THE CREATION OF AN EFFICIENT PRIVATE SECTOR DEBT MARKET FOR THE FINANCING OF PUBLIC SERVICE PROJECTS IN SOUTH AFRICA

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CONFIDENTIALITY CLAUSE

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TO WHOM IT MAY CONCERN

RE: CONFIDENTIALITY CLAUSE

Due to the strategic importance of this research remain confidential and may not be circulated for a period of five years.

Sincerely,

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DECLARATION

This research has not been previously accepted for any degree and is not being currently submitted in candidature for any degree.

Signed :

Date: 11/9/2003

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ABSTRACT

This paper focuses on the lack of an efficient private sector debt market for the funding of public sector projects. A brief synopsis is presented on the current listing activity on the Bond Exchange South Africa (BESA), which highlights the lack of private sector participation in public sector projects. Research is conducted on an international and a local basis with the use of a self-administered questionnaire to establish the extent of private sector funding in public projects. The results of this research reveal that whilst many jurisdictions recognise the role of the private sector in funding public sector projects, many have yet to see the benefits that flow from the private-public partnership initiatives that have been implemented in the developing countries such as China, Taiwan and South Korea. In this regard, however, South Africa has already gone a long way in the process of developing a public-private partnership program with the implementation of regulations and a separate unit being established at National Treasury to facilitate such programs. Nevertheless, the municipal sector of the country still needs to promulgate critical legislation to allow for greater involvement by the private sector in financing the infrastructure needs of local government.

To provide detail to the study, an interview was conducted with the listing director of BESA, which highlighted important concerns of investors and also presented solutions to address those concerns relating to the lack of development of the private sector funding of public projects. The main concern of investors relate to the lack of proper governance structures in municipal and other government organs. The proposed solution to address the concerns of investors is to adopt innovative financing techniques to attract private investors to such projects, such as the use of securitisation schemes.

Finally the study also highlights gaps in extant knowledge relating to the use of private sector funding in South African public sector projects. The study finds that more research needs to be conducted into the financial engineering techniques that have been successfully employed in countries that have more experience in developing a private sector debt market for the funding of public sector projects.

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List of Acronyms

TCTA	Trans Caledonian Tunnel Authority
INCA	Infrastructure Investment Corporation
BESA	Bond Exchange South Africa
IOSCO	International Organisation of Securities Commissions
DBSA	Development Bank of Southern Africa Limited
PSP	Public sector participation
MIIF	Municipal Infrastructure Investment Unit
PPP	Public private partnership
AIDS	Acquired Immunised Deficiency Syndrome
FRESCO	First Rand Enhanced Synthetic Collateralised Obligation
FSB	Financial Services Board
US	United States of America
ECA	Export Credit Agencies
MIIF	Municipal Infrastructure Investment Unit
LOS	Level of Service

Chapter 1

Introduction to the Creation of an Efficient Private Sector Debt Market for the Financing of Public Service Projects in South Africa

1.1. Introduction

Governments, especially in developing countries, are increasingly seeking alternative ways to finance infrastructure development. In the majority of these countries, the financing required to curb infrastructural backlogs and provide timely maintenance to existing infrastructure stocks exceeds the allocations on these countries' fiscal budgets. Accordingly, private sector financing of projects, that are traditionally the domain of the public sector, is becoming widely utilised as an alternative method of financing infrastructure provision.

In this domestic setting, South Africa has an estimated infrastructure backlog of R170.7 billion (Schur, 2000, 125). Moreover, the potential socio-economic impacts of this investment gap are heightened by an increasing demand for much-needed new and improved infrastructure such as water supply, sanitation systems, affordable housing, electricity supply, health care facilities, schools, roads, tourism infrastructure, airports and harbour facilities (Development Bank of Southern Africa, 1999). However, in view of the budgetary constraints in South Africa, the government is seeking alternative methods to finance new – and desperately needed – infrastructure. Apart from the finance needed for new infrastructure, government also needs to factor in the financial resources needed for the maintenance of existing infrastructure. As a result, there has been increased collaboration between the public and private sectors in order to meet the country's infrastructure requirements, which is a worldwide trend.

However, many obstacles exist to the development of an efficient private sector debt market for infrastructure projects. These factors, which are most prevalent in emerging economies include weak domestic capital markets, poor corporate governance structures, regional instability and poor socio-economic conditions such as high rate of unemployment leads to social problems, example crime, which acts as a deterrent to private investment. Of these, one of the greatest barriers to private sector involvement for infrastructure financing in developing markets has been identified as weak domestic capital markets. Furthermore, the inability to provide long-term financing for infrastructure projects that have long pay-back times and earn little or no foreign exchange has also contributed to the lack of a developed private sector debt market for public projects (World Bank, 1997a).

Therefore the challenge to governments seeking on-going financing of public sector projects rests on finding appropriate financing solutions that will enhance the viability of projects so as to make them more attractive for private sector investors. Moreover, the continued participation of the private sector through the adoption of innovative financing solutions for public sector projects will lighten the finance burden on government, releasing more funds for social development. Thus, aiming for innovation and better practices in public sector project financing should be one of the main initiatives in the drive toward sustainable infrastructure development. In this way, governments can devote their time and resources to redressing social problems – such as providing access to education by the country's poor, providing financial support for Aids infected victims and training and reskilling of the population.

Against the above backdrop, this paper focuses on identifying reasons why there is a lack of investor appetite for public sector projects in the South African context. From this, the paper addresses a second issue, namely what innovation is necessary to address the concerns of investors in attracting private sector funding of public sector projects.

1.2 Background to the Research

The research has been conducted by analysing the reasons for the lack of private sector appetite for the funding of public sector projects. An emphasis on developing countries and the major banks in South Africa has been the focus of this paper as the study revolves around the lack of a developed infrastructural debt market in developing countries. The funding of infrastructure projects by private sector means has been a growing trend internationally. However, a World Bank (2001) study conducted in 1999 reveals that Sub-Saharan Africa lags behind other countries in this trend. The reasons for this trend in Sub Saharan Africa are discussed in subsequent chapters of this paper. In this regard, the listings activity on the South African bond market has been analysed to provide evidence on the existence of a lack of private sector appetite for the funding of public sector projects.

The South African bond markets are dominated by government bonds (referred to as "gilt edged securities" or "gilts" because of the government guarantee) with some 80 percent of the total listed bonds in South Africa being government issues. Recently, there has been a small change in this trend, owing in part to the government's policy to reduce its reliance on debt financing, given a stricter fiscal policy. This sentiment has been echoed in the 2003 annual report by the Financial Services Board under market developments which has stated that the government participation in the bond market has been significantly reduced due to increased privatisation receipts and its long term fiscal policies. This has left a vacuum in the bond market, resulting in investors showing an increasing interest in corporate bond issues. According to www.besa.za.com:

> Private sector debt financing programmes are expected to increase given the trend towards falling fiscal deficits as increasing privatisation receipts will whittle down the need for government debt.

At the same time, this tighter fiscal policy framework will limit available government funds, implying that new infrastructure development will need to be increasingly funded by the private sector.

Whilst government bond issues dominate the South African bond market, there is, nevertheless, a growing private sector debt market for the financing of private sector projects. South African corporations have come to realise the benefits of raising finance through the bond market, which has resulted in innovative debt products being introduced into the market in order to satisfy investor needs. This has been evidenced mainly by listings of debt instruments relating to securitisation structures by SA Home Loans, BMW and First National Bank securitising its debt book through an enhanced securitisation structure using credit derivatives (BESA, 2003, 10). However, the new corporate bond issues have been mainly concentrated in the form of securitisation structures which have been financially engineered to cater for investors' risk appetite and to ensure sound corporate governance of structures used to raise and manage the debt instruments. In the same breath, however, this may be indicative of the manner in which to approach the development of a private sector debt market for public sector projects.

Extensive market research, have revealed that investors favour securitisation structures and innovative financially engineered debt products for these privately funded issues. The bond market in South Africa is predominantly a wholesale market where the bulk of investment takes place at an institutional level such as insurance funds, pension funds and large assets management companies, where the investors are professionals (BESA, 2002, 7).

The appetite by private investors to fund public sector projects has been subdued to a certain extent with the only issues on BESA relating to private sector funding of public projects originating from the Trans Caledonian Tunnel Authority (TCTA), Eskom, Transnet and the Infrastructure Development Corporation (INCA). In the majority of these issues, although the bonds are of a "vanilla type", meaning bonds have no credit enhancing features attached to them, the investor appetite is sparked by the government guarantee. This is confirmed by the listing statistics of BESA, where the total listed market capitalisation of all debt issued is R452 billion, with government issuers accounting for R395 billion. In other words, government debt accounts for eighty seven percent of total listed debt on BESA.

In terms of one of the main players providing infrastructure finance for the country, namely the Development Bank of Southern Africa (DBSA), part of its mandate is to invest in infrastructure and facilitate provision of infrastructure development finance and to finance sustainable development as a partnership between the public and private sectors. To this end the Private Sector Investments Unit of the DBSA was established in 2001 in response to a worldwide trend towards increased private sector involvement in infrastructure development. This view is further supported by Ferrera and Khtomi (2000), who reveal that there is a worldwide trend towards private sector participation in the financing and development of what has traditionally been deemed "public" infrastructure such as national roads, dams, telecommunications and national transportation networks. Ferrera and Khtomi (2000; 2) go further to suggest several reasons for this increasing trend, namely:

a) a lack of institutional and regulatory capacity necessary to facilitate private participation in infrastructure provision;
b) past neglect in the maintenance of public infrastructure;
c) low productivity of public sector capital and labour;
d) public sector budget constraints; and
e) absence of sound financial risk management within the public sector.

As a footnote, the spectacular success of Outsource under Dave King provide anectdotal evidence of the pressing need for sound financial management in the public sector.

The restructuring of public enterprises through privatisation will result in new private infrastructure companies implementing business disciplines and exploiting the additional opportunities for further infrastructure development. This in turn will lead to greater efficiency in the managing of such enterprises and will result in government speeding up the process of privatising other state owned assets.

The bond issues that are listed on BESA which are not government backed, such as municipalities, incur a much higher coupon rate weighting requirement from investors than government and quasi-government organisations (that is, investors require a higher yield on their funds than from gilts). This tends to make the cost of this form of funding fairly prohibitive to non-gilt issues. As a consequence, there are only two municipal bonds listed on BESA, with a joint value of less than R1 billion (an insignificant percentage of the total listed market capitalisation of all debt issued of R452 billion).

Given the poor listing activity by municipalities on BESA and the need for infrastructure development in previously disadvantaged local communities, government will need to speed up its initiatives in promoting private public partnership programs so as to stimulate growth in such communities through providing adequate infrastructure in such areas. In this regard approximately R50 billion to R80 billion will be required over a ten year period to eliminate backlogs in these two services namely water and sanitation in urban areas in South Africa (Jackson, 2000, 5). These estimates are likely to increase further with the inclusion of rural areas in South Africa. There will undoubtedly be some financing coming from government grants, but the bulk will need to be borrowed from the private sector. However, the added problem of a culture of non-payment within Sub-Saharan African countries acts as a further deterrent to enhancing private sector participation in infrastructure financing. It is for this reason that securitisations and specifically innovative financially engineered products are the only real solution for addressing the problem of enticing the private sector to invest in public projects in Sub Saharan Africa.

In this regard public sector projects funding in the form of infrastructure development has been limited by several factors, the main being lack of investor appetite for these projects as the returns generated do not meet the risk profiles associated with the projects. Consequently, the application of innovative financial engineered products will in part seek to address the problem of inadequate returns offered by public projects to private investors.

1.3 Motivation for the Research

Based on the background material presented above, the motivation for conducting the research is to ascertain the reason(s) for the absence of a developed private sector debt market for the funding of public sector projects. The further aim of this paper is to make recommendations and identify possible financial engineering solutions that will seek to address the problem.

As a note to the above, the lack of investor appetite for the financing of public service projects, resulting in a very high penalty rate of return being demanded from private sector lenders may have resulted in the lackluster performance of the private sector funding public sector projects. The research endeavors to explore and verify the reasons for the lack of investor appetite for funding of public sector projects. The research will further aim to identify solutions in this regard. As part of identifying the solutions to address investor concerns, the application of financially engineered structures, such as securitisation, is examined in addressing the research problem.

As stated in the previous section the gradual withdrawal of the government from the bond market, given the falling fiscal deficits and increasing privatisation receipts, will create an opportunity for private debt issues, thereby facilitating private sector involvement in the funding of infrastructure development in the country. This will be achieved through state owned assets being eventually privatised, which would result in the private sector increasing its role in the funding of such assets given the efficiencies such as an improvement in service delivery that are expected to result there from. However, Sub Saharan Africa has failed to either catch up with the increasing trend worldwide for private sector funding of public sector projects, or stepping up to the plate with the opportunities developing within the region for private funding bond issues (World Bank, 2001). This lack of interest by the private sector in this region has further contributed to its poor growth prospects and has made it reliant on the World Bank for its funding needs.

1.4 Value of the Project

The primary purpose of the research is to identify and verify the reasons for the lack of investor appetite for public sector projects in Southern Africa. From this, the study goes on to provide and substantiate solutions that could be implemented to address the concerns of investors and thereby enhance private sector funding of public sector projects.

1.5 Problem Statement

The aim of the research is to address several problems relating to the lack of a developed private sector debt market for the funding of public sector projects such as; the reasons for the lack of investor appetite for the funding of public sector projects; the causes of the lack of investor appetite for the funding of public sector projects; the solutions that could be implemented to address investor concerns for the funding of public sector projects; and the lack of use of financial engineering to address the need to entice private sector funding of public sector projects and mitigate the deterring factors.

The first two aims have been explored by a review of the relevant literature and through the issue of questionnaires to emerging country debt organisations and market participants. The third and fourth aims have been addressed primarily through questionnaires to market participants, along with an interview of a market participant, BESA.

1.6 Objectives of the Study

The objectives of the study are to validate the need for private financing of public sector projects; to identify the criteria required by investors for the generation of an appetite for the financing of public sector projects; and to propose a workable solution to the problem.

1.7 Research Method

The method of research employed is exploratory in nature as the aim of the study is to test for the existence of the problem as identified in the preceding paragraphs. The research has also led to the identification of possible solutions to address the problem.

1.7.1 Type of Research

The research conducted is qualitative, and uses real data to establish the reasons for the lack of a developed private sector debt market for the funding of public sector projects, as well as substantiation for the proposed to stimulate the private sector appetite for funding of public sector projects. The research comprises of the following:

a) literary research of the subject (need, criteria, and solution);
b) market questionnaires to test for the existence of the problem and the need for a solution; and
c) direct interviews with selected market participants to test the viability of the solution.

Regarding the format and treatment of the direct interviews and questionnaires, ethical considerations has been given a high priority with specific emphasis on the following:

a) obtaining the consent of the respondent to use in the research study;
b) maintaining confidentiality of the respondent and or certain information where deemed necessary; and
c) explaining the nature and reasons for the study to the respondents.

1.7.2 Questionnaire Design

The questionnaire employed involves questions that request a specific answer, as well as employing an open-ended portion for each question, where the respondent has been invited to add comments, expand on the matter and make suggestions pertaining to increasing the private sector involvement in the funding of public sector projects. The design of the questionnaire in this manner also assists in testing the appropriateness of each question, allowing for additional or qualifying information and the clarification of issues by the respondent where necessary.

Two questionnaires have been designed, namely:

a) a generalised questionnaire to establish the extent of the problem relating to the lack of a well developed private sector debt market for the funding of public sector projects in emerging markets. The questionnaire will also focus on what has or is being done to address the problems; and

b) a specific questionnaire designed to cater for specific market participants and information sought. Responses to these questionnaires were received from four major participants in the South African debt market, who are the major banks in South Africa, and who are actively involved in infrastructure development financing in Sub-Saharan Africa.

1.7.3 Data Analysis

The first step in analysing the responses from the questionnaires is the evaluation of the raw data. This has been done so as to be able to detect any errors and omissions that might have occurred, thereby avoiding "noise" and ensuring a high quality standard. As the questionnaires involve closed and open ended questions, pre-coding is used to analyse the closed- ended questions where possible. The pre-coding consists of numerical or alphabetical codes. For open-ended questions the data analysis employs content analysis and follows the systematic process as prescribed (Cooper and Schindler, 2001, 243).

1.8 Limitations of the Project

The following extraneous factors are not addressed by the research, namely:

a) Certain information regarding the financing options relating to the actual financing structures and or products that are employed by the private sector in funding public sector projects and or strategies of such organisations, that have not been disclosed owing to the confidential nature thereof;

b) Legislation, which may prohibit the disclosure of information owing to its sensitive nature;

c) Disclosure of information by certain foreign jurisdictions, which may be prohibited and or not be fully disclosed; and

Environmental differences between jurisdictions are not examined nor researched which could have a material effect on the outcome of the research findings. This has not been researched has this is beyond the scope of this paper. Further given time and cost constraints it was decided not to research this issue.

1.9 Structure of the Study

The remainder of this paper is divided into six further chapters. Chapter 2 provides a brief description of the domestic bond market, with focus on the constraints and the concerns and or requirements surrounding the development of an infrastructural debt market, Chapter 3 covers a detailed theoretical framework that is briefly discussed in chapter one regarding the trends internationally and locally for private sector funding of public sector projects. The discussion is, to a limited extent, also focused on the reasons for the lack of private sector funding for public sector projects in South Africa. Chapter 4 focuses on the design of the questionnaire, sample selection procedures and data analysis techniques to examine the responses to questionnaires and from direct interviews, Chapter 5 focuses on a discussion of the research findings and results, Chapter 6 looks at proposed solutions to the problem of the lack of a well developed private sector debt market for the funding of public sector projects. This chapter concludes with recommendations that address the concerns of market participants with regard to developing an efficient private sector debt market for the financing of infrastructure projects and finally Chapter 7 will conclude on the results of research conducted by providing a summary of the salient features of the research findings and the proposed solutions to the research problem.

Chapter 2

The Domestic Bond Market: Constraints and/or Concerns Surrounding the Development of an Infrastructural Debt Market

2.1 Background

BESA, which unlike most other bond markets is a formalised exchange (FSB, 2002, 14), lists Rand denominated debt securities issued by central and local government, public enterprises and major corporations, thereby providing a secondary market in these securities. The South African capital markets provide the central government, provincial and local authorities, public enterprises and major corporations with an important source of debt financing. These organisations are able to raise short-, medium- and long-term funds which can be used to finance capital projects and operating activities through the issue of interest-bearing securities (commonly referred to as loan stock, gilts or bonds).

The state has, in line with its long-term fiscal policies, significantly reduced its debt-funding programme and this, in conjunction with the proceeds of the potentially lucrative privatisation initiatives under consideration, are expected to result in the state's continued reducing participation in the capital market over the years to come. This sentiment has been echoed by the National Government in its intergovernmental fiscal review, which states that:

> Spending restraint and better tax collection at the national level have reduced budget deficits, and thus the national government's need to borrow. In 2000/01 the public sector borrowing requirement amounted to 1,7 percent of GDP, down from a high of 5,3 percent in 1996/1997. This decline in national government debt is expected to continue, and has already freed up significant amounts of investor capital for other quality investments (Intergovernmental Fiscal Review, 2001, 195).

Public enterprises such as ESKOM, Telkom and Transnet have over a long period, almost 15 years, been keen participants in the market. It is clear that many corporations recognise that they too can benefit considerably from the issuance and management of their debt profiles via medium-term note programmes and securitisation initiatives. In this regard, according to BESA[1]

> Corporations are now seeing the benefits of a listing to generate funds for capital-intensive ventures, and banks are coming to accept that they can fund their operations very cost-effectively through the use of listed capital market instruments. BESA has also seen its first mortgage-backed securitisation showing that creative structuring of debt can also achieve access to the formal debt markets.

The next section provides an overview on the trading statistics of BESA for the year ended 31 March 2003 so as to provide more insight into the listing activity and trends in the listing of government and non governmental bonds and the implications for the funding of public projects by the private sector.

2.2 Trading Statistics

The trading statistics for the year ended 31 March 2003 reflect that government bonds are declining in terms of market capitalisation and that the corporate bonds in issue have increased. This trend is expected to continue, as explained earlier, given the government's stricter fiscal policy and increasing privatisation receipts. This sentiment has been supported by BESA which is quoted as stating (Financial Services Board, 2003, 14):

> Public enterprises such as ESKOM, Telkom and Transnet have over a long period been adept participants in the market and it is clear that many corporations recognise that they too can benefit considerably from the issuance and management of their debt profiles via medium-term note programmes and securitisation initiatives, as evidenced by the increase in the number of new securitisation programmes that have been listed on BESA during the year under review.

[1] The Development of the South African Corporate Bond Market, 2001. (Online), Available at http://www.besa.za.com

Table 2.1: BESA Listed Debt Profile (Nominal Value) for the year ended 31 March 2003				
Issuer	**31 March 2003**	**%**	**31 March 2002**	**%**
Central government	R330,171 billion	74,8	R330,813 billion	77,1
Municipal	R 0,131 billion	0,03	R 0,790 billion	1,8
Public enterprises	R 34,712 billion	7,9	R 37,307 billion	8,7
Water authorities	R 17,953 billion	4,1	R 17,128 billion	4,0
Banking	R 30,008 billion	6,8	R 21,991 billion	5,1
Corporate	R 28,736 billion	6,5	R 21,027 billion	4,9
Total	**R441,711 billion**		**R429,056 billion**	

Source: Financial Services Board annual report: 31 March 2003

2.3 Constraints and Concerns Surrounding the Development of the Local Infrastructure Debt Market

The following factors are considered as the major obstacles to the development of the local infrastructure debt market namely the saturation of government paper in the market, lack of proper corporate governance, socio economic problems, lack of developed secondary market for the trading of bonds, lack of proper accounting standards, regional instability, inadequate listings requirements by BESA, exchange control regulations and the lack of a broad product base. These factors are discussed in more depth below.

2.3.1. Saturation of Government Paper in the Market

The South African government bond market currently accounts for approximately seventy eight percent of the total market capitalisation of listed bonds. This has resulted in other forms of bond issuance being crowded out from the bond market and consequently has contributed to an over reliance on the domestic banking sector for public funding. This over reliance on the banking sector to fund public projects creates a concentration risk and could lead to severe systemic problems for the South African economy (Genesis, 1999, 56).

The use of the commercial banks to fund public projects creates two problems, namely:

a) public project pay back periods are generally of a long-term nature, whereas banking deposits are short term. This creates a maturity mismatch for the banks which results in banks having to reserve more capital than is necessary to fund these projects; and
b) bank deposits can be withdrawn at short notice whereas loan defaults take a substantial time to liquidate as collateral is often not readily marketable owing to its public nature. This results from public assets, which are not ordinarily bought and sold, in the market place, which creates difficulty in exacting a value for such assets. Further, it is often the case where such assets have a social value to the community and any attempt to liquidate such assets creates political problems, which results in either the postponement of liquidation of such assets or in the bank having to seek recourse against the state, which can be a costly exercise.

The above-mentioned problems give rise to banks incurring a higher risk profile when funding public projects, which in turn translates into significant premiums, charged for the funding of public projects.

This trend is however changing with the increase in the number of securitisation structures that have been listed on BESA (Financial Services Board, 2003, 8). In the main, these financial structures have been created by the banks in response to the high costs of capital reservation and low return on equity of the bank.

However, securitisation has not been especially successful as the total debt taken up by investors is significantly less than that which has been authorised for a listing on BESA. This is evidenced by the FRESCO issue, which was originated by First Rand Bank Limited, whereby R10 billion was authorised, but investors were prepared to only take up R1 billion[2].

[2] Presentation by RMB on the history of securitisation 2002.

2.3.2 Poor Corporate Governance Structures

The lack of proper business based structures and poor corporate governance within government structures, especially at the local government level, has deterred many investors from investing directly in these structures. If sound governance and business disciplines coupled with experienced management are introduced, it will contribute to the overall effectiveness of managing these structures, and their attractiveness to investors.

This concern has been highlighted in several meetings with National Treasury, the Financial Services Board and industry participants, whereby institutional investors have expressed their requirement for sound corporate governance and the introduction of business disciplines into the structures within municipalities, before they will consider investing therein[3].

2.3.3 Socio-Economic Problems

South Africa is a country plagued with several social problems such as a high unemployment rate, increasing AIDS prevalence, a high illiteracy rate and poor sanitation services for the previously (still) disadvantaged. This has perpetuated the culture of non-payment for services, which results in the uncertainty of future cash flows from proposed infrastructure developments.

2.3.4 Culture of Spenders not Savers

South Africans, according to (Prinsloo, 2000, 30), are characterised as being a nation of spenders not savers. In recognition of this the South African government embarked on a savings programme in 2002 to try and encourage savings, and to sensitise its residents as to the importance thereof.

A lower savings pool results in limited investible funds (that is, institutions such as pension funds; banks and collective investment schemes will have little cash resources to invest in infrastructure projects).

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[3] National Treasury minutes: Development of the Municipal Bond Market in South Africa 2002.

2.3.5 Underdeveloped Secondary Market for the Trading of Bonds

According to Genesis (1999, 45), efficiency in a market is equitable with a market's level of liquidity. In South Africa, the government bond primary market and more importantly the secondary markets are considered as being fairly efficient given its high liquidity[4].

However, the secondary market for corporate debt is not as liquid. This is because investors in corporate debt tend to adopt a "buy and hold" strategy[5].

2.3.6 Lack of Proper Accounting by Local Government Structures

Investors in bond markets, when deciding on potential investment opportunities, need full and accurate financial information about the investment. National government has stated that local government structures will need to become self sufficient in the future. The lacks of proper financial records together with appropriate governance structures and business disciplines have never been more necessary than in local government structures.

The restructuring of the local government sector has meant that smaller local authorities would be merged with the larger metropolitans. This has meant that resource allocation has become more difficult given the poor infrastructure prevalent in many historically disadvantaged local councils. The inheritance of poor record keeping together with the culture of non-payment has led to these councils not being able to financially support the development of infrastructure in their areas[6].

However, the adoption of the Public Finance Management Act and the Municipal Finance Management Act will require local government structures to implement proper governance and reporting requirements before any external borrowing may be acquired or requested (Intergovernmental Fiscal Review, 2001, 197).

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[4] http://www.besa.za.com.
[5] http://www.besa.za.com: The Development of the South African Corporate Bond Market
[6] http//www.imiu.gov.

Further, National Treasury, together with the Department of Provincial and Local Government has embarked on a programme to revitalise the municipal debt market in South Africa. BESA has also reworked its listing requirements to allow other entities such as municipalities to list their paper on the bond exchange (BESA, 2002, 1-42). However, before this initiative can succeed local government will need to have in place a central debt register, which will account for all external debt that municipalities have entered into (that is, a consolidated debt record). National Treasury will be the gatekeeper of this register (National Treasury draft municipal regulations 2003, 25). Also, stricter and more enforceable legislative requirements will need to be in place in order to cater for the protection of investors participating in this market.

2.3.7 BESA Listing Requirements do not Provide for Mandatory Credit Ratings

According to a report by Genesis (1999, 42), which focussed on creating a financial centre for Africa, credit ratings are beneficial in that they provide investors with confidence about the existence and level of major risks inherent in financial product offerings. According to BESA's listing requirements, ratings are encouraged but not mandatory for issuers wanting to list their debt on the bond exchange[7].

In the case of infrastructure or public sector projects this may not encourage private participation in these types of projects. As stated in Section 2.3.8 certain public sector projects present significant threats to the continued funding of public sector projects. Ratings for these projects will encourage better governance and accountability and could lead to a revitalised public sector debt market (Genesis, 1999, 41). It has also emerged in terms of the same study, that entering the ratings process is better than not doing so, no matter how low the initial rating is, as this will provide investors with an independent assessment of the significant risks inherent in a project. Witness the American appetite for junk bonds.

[7] http//www.besa.za.com/listings.

2.3.8 Regional Stability and Perception thereof

Africa is plagued by many disasters such as civil wars, famine, high unemployment, civil disobedience, genocide and poor to non existent governance structures[8]. These factors act as a deterrent to foreign investors in terms of making investments in the African region. As a result of the lack of investment by foreign investors, infrastructure development in the African region is slow and cannot keep pace with the developing world.

The local investment community has also been slow in actively promoting investment in infrastructure projects, which in part may also be due to the same concerns or perceptions as is the case with the foreign investors.

2.3.9 Exchange Control and Currency Volatility

The existence of exchange control regulations and currency volatility associated with emerging market economies makes investment in such economies relatively high risk (South African Reserve Bank, 2001, 59). South Africa, although classified as an emergent market economy, is a country, which is characterised as a blend between a developed economy, especially the financial sector, and a developing country, with its high unemployment rate and poor social infrastructure.

The aforementioned factors contribute to the volatility of the currency, and make investment in infrastructure problematic, given the uncertainty in the local investment environment. Exchange control regulations also act as a deterrent to inward bound investment in the South African economy. This sentiment has been echoed in a study by Chinn and Ito (2002, 22), which states:

> Our first key finding is that if one measures the level of financial development in terms of private credit creation and stock market value traded, there appears to be a strong relationship between the extent of capital controls and financial development. This finding holds for less developed

[8] http://www.worldbank.com/countries/africa.

> countries in terms of stock market value traded, and even more so for emerging market countries. In this latter group, the linkage is particularly strong for private credit creation, stock market value traded, and stock market turnover.

Based on the above, exchange controls act as a deterrent to foreign direct investments which in turn results in the underdevelopment of the capital markets especially in emerging markets where liquid markets are required for the efficient mobilisation of capital.

2.3.10 Lack of Broad Product Base

The Bond Exchange of South Africa has a fairly limited product variety with the main products being "vanilla" bonds, which are bonds with no credit enhancements. These bonds are also restricted in product choice as the major bonds are that of the government bonds followed by quasi-government bonds. Recently, however, other types of bond products have emerged on the exchange, such as securitisation structures and medium-term note programmes[9].

However, the product choice is still limited, and does not energise the bond exchange liquidity that is so desperately needed to make a thriving secondary market in non-government bonds. This has resulted in the bond exchange having to restructure its business model to cater, in part, for this anomaly (BESA, 2002, 2). The restructuring of the exchange will in essence involve different market associations being created which will be responsible for the trading of different product groups such as derivatives, money market instruments and the like. BESA's executive committee has approved the new structure but in order for the restructuring to take effect the rules of the exchange will need to be approved by the FSB, which is still outstanding.

2.4 Differences between Project Bonds and Corporate Bonds

While most project bonds are corporate bonds, the reverse is not true. There are subtle financial, economic and analytical differences between these two market segments that merit further attention in the context of an institutional

[9] http://www.besa.za.com/listings/statistics.

analysis of the market. The dissimilarities between project and corporate bonds primarily stem from the underlying economics of the borrower. In the case of a project, the issuer raises funds to finance a single indivisible large-scale capital investment project whose cash flows are the sole source to meet financial obligations and to provide returns to investors. In the case of a typical corporate borrower, the security is issued against the firm's general credit and the underlying assets consist of multiple sources of cash flows. Hence, typical corporate bonds are secured by the firm's various assets and cash flows that offer investors in investing in such bonds risk diversification and an important cross-insurance mechanism. If a certain set of cash flows becomes unavailable for debt service, firms typically have other sources of cash that might tide the issuer over the liquidity crisis.

No such cross-insurance exists in the case of project bonds. The moment the single source of cash flows ceases to exist, the issuer experiences a liquidity crisis that might force it to default on its bond obligations. In addition, projects suffer from asset-specificity (location and/or use of the assets), often ill-defined or ill-enforced property rights, and bilateral monopoly settings (dominant output buyer) that render them vulnerable to opportunistic behavior and unilateral contract renegotiation. Indeed, such opportunistic behavior coupled with shortcomings in the ambient legal institutions is often at the root of project's economic distress and, ultimately, financial distress. Such as US Gas Pipeline projects in early 1970s[10].

The differences between project and corporate bonds affect investors risk perceptions, the pricing of the bond and the legal structure. Project bond investors tend not to place too much reliance on the underlying assets as true security but rather focus on factors such as:

a) creditworthiness of off takers;
b) third party guarantees;
c) legal and institutional environment; and, ultimately,
d) the most important aspect of the project, the quality of its cash flows.

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[10] http://strategis.ic.gc.ca

2.5 Summary

In summary, the domestic bond market is a market characterised by the following features:

a) Bonds are traded through the only licensed financial exchange in South Africa that lists bond products, namely BESA. The lack of competition for BESA has resulted in innovation in bond product financing being limited.
b) Trading in bonds is regulated by BESA and the FSB, with BESA acting in its capacity as a self regulatory organisation. The regulation of this market has created a more reputable and viable market place for issuers and investors to interact. This is likely to further give impetus to creating an efficient debt market for the funding of public sector projects.
c) Both government (gilts) as well as corporate bonds are traded on BESA, with government bonds dominating the listings. However, this trend is changing with more private sector bonds being listed on BESA. This change in trend will enable public sector issuers, such as municipalities, to list their paper on BESA.
d) Trading of bonds is facilitated through efficient clearing and settlement systems. (FSB, 2003, 9)

The main concerns that investors have in investing in infrastructure projects relates mainly to the stability of the economy; the presence of exchange control and currency volatility; poor governance and accounting; lack of mandatory credit ratings for such projects; regional instability; the presence of socio economic problems; and the lack of a developed secondary market needed for liquidity purposes.

The next chapter will focus on the developments internationally and locally regarding the funding of public projects by the private sector.

Chapter 3
Trends Internationally and Locally for Private Sector Funding of Public Sector Projects

3.1 Introduction

This chapter focuses on the developments in the funding of infrastructure projects from an international and a local perspective. Further, the funding methods and policy objectives of governments internationally are discussed in developing an infrastructural debt market. The main sources that are used in this chapter are citation of papers on the emerging project bond market obtained from the World Bank website[11], government legislation and regulations pertaining to public private partnerships in South Africa and the resource material on infrastructure development in Southern Africa by the DBSA. These sources of literary research have been chosen as they are considered to be the most appropriate in gaining an understanding of both the local and international project finance debt markets and in identifying trends in this important field of study.

3.2 Developments and/or Trends in the International Funding of Public Sector Projects

According to Dailami and Hauswald (2000, 1) the emergence in the 1990s of a nascent project bond market to fund long-term infrastructure projects in developing countries, such as electric power plants, roads, ports, airports, telecommunications networks, and water and waste water facilities, merits attention for several reasons, namely they highlight the attractiveness of such investment opportunities that are traditionally the preserve of the public sector for private sources of capital; project bonds are potentially a major source of long-term private debt capital linked directly to economic growth and competitiveness; they are a new asset class in the emerging market debt spectrum, offering asset diversification and investment opportunities particularly to institutional investors, such as insurance companies and pension funds whose long-term liabilities match the long-term tenor of project

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[11] www.worldbank.com

bonds; and they mirror the shift in the pattern of capital flows from bank loans to publicly issued bonds.

Dailami and Hauswald (2000, 2) find that on average, project bonds are issued at approximately 300 basis points above U.S. Treasury securities; have a surprisingly high issue size of US$278 million; have a maturity of slightly under 12 years; and are rated slightly below investment grade. In terms of geographic origin, projects in Asia and Latin America have issued more bonds than those located in other regions. The reason for this is that these regions have experienced substantial growth, which necessitated the need for faster infrastructure development, and hence the growth in the bonds issued by these regions to finance such development.

The research by Dailami and Hauswald (2000, 3) also finds that in circumstances in which the underpinning legal and institutional frameworks governing contract formation and enforcement are not well developed, the link between bond pricing and legal framework becomes important. This means that investors take into account the quality of the host country's legal framework, and reward projects located in countries that adhere to the rule of law with tighter credit spreads and lower funding costs. This is evidenced by the issue of infrastructure bonds by Transnet limited where the bond was issued at 802 basis points above a comparable US Treasury security and another bond that was issued by Global Telecom of the Philipines at 709 basis points above a comparable US Treasury security (Dailami and Hauswald, 2000, 34).

The worldwide move towards private participation in infrastructure (PPI) schemes that gained momentum in the early 1990s brought about fundamental changes in the traditional fiscal financing of infrastructure facilities. It (PPI) also ushered in structural changes in the way in which infrastructure was operated and managed as a pre-requisite for successful private funding for projects. For instance, the development of structured credit techniques, most prominently limited recourse project financing methods, along with various risk sharing and hedge devices (for example, multilateral and export credit agencies (ECA) guarantees, private political risk insurance), were instrumental in containing projects' credit risk sufficiently to make them of interest to bond investors. At the same time, privatisation, market liberalisation, and regulatory reforms created an economic environment that could provide private investors with return potentials that could justify the considerable risks associated with debt investments in emerging market infrastructure.

Debt covenant provisions historically have catered for basic covenant provisions aimed at mitigating typical shareholder-bondholder conflicts such as asset substitution, dividend policies, claim dilution and under-investment (Warner and Smith, 1997). The study by Dailami and Hauswald (2000, 9) finds two recent provisions aimed at protecting investors' investments in such projects, namely:

a) incentive provisions for contractors, operators and sponsors such as performance targets, mandatory penalties and minimal equity participation in the project; and
b) institutional environment provisions to cater for changes in ambient regulatory, legal or tax environment, trigger change of control and or mandatory redemption of debt that would assure bankruptcy and operating disruptions of the project.

Such provisions could further add to the creation of an efficient private sector debt market for the funding of public sector projects through further lending to investor protection. These incentive and institutional provisions will assure investors that their investments in public projects will protect them legally from unforeseen circumstances such as a change in the legal environment, which could cause the sudden write off of their investment.

3.3 Developments in the Local Funding of Public Sector Projects

Several developments to encourage the funding of infrastructure by the private sector have been embarked upon by National Treasury through its public private partnership (PPP) program, DBSA through its loan funding assistance and advisory services department and the National Government to stimulate interest by the private sector to fund municipalities infrastructure needs. These developments are explored briefly below.

3.3.1 Development of a Municipal Debt Market

According to (Jackson, 1999) the following areas for development of private participation at a local government level have been identified by National Treasury, namely:

a) There is a need for regulatory and enhancement (in terms of accounting disclosure) measures to encourage private sector investment. The Department of Finance has initiated work on the various items needed to create such an enabling environment. These include a review of municipal accounting and reporting systems to ensure that prospective financiers can assess a municipality's financial standing, and a review of regulations governing borrowing powers. An inter-departmental team also is working on the grant component of the Municipal Infrastructure Investment Framework (MIIF) In this regard, the draft municipal regulations cater for the detailed disclosure requirements in respect of securitisation schemes and also demands that a central debt register be maintained by National Treasury, which will promote greater transparency when municipalities go to the market to raise debt finance.

b) There is a need for rational long-term planning, especially when it comes to the choice of level of service (LOS) and the speed at which backlogs can be addressed. To enable municipalities to do this properly, DBSA and the Water Research Commission have funded the development of a computer-based financial modelling tool to test, in detail, proposed investment plans in order to establish their long term financial viability. It is an interactive tool for the use of town engineers, treasurers and councillors, and prospective financiers. It enables municipalities and other service suppliers to model their needs and demonstrate their ability to repay loans, and to understand the political choices that must be made.

c) There may well be considerable efficiency gains from moves towards more private sector participation in municipal services, which in turn could make it easier to raise finance. The DBSA has geared up to provide local authorities with the necessary advice and assistance to consider their options in private sector participation (PSP) and prepare appropriate contract documentation. In general, there is a range of options for improving the performance and "borrower attractiveness" of local government utilities, but each of these should be firmly based within the local authority context of clear accountability to consumers.

The implications of the above is that, in order for efficiency gains to develop, their needs to be proper regulatory controls, sound accounting and corporate governance structures for such projects and proper contract negotiation terms that protects both the government and the private sector in participating in these programs. In this regard, National Treasury has developed a framework which deals with the development of a PPP program in South Africa.

3.3.2 National Treasury PPP Programs

National Treasury has formed a separate unit referred to as the Public Private Partnership Unit. Regulations have been issued to cater for the increased private participation in public projects and in essence these regulations seek to establish the following:

a) the affordability of a project;
b) a project's ability to offer value for money; and
c) the ability of the project to transfer appropriate technical, operational and financial risk to the private party.

These points have been explained briefly in the following sections.

3.3.2.1 Affordability

In order to assess affordability, government must not commit expenditure that is not available. This is critical in order to set the initial parameters for project financing so that the initial design or project specification does not fall into the trap of aiming for higher levels of service than the government can readily afford. Affordability is not just about setting the financial limits, but also involves social considerations. A sensitive issue in toll road project design, for example, is the structure of tariff-setting, including discounts for regular local traffic users, and appropriate differential costs on distinct categories of road users. This sentiment has been echoed by the Minister of Finance on the public private partnership unit whereby it was stated that "Affordability is both about budgetary considerations and about wider human, social or environmental considerations" (Minister of Finance, 2003, 5). Analogous issues arise in water concessions or projects involving access to land and ecological assets. South Africa's toll road concessions involve a considerable shift of these responsibilities to concessionaires. Affordability is not just about a capacity to pay and a fair balance between outlay and reward, but it is also about avoiding the unnecessary exclusion from public goods or services of those who could be accommodated without cost or inconvenience to others, but who lack the means to pay. It is, in other words, about familiar problems of public utility tariff-setting in the presence of excess capacity and declining marginal costs.

3.3.2.2 Value for Money

In assessing value for money, government has borrowed from international experience, and it looks for an appropriately structured "benchmark" against which the public private partnership unit can assess the case for bringing profit-seeking capital into the delivery of public services. Private sector participants are required to respond with imagination and innovation in building a relationship with government so as to meet the demands that government has placed on such projects when soliciting private sector participation. The aim of government is to ensure the public private partnerships produce the following (Minister of Finance, 2003, 6):

a) high standards at an affordable cost;
b) opportunities for black economic empowerment participants;
c) local economic development spin-offs for small and medium businesses;
d) skills transfer; and
e) job creation.

Each of these factors "adds value" in increasingly complex and qualitative ways, unique to the African environment, and therefore need consideration in terms of how they detract or create variations from the value of the benchmark mentioned earlier. They bring additional performance criteria and distinct risks, often in the absence of appropriate comparative data and agreed indicators.

3.3.2.3 Risk Transfer of the Project to the Private Sector

The rationale for transferring risks of the project to the private sector is to balance the social needs of the project with that of the profit needs of the private sector. The reason for this is that private interests may collude to undermine the public good. In the perfect PPP, all risks are fully covered by offsetting profit-seeking interests with the public good, which is assured by a lump-sum unitary charge. Any uncertainty is disposed of through complete contract specification, wherein profit generation is subject to the project performance and its satisfaction of user needs. However, it is not possible at the time of contract negotiation to have covered all possible risks of the project and to have averted private collusion completely, which makes the process of risk identification and transfer an increasingly complex but important task. Minister Manual (Minister of Finance, 2003, 6) summarised this in a recent speech in which he states:

> Information is unavoidably incomplete; the possibilities for collusion are unlimited; there is the practical inconvenience of complying with awkward features of the tax laws. So the risk-transfer objective is really about a sensibly structured set of compromises.

The concern is that it is easier to identify risks that are quantifiable and auditable which permit assignment and pricing. However, for other often subjective and socially adept risks that do not allow for quantification, the process of risk assignment and pricing becomes an almost impossible task. In the latter case the only way to identify and then to assign such risks is through the process of negotiation. The process of risk assignment is therefore one whereby some risks can be assigned and then managed; while others are better managed and then assigned.

In managing the risk profile of a project, the PPP unit has devised a risk matrix, which identifies:

a. the major risks;
b. the mitigating factors;
c. the party to take on the risk; and
d. how the risk is to be managed.

The extract below gives an indication of the major financial risks that have been identified within a project. National Treasury compiled the table in an attempt at identifying the major financial risks associated with funding of public projects by the private sector. The table identifies the major financial risks as being that of exchange rate risk, interest rate risk, tax rate risk, residual value risk and regulatory risk. Along with the risk identification, an explanation is provided on how the risk is mitigated and which party should bear the risk.

Figure 3.3.2.3.1: Extract of Risk Matrix

Categories	Description	Mitigation	Allocation
Regulatory risk	The possibility that the approvals required from government authorities for the Project will not be obtained (other than planning and environmental approvals, which elsewhere herein, are specifically dealt with, see planning risk and environmental risk).	Legal scan undertaken to be by the Institution at the feasibility phase of the Project to identify all such approvals. Implementation by the Institution of an inter-governmental liaison process with the responsible government authorities before the procurement phase. Due Diligence by Private Party to identify approvals its requires for its operating requirements If permitted under applicable law, obtain all such approvals before the Signature Date.	If any such approvals (other than those relating to Private Party's operating requirements) can be obtained before the Signature Date, the Institution. In relation to the Private Party's operating requirements, the Private Party.
Currency or exchange rate risk	The possibility that exchange rate fluctuations will impact on the envisaged costs of imported inputs required for the construction or operations phase of the Project.	Hedging instruments (e.g. swaps).	Private Party.
Interest rate risk	These are factors affecting the availability and cost of funds.	Hedging instruments. Fixed rate loans	Private Party.
Tax rate change risk	The possibility that changes in applicable tax rates (income tax rate, VAT) or new taxes may decrease the Project party's anticipated return.	Termination by Private Party with compensation for tax increases or new taxes arising from Discriminatory Changes in Law.	In relation to tax increases or new taxes arising from General Changes in Law, Private Party. In relation to tax increases or new taxes arising from Discriminatory Changes in Law, the Institution.
Inflation risk	The possibility that the actual inflation rate will exceed the Projected inflation rate. This risk is more apparent during the operations phase of the Project.	Index linked adjustment to Unitary Payments or user charges. However, index-linking not blanket, but only to specified input items.	Shared between the Private Party and the Institution in relation to specified input items.

Category	Description	Mitigation	Allocation
Insurance risk	The possibility (i) that any insurable risks may become uninsurable in the course of the Project Term or (ii) of substantial increases in the rates at which insurance premia are calculated.	At the option of the Institution, self-insurance by the Institution or, if the uninsurable event occurs, then termination of the Agreement with compensation to the Private Party. Reserves.	In relation to (i), if the Private Party caused the uninsurability (or, even if it did not, the Private Party cannot show that similar businesses would stop operating without the insurance in question), then the Private Party bears the risk. If this test fails, then the risk is shared between the Private Party and the Institution. In relation to (ii), the Private Party (save if caused by Institution variations).
Residual value risk	The risk that the Project Assets at termination or expiry of the Agreement will not be in the prescribed condition for handback to the Institution.	Obligations on Private Party to maintain and repair. Audit towards the end of Project Term. Security by the Private Party in favour of the Institution, e.g. final condition bond, or deduction from Unitary Payment. Reinstatement obligations on Private Party.	Private Party.

Source: http://www.treasury.gov.za/ standardised PPP provisions/risk matrix may 2003 (draft).

3.3.2.4 Summary/Implication.

Of the risks identified, interest rate risk and exchange rate risk could be mitigated through hedging instruments such as interest rate and or exchange rate swaps. Also, the use of fixed interest instruments, which could take the form of bonds, could be used to address these risks. Other innovative hedging products that could be used, although not suggested as these are considered highly geared and hence risky instruments, are options and futures contracts on fixed rate instruments. The table also seems to suggest that the majority of the risks should be borne by the private sector. This would mean that the private sector will need to have proper risk management systems in place to adopt such projects and to be able to develop innovative financing solutions in order to manage its risk exposure to these projects.

3.3.3 Separate Unit Established by the Development Bank of South Africa to Encourage Private Participation in Public Projects

The DBSA has formed a special unit, which is committed to mobilise private sector resources for infrastructure development. During the start of a major transformation phase in 1995 and 1996, the DBSA exerted greater emphasis on securing private sector co-financing for projects within its development portfolio. This initiative has focused on projects where the borrower-operator is a public entity, rather than those projects involving the private provision of infrastructure.

The bank has found that this has been a successful approach to private participation in public projects and will remain an integral component of the DBSA's operations. Policy shifts towards the private provision of infrastructure, however, presents an opportunity for the bank to play a broader catalytic role in facilitating greater private sector involvement in providing and operating infrastructure services.

In order to facilitate more extensive provision of infrastructure, the bank is supporting initiatives at various levels of government and the private sector to encourage the private provision of infrastructure. This commitment includes the provision of project structuring advice and technical assistance to national, provincial and local government bodies.

In defining the nature and scope of the DBSA's support role, cognisance has been taken of the experience of a range of national and multilateral development finance institutions. Two broad areas of support have been identified by the DBSA, namely: (bullets)

a. the provision of technical assistance; and
b. the fulfilment of a financing role,

which are further explained below.

a) Technical assistance

Technical assistance entails the provision of professional support by DBSA staff, where appropriate, and assisting in mobilising financial and technical support from third parties for public sector clients.

In the context of the private provision of infrastructure, the DBSA intends to make its technical assistance available largely to public sector clients. The bank will concentrate its support on those stages of the process and those issues that are pivotal to structuring the project in favour of the best interests of consumers and taxpayers. The DBSA's role is not intended to be all-inclusive and will allow private sector organisations, which are better placed to provide services to clients. Further the DBSA will assist clients in securing appropriate professional support in managing the infrastructure project.

b) Financing role

Financing entails the provision of a range of financial products to private and public sector organisations. Where the DBSA's financial products are not necessary to finance the project efficiently, the bank will not consider a financing role. The bank's financing role will be determined primarily by the need to play a catalytic role in leveraging private sector investment for infrastructure projects.

The financing instruments that the bank can make available include *inter alia*[12]:

a) loan finance;
b) equity investments;
c) guarantees on capital;
d) refinancing commitments; and
e) preparation assistance loans to public sector clients.

The precise terms for providing these products are specified for each individual project.

The DBSA special unit dedicated to the mobilising of private sector investment for infrastructure projects is referred to as the Private Sector Investments Unit. The bank has developed expertise in the following areas[13]:

a) water and sanitation;
b) solid waste management;

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[12] http://dbsa.co.za.

[13] http://dbsa.co.za.

c) transportation;
d) energy;
e) telecommunications;
f) health; and
g) education.

The above fields of expertise enable the bank to provide a valuable service to the structuring of project finance.

3.4 Summary

In summary various initiatives have been undertaken by the key players in the development of a private sector financing market for public sector projects. The most notable of these have been the developments at local government level with the development of legislation and regulations to cater for a municipal debt market.

At National Treasury level, the establishment of the PPP unit has met with success and has developed detailed guidelines much of which has been borrowed from international experience in this sector to develop the private sector financing and or partnership for developing what used to be referred to as public sector goods.

Local institutions such as the DBSA have also developed a separate unit to help aid in the encouragement and development of the private sector debt market for public sector projects. In this regard the aid provided is in the form of both technical as well as financial assistance to the private and public sectors for a synergistic relationship to blossom.

The next chapter focuses on the design of the questionnaires that are used in this study to collect data from market participants, sample selection procedures and data manipulation techniques.

Chapter 4
Design of the Questionnaire, Sample Selection Procedures and Data Manipulation Techniques

4.1 Introduction

The focus of this chapter is on the design of the questionnaire, sample selection procedures and data analysis techniques to interrogate the responses both from questionnaires and direct interviews.

The aim of the questionnaires and interviews is to collect data on four main issues, namely:

a) the extent of the problem brought about by lack of the development of an infrastructure debt market in emerging markets, where the need for such development is critical, both economically and socially;
b) the legal and or social environment that either impedes or caters for the development of an infrastructure debt market;
c) the measures that have been put in place to address the perceived weakness in developing an infrastructure debt market; and
d) the types of debt and or other financial instruments used to finance infrastructure projects.

4.2 Design of Questionnaire

Two basic types of questionnaires are designed. The first is generic, and focuses on developments in international markets regarding the development of an infrastructure debt market. The second is specific to pre-selected organisations that are actively involved in the development of an infrastructure debt market in Southern Africa.

4.2.1 International Standardised Questionnaire

The purpose of the international – or what is termed in this paper 'generic' - questionnaire is to test for the existence of a locally developed infrastructure debt market. The questionnaire also aims to analyse the reason(s) for the lack of or development of such a market.

In analysing the reasons for the development of an infrastructure debt market, emphasis is given to the types of financing instruments and or schemes employed to generate investor appetite for the participation of the private sector in developing public sector projects.

The questionnaire takes the following format, namely:

a) Background

This section focuses on the reason(s) for the survey and what is expected to be accomplished from the survey. Issues of confidentiality are addressed to give assurance to potential respondents that, if required, their responses will be kept confidential and will not be divulged for any other purposes other than for the purpose of this research project.

b) General Overview of market infrastructure

Under this section questions raised address issues such as the type and extent of a developed market infrastructure. This entails obtaining information on the following broad areas:

- types of capital markets (equity, derivative and debt);
- size of capital markets in US$ terms;
- extent of regulation of capital markets (an overview);
- general economic indicators such as gross domestic product, price inflation and the *per capita* gross domestic product for a three-year period from 2000 to 2002.

c) Legal environment to support the development of an infrastructure debt market

Questions on the prevailing legal environment are looked at in addressing the stability of the legal infrastructure in contributing to and or enabling the participation of the private sector in the development of public sector projects. In essence three questions are raised which attempt to assess the legal stability in the jurisdiction and will focus on the following areas, namely:

- protection of investors regarding financing made available;
- extent of corporate law in addressing corporate governance issues in managing private public projects; and
- recognition of international law practice for the management of such projects.

d) <u>Socio-economic environment that either contributes to or impedes the development of an infrastructure debt market</u>

Under this section of the questionnaire an analysis is done on the socio-economic environment through the collection of data relating to issues such as:

- unemployment rates;
- population growth rates;
- interest rate which focus on the prime lending rate; and
- the extent of infrastructural backlogs and the nature of these backlogs.

e) <u>Projects that have been or that are expected to be implemented to encourage private sector participation in public projects</u>

In this area of the questionnaire, respondents are required to identify what initiatives have been or are likely to take place to involve the private sector in funding public sector projects. In addition, respondents are required to state which projects, if any, have been funded through the issue of debt that has been listed on a recognised exchange and at what rate of interest are such projects funded. For comparison purposes, respondents are asked to identify the number of basis points that have been incurred on such funding over the US Treasury bill rate.

f) <u>Financial engineering techniques used to encourage private participation in public projects</u>

This section of the questionnaire is aimed at those respondents which have indicated the existence of a private sector project finance debt market. Respondents are required to identify financing arrangements and or schemes that have been successfully implemented to finance public sector projects. In this regard the questions are aimed at establishing the following:

- types of financial instruments used to finance public sector projects;
- debt covenants applied to ensure safety of lender financing;
- whether financing schemes are in the form of securitisation, and the type of securitisation applied (such as collaterialised debt obligations or enhanced securitisation structures); and
- whether the instrument used has been listed on an exchange and, if not ,then reasons for this.

4.2.2. Organisation Specific Questionnaire

The purpose of the organisation specific questionnaire is to ascertain the nature and extent of the organisation's involvement in the development of an infrastuctural debt market in Southern Africa. Further, the questionnaire focuses on the types of financial engineering structures that have been employed to encourage private participation in developing the local infrastructure.

This organisation specific questionnaire takes the following format:

a. <u>General overview of the organisation</u>

Under this section of the questionnaire basic data is collected regarding the nature of the organisation with an emphasis on what business it is involved in, the size of the organisation based on its turnover and number of employees, the divisions of the organisation that are involved in infrastructure debt financing and the legal status of the organisation, that is, is the entity governed by statute.

b. <u>Financial engineering schemes employed to encourage and to develop the participation of the private sector in developing infrastructure projects</u>

This section of the questionnaire focuses on the types of financial products employed in the financial schemes used to attract private participation to public projects. Further the use of securitisation is looked at in greater detail as a means to generate private interest and questions are designed to elicit responses on issues surrounding securitisation structures such as type of securitisation used, collateral requirements, credit rating of the special purpose vehicle which is used as part of the securitisation structure, and corporate governance principles relating to the safeguarding of lenders.

c. Development of the local bond market

Under this section of the questionnaire respondents are required to respond to the extent of their involvement in the development of the local bond market with specific emphasis on the listing of infrastructure debt on BESA. Further, respondents are required to respond to questions on developments that have taken place or is likely to take place to revitalise the infrastructure debt market in South Africa, the impediments to development of a local infrastructure debt market and the mechanisms that have been implemented or likely to be implemented to develop the infrastructure debt market.

4.3 Interviews

In addition to the questionnaire survey, interviews were also conducted to further lend to the research objective of this paper. In this regard, interviews were conducted on two levels. The first interview was directed at BESA's listing director on the development of the bond market regarding the listing of infrastructure debt and secondly to identify the areas that will need to be addressed to facilitate the successful development of the municipal debt market in Southern Africa.

The second interview was directed at the debt origination department in one of the big four banks in South Africa. The aim of this interview was to ascertain the extent of involvement by the banking sector in the provision of finance for infrastructure projects and secondly to identify the areas that will need to be addressed in order to attract private sector participation in infrastructural projects with an emphasis on developing an efficient private sector debt market for the financing of public sector projects.

4.4 Sample Selection Method

Research is conducted on an international as well as local basis. The international research entailed designing a standard questionnaire that was sent to whom in all countries identified as emerging market economies and which are members of the International Organisation of Securities Commissions (IOSCO). IOSCO has been selected as the organisation from which to select the countries as this organisation represents the international capital markets forum.

The countries classified as emerging markets in IOSCO total 74 and represent a cross section of all major economies in the world (refer Appendix V).

Local research entailed designing an organisation-specific questionnaire that was sent to pre-selected organisations, which are actively involved in the development of an infrastructure debt market either directly or indirectly. These participants were the four major banks in South Africa, namely: ABSA Bank Limited, Standard and Corporate Merchant Bank (Nedcor Bank Limited and First Rand Bank Limited (refer Appendix IV).

4.4.1 Data Analysis Techniques

4.4.1.1Qualitative Data

Summary data tables are employed in the analysis of the responses from questionnaires. Regarding the international questionnaire responses are analysed on a global basis with focus on the emerging markets. The response rate was fairly low (ten percent response) with the total population being surveyed, which is not unusual when compared to the low response rates of similar surveys conducted in the past by IOSCO. It was therefore necessary to obtain the required information from alternate sources such as the World Bank, Organisation for Economic Cooperation and the International Monetary

Fund. Market statistics on equity capitalisation and bond turnover has been obtained from the World Federation of Exchanges.

Regarding the organisation specific questionnaire, the responses are analysed per organisation and responses that are common to more than one organisation have been highlighted in a separate table as represented below:

Organisation	Question reference	Response	Unique /common

Interview responses are documented in much the same manner as the responses from questionnaires. These responses have been summarised per interviewee and not overall so as not to influence the final result through over summarisation.

4.4.1.2 Quantitative Data

As the research is exploratory in nature and the data is of a nominal (meaning data is cannot be easily measured as it is qualitative) nature, the use of charts, such as bar and line charts, is therefore be used to analyse trends in quantitative data.

An example of the two questionnaires can be found in Appendix I and II and interview questions in Appendix III.

4.5 Summary

In summary two types of questionnaires are developed, one for the international market and the other organisation specific. Interview questions are designed along the same lines as that of the questionnaire and are addressed to two participants in the research with one interviewee being from BESA and the other from the debt origination department of one of the big four banks in South Africa.

All countries which represent the emerging market category of IOSCO were surveyed using the international questionnaire. For the organisation specific questionnaire only those entities (as mentioned in Chapter 1) that are actively involved in project finance work were selected for the research.

As response data is nominal in nature, extensive use of graphical tools is employed to analyse the data. Also, data tables are used to group the responses received from questionnaires.

The next chapter will focus on the analysis of the data that will be received from the questionnaires and the interview process.

Chapter 5

Analysis of Research Data and Discussion of Research Findings

5.1 Introduction

This chapter summarises the data that has been received from the questionnaire and interview process. The analysis presented in this chapter is compiled on the basis of the responses received from the emerging market countries and or regions, responses from the local banking sector and the interview response from BESA.

5.2 Responses from the Emerging Market Countries

The questionnaire for the international community was sent to all emerging market countries that are members of IOSCO. However, given the low response rate in terms of this survey and also the low response rates in terms of similar surveys that have been conducted in the past such as the World Bank survey on the development of developing countries government bond markets, it was necessary to survey other international databases to obtain the required information. In this regard the analysis presented below is an overview of the status of implementation of the extent of private public participation in infrastructure development in emerging markets.

5.2.1 Analysis of Public Private Participation in Infrastructure Development by Emerging Market Countries

According to Chang and Imura (2001), public private partnerships have been recognised as a solution to the development of creating an efficient means to developing the infrastructure of Asian developing countries. Chang and Imura (2001, 1) state:

> With the start of the 21st century, increase in urban population has accelerated especially in Asia, and Asian urban population is expected to occupy about 51% of the world's urban population. In many Asian cities, however, development of urban environmental infrastructure (UEI) such as sewage systems, wastewater treatment facilities, and waste management facilities is still insufficient, causing

> serious problems of urban pollution due to wastewater and solid waste, considerably obstructing sustainable growth of Asian countries. Funding difficulties in this area are recognized as a barrier to development of UEI, and raising necessary funds in a short period is the key to the problem.

The government and private sectors of developing countries regard the development of their urban environmental infrastructure (UEI) as critical to their economic growth. These countries still need to establish clear financial needs targets, funding methods for the achievement of these targets, and the role sharing formula between the central and local governments. Developing countries require accelerating UEI development under conditions of increasingly limited government budgets. This makes the use of private finance initiatives (PFI) as an alternative funding source attractive. This additional funding creates political effects such as acceleration of UEI development, cost reduction and improvement of investment efficiency, promotion of environmentally friendly consumption patterns, technology transfer to developing countries, and the promotion of an environmentally friendly industry (Chang and Imura, 2001).

Many of which countries have prepared legislative and political measures to promote PFI projects, and started implementation of such projects not only in the economic infrastructure areas but also in the water, fluid and solid waste management areas. Furthermore, the acceleration of sound PFI activities requires the establishment of a new system to implement proposed PFI projects. Public-private partnership (PPP) has therefore been identified as an indispensable and effective means of achieving this objective.

In order to establish an effective PPP, there should be an optimum combination of risk sharing and profit sharing in UEI projects between the public and private sectors. In this regard important issues that have been identified are the enactment of necessary laws/regulations and decrees; the establishment of an implementation system; risk-avoiding measures; incentives in taxation; land use permission and the like; transparency of funding; and the preparation of manuals of project processes.

Establishment of PPPs requires high-level administrative capabilities, and negotiation capabilities including selection and evaluation of private companies as well as risk management evaluation techniques. The public sector of many developing countries is lacking in know-how and experiences of UEI development. In this regard such countries will have to collect many examples of PFI projects from various countries who have successfully implemented PPPs, and clarify the factors in their success so as to assist them in formulating an effective PFI.

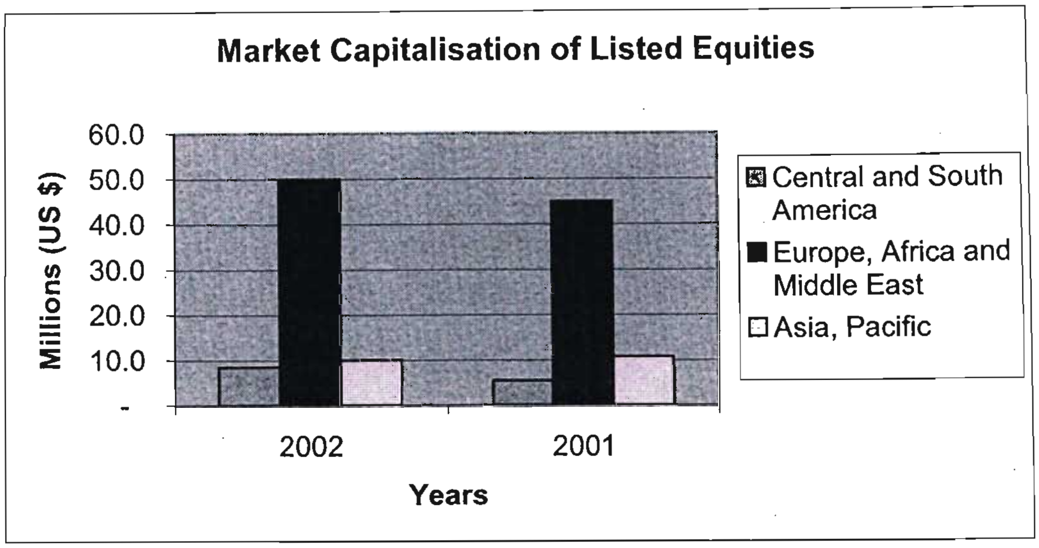
Further, in many emerging market countries, the existence of severe socio-economic problems coupled with public sector mismanagement; act as a deterrent to private sector participation in infrastructure development. The existence of high unemployment rates, political volatility, high incidence of HIV Aids, especially in Africa, and weak legal structures have also contributed to weak domestic capital markets and to the unease with which the private sector contributes to infrastructure development.

Where debt has been used as a funding instrument, such instruments are of a vanilla type, that is, these bonds have no credit enhancements attached to them, and carry an investment grading, similar to that of their local country credit ratings. As many of these ratings are of a "non-investment grade", this creates a further impediment to fully developing an efficient debt market. The reason for this is that investors in such projects look towards projects that are of an investment grade rating. This then translates into a positive investment climate when making such investments thus encouraging further investment in such projects.

5.2.2 Summary Market Statistics for Emerging Markets

The graphs below represent the capital market statistics for the emerging market countries in Central and South America, Europe, Africa, Middle East and Asia. Figure 5.1 is a graphical representation of the market capitalisation of listed companies for the regions as identified. Figure 5.2 is a graphical representation of the turnover value of bonds traded for the similar regions over the years 2001 to 2002. The statistics have been adapted from the World Federation of Exchanges[14].

FIGURE 5.1: MARKET CAPITALISATION OF LISTED EQUITIES IN DEVELOPING COUNTRIES



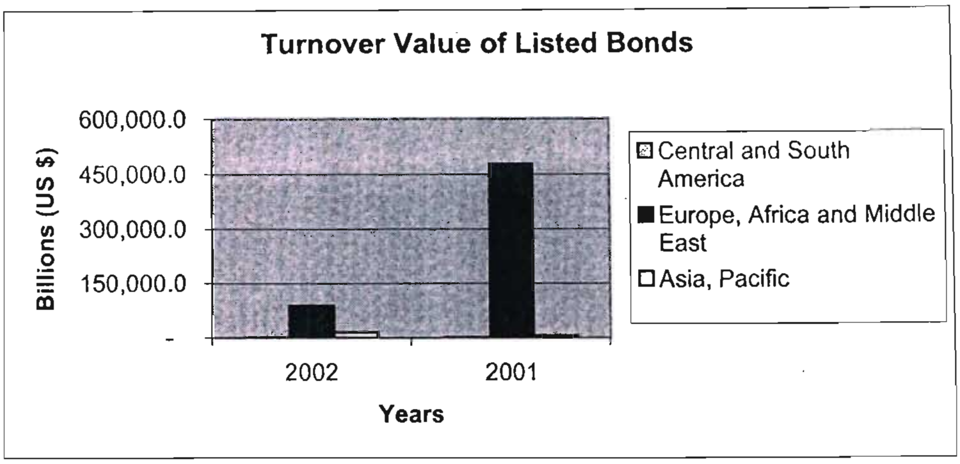
Source: Adapted from http://www.fibv.com.

The above graph shows that of the emerging market countries, the largest market capitalisation is in the Europe, Africa and Middle East regions with the smallest market capitalisation in Central and South America and Asia. This could be the result of lower market capitalisation regions experiencing significant market turmoil in the late 1990's and early 2000's with the Asian crises and the Argentian crises respectively.

The next chart is a graphical representation of the value of bond turnover in developing countries for the period 2001 to 2002.

[14] www.fibv.com.

FIGURE 5.2: TURNOVER VALUE OF LISTED BONDS IN DEVELOPING COUNTRIES



Source: Adapted from http://www.fibv.com

The above graph shows that the highest bond turnover is in the Europe, Africa and Middle East region. In addition, the value of bonds traded far out shadows the value of equities. The implication is that bonds have a higher turnover than equity listed instruments. This is because investors prefer bond investments to equities in environments that are considered highly volatile. This allows bond investors a certain amount of protection in terms of loan covenants whereas an investment in equities does not readily lend to investor protection. Therefore it would stand to reason that in developing private public participation PPP programmes, governments would seek to encourage the funding of such projects using debt instruments and to further encourage the private sector to list such bond instruments to create market depth in the number and type of instruments traded thereby facilitating greater liquidity.

Table 5.1 shows that the largest portion of the bond turnover in the Europe, Africa, Middle East region stems from the public sector with limited private sector participation (that is, $65 billion public debt versus $21 billion private debt in 2002).

Table 5.1: Bond Trading Statistics for Developing Countries 2001 and 2002			
Region	**Type of bond**	**2002 Billions (US$)**	**2001 Billions (US$)**
Central and South America	Domestic private	411.6	456.2
	Domestic public	364.4	719.7
	Foreign	6.8	0.9
Europe, Africa and Middle East			
	Domestic private	21,668.5	18,005.0
	Domestic public	65,181.9	455,885.6
	Foreign	1,800.0	3,194.0
Asia, Pacific			
	Domestic private	682.4	107.2
	Domestic public	14,649.9	6,367.5
	Foreign	-	-

Source: Adapted from http://www.fibv.com

The above table also reflects that whilst the public sector debt occupies a significant portion of total listed debt, this is decreasing with private sector debt increasing. The exception is found in the Asia, Pacific region whereby both private and public sector debt is increasing.

5.3 Responses from the Local Banking Sector

The organisation specific questionnaire was sent to four of the largest banks in the country namely, Standard Corporate and Merchant Bank, a division of Standard Bank Limited, ABSA Bank Limited, Nedcor Investment Bank Limited and First Rand Bank Limited. The questionnaires were sent to the project finance divisions of these organisations. Responses were received from all of the participants and have been summarised in Tables 5.2 and 5.3 below.

The information from the organisation specific questionnaires is arranged in two tables. Table 5.2 gives the general corporate information as required by Question 1 of the questionnaire, which required the organisation to briefly identify the nature of their business and to state the organisation's market capitalisation as of 2002. Table 5.3 provides an analysis of the responses to Questions 2 to 7 of the questionnaire as per Annexure II.

Table 5.2: Organisation Specific Information (Response to question 1)

Organisation	Question 1 (2) Response	Question 1(3) Response
Standard Corporate and Merchant Bank	Provision of corporate banking and merchant banking services such as project finance, structured finance and corporate finance services.	R44,7 billion (market capitalisation of Standard Bank South Africa Limited)
ABSA	Retail and corporate banking services with specialised finance provided through ABSA Corporate and Merchant Bank..	R32,7 billion
First Rand Bank	Retail and corporate banking services with project finance provided by Rand Merchant Bank a subsidiary of First Rand bank.	R42,8 billion
Nedcor/BOE	Retail and corporate banking services.	R26,1 billion

Table 5.3: Organisation responses to questions 2 to 7 of questionnaire		
Organisation	**Question reference**	**Response**
Standard Corporate and Merchant Bank	2	Excellent
	3	N3 toll road. Funding is in the form of a promissory note issue and yield is significantly higher than benchmark government bond yield, namely the R150.
	4	Securitised structures have in the main been used. Also the use of swaps and options in structuring of such debt products.
	5	Regulations have not yet been promulgated for the Municipal sector. The culture of non-payment by ratepayers creates uncertainity in funding future cash flows. Poor record keeping by municipalities have resulted in debt being raised but not reflected on the municipal accounting records.
	6	Good
	7	Positive, will improve transparency of such debt.
ABSA	2	Good
	3	Information not available due to confidentiality nature thereof.
	4	Use of swaps and options used in structuring such debt. Recently, use of securitisation in the form of collateralised debt obligations.
	5	Concerns are similar to those raised by SCMB.

	6	Good
	7	Positive
First Rand Bank	2	Excellent
	3	First Rand bank acting through its subsidiary Rand merchant Bank sponsored the issue by the National Roads Agency for the listing of a bond on BESA which is government guaranteed with a coupon of 10.75%.
	4	Traditional derivatives used such as swaps and options together with credit enhancements in the form of government guaranteed debt.
	5	Poor municipal governance structures in the past but the new Municipal Finance Management Act will seek to address these issues once promulgated.
	6	Good
	7	Positive
Nedcor/BOE	2	Good
	3	Non-disclosure requirements prohibits bank from disclosing such information.
	4	Derivatives applied but mainly debt is government guaranteed.
	5	Concern raised over the stability of municipals being able to service funding costs of future uncertain cash flow streams.
	6	Good
	7	Positive

Based on the results from the above table, the responses to Questions 6 and 7 were common to all participants. In essence, all participants concurred on the view that private sector funding for the public sector projects has not been fully developed but that this will take time given the concerns of investors. Participants further agreed that legislation is the key to unlocking the efficiency in the private sector funding of public sector projects. The use of vanilla instruments with limited application of certain derivative instruments such as options have been used in the funding of public sector projects.

5.4 Response from BESA Interview

The interview was conducted with the listing director (Allen Jones) of BESA and a self-administered questionnaire was used in the interview process. Appendix III sets out the structure of this questionnaire that was used in the interview process. The responses from the interview have been summarised in Table 5.4 below.

Table 5.4: Responses from BESA interview

Question reference	Response
1	The rating of the development of the private sector debt market for the funding of public projects was assessed as being poor. The reasons advanced for this related mainly to historical differences in institutions funding policies, lack of understanding of products by certain investors and lack of regulatory infrastructure to afford protection to investors. The latter point has been addressed to a certain extent in that securitisation regulations have been expanded to include not just bank securitisation structures thus allowing municipalities to raise debt through such structures. The promulgation of the Municipal Finance Management Act will also lend impetus to further developing this market through its protection mechanisms for investors.
2	Lack of education of issuers regarding the use of a formal debt market to raise funds as traditionally all funding needs were raised via bank loans, advisors being from the previously disadvantaged groups have not been properly trained in debt origination and hence lack knowledge, tax regime not investor

	friendly especially regarding capital gains tax which acts as a disincentive to investing in not only bonds but other types of securities. The interviewee also stated that although stamp duty has been reduced this does not go far enough to encourage further participation in the debt markets as the stamp duty was only aimed at the issuers and not the investors.
3	Yes. The debt listed is INCA which raises finance through the listing of collateralized debt obligations which are vanilla in type and the yield applicable to such issue currently stands at 12,09%. Such listing has been on BESA since 1997 and the proceeds from the issue are used to finance municipalities in South Africa. The listing has been fairly successful in terms of its duration and amount raised which is R3, 8 billion to date.
4.	BESA has participated on various regulatory committees. The municipal finance management committee, which caters for the establishment of a debt market for the raising of debt finance by municipalities, has been actively trying to rejuvenate this market of which BESA has been an active participant. BESA also closely liaises with the South African Reserve Bank on certain regulations that would affect the bond market such as securitisation regulations. The main aim of BESA in developing this market is to ensure that there are adequate mechanisms in place to protect investors and to this extent BESA continuously monitors developments in the market for any issue that needs attention such as the use of rating agencies and their standing in the investment community.
5.	Such issues will need to obtain a mandatory credit rating, regulations will need to be issued to provide for the comprehensive disclosure of information by way of public placement documents, regulations must keep up with international best practices and implementation of sound corporate governance structures to ensure the stimulation of listing such debt products.

5.5 Summary

In summary the responses were received from local and international participants and represented a cross section of views pertaining to the use of private sector debt to fund public sector projects. Various concerns were raised and in certain cases solutions to the present problems of developing an efficient debt market for the funding of infrastructure projects were suggested. Such solutions ranged from the implementation of a sound legal infrastructure to ensure protection of investor's investments in public projects, to issuers ensuring that they adopt sound corporate governance practices and implement proper record keeping procedures so as to ensure that all assets and liabilities have been properly accounted for. Further the use of credit rating agencies to rate the debt and more importantly the project cash flows was highlighted by BESA as being critical to the success of private participation in public sector projects.

Responses are summarised in a manner that could be used to assist in developing the recommendations and findings. Tables are used to summarise the data gathered from the questionnaire process and the interview held with BESA. Data that could not be obtained was clearly highlighted as such and the reason for non-disclosure was mainly due to the confidential nature of the information requested. Further, low response rates were evidenced from the international survey. This was however expected given the low response rate to similar surveys performed by IOSCO and the World Bank in the past. In lieu of this it was deemed necessary to conduct further literary research into recent surveys conducted into the funding of public sector projects by the private sector.

Against the backdrop of the information gathered by the survey methods, Chapter 6 turns to consider the findings and recommendations of the research.

Chapter 6

Findings, Recommendations and Legal and Regulatory Implications for the Development of an Efficient Debt Market in the Funding of Public Sector Projects

6.1 Introduction

This chapter focuses on the findings and recommendations of the research reported on in the previous chapters of this study. In addition, the implications of the findings and or recommendations are discussed to further lend to the proposed solutions to developing an efficient debt market for the funding of public sector projects.

6.2 Findings

Based on the research conducted, the findings reveal that the African continent is lagging behind in the development of a private sector debt market for the funding of infrastructure projects, although significant progress is being made in certain parts of Africa such as Zambia, Namibia, Zimbabwe and South Africa in creating and providing an efficient debt market for the funding of public projects.

Internationally, the trend has been to move away from excessive reliance of government debt and towards private sector debt. Based on the capital market statistics provided in the preceding chapter this is clearly evident in the Europe, Africa and Middle East region where public sector debt has declined from $455 billion in 2001 to $65 billion in 2002 and the increase in private sector debt from $18 billion in 2001 to $21 billion in 2002. This translates into an increasing role of the private sector in the listing of new debt. It also means that with more private sector involvement in the debt market, public projects are likely to benefit there from through the increased participation of the private sector.

Further, it has been recognised that several developing countries have already implemented laws and or regulations to cater for the public private partnership to facilitate the funding of public sector projects by the private sector. These laws and or regulations implemented ensure that adequate legal mechanisms are in place that protect the interests of the issuer and does not go far enough in addressing the needs of the private investor. However, more work still needs to be done in this area and specifically entail establishing adequate mechanisms for the risk sharing between public and private sectors, enactment of laws and regulations to ensure sound legal infrastructure is in place for the protection of investors, implementation of proper administrative systems to monitor progress on project development, incentives in taxation; land use permission and the like; transparency of funding; and the preparation of manuals of project processes.

Of the emerging market economies in Africa, South Africa appears to lead the way in developing an efficient private sector debt market for the funding of public projects. This is evidenced by the establishment of the regulations for the governing of public private partnerships by National Treasury and the establishment of the Municipal Infrastructure Investment Unit to facilitate the funding of municipalities by the private sector. However, regulation in itself does not solve all investor problems. This is evident in the ambivalence of the private sector in funding public projects that are not backed by government guarantees. The evidence of this is clearly to be gained from the listing statistics of BESA where investors have invested in public projects such as Trans Caledonian Tunnel Authority and DBSA on the basis of these issuers being backed by an explicit government guarantee.

The lack of private sector interest in funding public sector projects is mainly due to public projects being considered the domain of the government and therefore considered a public good and the concern by the institutional investors that the present and or absence of current legislation does not adequately ensure the protection of investors.

According to Allen Jones the key to unlocking the development of a private sector debt market is to ensure that an adequate infrastructure is provided for to cater for price transparency. Regulation of the debt market should not be viewed as the same for the equity market given that the former market is a professional market. Further proper legal mechanisms should be created to ensure the protection of investors, and a concerted effort should be placed in the education of potential investors and issuers such as municipalities and other government bodies on the use and listing of debt products to raise finance. The present tax regime should be investor friendly as the existing tax benefits in the form of reduced stamp duty for listed debt products only benefit the issuers and not the investors.

The limited success of funding public projects through the use of listed debt products is evidenced by the fact that only one major issuer is listed on BESA namely INCA, which has debt listed on BESA of approximately R3.8 billion with a yield of 12.08 percent. This when compared to other instruments such as the R150 (government benchmark bond) which is capitalised at R 72 billion and currently trades at 9.45 percent and DBSA which is capitalised at R6.6 billion and trades at approximately 10 percent (BESA surveillance division) reflects the significant premium that investors require on the INCA bond which is 120 basis points above the government benchmark bond and 108 basis points above the DBSA bond. Further, the listing of existing and past debt products, in the main, have been limited in financial innovation as the nature of such debt has been vanilla with credit enhancements in the form of government guarantees.

The banking sector of South Africa, have identified as a main cause the lack of interest in funding public sector projects as being the mistrust in government structures due to poor or severely lacking corporate governance structures in certain government sectors such as that of municipalities. This sector is seen as being the major investor in such projects, having funded previous projects using traditional debt structures. Such debt structures have been packaged as credit enhancements in the form of government guarantees and derivative type products. However, recently the increased use of securitisation structures have been used to fund new private sector debt issues which points towards more innovative financial engineered products.

6.3 Recommendations

The main aim of the recommendations presented in this chapter is to highlight important areas that need further attention in order for an efficient debt market to be developed in the financing of public sector projects. The recommendations differ from the proposed solutions section, to be discussed later on in this chapter, in that the proposed solutions will focus on specific financial engineering solutions to attract private sector lenders to public sector projects.

The recommendations that follow are not exhaustive as the research conducted is confined to the emerging market countries. Moreover, responses from the emerging market countries questionnaire were extremely low. Nevertheless, the information captures what is believed to be the essence of the concerns raised in the previous section of this paper, namely: the enactment of appropriate laws and regulations that need to be passed by government to ensure that investors in such projects are adequately protected; existing tax regulations will need to be adapted to promote investor incentives for investing in public projects; municipalities should be equipped with the ability to raise revenue to enable them to fund future commitments; the establishment of a clear mechanism that establishes which risks are to be shared between the public and private sectors; the implementation of an adequate price discovery system to cater for price transparency so as to ensure that bond prices are relayed to potential investors in an efficient and effective manner; and the adoption of sound regulatory practices that takes into account the nuances between the debt market and the equity market. Following hereunder is a detailed discussion of the recommendations.

6.3.1 Enactment of Laws and Regulations

The enactment of appropriate laws and regulations will need to be passed by government to ensure that investors in such projects are adequately protected. In this regard, the specific legislation that will need urgent attention is the Municipal Finance Management Act proposed regulations, which deal with the disclosure criteria for the listing of municipal bonds.

6.3.2 Promotion of an Investor Friendly Environment

Existing tax regulations will need to promote investor incentives for investing in public projects. The use of effective tax incentives act as a significant promotional tool in attracting private sector investors to investing in public sector projects. These incentives allow investors to obtain an enhanced yield on their investments through a higher after tax profit generated from holding such investments.

6.3.3 Promotion of Local Taxing Ability Especially for Municipalities

Municipalities should have the ability to raise revenue to enable it to fund future commitments. These are considered important in light of municipalities experiencing a high degree of uncertainty on the collection of rates due to the culture of non-payment. Additional revenue sources will allow the municipal to raise cash to fund debt obligations and not incur substantial write offs through the non-payment of rates by ratepayers.

6.3.4 Establishment of a Risk Sharing Mechanism between Public and Private Sectors

There should be a clear mechanism that establishes which risks are to be shared between the public and private sectors. Such risks should, in as far as possible, be quantified with a clear formula for the allocation of such risks between the public and private sectors.

6.3.5 An Adequate Infrastructure should be Provided to Cater for Price Transparency

An adequate price discovery system should be implemented to cater for price transparency so as to ensure that bond prices are relayed to potential investors in an efficient and effective manner thus contributing to an efficient market. The lack of an adequate price discovery system would lead to potential investors not wanting to invest in such projects.

6.3.6 Regulation of the Debt Market should not be Viewed in the Same Manner as that of the Equity Market

Debt market regulation should not be viewed in the same manner as that of the equity market as the debt market is a professional market whereby investors are institutions and the bonds are placed on a private placement basis. Traditionally, such investors have adopted a buy and hold strategy thereby resulting in a constrained secondary market for such debt. This latter point is critical to ensuring an efficient debt market for the funding of such debt by the private sector as investors need assurance that they will be able to exit an investment in a liquid secondary market. Although buy and hold could be an efficient investment strategy, even if it is not useful in making a market.

6.4 Legal and Regulatory Implications

Regulation of capital markets should be guided by the founding principles of effective market regulation as envisaged by IOSCO. These are to ensure the protection of investors, the promotion of efficient markets and the prevention of systemic risk.

Legislation that intends to regulate the debt market should take into account the needs of investors and that of the market as a whole and should not be overly restrictive in application, which results in an "overkill" approach to regulation. This in turn does not lead to an efficient debt market signified by a deep secondary market as debt will more than likely be traded on an over the counter basis and not through a licensed exchange.

The passing of the recent securitisation regulations is a step that will further promote an efficient debt market through issuers adopting sound disclosure practices.

The promotion of local taxing ability may not be well received by domestic tax authorities has this as the effect of removing autonomy over tax collection by central government to provincial government thus creating political tension and leading to a delay in infrastructure development.

The expected promulgation of the municipal regulations will promote issuer transparency through better disclosure and governance practices. As part of the regulations the issuers will be required to obtain a credit rating, which will allow potential investors to better understand the risks of investing in such debt instruments. However, the issue of which rating agency should be used and how should the criteria for selection of such an agency be established are questions which government needs to provide solutions to as they are loaded with political sensitivities.

The issue of the private public partnership regulations by National Treasury provides an essential framework for the development of the PPP unit. These regulations do not address the issue of using the debt market for the effective allocation of risks. However, National Treasury recently issued a draft of the risk allocation matrix to be adopted by government for the allocation of risks between private and public sectors.

6.5 Proposed Solutions

This section focuses on possible financial engineering techniques that could be used by the private sector in addressing their concerns and allowing for public sector issuers to tap the debt market for much needed capital for infrastructure development.

The one financial scheme that has been gaining increasing acceptance for funding of public projects is that of securitisation. The use of securitisation for raising capital is regulated by the South African Reserve Bank. Securitisation is popular for funding public projects in that finance raised is specific for projects. Thus project cash flows are ring fenced through the use of a conduit such as a separate special purpose vehicle that is owned and controlled by parties independent of the originator.

This type of structure allows for proper governance of the entity raising the funds and for proper record keeping and accounting of the cash flows securitised. Securitised structures also allow issuers to raise finance either through the traditional securitisation route whereby the underlying assets are sold to the SPV or the credit risk is transferred to the SPV without the underlying assets being transferred or better known as credit enhanced type of securitisation. These types of structures thus enable the issuer to better manage their finances and for the investor to choose a risk level that he or she is willing to take on.

6.6 Summary

In conclusion the extent of the private sector funding public sector projects from an international and local perspective is dependant on several factors such as the existence of appropriate laws and or regulations to protect investors, extent of tax incentives afforded to investors in investing in such projects, political stability of the host government, adoption of sound fiscal and monetary policies followed and the extent of socio-economic problems present in a jurisdiction.

The recommended courses of actions have focused broadly on the main issues surrounding the lack of development of an efficient debt market for the funding of public sector projects. The proposed solutions envisaged financial engineering structures to better facilitate the private sector participation in such projects.

Finally, the legal and regulatory issues concerned the situation in South Africa and the extent of regulation already in place to address the private participation in public projects. Pending regulation was briefly touched on and seen as a welcome addition to further facilitate an efficient debt market for the funding of public sector projects.

The next chapter will focus on the conclusions reached in this paper in responding to the research objectives as identified in Chapter 1.

Chapter 7
Conclusion

7.1 Introduction

In this chapter the research objectives as identified in Chapter 1 namely the reasons for the lack of investor appetite for public projects in South Africa and the financial innovation needed to address the concerns of investors in attracting private sector funding for public projects will be concluded on in terms of the underlying research data gathered from literary sources and fieldwork conducted.

7.2 Findings of the Research

7.2.1 African Continent Lags Behind in the Development of a Private Sector Debt Market for the Funding Infrastructure Projects

Based on the research conducted, the findings reveal that the African continent is lagging behind in the development of a private sector debt market for the funding of infrastructure projects, although significant progress is being made in certain parts of Africa such as Zambia, Namibia, Zimbabwe and South Africa in creating and providing an efficient debt market for the funding of public projects.

7.2.2 International Trend is to Place Less Reliance on the Government Sector for the Financing of Infrastructure Projects

Internationally, the trend has been to move away from excessive reliance of government debt and towards private sector debt.

7.2.3 Developing Countries have Implemented the Necessary Legal Infrastructure but More Needs to be Done in this Area

Further, it has been recognised that several developing countries have already implemented laws and or regulations to cater for the public private partnership to facilitate the funding of public sector projects by the private sector. However, these laws and or regulations implemented ensure that adequate legal mechanisms are in place that protect the interests of the issuer and does not go far enough in addressing the needs of the private investor. Therefore, more work still needs to be done in this area and specifically entail establishing adequate mechanisms for the risk sharing between public and private sectors, enactment of laws and regulations to ensure sound legal infrastructure is in place for the protection of investors, implementation of proper administrative systems to monitor progress on project development, incentives in taxation; land use permission and the like; transparency of funding; and the preparation of manuals of project processes.

7.2.4 South Africa Leads the Way in Developing an Efficient Private Sector Debt market in the African Continent

South Africa appears to lead the way in developing an efficient private sector debt market for the funding of public projects. This is evidenced by the establishment of the regulations for the governing of public private partnerships by National Treasury and the establishment of the Municipal Infrastructure Investment Unit to facilitate the funding of municipalities by the private sector.

7.2.5 Lack of Sound Governance Structures in the Public Sector Acts as a Deterrent to Private Sector Funding of Public Sector Projects

The banking sector of South Africa, have identified as a main cause the lack of interest in funding public sector projects as being the mistrust in government structures due to poor or severely lacking corporate governance structures in certain government sectors such as that of municipalities. This sector is seen as being the major investor in such projects, having funded previous projects using traditional debt structures.

7.2.6 Investor Related Concerns in Terms of Market Infrastructure, Political Risk and Country Risk have Contributed to the Lack of Private Sector Participation in Public Sector Projects

This finding has been expounded on in Chapter 2 as contributing to the lack of investor appetite for investing in public projects, namely: the saturation of government paper in the market, socio economic problems, lack of a developed secondary market for the trading of bonds, lack of proper accounting standards, regional instability, inadequate listings requirements by BESA, exchange control regulations and the lack of a broad product base.

7.3 Solutions

Based on the findings of the previous section the following solutions have been advanced, namely:

a. the enactment of appropriate laws and regulations that need to be passed by government to ensure that investors in such projects are adequately protected;
b. existing tax regulations will need to be adapted to promote investor incentives for investing in public projects;
c. municipalities should be equipped with the ability to raise revenue to enable them to fund future commitments;
d. the establishment of a clear mechanism that establishes which risks are to be shared between the public and private sectors;
e. the implementation of an adequate price discovery system to cater for price transparency so as to ensure that bond prices are relayed to potential investors in an efficient and effective manner; and
f. the adoption of sound regulatory practices that takes into account the nuances between the debt market and the equity market.

Further the use of securitisation as a financial engineered product could be used to attract private investors to fund public projects. This method of financing has been has been gaining increasing acceptance for funding of public projects world wide. The use of securitisation for raising capital is regulated by the South African Reserve Bank, which in itself does not protect investors in such undertakings but provides a level of comfort when making an investment. Securitisation is popular for funding public projects in that finance raised is specific for projects. Thus project cash flows are ring fenced through the use of a conduit such as a separate special purpose vehicle that is owned and controlled by parties independent of the originator.

7.4 Conclusion

In conclusion the financing of public projects by the private sector is a problem in the developing countries. This is because of a host of reasons as identified in the preceding chapters of this paper but the critical reason being that of weak governance structures in public sector institutions and the lack of proper financial management in such structures.

The recommendations advocated in this paper range from the legal and regulatory issues to that of adopting sound financial management practices. The financial engineered solution recommended is that of securitisation given the existence of a regulatory structure and the protection of the investor from the contamination that may exist in the originating entity of these cash flows.

Finally, the change in the mindset of the private sector in the funding of public projects together with the public sector adopting sound business ethics in the management of public sector institutions is urgently needed in order to stimulate the private sector debt market for the funding of public sector projects.

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Appendix I: International Standardised Questionnaire

Part 1

Purpose of the questionnaire

The purpose of this questionnaire is to assess and evaluate the extent to which the private sector is involved in the funding of public sector projects in your jurisdiction. In performing this assessment and evaluation the development of the local capital market for debt and derivative products will be analysed. For the purpose of this questionnaire public sector projects have been defined as any project that requires government funding to cater for the needs of society such as building of hospitals, dams, national road networks and other such similar projects.

As the responses to this questionnaire will be used for dissertation research purposes respondents must ensure that were such responses given are considered confidential then this must be clearly stated by way of the submissions. The researcher will ensure that such responses are carefully summarised so as not to divulge such information to third parties.

The deadline for responses is 22 August 2003 and should be e-mailed to the following address: kumaranp@fsb.co.za.

Part 2

Question 1

Please could you provide data on the following in your jurisdiction for the period 1999 to 2002, namely:

a. market capitalisation (in US$ terms) of listed debt and equity;
b. market turnover of listed debt;
c. market turnover of derivatives on listed debt instruments;
d. percentage of listed debt to gross domestic product;
e. percentage of debt relating to listed private sector debt;
f. percentage of listed private sector debt relating to the funding of public sector projects.

Question 2

Would you rate the participation of the private sector in funding public sector projects as:

(Insert a tick in the applicable box below)

i. Weak	
ii Satisfactory	
Iii Good	
Iv Excellent	

Question 3

Would you attribute the development or lack thereof of the private sector debt market in funding public sector projects in your jurisdiction to the following:

(Insert a tick in the applicable box below)

i. Socio economic	
ii. Political	
iii. Legal	
iv. Economic	
v. Other	

Where your response is other, please specify what these factors are.

Question 4

Based on your response to question 3, what do you consider as the key contributing factors to the development or lack thereof, of the increased participation of the private sector to funding public sector projects?

Question 5

Would you attribute the key conditions to developing a private sector debt market for the funding of public sector projects as follows:

(Insert a tick in the applicable box below)

i. regional stability	
ii. macro economic stability	
iii. legal covenants to secure investor interests	

iv. all of the above	
v. other	

Where your response is other, please specify.

Question 6

In developing a liquid private sector debt market for the funding of public sector projects, would you attribute any of the following conditions as a precursor to the development of such a market:

(Insert a tick in the applicable box below)

i. highly liquid government debt market	
ii. mandatory credit ratings for such debt	
iii. established governance structures	
iv. adoption of international accounting practices	
v. all of the above	
vi. other	

Where your response is other, please specify.

Question 7

a. Has government in your jurisdiction issued debt, including on a local or foreign bourse, to fund public sector projects?

b. If such debt has been rated, then would you classify the rating as being:

i. investment grade	
ii. non-investment grade	

c. Do you think that the credit rating of the debt issuance has contributed to the liquidity, either negatively or positively?

Question 8

What initiatives have been undertaken or are is currently being considered to enhance the private sector debt market for the funding of public sector projects?

Question 9

In developing the private sector debt market for the funding of public sector projects what types of financial engineering schemes have been employed in the funding of such projects? (An example would be the use of securitisation schemes)

Appendix II: Organisation Specific Questionnaire

Part 1

Purpose of the questionnaire

The purpose of the organisation specific questionnaire will be to ascertain the nature and extent of the organisation's involvement in the development of a public sector debt market in Southern Africa. Further, the questionnaire will focus on the types of financial engineering structures that have been employed to encourage private participation in developing the local infrastructure.

For the purpose of this questionnaire public sector projects have been defined as any project that requires government funding to cater for the needs of society such as building of hospitals, dams, national road networks and other such similar projects.

As the responses to this questionnaire will be used for dissertation research purposes respondents must ensure that were such responses given are considered confidential then this must be clearly stated by way of the submissions. The researcher will ensure that such responses are carefully summarised so as not to divulge such information to third parties.

The deadline for responses is 25 August 2003 and should be e-mailed to the following address: kumaranp@fsb.co.za.

Part 2

Question 1

Please could you provide the following information regarding your organisation:

1. Name of organisation :

2. Nature of business:

3. Size of organisation in terms of market capitalisation:

Question 2

Would you rate your organisation's involvement in the development of the private sector debt market for the funding of public sector projects as being: (Insert a tick in the applicable box below)

i. weak, no involvement	
ii. good, involved takes place either on an advisory or funding capacity	
iii. excellent, involvement takes place on both advisory and funding	

Question 3

What public sector projects have your organisation assisted either from a technical and or funding perspective? In answering this question please specify the following:

i. type of project,

ii. type of project funding used,

iii. average size of funding,

iv. if the funding was in the form of debt then whether or not the debt has been listed, and

v. the yield applicable to the debt.

Question 4

Generally what types of financial engineering schemes have been applied in attracting private sector funding for public sector projects?

Question 5

In your dealings with the private sector on the issue of funding public sector projects, what would you consider as being the key concerns of the private sector?

Question 6

Would you rate the government's initiative, such as the public private partnership program and the Municipal Infrastructure Investment Unit, in encouraging the participation of private sector for the funding of public sector projects as being:

(Insert a tick in the applicable box below)

i. poor, initiatives have failed to address investor concerns	
ii. good, initiatives provide good support for the development of the private public sector debt market	
iii. excellent, initiatives go beyond investor concerns with legislation being forward looking addressing key project risks	

Question 7

Would you consider the listing of private sector debt for the funding of public sector projects to be:

(Insert a tick in the applicable box below)

i. positive to the development of the public private sector debt market?	
ii. negative to the development of the public private sector debt market?	
iii. listing of such debt will have no influence on the development of the public private sector debt market.	

Please provide reasons in support of your response

Appendix III: Interviews

Question 1

Would you rate the development of the private sector debt market for the funding of public sector projects as being:

(Insert a tick in the applicable box below)

i. Poor	
ii. Good	
iii. Excellent	

Please provide reasons for your assessment made above.

Question 2

What do you consider to be the major reasons for the development or lack of interest of the private sector for the funding of public sector projects?

Question 3

To your knowledge has their ever been such debt listed on a licenced exchange? If so, then please state with reasons the extent of success of such listing. Further provide detail on the type of project funded, type of funding used, yield applicable to the debt and type of financial engineering applied.

Question 4

What initiatives is your organisation considering to further develop this market?

Question 5

What conditions must prevail in order to stimulate the listing of such debt products?

Appendix IV: List of Participants who Participated in Completing the Local Questionnaire

ABSA Bank Limited

Standard and Corporate Merchant Bank (Proprietary Limited)

Nedcor Bank Limited

First Rand Bank Limited

Appendix V: List of Emerging Market Countries of IOSCO

Albania
Algeria
Argentina
Bahamas
Bahrain, Kingdom of
Bangladesh
Barbados
Bermuda
Bolivia
Bosnia and Herzegovina, Federation of
Brazil
Bulgaria
Chile
China, People's Republic of
Chinese Taipei
Colombia
Costa Rica
Croatia, Republic of
Cyprus, Republic of
Czech Republic
Dominican Republic
Ecuador
Egypt
El Salvador
Estonia
Former Yugoslav Republic of Macedonia
Ghana
Hungary
India
Indonesia
Israel
Jamaica
Jordan
Kazakhstan, Republic of
Kenya
Korea
Kyrgyz Republic
Latvia, Republic of
Lithuania
Malaysia
Malta
Mauritius, Republic of
Morocco
Nigeria
Oman, Sultanate of
Pakistan
Panama, Republic of
Papua New Guinea
Paraguay

Peru
Philippines
Poland
Romania
Russia
Serbia, Republic of
Slovak Republic
Slovenia
South Africa
Sri Lanka
Srpska, Republic of
Tanzania
Thailand
Trinidad and Tobago
Tunisia
Turkey
Uganda
Ukraine
Uruguay
Uzbekistan, Republic of
Venezuela
Vietnam
West African Monetary Union
Yugoslavia (Federal Republic of)
Zambia