DEVELOPING A DOMESTIC FUNDING STRATEGY FOR SOUTH AFRICA'S PUBLIC SECTOR

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FOREWORD

The South African capital markets could be called upon to provide substantial amounts of funds to support social development programs in the future. Investment programs and projects will be planned and carried out by various levels of government and by government corporations. This informal working paper provides an assessment of the capacity of the rand capital markets, as currently structured, to provide for the new needs. The evidence presented in this paper indicates that the South African capital markets will not be equipped to respond adequately to the new demands for social development without special measures to enhance the demand for securities issued by the public sector. This assessment provides the basis for recommendations to improve the prospects for funding development programs at relatively low cost to the government while at the same time ensuring that investors receive a competitive financial return.

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Developing a domestic funding strategy
for South Africa's public sector during the period of transition

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Executive Summary

The challenge

The financial system in the new South Africa could be called upon to channel a large volume of funds to economic development. Much of the demand for funds would come from projects to be undertaken by government at the local level or by specialized government agencies at the national level. The demand for funds at the various levels of government is likely to exceed the resources available from their respective tax bases, along with any transfers and foreign aid. A large portion of the funds - upward of R175 bn - would consequently have to be raised in the South African capital markets over the next four years. It is not a foregone conclusion, however, that the South African financial system has the capacity to provide the volume and kind of financing desired to meet the demand. An assessment of the South African capital markets' capacity to channel funds to the public sector is therefore required, and ways of enlarging market capacity need to be identified.

The period of transition

A gradual process is envisaged before investors gain sufficient confidence to place funds both voluntarily and on a sizeable scale in South African fixed-income assets. This is the perception of virtually all participants in the rand financial markets - institutional investors, traders and underwriters, debt issuers and regulators. South African as well as foreign investors are expected to gain confidence in the economy's future as the country builds a credible record of sound economic policies and good financial performance.

Second-best policy approaches

During the period of transition, however, before the benefits of large-scale foreign participation become available, it becomes imperative to identify second-best mechanisms for rapidly increasing the market's capacity to channel funds to government-sponsored development purposes. If any mechanism is to function on a sustained basis, it must be able to safeguard the incentives that mobilize savings from the South African public, and this means that it must entail financial returns on public-sector bonds which domestic investors will judge to be attractive and competitive with investment alternatives.

Formulation of policy approaches

Six distinct categories of policy approaches have been formulated. Variations on each approach can be developed, thereby filling out the range of possibilities which they illustrate. The approaches are as follows:

(a) Enable the national government to function as a pass-through vehicle for public-sector borrowing subject to an aggregated borrowing ceiling and other conditions.

(b) Eliminate tax preferential treatment of equity investments.

(c) Promote liquidity in the fixed-income and related derivatives markets.

(d) Grant preferential tax treatment to local government issuers.
(e) Establish and/or improve special government-sponsored credit programs (e.g., Local Authorities Loan Fund, Housing Fund, etc.)

(f) Re-introduce a policy of prescribed investments

Positive real interest rates as an essential criterion for assessing all approaches to public-sector funding

There is no resilient bond market in the world that operates in an environment where investors believe that interest rates could become negative over the term of their financial contracts, after adjustment for inflation. The paramount criterion for evaluating policy approaches to strengthening the capacity of the rand public-sector bond market is their potential impact on fiscal and monetary discipline in the South African economy. Fiscal discipline is necessary at all tiers of government and throughout the national level, moreover, because of the likelihood that a break-down in discipline in one domain would spill over to the central government. Policy mechanisms that are most likely to function as intended must therefore ensure that the incentives are in place to induce financial discipline throughout the public sector, thereby avoiding the consequences of public-sector insolvency.

Additional assessment criteria

The criterion of fiscal discipline ranks ahead of all other criteria, since failure to achieve it would spell the failure of any associated policy during the transition period. Policy approaches that would satisfy this criterion can be ranked according to their capacity to meet additional criteria. These include: maximizing the aggregate volume of funds which the rand financial markets could channel to development, minimizing the public-sector's cost of borrowing, facilitating an efficient flow of funds from the borrowing entity to the public-sector end user in reflection of policy priorities, and minimizing any distortions in the rand financial markets that might be difficult to reverse in the post-transition era, i.e., after investor confidence has been instilled, exchange controls have been lifted and private-sector initiatives become plausible alternatives to large-scale government borrowing.

Assessing the policy options

The attached matrix illustrates how the six policy approaches can be assessed and ranked according to designated criteria. All approaches are found to be highly imperfect, either because of ineffectiveness in securing large volumes of funds in the short run, or because of their likely detrimental impact on incentives to save in the long run, or both. The centralized pass-through vehicle, while perhaps the most effective approach, would nevertheless restrict regional and local autonomy with respect to borrowing operations.

Primary characteristics of a borrowing strategy

A judicious combination of the best features of each approach, however, could be developed into a domestic borrowing strategy during the period of transition. The principles underlying a sound borrowing strategy during the period of transition would include: a prominent borrowing role for the central government; a hard constraint on public-sector borrowing, analogous to a hard-budget constraint on public-sector expenditure; measures directed toward bond-market deepening; a policy response to tax disincentives to bond investment; and a bridge to decentralization of the borrowing
process. These principles represent a cheaper and more sustainable policy alternative to simple budget transfers that could become highly inflationary. Application of these principles would entail substantial work with respect to the design of specific policies and institutional development.

Principal strengths of the second-best transitional borrowing strategy

Funds could be channeled to public-sector investment from voluntary investors by increasing the demand for bonds in a number of ways. Market deepening can be achieved by enhancing the tradeability of securities and by applying a tax treatment to fixed-income securities that is as favorable, if not more favorable, than equity securities and other investment alternatives. Market broadening can be achieved by expanding the types of South African financial institutions authorized to deal in financial derivatives and fixed-income instruments, as well as by extending their authority to take positions, subject to prudential oversight. The funding vehicle contributes to both market deepening and broadening by combining relatively strong fiscal control at the macro-economic level with the high value for liquidity and credit to be expected from RSA bonds or legally fungible substitutes ("New South Africa bonds"). In addition, the demand-driven issuance of New South Africa bonds could potentially be marketed internationally as well as domestically, even before exchange controls are lifted. It would moreover be consistent with the current international trend to develop government securities markets with a global orientation and to manage the public debt actively and independently.

Principal shortcomings of the transitional borrowing strategy

Delays in implementing a sound borrowing strategy may be inevitable. While the technological and regulatory improvements recommended above could probably be introduced expeditiously, they would most likely produce the most marginal effect on volume flows. Regulatory reforms could become time consuming. Tax reform would require thoughtful preparation and would go through the parliamentary debate process, both requiring time, but it could have a substantial short-term impact on volume flows. The centrally funded vehicle, while also requiring time for legislation and implementation, would likely generate funds for public-sector users at a pace that coincides with the budget process. Hence it is not likely to be the cause of delays in respect of disbursements for investment programs. However, the availability of funds from the vehicle risks institutionalizing a lack of financial discipline on the part of public authorities, including regional and local authorities. Providing for a gradual reduction in access to the vehicle (a sunset provision) is therefore a key element in its potential success.
# Comparative Assessment of Policy Approaches to Channeling Funds to Public-Sector Investments

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<td><strong>Policy Approaches:</strong></td>
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<tr>
<td>1. Establish a centrally funded pass-through vehicle for public-sector borrowing</td>
<td>Better control than all other policy approaches considered here</td>
<td>Maximizes market access to funds</td>
<td>Lowest average cost of public-sector borrowing</td>
<td>Poor to moderate</td>
<td>Unclear</td>
<td>Controlled impact on economic growth and employment</td>
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<td>2. Eliminate tax preferential treatment of equity investments in favor of bonds</td>
<td>No impact</td>
<td>Potentially sizesable, depends upon incidence of tax benefits</td>
<td>Marginally lower</td>
<td>No impact</td>
<td>Moderate potential</td>
<td>Potential for adverse impact on foreign (equity) investment</td>
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<td>3. Enhance Bond Market Liquidity</td>
<td>No impact</td>
<td>Marginal improvement</td>
<td>Marginally lower</td>
<td>No impact</td>
<td>Not applicable</td>
<td>Positive for economic growth</td>
</tr>
<tr>
<td>4. Grant preferential tax treatment to local government issuers</td>
<td>Adverse impact</td>
<td>Unclear</td>
<td>Unclear</td>
<td>Excellent</td>
<td>Very difficult</td>
<td>Potentially moderate impact on economic growth and wealth redistribution</td>
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<td>5. Establish and/or improve special government-sponsored credit and guarantee programs</td>
<td>Adverse impact</td>
<td>Reduced access if the programs are authorized to borrow in the market</td>
<td>Higher due to premiums for liquidity and credit risk</td>
<td>Moderate</td>
<td>Very difficult</td>
<td>Mixed results</td>
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<td>6. Prescribed investments</td>
<td>Potentially no control</td>
<td>Potentially disastrous impact on savings mobilization and access to borrowing volume</td>
<td>Lower in the short run, but higher for non-prescribed government borrowing</td>
<td>Excellent</td>
<td>Very difficult</td>
<td>Mixed results</td>
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*This assessment takes into account conditions related to the pass-through vehicle as noted in Section 3 of the report. A ceiling on the aggregate borrowing authority of public-sector entities is a key condition.*
Developing a domestic funding strategy for South Africa’s public sector during the period of transition

1. Introduction

1. The South African capital markets could be called upon to provide substantial amounts of funds to support social development programs. Investment projects will be planned and carried out by various levels of government and government corporations. This report provides an assessment of the capacity of the rand capital markets, as currently structured, to provide for these new needs. The evidence presented in the report indicates that South African capital markets are unlikely to respond adequately to the new demands for social development without special programs to enhance the demand for securities issued by various levels of government and government agencies (“the public sector”). This assessment provides the basis for recommendations to improve the prospects for funding social upliftment programs at relatively low cost to the government while at the same time ensuring that investors receive a competitive financial return.

2. Section 2 of this report formulates six alternative policy approaches to strengthening the rand market for public-sector bonds, and identifies the criteria for assessing their effectiveness. In Section 3 the policy approaches are assessed according to the designated criteria. Most are found to be fundamentally flawed in achieving their intended objectives. In Section 4 conclusions are presented supporting a three-pronged approach which combines the most promising features of the policy options.

2. Formulation of Policy Approaches

3. Since governments at all levels must fund their debts by issuing fixed income securities rather than by issuing equities, the funding vehicle for social development projects in South Africa carried out at the local level will be bonds. (The sale of government assets through a program of privatization is not considered in this report.) Thus, a basic question that must be addressed is what factors are likely to improve investor appetite for bonds. This question has several dimensions. One dimension is whether the South African bond market, which is currently almost solely a central government bond market, will be hospitable to a more diverse group of issuers. This dimension is important in determining whether regional and local authorities should be authorized to issue their own bonds on a significant scale or whether social upliftment funding must be centralized. A second dimension is whether regulatory and market structure reforms can be effective in improving the market for bonds or whether investors need to be encouraged to buy more bonds through special incentives.

4. An assessment of mechanisms for improving the market for bonds must begin with an estimation of the South African public sector’s expected borrowing requirements.
over the coming years. This is followed by an analysis of issuer diversity in the rand markets within the context of the South African financial system. An international comparison of the sources of issuer diversity in domestic bond markets is then presented, along with an explanation of the lack of diversity in South Africa. The analysis provides the basis for discussing options to improve the bond market. Six policy approaches to strengthening the rand market for public-sector bonds are formulated and the criteria for assessing their effectiveness are identified.

**Expected Borrowing Requirements**

5. According to official statistics for outstanding government debt and World Bank projections of the fiscal deficit under alternative growth scenarios, the borrowing requirements of the consolidated government are projected to range between R44 and 48 billion per year during the period 1994-1997. This amount corresponds to 7.4-7.6% of projected GDP and 32.36% of projected gross domestic savings. By comparison, new domestic issues of public-sector securities, excluding purchases by the Public Investment Commissioner, Reserve Bank and Corporation of Public Deposits, ranged from 5.2% of GDP in the 1980s to 5.3% of GDP in the period 1990-1992, reaching 8.5% of GDP only in 1993. New domestic issues of public-sector securities jumped from 14.18% of gross domestic savings in the period 1980-1990 to well over 41% starting in 1991 (for details see Annex 1).

6. Thus the rand capital market would have to maintain the exceptional level of absorption achieved in 1993, measured in terms of GDP, over the course of the next four years under various growth scenarios. The public sector would furthermore have to draw a far higher proportion of savings than achieved during the period of high economic growth in the 1970s and early 1980s. The market's absorptive capacity may be further tested as these projections do not take into account about R27 billion in government financial guarantees outstanding, some of which is already being consolidated with the government's direct obligations. In addition, the redemption schedule of outstanding government debt will place especially heavy pressure on new borrowings over three consecutive years (R9 billion in 1996, R17 billion in 1997 and R13 billion in 1998).

**Issuer Diversity in the Rand Bond Market**

7. There are only two major bond issuers in the South African market: the central government and several corporations owned by the central government. For example, at year end 1992, there was about R130 billion of marketable central government debt outstanding (representing 72% of the total), about R38 billion of public corporation debt (21%), about R7 billion of local authority debt (4%), and about R6 billion of sundry other public debt outstanding (3%). There is virtually no market for private corporate debt or mortgage-backed securities.

8. Thus, almost 75 percent of all bond issues in South Africa are direct obligations of the central government, and close to 97% are direct or indirect obligations of the central government. In contrast, there is a much more diverse set of issuers in the
United States: Only 38 percent of bonds outstanding are direct obligations of the US government. Twenty-four percent of outstanding U.S. bonds are liabilities of the corporate or foreign sectors, 22 percent are obligations of U.S. government agencies, and 16 percent are obligations of state and local governments.

9. The South African bond market is less diverse than the Deutschmark and Japanese yen bond markets as well. In Germany, all levels of government account for 28 percent of outstanding DM bond issues, banks account for 50 percent of issues, and foreigners account for 18 percent. In Japan, the central government accounts for 51 percent of bonds outstanding, banks account for 19 percent, public corporations account for 12 percent, local governments for 6 percent, and corporations for 13 percent. Among major capital markets, only the UK bond market is as single issuer oriented as the South African market: The central government issues almost all the bonds outstanding in that market.

10. If local social upliftment programs are to be funded at the local level, the South African bond market must achieve the diversity of the U.S. or Japanese bond markets. If it cannot achieve this level of diversity, alternative funding strategies, such as centralized funding, must be analyzed. One question to be considered is whether lack of diversity is a function of market structure or regulation.

Structure of the Rand Bond Market

11. The South African financial system is sometimes characterized as a first-world financial system that is capable of satisfying a wide range of borrower and investor needs. Hence, it is often taken for granted that the South African financial system will be able to channel efficiently local-authority demand for fixed income securities to final investors.

12. It is easy to conclude from a cursory analysis of the structure of the South African financial system that it is similar to some of the most developed systems in industrialized world. About 42 percent of the total financial assets of South African financial institutions (including the monetary authority) are held by depository institutions. This ratio is slightly higher than in the United States and the United Kingdom, but lower than in Japan, where about 60 percent of financial institution assets are held in depository institutions. German financial institutions are even more heavily bank dominated - depository institutions make up about 75 percent of financial institution assets. In contrast to South Africa, the financial systems of most developing and newly developed countries' financial systems are dominated by depository institutions.

13. Contractual savings institutions—life insurance companies and pension funds—make up over 90 percent of the assets of non-depository financial institutions in South Africa, which is similar to the ratio in the United Kingdom, but higher than in Japan and

\[ V \] Data for Germany, Japan, and the United States are from the Flow of Funds. For the US, the data are as of third quarter 1991; for Germany and Japan, they are for June and March 1990, respectively. The weight of government issues has probably increased significantly in the German data because of debt arising from reunification. However, the point still remains: there are fewer issuers in Germany than in the United States and Japan.
the United States, in which contractual savings represent about 75 percent of the assets of non-depository financial institutions.\(^2\)

14. The assets of contractual savings institutions in South Africa are more similar to those in the United Kingdom than to those in the other major industrial countries. For example, South African insurance companies invest about 52 percent of their assets in equities, which is a much higher percentage than insurance companies in Germany, Japan, and the U.S, where insurance companies invest about 15 percent, 25 percent, and 10 percent of their assets in equities, respectively. Data are not available for UK insurance companies only; however, insurance and pensions hold 40 percent of their assets in domestic equities and 17 percent of their assets in foreign securities, which are not allocated between equities and bonds.

15. The South African financial system is more highly concentrated than the financial systems of the major industrial countries. The insurance and private pension fund business is dominated by two large mutual institutions, and the banking sector is dominated by four banking groups. This level of concentration is similar to Canada and several small financial systems in Europe, such as Belgium, the Netherlands, and Switzerland.

16. A comparison of the financial structure of South Africa with those of the major industrial countries suggests that the lack of diversity of bond markets is not strongly related to financial structure: The United States and Japan have relatively diverse bond markets even though the Japanese financial system is more bank dominated than the U.S. system. In contrast, the U.K. has a financial system that looks more like that of the U.S. than Japan, but it has only one major bond issuer. Likewise, market size and concentration cannot be isolated as the cause of the lack of diversity in the South African bond market: the United Kingdom is a larger market with a larger number of contractual savings institutions than South Africa; yet, both the U.K. and the South African bond markets lack diversity.

17. Despite the similarities in bond market diversity in Germany, Japan, and the United States, their domestic markets differ significantly in respect of the issuers having access to the markets and how bonds are held. The most obvious difference between Germany and Japan on the one hand and the United States on the other is that banks are major bond issuers in Germany and Japan, but not in the United States. In Germany banks are the only significant issuer other than governments, indicating that the government is the only non-financial domestic borrower that has direct access to bond markets on a large scale. In Japan, the diversity of the bond market is likewise not as wide as it appears at first glance. Much of the volume of public corporation and local bonds is held by the government's postal savings system. It is by no means certain that the market for these bonds would be as large if the postal savings system were unavailable as a captive investor.

\(^2\) It is difficult to compare the structure of financial institutions in Germany with the other countries discussed in this paragraph because German pension funds are managed as an integral part of the balance sheets of nonfinancial corporations.
18. In contrast to the German and Japanese data, the US figures probably understate the diversity of the US domestic bond market. Corporate bonds include junk bonds—those issued by corporations rated below investment grade—triple-A credits, collateralized mortgage obligations, and securitized consumer loan receivables. Thus, it appears that the US dollar market is the only one offering significant opportunity for a wide variety of domestic borrowers to issue bonds. To determine whether the South African bond market is capable of achieving some of the diversity of the US market, the source of impediments to diversity in Germany and Japan is identified below, and a determination is then made whether similar impediments have hindered the growth of diversity in the South African bond market.

Sources of Issuer Diversity in Other Domestic Bond Markets

19. Historical lack of direct access by private borrowers to bond markets in Germany and Japan can be traced to market practices. In Germany, private corporations are allowed to issue bonds with the approval of a committee that includes representatives of the major banks. This approval has been rarely forthcoming (or sought) because of the dominance of the house-bank relationships with corporate customers, a convention that has diminished only somewhat since the DM markets were internationalized starting in 1990. In Japan, the system for transferring ownership of corporate bonds is cumbersome and time consuming, and a lack of competition among dealers and investors has impeded the development of an efficient secondary market in these bonds. Thus, in both countries it is plausible that regulatory and technical factors have been impediments to issuer diversity and that reforms might enable a U.S.-type bond market to develop.

20. Lack of diversity in the South African bond market shares origins similar to those in Germany and Japan with respect to regulatory and technical practices, which may have kept the rand market highly illiquid. Institutional investors explain their unwillingness to buy more bonds as a result of the market’s illiquidity, which makes it difficult for them to hedge against changes in interest rates, whether by selling bonds or using derivatives such as futures contracts and options. Even the market in the most frequently traded issues—the R150 and the E168 benchmarks—\(^7\) is uniformly criticized as suffering from illiquidity, causing investors to fear that they cannot sell large blocks of bonds without significantly affecting the price at which those bonds trade.

Evidence of Bond Market Illiquidity

21. There appears to be strong evidence that the complaints about bond market illiquidity are well founded, even if a superficial overview of the rand market’s structure

\(^7\) The E168 is issued by Eskom, the government-owned electrical utility, and the R150 is issued by the central government.
would suggest otherwise. The rand bond market is considered large in relation to the size of South Africa's economy, turnover is high, and there are a host of derivative products, both listed on the South African Futures Exchange (SAFEX) and traded over the counter, for investors to use to hedge their positions. In relation to an outstanding volume of approximately R200 billion, turnover in the cash market stood at R500 billion on the Johannesburg Stock Exchange in 1992, excluding sizeable over-the-counter trading. Nevertheless, the average deal is reportedly only R5 million, and trades above R50 million are highly likely to move the price. In addition, the bond option markets are in reality thin. For example, an options contract on the E168, which is listed on SAFEX, has extremely low volume, indicating that investors make little use of this contract to hedge their positions. There are no futures contracts, listed or over-the-counter, on bonds.

22. The options contract on the R150 is an over-the-counter product, so volume and bid-ask spread statistics are not readily available. Investors and traders alike indicate that they rarely hedge a position with this option because it is expensive to use. Bid-ask spreads are so large that, by some accounts, a truck could ride through them, and sometimes a seller wishing to unload a position cannot find a buyer. Indeed, bid-offer spreads in this contract sometimes exceed 20 percent of the strike price, even for large volume trades. Thus, if an investor buys a call option (the right to buy a bond at a specified price) and decides later to sell the option, his cost of transacting will represent roughly 20% of the price of the underlying bond, which, of course, reduces the profitability of the hedge. In contrast, markets in options are active and publicly traded in the United States on a wide variety of financial instruments.

23. Another indication that bond markets are substantially illiquid is that it is common practice for South African issuers to make markets in their own securities. In the United States, German and Japanese markets, in contrast, dealers voluntarily make a market in the more liquid bonds. The market in the E168 is made by Eskom, and the options written on the R150 are traded by the Reserve Bank (which also makes a market in government bonds, as is the common practice). Spreads in government bond options markets widened recently when the Reserve Bank reduced its exposure because of losses.

24. It should also be noted that the settlement of financial futures contracts, were a demand for them to arise, would be executed with cash rather than delivery of the bond due to investor fears that bond markets are subject to being cornered. Potential sellers of futures contracts report that they would significantly drive up the price of a bond on the settlement date merely by attempting to purchase a bond to deliver to the buyer of the contract. Insurance companies' complaints that they cannot buy bonds with cash strongly supports the view that the terms of delivery would be driven by a fear of corners. By the same token, insurance companies wishing to purchase a security do not want cash delivery on a futures contract, because their demand for the bond is likely to change the bond's price in the market.

22 Turnover on the Johannesburg Stock Exchange in 1992 was reported at R500 billion against an outstanding of R200 billion. The average secondary-market transaction was reported to be roughly R5 million, with deals over R50 million likely to move the transaction price.
25. Similarly, options dealers cannot be confident of being able to sell options they have purchased from investors at a price close to their own purchase price. The risk of loss makes it expensive for dealers to make markets in options. Without market makers, bid-ask spreads will remain high.

**Six Generic Policy Approaches**

26. Formulated below are six distinct policy approaches to financing the public sectors' long-term programs and investment projects in social upliftment. Each policy approach is generically different from the others, and each can be modified into any of a number of variants featuring the same generic characteristics. They highlight features of a potential range of policies that might be adopted, and they could be combined in a variety of ways. They are as follows:

(a) Enable the national government to function as a pass-through vehicle for public-sector borrowing subject to an aggregated borrowing ceiling and other conditions.

(b) Eliminate tax preferential treatment of equity investments.

(c) Promote liquidity in the fixed-income and related derivatives markets.

(d) Grant preferential tax treatment to local government issuers.

(e) Establish and/or improve special government-sponsored credit programs (e.g. Local Authorities Loan Fund, Housing Fund, Industrial Development Corporation, etc.).

(f) Re-introduce a policy of prescribed investments.

27. Each of these policy approaches is presented in greater detail and is assessed below.

**Criteria for Assessment of the Policy Approaches**

28. Positive real interest rates are a sine-qua-non for bond market development, in South Africa as elsewhere. In addition, fiscal discipline at the central level can be maintained only if one of two conditions prevails. Either financial discipline is exercised at lower tiers of government. Or a lack of financial discipline at the sub-national level is financially internalized at that level, i.e. the constituencies of a political jurisdiction are willing and able to pay the costs of their local government's financial insolvency. Among South Africans there seems to be a consensus view that any future government will be unable to withstand political pressures to bail out some public-sector borrowers confronting financial insolvency. Consequently any public policy involving public-sector borrowing must ensure that fiscal and financial discipline apply at all levels of government.

29. The second major criterion for assessing policy approaches to funding public-
sector investment programs is the efficiency of the funds mobilization and disbursement processes. There are several dimensions to the meaning of efficiency in this context: Is the volume of accessible funds being maximized? Is the cost of the funds being minimized? Are all the funds likely to be channelled to, and used for, their intended purposes?

30. The reversibility of any policy should also be taken into consideration. The most effective policies for implementing strategic objectives during the transition period may become outdated after the transition, when investor confidence in South Africa’s prospects is reasonably assured. If transitional policies are maintained, they may conflict with and hinder more pressing policy objectives. For this reason, a policy approach that is administratively easy to reverse and whose reversal would not be opposed by emerging vested interests is preferable to a policy approach that is neither. An enforceable sunset provision is thus another key criterion.

3. Assessing the Policy Options

31. The six generic policy approaches assessed below are not strictly comparable to each other, either in terms of effectiveness or financial attractiveness. The resolution of several political debates currently in process will impact directly on future assessments of the approaches. For example, the debate on the future structure of intergovernmental fiscal relations will determine whether regional and/or local authorities can expect to develop an autonomous revenue base against which some borrowings might be collateralized in the capital market. Outcome of the debate will also determine whether a procedure will have to be developed for allocating central transfers to lower tiers of government, in which case the same procedure, or a similar one, might be adopted to allocate borrowing authority. Current debate about the new government’s monetary and fiscal credibility will moreover be overtaken by the record being built, as will the government’s propensity to manage its agencies responsibly. Future capital flows and the market-clearing levels of long-term interest rates will be indicators. Finally, while all six policy options appear to be highly imperfect in relation to the combined assessment criteria, their imperfections would be magnified by the scale on which each of the policies might be implemented.

Establishment of a Centrally Funded Pass-Through Vehicle for Public-Sector Borrowing

32. The most effective way for increasing the volume of funds to be invested by the private sector in the projects of local authorities and specialized public funds, such as those devoted to housing or education, is to design a bond product that is as liquid and creditworthy as is feasible in the rand market. This can perhaps be best accomplished by centralizing all public-sector funding at the national government level. Maximum liquidity would be obtained through the larger issuance size and standardized character of debt securities generated by a centralized funding scheme. Moreover, the creditworthiness of the Republic of South Africa (RSA) cannot be surpassed by any other public-sector issuer, due to its senior relationship with the Reserve Bank. The financial
benefits of liquidity and creditworthiness, which include larger volume and lower borrowing cost, can be passed through to the various public-sector authorities with minimal administrative involvement at the center.

Conditionality

33. Centralized funding without conditions constraining the borrowing and investment decisions of the full range of public-sector authorities could generate more problems for the economy than financial benefits, however. Two problems in particular are to be avoided under a centralized funding scheme. First, given the fragility of investor confidence, it is essential that the public sector borrow only as much as it can afford to repay. Second, every effort should be made to restrain the natural tendency of local authorities and specialized funds to succumb to financial indiscipline and dependence upon the national government's largesse. This is especially crucial in an environment where the national government is expected to be under immense, and perhaps irresistible, pressure to assure the continued operation, and hence financial viability, of local authorities and specialized social-investment projects.

34. The first step to addressing both potential problems would be to put into place a credible fiscal control program at the central government level. A second step would be to introduce incentives for public-sector authorities to exercise financial discipline in their respective investment operations despite the temptations not to. And the third step would be to remove local authorities' and specialized investment programs' access to centrally funded moneys as soon as the South African government can politically sustain a financial default by any such public-sector entity.

35. The central government is likely to have to guarantee all debt related to high-priority social-upliftment investments, whether it makes the guarantees explicit at the outset or makes good on a defaulting fund's obligations as the need arises. Controlling the volume of the central government's total contingent liabilities would be more transparent and effective by concentrating the funding function with the central government. The drawback to a centralized funding approach is that local and specialized public authorities would forego the financial responsibility of meeting the market's demands and therefore might act in a less disciplined manner than they would otherwise. They would also forego some autonomy of operation and associated flexibility.

Financial Benefits of Centralized Funding

36. The arguments favoring centralized public-sector funding go beyond the issue of fiscal discipline. A consolidated or well coordinated funding strategy and plan for South

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Consideration may be given in the longer run to developing a system along the lines of those in Belgium, France and Switzerland for depoliticizing the process of municipal financing through the incorporation of a hard constraint on public borrowing. Evaluation of the financial situation of municipalities and tying restructuring conditionalities to further financing, when required, would be key elements. Financial institutions such as the Credit Communal de Belgique, have legal as well as technical means to assist municipalities in need of restructuring.
Africa would help to offset a part of the financial costs associated with a vertically decentralized public sector. While international experience shows that there is no "correct" configuration of public-sector borrowers in capital markets, it is usually the case that the more centralized is public-sector securities issuance, the greater is the market liquidity and valuation of the securities' creditworthiness. This means that greater centralization of securities issuance tends to yield access to a larger volume of funds in the aggregate, at a lower average cost. Conversely, institutional fragmentation of securities issuance tends to yield access to a smaller aggregate volume of funds at a higher average cost.

Developing the Gilt Market

37. In addition, the development of government securities markets is rapidly becoming a crucial economic and financial policy being pursued worldwide. Growing ratios in government debt to GDP and the declining reliability of domestic investors in geographically expanding financial markets are forcing governments to focus on the demands of international investors, which are overwhelmingly institutional. Their investment decisions are driven by the goal of achieving competitive financial performance. This has meant that they seek liquidity, transparency, issuing and trading efficiency and a tax treatment of bonds that is harmonized with U.S. Treasury bonds. To the extent that South Africa contemplates lifting exchange controls eventually, it would benefit from anticipating the global trend by developing its own gilt market in each of these areas. Independent management of government debt is another key feature of the trend, and has resulted in increasingly autonomous government debt offices, particularly throughout Europe and North America. Central banks, in turn, are developing other instruments to sterilize the impact of debt management operations (for example with respect to maturity and currency) on the monetary base.

38. In South Africa at present there are three types of public-sector institutions which tap the domestic and/or external capital markets to fund government programs. They are: (1) the national government itself, represented by the Department of Finance issuing debt on behalf of the Republic of South Africa; (2) agencies of the national government, which are wholly or, in a few cases, partially owned by the government and which issue debt under their respective names (including the Local Authorities Loans Fund, Eskom, Telkom, DBSA, IDC and SBDC); and (3) local or regional governments (including homelands, large or suburban municipalities and local utility companies). As of end-1992 more than 50 legal entities had rand-denominated debt issues outstanding, of which about 15 in the second category and 42 in the third category. There were also a handful of legal issuers of outstanding foreign-exchange denominated debt.

39. On the whole, raising funds through a large number of issuers runs counter to the global trend. The fragmentation of the issuance of public-sector securitized debt raises a number of policy concerns. First, the purposes for which funds will be used by the individual issuers of debt, such as Eskom, Transnet and Telekom, do not necessarily match the economic sectors to which high-priority funds need to flow. Aside any collateralized credit, Eskom has enjoyed exceptional capacity to draw funds from the market - a portion of which funds undoubtedly deserve to be used for electrification but another portion of which perhaps would have better served other social sectors. Second, nearly all borrowing institutions in South Africa have floated small, illiquid and therefore
relatively costly bond issues in the past. The exceptions are the RSA and Eskom in the domestic market. Third, certain South African bond issuers (all enjoying an explicit government guarantee) have borrowed externally over recent years with the primary purpose of maintaining name recognition in the markets. This strategic approach is valuable only if the name of the issuing institution is indeed one which will be promoted in the new South Africa.

40. A policy approach to public-sector debt issuance that shifts away from a fragmented configuration of bond issuers to a concentrated one would generate a number of additional positive financial effects. International experience indicates that borrowing costs would be lower, the market’s capacity to absorb new issues would be greater and, as a related matter, investors might become more inclined to purchase longer-term securities. The funding programs of the RSA, the parastatals and the white local authorities to date, in contrast, have reportedly reflected a shortening of maturities and, in the case of the RSA and parastatals, a growing reliance on foreign rand investors precisely because domestic investors have sought to diversify away from illiquid fixed-income and equity positions.

41. Consolidation and standardization of public-sector debt issues would help to mitigate the adverse effects on secondary-market liquidity caused by more fundamental market factors discussed earlier in this report. In particular, average issue size could be increased; and a long-bond futures contract could be introduced that would benefit from a relatively large base of underlying, deliverable securities. The current fragmentation of capital-market borrowings by South African issuers has been detrimental to fostering liquidity through large-volume issues. Three of the largest domestic issues to date, all by the RSA, are of a size (ranging from about R5 to 30 billion) that dwarf all others and are roughly comparable to sovereign issues in domestic markets elsewhere in the world. This leaves the better part of the domestic bond market with small issues. The smallest issues belong to parastatals as well as municipalities, including several below R50,000 by the city of Cape Town, Iscor, SABC and Springs. All external issues, regardless of the name of the issuer (RSA, Eskom, DBSA), have been of a small size.

42. The fragmentation of public-issuing entities furthermore tends to detract from South Africa’s overriding funding needs. Finance managers of individual issuing institutions may be assigned operational goals that do not serve the greater public interest. Eskom and the DBSA, for example, appear to be conscious of conflicting objectives in their funding programs. On the one hand they are supposed to seek cheap funding, but on the other hand if they find financing below the RSA’s cost of borrowing or if they work to gain market access abroad, the proceeds of their debt issues cannot be made fungible with other government programs. When Eskom has raised funds at a spread below the RSA, the funds had to be used exclusively for electrification.

43. When public funds are raised at different cost levels by different public-sector issuers, there may result a lack of accountability by individual institutions to raise funds at the finest terms available. This is partly evidenced by the wide spreads of various parastatals in both the domestic and external markets. In addition, a white local authority, although rated triple-A in the past, would have to pay a rate of interest in
present economic conditions about 130 basis points higher than the RSA.

Structure of a Proposed Funding Scheme

44. For all of these reasons, it is proposed to establish a centrally funded pass-through borrowing vehicle to facilitate the flow of funds to development-oriented public-sector projects during the transition period, while maintaining fiscal discipline and minimizing central involvement in all but financial aspects. It would be structured according to the following sequence:

1) Establishment, through the national budget process, of an annual ceiling on aggregate public-sector borrowing in line with fiscal-policy constraints. This condition would ensure maximum fiscal discipline with respect to the public sector's capacity for indebtedness.

2) Allocation of the "country" ceiling between borrowing authorities at the national government level and at the regional and/or local government levels according to a procedure to be determined. This condition represents a weak link in the proposed structure, as the procedure for determining inter-governmental allocations could prove to be politically difficult to agree upon. However, the procedure for determining the inter-governmental allocation of borrowing authority would be no more difficult than the procedure for determining the inter-governmental allocation of funds raised through taxation. The procedures could even be the same.

3) Allocation of portions of the national-level capped borrowing authority to implementing agencies at the national level. These could include special development funds (e.g. housing, education), and a variant of the existing Local Authorities Loan Fund. Allocations would be made on the basis of political negotiation at the national level.

4) Allocation of the sub-national borrowing authority to lower tiers of government (regions and/or metropolitan areas) in capped amounts pro-rated by population, population density or other criteria to be determined. The extensive research that has already been performed by South Africans about mechanisms and criteria for allocating funds to lower tiers of government could be applied to borrowing authority as well.

5) Authorization of most (or possibly all) public-sector entities to borrow in the rand capital market and/or from a specially established government vehicle subject to their respective ceilings. The government vehicle would be funded by the central government principally through the issuance of rand-denominated bonds. Bonds labelled "New South Africa" could be marketed to appeal to socially responsive investors, while at the same time being issued by the Department of Finance in lots comparable to RSA issues and generating proceeds which would be treated legally, regulatorily and fiscally like the proceeds on RSA bonds. Foreign aid and external borrowings might be included in the pool as well. A uniform set of terms and conditions would be applied to all public-sector entities electing to borrow from this vehicle and would include:
(a) A designation of uses to which the borrowed funds could be channeled (e.g. urban infrastructure, housing and other investment-types of social upliftment). Such designation would limit the potential for misusing borrowed funds, whether by channeling their use to consumption or to low-priority investments.

(b) A rate of interest equal to the vehicle's average cost of funds plus a fixed spread (e.g. 70 basis points), this interest rate to be reset periodically. This approach to determining the interest rate would ensure that all the financial benefits of consolidating and standardizing public-sector bonds would be fully passed on to eligible public-sector borrowers at all levels of government.

(c) A common maturity regardless of the expected life of the investment project for which funds are borrowed (e.g. 10 years). The choice of a maturity should be both attractive to implementing agencies and reasonably close to the average maturity of the central, borrowed funds. By limiting the choice to a single option, the need for a maturity-evaluation function, which would entail administrative scrutiny of the expected life of every investment project, is avoided at the central-government level.

(d) Funds from the government vehicle to be deposited in an escrow account prior to their disbursement (i.e., the vehicle functions as a trust).

(e) Disbursement of funds to any public-sector borrower to be subject to financial-accountability rules and practices, including the signature of an external auditor of international standing attesting that the funds will be used for their designated and eligible purpose; and

(f) Non-performance on such debt to result in a deduction from the next scheduled budgetary transfer from the central government to the delinquent public-sector entity.

(6) Specification in the legislation establishing the pass-through vehicle that its access by public-authorities would decline according to a stated formula, commencing in the fiscal year following the lifting of exchange controls. For example, the percentage of vehicle funds available to each public authority under its borrowing ceiling could decline from 100% to 70% to 50%, and so forth; such a system would induce the public authority to tap the market directly and might foster the financial discipline necessary for it to gain market access.

45. The automatic and fully objective mechanism for determining the on-lending rate of interest and the choice of a single maturity for loans serve the purpose of constraining and simplifying the central government's role in intermediating funds. Traditional banking functions associated with lending, such as evaluating projects and setting the financial terms for loans are shifted away from the central government to the implementing agencies. Only the borrowing function is left in the Department of Finance's domain, in reflection of its comparative advantage. As a result of this structure, there should be very little, if any, demand for civil servants to administer sub-loans funded in this manner. Consequently, delays in passing on funds to implementing
agencies should be minimal. Likewise, the emergence of a group of civil servants whose livelihood is tied to administering sub-loans is avoided. The "pass-through" quality of this vehicle, in sharp contrast to de-facto parastatal banking organizations should facilitate the enforcement of a sunset provision on the centrally funded vehicle. Phasing out access to borrowed funds by municipalities, regions and special funds at the national level should be encouraged as soon as the financial default of any of these entities becomes a politically acceptable outcome. Only at that time can the capital markets successfully enforce financial discipline.

**Improving the Tax Treatment of Bonds in Relation to Equity**

46. Yield enhancements represent a second policy approach to increasing the demand for bonds. Yield enhancements can take a variety of forms. One is a reduction in the tax burden on bond income, which could include interest income, capital gains or both. A more favorable treatment of capital gains on bonds could also be interpreted to include a more favorable treatment of capital losses. The latter could be of special value in the current interest-rate environment, in which the risk of future inflation is perceived to be significant and the risk of capital losses on fixed-income instruments therefore high.

47. A tax policy aimed at making bond returns more attractive would most likely entail shifting at least a portion of the tax burden from bonds to equity, as equity investments constitute the principal alternative financial asset available to investors. If the tax burden on bonds is reduced and the burden on equity is increased, institutional investors would have an incentive to shift part of their portfolios from equities to bonds. Such a shift would be a reversal from current tax policy which, from investors' standpoint, favors equity investments. At present, institutional investors face a 43 percent tax burden on interest income and an approximate 29 percent tax burden on dividend income, after expenses have been deducted from all investment income (for details see Annex 2). Equity investments further benefit from an exemption of capital gains from taxation, whereas bond investments do not. This exemption has proved very valuable to investors, as capital gains over the last ten years have accounted for about 75% of the return on equities.

48. The main challenge in shifting the tax burden from bonds to equities lies in making the policy effective while avoiding counter-productive side effects. The primary objective of the policy - to increase the demand for bonds at the institutional level - should not be in conflict with normally unrelated policy objectives, such as protecting the future value of pension income and encouraging both domestic and foreign investment in new ventures, including export-oriented industries. Avoiding policy conflicts along these lines poses a number of questions.

49. For example, the current tax structure suggests, on the one hand, that encouraging investments in bonds could be accomplished in a fairly straightforward way - by simplifying existing rules and levelling tax treatment across financial assets. One large insurance company reports paying taxes in the most recent financial year equal to 120
basis points on its interest income portfolio compared to only 16 basis points on its equity portfolio. If this report is characteristic of the insurance industry, the effective tax rate on equities is substantially lower than that on bonds. Bringing the effective tax rates on equities and bonds to roughly the same level would provide a strong financial incentive to shift out of equities and into bonds. Tax relief for bond investments could alternatively be offered on a targeted basis for certain bonds, such as the "New South Africa bonds" defined in the next section.

Increasing the Tax Burden on Equity

50. Instead of simplifying the tax treatment of financial assets by reducing the tax burden on bond investments, a policy could provide for increased taxation of equity. This approach would pose at least two distinct problems which would have to be addressed concurrently. First, raising the tax rate on equity returns (dividends, capital gains or both) could prove to be an administratively complex undertaking because of the capacity of South Africa's financial conglomerates to shelter taxable value by shifting income across legally distinct subsidiaries.

51. Second, raising the tax rate on traditional equity investments might be less at odds with growth-oriented policies than raising the tax rate on all classes of equity. A differential tax treatment would help address the pressing equity needs of small and emerging industries. Tax reform should therefore allow the main source of return on risky ventures, which are likely to represent the kinds of firms in which equity investments should be encouraged rather than discouraged, to remain relatively sheltered from tax. International experience indicates that most of their return will take the form of capital gains rather than dividend income. Consequently some tax relief from capital gains in conjunction with the taxation of dividends might strike a reasonable compromise for both policy objectives. Likewise, generous tax credits for losses on equity investments might successfully differentiate the riskier ventures from the traditional equity investments. Taxing dividends would also discourage investments in blue chips to the benefit of bonds and risky equity ventures.

52. The relatively low proportion of insurance company funds that are currently held in taxable assets, however, places an upper limit to portfolio shifts away from taxable equity to taxable bonds. For example, only about 15 percent of one large insurance company's total assets are held in taxable funds. This is because retirement annuities and pensions are tax exempt. Hence, even if the change in the tax status of bonds induces a substantial investment in bonds by taxable investors, the amount of new funds available for investment will be relatively small. The most direct way of dealing with this constraint would be to subject to taxation the investment income from insurance funds that are currently untaxed until the benefits are actually paid to the recipient. As the taxation of pensions is generally undesirable, a re-arrangement of the current tax treatment of retirement income could address the policy objective of encouraging investments in bonds without altering the net, after-tax return to retirees. In particular, pension recipients currently are taxed on all pension income, regardless of source, when it is received. One reform to be considered would be to apply a tax on investment income differentially at the source and permit the final recipient to receive a tax credit for
taxes paid by the insurance company.

Enhancement of Liquidity in the
Fixed-Income and Related Derivatives Markets

53. As discussed above, the rand bond market is illiquid, and this illiquidity represents a major deterrent to investor demand. A third policy approach to mobilizing funds domestically would therefore be to devise ways of promoting liquidity. Two complementary policies could be adopted. One is to improve technical factors in the market, which in the case of rand fixed-income instruments would include updating the clearing and settlement system, extending regulated authority to take positions and broadening regulated access to the bond and derivatives markets. Another approach would be to take measures and send signals aimed at instilling and augmenting investor confidence.

Updating the Settlement System

54. The absence of futures contracts in rand-denominated bond instruments has been blamed by some market participants on an inadequate settlement system. Contracts are settled two weeks after a trade, which is long by international standards. Government securities, other than short-term bills, are held in the form of registered paper certificates. When bonds are sold, these certificates must be transferred from the name of the seller to the buyer. This requires physical delivery of the paper as well as a legal change in title. Physical transfer of securities is cumbersome and time consuming.

55. The length of time between trade and settlement increases the risk associated with the allocation of liability for a defaulted trade. In the U.S. dollar and Pound sterling government securities markets, securities can be settled within one day of the trade date. When a trade takes place, the purchaser orders his bank to send funds to the seller's bank. If the purchaser's bank is willing to comply with the order, once the message is sent, the trade is settled, even though banks do not actually settle their cash positions with each other until the end of the day. If the buyer's bank fails to deliver, the central bank guarantees delivery of funds to the seller's bank. Hence, the U.S. and U.K. government securities markets have virtually immediate settlement. In South Africa, in contrast, there is uncertainty about which party would be liable if a trade were to fail during the 14-day clearing and settlement period - the buyer, the seller, or either of their banks.

56. Most developed government securities markets elsewhere in the world have moved their operations to a book-entry system, in which securities are dematerialized into computer entries and title is transferred electronically. The two Euromarket settlement systems, which are used for cross-border transfers of a wide variety of sovereign and other bonds, also operate on a book-entry basis, but physical securities are accommodated in their respective clearing houses, which are electronically linked. Responding to the international trend, the South African Reserve Bank and rand market participants are considering the adoption of a book entry system for South African government bonds.

57. While the details are in the process of being worked out, it is likely that a two-day
settlement system will be adopted. This would allow funds and securities to be transferred two days after the trade. It is still not clear whether funds will be transferred on the day of the trade against or upon delivery of the security and whether the central bank will guarantee delivery of funds.

58. However liability is finally structured, it is certain that a two-day delivery system will motivate investors and traders preferring to hedge over a two-week period to operate in the derivatives market. This will increase liquidity in the short-term derivatives market.

59. The underlying bond market will benefit only marginally, however. An informal, albeit less efficient, derivatives market already exists with two-week settlement. Bonds traded today and settled in two weeks carry an implicit futures contract component. The price of the trade reflects the market's expectation of where overnight rates will be in two weeks because this reflects the cost of delivering cash in two weeks. Thus trades occurring under the current two-week settlement system arguably represent a futures market without margin requirements. Although no third party, whether the Reserve Bank or a clearing house, guarantees delivery in the over-the-counter bond market, traders have not found it difficult to know their counterparties within a concentrated market structure. In addition, money market instruments, mostly banker's acceptances, trade on a same-day settlement basis, so it is already possible to take a position on interest rates for shorter periods than two weeks, even under the current settlement system.

60. A long-run approach would therefore start with a delivery-versus-payment (DVP) system to encourage greater liquidity in the cash market. If and when the initial objective of improved liquidity is

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**Box 1**

**Transformation of the Deutschmark Capital Market**

Until 1990 the DM capital market's structure and a number of its features appeared quite analogous to the Rand bond market today. These included a largely domestic orientation, captured by the German anchoring principle; very limited market liquidity, as reflected in wide bid-offer spreads (by U.S. standards), an inhibiting securities turnover tax, a preference by largely retail investors to buy and hold, an isolated clearing and settlement system for government bonds, a virtual dearth of hedging or money-market instruments and cartelized selling and brokerage commissions. Like South Africa, Germany was running a balance of payments surplus, and by first-world standards was "under-borrowed". In contrast to the Rand market, however, the DM market benefited from investor confidence in the stability of its currency, and it had gained some international exposure as a result of tax preferences granted to foreign issuers.

When the reconstruction of eastern Germany entered the budgetary agenda in 1990, the huge public financing requirements were met in large part by internationalizing the DM bond markets. A futures contract was introduced and traded both in London and Frankfurt. Foreign financial intermediaries were given large and increasing access to domestic business, including the underwriting and sale of government bonds; selling commissions on the largest bond issues narrowed by well over a percentage point; the choice and volume of domestic money market instruments expanded; the securities turnover tax was abolished; the German clearing and settlement system's account convention was harmonized with international standards and its link with the Euromarket system was made more efficient; and the tax treatment of bond investments was simplified and harmonized. Thanks in large part to these measures, the German Unity Fund and the Treuhand Anstalt, both established specifically to fund reconstruction and enjoying an explicit government guarantee, were able to raise an average DM 45 billion per year during the first four years. These bonds were heavily marketed, sold and traded abroad as well as at home, and they were made deliverable against Germany's long bond futures contract. Representing almost 6% of GDP at year-end 1993, they also contributed to a level of public-sector indebtedness that has reached 60% of GDP, much to the consternation of the monetary authorities.
achieved, the hedge markets can be expected to develop more sustainable functions. DVP on forward transactions and cash offset on futures would conform to the trend in the most developed capital markets. There futures contracts on bonds started off with a physical-delivery option assuring price convergence with cash instruments but evolved into a system under which most actively traded futures are offset markets with cash settlement against cash market reference prices. Eventually consideration should also be given to the establishment in South Africa of a multilateral clearing facility. This would enable purchases and sales to be netted so as to minimize the number of deliveries that are actually required. The U.S. National Securities Clearing Corporation (NSCC) and Government Securities Clearing Corporation (GSCC) systems for corporate and government securities, respectively, might serve as useful references. However, this may be quite some time away; multi-netting schemes have not yet been adopted in the Euromarkets.

Extending Regulated Authority to Take Positions

61. Another way to boost demand for bonds would be to liberalize the rules governing the trading capacity of domestic market participants. Unit trusts are currently subject to a cash ("margin") requirement on futures positions even when the futures contract has been acquired to hedge a cash position. Reducing or removing the margin requirement on hedges would encourage portfolio hedging, which in turn would enable portfolio managers to manage their funds more inexpensively and aggressively and in this manner generate higher financial returns. Some unit trust managers moreover claim they could sell a larger volume of bond funds if they were authorized to take unhedged positions in the futures market. Unhedged futures positions would provide an efficient vehicle for generating positive returns particularly during the transition, when the risk of nominal interest rates rising is perceived to be relatively high. To the extent that the rules prevent professional investors from profiting in a rising rate environment, they too dampen the demand for bonds.

62. While the arguments in favor of liberalizing the rules are compelling, they are incomplete. The underlying illiquidity of the rand securities markets raises the risk associated with unwinding unhedged futures positions. The fact that futures contracts are settled on a cash basis, moreover, suggests that tighter margin requirements rather than looser rules might be warranted. Either way, the effectiveness of more liberal rules for taking positions is likely to be limited, as unit trusts represent less than 5 percent of financial institution assets. The U.S. dollar market, where hedged positions are often exempt from margin requirements, is a poor reference for South Africa, given its liquidity and the availability of a delivery-versus-payment settlement option.

Broadening Regulated Access to Markets

63. Reforms aimed at encouraging more diversity of opinion among investors and traders are crucial for both broadening and deepening the rand bond market. Buyers need to find sellers, and sellers buyers, whether for purposes of long-term investment or trading. Reforms must therefore seek to attract new market participants who are driven by different expectations about financial returns on bonds or who can afford to take a less
alarmist view of short-term adverse changes in market conditions.

64. There is likely to be a transition period during which it may be excessively risky for the monetary authorities to lift exchange controls because of the likelihood that capital flight will exceed capital inflows. A financial environment having exchange controls eliminates, however, the policy option of opening the rand capital markets to foreign investors on a significant scale, a policy that in other countries has successfully mitigated, if not fully satisfied huge public-sector funding requirements (see Box 1). Foreign participation tends to increase the attractiveness of a capital market to domestic participants, as well as to broaden the pool of funds available from foreign sources. A significant role for foreign investors and dealers could perhaps be more valuable than any other policy aimed at increasing the rand market's capacity to channel funds to development purposes.

65. An illiquid one-sided market, as the rand bond market has frequently been characterized to be, can be transformed into a far more liquid two-sided market by means of foreign participation. South African investors would more readily find buyers when they themselves might prefer to sell, and sellers when they prefer to buy, because of their diverse expectations about financial return. The rand bond market's enhanced liquidity would normally increase the attractiveness of bond investments relative to equity and therefore result in even more active domestic participation as well. In addition, foreign participation would most likely increase in the absence of the cumbersome procedures related to the dual exchange rate and the uncertainty about funds repatriation.

66. Foreigners' expectations about financial return tend to differ from South Africans' because the risk of South African inflation represents a much smaller percentage of their investment portfolios. They may consequently be willing to hold rand fixed-income paper at a lower nominal yield than South African market participants. The financial benefits or risk diversification in foreigners' portfolios also mean that foreigners can be expected to purchase a relatively large volume of bonds, by domestic standards, at a relatively small yield pick-up.

67. But foreigners, like residents, have displayed hesitation in buying South African bonds without first receiving a clear indication of what the fiscal and monetary policy of the new government will be. Evidence of this stance may be seen in foreigners' preference for investments having equity features, despite the dual exchange-rate's bias in favor of fixed-income investments. In particular, foreigners may invest in South African securities at the financial rand rate, which is cheaper than the commercial rand. They can repatriate their dividend and interest earnings at the higher commercial rand rate, thus earning a profit on the currency transaction, while the proceeds from the sale of assets must be converted at the financial rand rate, which is not only more expensive but also is far more volatile as a result of the currency market's relative illiquidity. Capital gains tend to represent a larger percentage of the return on equities (and deep discount bonds) than on regular bonds, so foreign demand for bonds might be expected to be greater than for equities. and capital gains must be repatriated at the financial rand exchange rate. Nevertheless, property equity funds have become popular with New York fund managers. Equities are generally reported to be an easier item to sell abroad than
gilts or other bonds.

68. The mood characterizing foreign investor preferences contrasts sharply with foreigners' attitudes toward German Unity bonds after internal market reforms were introduced to improve the liquidity DM securities. Foreigners flocked to the DM bond market, reportedly with a conviction about the Bundesbank's unparalleled commitment to low inflation. Similarly, when Belgium opened its bond market in 1990, foreigners were eager buyers because they felt that Belgium had no choice but to tie its monetary policy to the Bundesbank's.

Introducing Sinking Funds

69. The creation of one or more sinking funds may also be considered. In developed and developing bond markets, sinking funds have been typically created for publicly and privately issued bonds and sometimes for utilities bonds. An associated sinking fund provision requires the bond-issuing entity to retire a certain amount of the outstanding debt each year. Bond retirement is generally done in one of two ways. Either the issuer purchases the bonds to be retired in the open market if their price is below par (frequently done) or at par (less frequently). Or the issuer may make payments to a trustee who is empowered to retire bonds determined every year by lottery. The mechanism and schedule of retirement are set at the time of the issue of the bond and vary from one issue to another and from one country to another.

70. In South Africa, by special provision, sinking funds could retain part of the proceeds of bond issues as a kind of "working capital" in order to finance secondary trading and thereby provide liquidity to incipient markets. There are different mechanisms that could serve this end, and they could be studied.

71. Sinking funds would offer several benefits in the rand market, including:
   a. the orderly retirement of debt;
   b. enhancement of liquidity of some debt, especially in the shallowest markets;
   c. greater stability of bond prices; and
   d. a boost in public confidence in the creditworthiness of the issuer.

The Need for Investor Confidence

72. Criticisms of technical failings of the rand derivatives market, while important, are not the major source of difficulty for the bond market in South Africa. The bond market is illiquid for reasons that appear to go beyond technical market factors. As the analysis of technical factors obliquely suggests, bond illiquidity in South Africa appears to originate in a lack of investor confidence.

73. This finding can be examined first by considering traders' views on market turnover. Turnover in the spot market for the R150 and the E168 is high, which analysts usually interpret as a sign of market liquidity. Traders in the South African market, however, indicate that high turnover is often accompanied by large price movements. Investor fears about the bond market being subject to cornering has resulted in a stated
preference by sellers to settle futures contracts, were any available, in cash rather than
delivery of the underlying bond. This observation suggests that a large volume of new
bonds can be placed only in conjunction with a substantial change in price. The reason is
that the market is one way - expectations about where the market is going are uniform
and these expectations change uniformly across investors and traders.

74. Uniform expectations are a by-product of the South African financial system's
small size, its concentrated market structure and its isolation. Thus, one remedy would
be to offset these features by increasing competition in the financial services industry.

75. Liquidity in the equity market appears greater than in the bond market, however,
suggesting that enhanced competition would be an insufficient remedy. Evidence of the
equity market's greater liquidity can be seen in the most actively traded derivative
product, the All Stock Index Futures Contract (ALSI), which is listed on SAFEX. As the
name implies, this is a futures contract on equities listed on the Johannesburg Stock
Exchange (JSE). The relative popularity of this futures contract implies that the market
can be more two-sided than the market in any rand bond. Furthermore, the spot market
in equities is, on average, more liquid than the spot market in bonds, enabling the futures
index to be priced off the spot market. If spot prices did not reflect true market
sentiment, the futures index price could not reflect market sentiment either and would not
be so actively traded.⁶

76. Implicit in the observation about liquidity in the equity market is that the relatively
illiquid nature of the bond market is due to factors peculiar to bonds. The major
difference between bond contracts and equity contracts is that bond contracts are nominal.
Unless they carry a floating rate of interest, they pay an income stream whose value
varies inversely with the inflation rate. In South Africa, there are few floating rate bonds
so inflation risk is a major (negative) determinant of the demand for bonds.

77. During the transition period, the inflation outlook is likely to remain highly
uncertain. Investors realize that large new financing demands will be made on the
market, but they are uncertain as to whether the proper controls will be put into place to
ensure that the debt remains manageable. It is therefore logical and reasonable that they
should prefer equity to bonds. Moreover, in the case of blue chip equities, asset value is
sensitive to international developments (such as the performance of the Dow Jones
Index). In the current environment of exchange controls, South African investors are
thus likely to continue investing in equities as a substitute for international financial
assets. Equity values are not only less vulnerable to domestic inflation risk but are more
responsive to international trends. Bonds, in contrast are less attractive as a hedge
against inflation and they are moreover vulnerable to price manipulation.

⁶ Many participants in the South African market have noted that the spot equity market is also
illiquid, but because of fixed brokerage commissions. They support this view with evidence of a relatively
low ratio of turnover to outstanding in equities in South Africa compared to major markets.
78. Like institutional investors, retail savers have good reason to avoid fixed-income instruments. Tax benefits play an important role in attracting households to contractual savings instruments. But the very low profile of households among bank depositors may also be due to the more developed capacity of institutions to protect the value of fixed-income investments. If this is the case, the scope for channeling household savings through the banking system during the period of transition could be severely limited by the perceived risk of inflation.

79. Investors' concern about inflation also explains their demand for marketability in bonds. Ironically, it is those very concerns that prevent bonds from being highly marketable, especially when moods swing uniformly. Investors consequently observe or experience a lack of liquidity in the rand bond market. Unlike the most attractive equities, even the best bonds cannot be unloaded at a price reasonably close to the last transaction.

**Preferential Tax Treatment for Local Government Issuers**

80. A fourth policy approach to mobilizing funds would be to provide preferential tax treatment to the debt of local government issuers. This would provide an after-tax yield enhancement to investors to encourage them to buy securities offered by these governmental units. Such a policy would have the principal advantage of potentially making local authorities responsible for their own debt. Advantages must be weighed against the decline in the country's fiscal revenues and cost of borrowing, however.

**The South African Experience**

81. Spreads between yields on the relatively liquid R150 and E168 bonds on the one hand and yields on local authority bonds have increased since early 1993 from a range of about 30-70 basis points to well over 100 basis points. Even the largest municipalities and the wealthiest white local authorities find that volumes (in excess of R500 million) are either unavailable altogether or they are priced at prohibitively expensive levels. Market participants perceive that the increase in spreads is due more to illiquidity than to credit-quality problems, though both are factors. As investors do not believe that the central government would permit a major municipality to fail, their concerns center on the costly delays which they might encounter in awaiting debt-service payments, as well as the costs of unloading bonds in a thin or dead market. Investors' fears are magnified for issues of small size. And small municipalities, which might be permitted to fail, have been shut out of the market for credit reasons.

82. Since the political transition toward elections, the largest municipalities have not been completely shut out of the market. They have been able to raise funds through tax-driven vehicles and structured deals. Under sale lease-back arrangements, for example, municipalities, which are exempt from income tax, sell depreciable real assets to the lender, who can use the tax benefits of depreciation. The lender then leases the assets back to the municipality. Maturities, at around 2-4 years, tend to be shorter than municipalities would like in order to match the expected life of investment projects. The supply of funds is moreover limited by the availability of physical assets that Inland
Revenue is willing to consider a depreciable asset. The unwillingness or inability of major municipalities to raise funds without resorting to what amounts to issuance of tax-free debt indicates that the cost of credit under current conditions is a major obstacle to municipal finance.

Application of the U.S. Model

83. Thus yield enhancement on local authority debt might be effective in broadening the demand, despite the probable illiquidity in the market. A possible yield enhancement could be generated through a tax-exempt municipal bond market, modeled after the U.S. program where interest earned on state and local (municipal) bonds is tax exempt at the federal level (see Annex 3 for details). Because investors equate after-tax yields across securities, they are willing to hold municipal bonds at a lower pre-tax interest rate than other securities. The pre-tax interest rate represents the cost of issuing bonds to state and local governments, which means that the tax benefit of municipal bonds passes through as lower funding costs for local governments.

84. The municipal tax exemption in the United States has been condemned by policy analysts as a distortion in the capital market for several different reasons. First, it represents a subsidy to municipal borrowing rather than a subsidy to municipal investment. In other words, it encourages municipal indebtedness. The counterargument is that federal subsidies allocated in other ways would ultimately lead to federal control over how the funds are used at the local level. Second, it represents a partial subsidy to high-income taxpayers. These taxpayers find after-tax yields on municipal bonds superior to taxable securities, which implies that part of the tax advantage of municipal bonds is split between municipalities and high-income taxpayers.

85. The transferability of the U.S. experience to South Africa should again be made cautiously. As noted, non-central government borrowers in the United States can issue debt more cheaply relative to the central government than in South Africa. This is because U.S. bond markets have greater investor diversity (breadth) and liquidity (depth) than the South African bond market. Even if South African local authorities are given a tax exemption, they will have to pay the cost of a shallow bond market, and their access to large-scale volume will be greatly limited. While the precise cost premium cannot be known in advance of an issue, a range of 150-400 basis points in annual yield would be realistic. It is not likely that this cost will disappear soon, or that access to volume will increase, as no other bond market has the same breadth or depth as the U.S. dollar market.

86. Moreover, investors are not likely to make fine distinctions in the credit quality of issuers in South Africa, given the absence of a record of performance for virtually all of them (under the economic and political conditions characterizing the new South Africa). In the dollar market, in contrast, investors differentiate issuers on the basis of perceived credit risk. Individual issuers, including the triple-A rated Washington State Power Authority, have gone bankrupt without appreciably disrupting the market. Large issuers, such as New York City, have been bailed out by the government, but only after much debate and uncertainty, which translated into costly bond-price volatility during the
waiting period. In contrast, one default in South Africa could destroy the whole market.

87. In conclusion, the South African bond market is unlikely to have the depth to support a municipal bond market that differentiates borrowers according to risk.

Special Government-Sponsored Credit and Guarantee Programs

88. A fifth policy approach to mobilizing funds domestically would be to establish or refine existing credit programs sponsored by the government and enjoying some form of open-ended or unfunded guarantee by the central government. A system of government-sponsored credit and guarantee programs would respond to the widely held view that the central government should be called upon to become the de facto guarantor (even if only implicitly) of local government securities and specialized agencies, at least during the transition.

The U.S. Experience

89. There are a wide variety of models to choose from or build on (see Annex 4). In the United States, federal and federally sponsored agencies were created to channel credit to particular sectors of the economy, such as housing, farming and education, but not large infrastructure. Federal agencies issue debt explicitly guaranteed by the U.S. government, whereas federally sponsored agencies do not have an explicit guarantee. Instead, they have a line of credit from the Treasury that can be called upon, up to legally specified amounts, if they encounter difficulty in funding or servicing their debt.

90. Federal agencies issue very little debt directly, but they often guarantee or insure third party debt. For example, the Government National Mortgage Association (Ginnie Mae) issues no debt, but it insures a mortgage portfolio of about US$400 billion. In contrast, federal sponsored agencies, such as the Federal National Mortgage Association (Fannie Mae), the Farm Credit Banks and the Student Loan Marketing Association (Sallie Mae) have over US$400 billion in direct obligations outstanding. They have used these funds like a bank to make loans or like a dealer to make markets in third-party securities.

91. Various combinations of functions are possible. Fannie Mae insures mortgages held by third party investors like Ginnie Mae, and it also uses its balance sheet to make markets in the mortgages it insures. The Farm Credit Banks issue securities and make loans directly to their constituents, but they do not guarantee third-party securities.

92. The expansion of government-sponsored loan programs in the United States over the last ten years might suggest at first glance that this could be an attractive method for South Africa to adopt in order to expand the markets for local authority bonds and mortgage bonds. Whereas agency securities represented about 21 percent of total U.S. federal debt in 1974, this ratio had increased to over 35 percent by 1991. As these programs grow, they tend to become riskier, however. In the United States, the debt of the Home Loan Banks was used to fund failing savings and loan associations from the early 1980s. The Home Loan Banks' authority to issue bonds with credit lines to the
central government prolonged the savings and loan crisis, and increased the long-run cost to the public (to well over $100 billion). The solvency of the U.S. government-sponsored student loan program is currently under jeopardy as well, because of severe repayment delinquencies by its client base.

The Japanese Experience

93. A different approach to credit guarantees is embodied in the Japanese system. Instead of relying on agencies issuing their own debt or insuring third-party debt, Japan has a series of government financial institutions for housing, small business finance, municipal finance, and regional development. These institutions receive funding through the government postal savings system. The postal savings system offers deposits to the public through post offices at tax-preferred rates. During the post-war period of Japanese industrial development, the postal savings system was relatively small. In 1955, for example, total postal savings assets stood at around 10 percent of bank assets. In South Africa today, 10 percent of bank assets would correspond to R27 billion -- only one to two years' worth of government borrowing.

94. During the early 1980s, after Japan had risen to become a major economic power, the postal savings increased to almost 30 percent of bank assets. Thus it appears that the Japanese authorities were cautious about channeling scarce capital resources through such government-sponsored credit programs until economic development had essentially been achieved.

Applications to South Africa

95. The experience of the United States must be cautiously applied to South African conditions. The U.S. government agency market expanded in an overall market that was liquid to begin with and becoming increasingly liquid. Agency and agency-sponsored securities have been traded at narrow spreads over U.S. Treasury bonds (about 20 basis points), a level which clearly will not be obtainable in the rand market. It is furthermore unlikely that the rand bond market could reach the U.S. level of market maturity during the transition period. In addition, proper governance has been essential to the success of U.S. programs in two complementary respects. First, it has mitigated some of the moral hazard of running programs that, out of political concerns, would be bailed out by the central government rather than go bankrupt. And second, the inclusion of private owners and managers bearing the first risk of loss in the programs has induced them to reduce systemic risk in recognition of the inevitable inflationary alternative.

96. Application of the Japanese model to South Africa appears to present less risk of losing financial control over credit and guarantee programs than the U.S. model, but it also offers little potential for effectiveness. The Japanese approach encompasses features characterizing three generic policy approaches presented above. The centralized allocation of funds through specialized government agencies is a feature - and arguably a shortcoming - of the centrally funded pass-through vehicle (the first approach presented above). The mobilization of funds through the postal system was facilitated by a tax enhancement, which is the key feature of the previously presented approach. Critically,
the Japanese government’s credit programs were fully funded via postal savings. In this manner open-ended (i.e. unfunded) guarantees by the government were averted.

97. Another constraint on adapting the Japanese model to South Africa would be the need for an inducement to households to change their savings habits. Incentives for shifting savings out of contractual savings institutions into a postal savings, or some variant, system would need to be explored. Supplementing the contractual savings flow with a policy aimed at channeling South Africa’s community bank deposits through a trust fund managed by the Department of Finance into specialized government financial institutions would be closer to replicating the Japanese system. However, this alternative would be unlikely to attain substantial volume during the transition.

98. The establishment of special government-sponsored funds in South Africa - for example a Housing Fund or a Local Authorities Fund to replace the existing Local Authorities Loan Fund - could raise grave risks to the economy. The problem with guarantees and lines of credit to the central government (i.e. Department of Finance) is that the benefits of government support are transparent, whereas the costs are not. On the one hand, the funds do not entail government borrowing and therefore are less costly than direct government borrowing. The government’s borrowing capacity appears unaffected by the issuance of guarantees unless an agency actually borrows from the central government, which is normally not foreseen. When, on the other hand, the government establishes a program requiring capital, the capacity of the capital markets is used whether the program is directly funded by the government or funded through guarantees. In the event of default, the government’s obligation is the same in either case: it must make good on the debt obligation.

99. By the same reasoning, capital-market borrowings by government-owned or government-sponsored financial institutions are to be avoided because the cost to the economy of intermediating funds outside the framework of the government’s fiscal policies are not transparent. Any capital-market borrowings by regions, municipalities or parastatal organizations, such as the Development Bank of Southern Africa (DBSA), the Industrial Development Corporation (IDC) or Eskom may appear at first glance to stand apart from the government’s own bond issues (RSA bonds). But any presumption that such borrowings do not affect the government’s own borrowing capacity would be erroneous. As with government guarantees and lines of credit, the capacity of the capital markets is used when government-owned institutions tap the markets; and in the event of

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Box 2

Prescribed Investments as Policy Failures

In Zambia, Nigeria, Ghana and Egypt, pension and provident funds were forced into government investment vehicles, such as a national investment bank (Egypt) and government bonds (Zambia). As these vehicles yielded negative financial returns in inflation-adjusted terms, the pension and provident funds quickly eroded in volume. In Zambia, Nigeria and Ghana, the savings institutions actually went bankrupt. Not only did the holders of pension and provident policies lose their retirement savings, but also the stock of domestic savings available for long-term investments diminished.

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default by a government-owned institution, the government assumes the latter's obligations to bondholders.

100. Pressures in South Africa to solve the numerous funding needs of special sectors, interest groups and tiers of government have resulted in growing support for the establishment of government-sponsored funds and the improvement of existing credit programs. This is the case with respect to housing, local authorities and small and medium-size enterprises. Public support is also providing a new lending “direction” to existing institutions performing a funding function; DBSA and IDC are now extending loans for community banking and thus indirectly to housing, for example. The expansion of such institutions is likely to raise the level of central government obligations beyond its ability to service them, precisely because the cost of the guarantee is neither apparent nor taken into full account when the programs are designed. Investors taking note of uncontrolled contingent liabilities of the new South Africa can be expected to react negatively to what they will be inclined to view as fiscal impropriety. In addition, the larger the book of guarantees, the more negative their effect on the central government’s direct funding costs.

101. Likewise, there is a significant risk of undermining fiscal discipline through the establishment of institutions with substantial government-endowed funds (on which no dividends would be payable) if the government endowment is interpreted by the public as government sponsorship carrying an implicit government guarantee. Even if such institutions were authorized to supplement endowment funds with borrowing at market rates through negotiable securities, they could be vulnerable to the same excesses and shortcomings as traditional government-sponsored credit programs. While the costs to the economy of specialized financial institutions would not be immediately evident, the benefits to the public might be magnified by pooling grants, foreign aid and any other concessional sources of funds to reduce the interest rate on loans to ultimate borrowers to below-market levels. If the government could not politically afford to allow such institutions to fail, or if the public perceived the government to take a serious interest in the institutions’ credit operations, additional borrowings would not have to pass the market test. This vulnerability to financial indiscipline would apply even if the initial endowment funds were contributed entirely, or in part, by contractual savings institutions.

102. Any fragmented approach to public-sector borrowing and unfunded guarantees, therefore, should at a minimum include the disclosure of accounts on both an unconsolidated and consolidated basis. South Africa, as a member of the International Accounting Standards Committee, could apply the same high standards to financial statements prepared in the public sector as are prepared in the private sector. Contingent liabilities need to be declared, and the government accounts should present them in consolidated form for purposes of debt management. Disclosure is not sufficient, however, since large volumes of declared contingent liabilities might otherwise be read by recipients of government-sponsored credits and guarantees as a signal that the recipients would not be expected to fulfill their contractual obligations. Another mitigating measure would be for the government to provision against the expected losses of each credit or guarantee scheme by means of budgetary transfers held in escrow.
103. One exception to the adverse trend generated by government-sponsored credit programs relates to the capacity of government-sponsored organizations to collateralize their debt with predictable revenue flows. The utility companies - Eskom and Telkom in particular - have a track record of income linked to customers' use of electricity and telecommunications, respectively. To the extent that their market debt obligations are collateralized with collectable funds, their reliance on an explicit or implicit guarantee by the central government is alleviated.

104. Another exception could be made if the annual volume of borrowings and guarantees by parastatal organizations had to be authorized in advance by the Department of Finance and Reserve Bank in accordance with the country's fiscal and monetary policies, along the lines of the first policy approach presented in this report. International experience suggests, however, that borrowing authorization by the central fiscal and monetary authorities is rarely agreed upon on an ad-hoc basis, and even more rarely adhered to. In Germany and Spain, for example, during the years when fiscal pressures were slight, regional authorities regularly received authorization from the Ministry of Finance to proceed with proposed budgets and borrowing programs. When the new Federal States and regions were confronted with huge expenditure and investment requirements, however, they insisted on fiscal autonomy. This shift in attitude has led to inflationary pressures.

Prescribed Investments

105. Prescribed investments on insurance companies and pension funds, the sixth approach presented, are very similar to directed credit programs applied to commercial banks. Both types of schemes were used extensively in developing and developed countries in the 1960s and 1970s as parts of policies to promote the availability, and lower the cost, of finance for preferred sectors or activities. While the social benefits of prescribed investment programs have been the focus of public policy, the costs have tended to be overlooked. The nature of such costs are outlined below.

International Experience

106. Prescribed investment policies have generated mostly negative financial results, and in a significant number of instances they have been financially catastrophic. The fundamental difficulty with prescribed asset programs is that, because they permit governments to commandeer financial resources, governments tend to view them as a source of virtually free funds, an attitude which severely undermines fiscal discipline. An economy's scarce financial resources are perceived to be plentiful, making it relatively easy for the government to misallocate them. The reports in South Africa that the contract al savings industry represents a huge source of funds that should be tapped to finance social upliftment reflect a comparable attitude. Prescribed investment programs in many countries have eventually led to negative economic growth and hyperinflation (see Box 2).

107. This has been the experience of insurance companies and funded social security
systems in most Latin American countries as well as several African countries such as Ghana, Nigeria, and Zambia. The national provident funds of these three countries have effectively gone bankrupt. In Ghana, the provident fund has been closed down and is being replaced by a system of social security. Not only have the workers lost their retirement savings, but the stock of domestic resources that is available to fund long-term capital investment has diminished. In Egypt, the substantial resources of the social security system have also eroded as a result of their placement with the National Investment Bank of Egypt, which used the funds for inefficient investments in public works and public-sector enterprises. These produced negative real rates of return that have on occasion reached minus 15% but have averaged minus 12% over the 1980s. Other countries where contractual savings institutions have suffered from prescribed investments in low-yielding public sector securities and social housing include Tunisia, Turkey, and Morocco as well as several countries in Southern Europe.

108. Programs in a few East Asian economies, in contrast, are sometimes cited as successes. In these countries, the governments maintained a semblance of fiscal discipline, which limited the potential abuses that often characterize prescribed investment programs. Nevertheless, even in these disciplined economies, prescribed asset programs have had detrimental effects on the health of the financial system (see Annex 5 for a summary of the cases of Japan, Singapore, Malaysia and Sweden).

109. Directed investment policies cannot succeed without macroeconomic stability and financial discipline. International experience suggests that essential ingredients to a prescribed investment policy, if it is not doomed to failure, must also include a focus on the promotion of industrialization and exports, the use of detailed project appraisals, and both extensive and effective monitoring of the use of funds and their timely repayment. Programs stand a chance of being more successful when they are narrowly focused, limited in scale and duration, and involve small interest-rate subsidies that minimize the distortions in incentives for borrowers and lenders. The larger a prescribed investment program, the higher the marginal cost to the financial system.

South Africa’s Experience

110. Prescribed asset requirements in South Africa started out similar to those of Singapore, Malaysia or Sweden, but the situation deteriorated in a predictable manner and could have resulted in financial disaster had the policy not been lifted or had monetary restraint not been introduced. Insurance companies and pension funds were required until 1989 to place 53% of their untaxed liabilities and 33% of their taxed liabilities into fixed-interest bearing public sector securities. The real return on those securities was substantially lower than that on listed equities. Although average returns were positive in real terms in the 1960s, they turned negative in the 1970s and 1980s when inflation accelerated to double digits.

111. Data contained in the Mouton Report show that the average nominal return on equities was 11.3% in the 1960s against 4.9% for prescribed assets and 3% for the inflation rate. In the 1970s, the nominal return on equities increased to 24.5%, but the return on prescribed assets rose to only 7.3% against an inflation rate of 11.3%, resulting
in a negative real return of 3.5%. In the 1980s, the nominal return on equities fell to 20.1%, while the return on prescribed assets rose to 13.5%. However, as inflation accelerated further to 14.5%, prescribed assets continued to earn a negative real return of nearly 1%. Recognizing the policy's adverse impact on the returns of insurance companies and pension funds, authorities abolished the policy of prescribed investments in 1989.

112. At present, insurance companies and pension funds are subject to ceilings on their investment allocations for prudential and diversification purposes. Thus, the institutions are allowed to invest a maximum of 25% of their funds in real estate (with a maximum investment per single property of 5%), 75% in shares, and 90% in shares and property combined.

113. Use of prescribed investments inevitably entails a subsidy to preferred sectors or activities at the expense of others. Financial institutions, in providing funds to social upliftment or wealth redistribution, may suffer a weakening of their own financial position. Other users of finance, moreover, may incur a higher cost of funds. And savers, which in the South African case involve pension fund holders and insurance policy holders, are likely to obtain a lower return on their financial savings.

Any Policy of Prescribed Investments

114. Three important criteria should be met to minimize the adverse effects of prescribed investments:

a. First, the preferred activities should involve large spillover effects that cause social benefits to exceed private benefits. Export-oriented activities involving innovation and learning fall under this category; major infrastructure projects (e.g., road construction, electrification and telecommunications), which produce essential inputs for most other activities, may also have large spillover effects. Investments in social housing and schools also have large spillover effects, but because of their longer-term nature, care must be taken to ensure that they are affordable and would not cause an overheating of the economy and generate strong inflationary pressures.

b. Second, the preferred activities should have difficulty in obtaining finance from ordinary market sources, whether because of high investment risks or information costs. Exporting small and medium-size firms as well as social housing and school building might qualify, whereas utilities engaged in infrastructure projects might be less likely to face a similar constraint.

c. Finally, the cost and scope of eligible assets should be very small to minimize distortions in the behavior of borrowers and lenders and should be based on close and extensive consultation with the private sector. Only the smallest interest-rate subsidy should be tolerated, perhaps covering a portion of the risk premium that preferred activities would otherwise have to pay. In addition, the programs should fall well short of 15% of total financial resources.
exceed these limits would severely limit the scope of market forces in the
mobilization and allocation of financial resources and would place a heavy burden
on governmental agencies in selecting projects and monitoring their performance.
In the end, fiscal discipline would be undermined.

115. In the context of South Africa and the transition toward a more integrated
economic system, care must be taken to avoid overloading the productive system with
overly ambitious programs that may cause a big rise in the cost of adjustment and may
undermine macroeconomic stability. Different programs must meet basic market tests in
terms of economic and financial feasibility.

116. The use of prescribed investments entails a redistribution of income and wealth
which, however, will be extremely limited if the policy itself adheres to stringent limits
on its scale and the size of its subsidy. Prescribed investments, by lowering the return on
contractual savings, may also affect the rate of saving. International experience shows
that the impact of a small reduction in real returns is ambiguous. People who are
sensitive to real returns may decide to save less, while those who have a target level of
savings in mind may be induced to save more. A large fall in real returns would most
likely cause a net reduction in contractual savings, as more people decide to save less
and/or place their savings in other assets (real estate, precious metals, or foreign assets
through capital flight). The available pool of long-term financial savings will then be
reduced, to the detriment of the economy’s future prospects.

117. Grave risks also lie in the design of prescribed investment policies. It cannot be
overemphasized that if such policies do not meet the criteria of narrow focus, small size,
limited duration, and small subsidies, they will be difficult to implement efficiently and
monitor effectively to prevent misuse. Programs with a longer gestation period, such as
housing, will suffer from greater exposure to the risks of misuse, political manipulation
and interference. In terms of sequencing, the most promising programs will be those that
emphasize employment creation in activities that both expand the economic potential of
the country in the short run and are sustainable in the longer-run. These are to be found
in supporting smaller firms that are oriented toward the export markets, either by
exporting directly or by producing for other exporting firms. These programs are likely
to produce beneficial results within one or two years from their implementation and
should therefore receive highest priority. Spending on infrastructure, housing and
schools will have a longer gestation period and generate benefits over a longer period;
they would therefore fit better into a longer-term planning horizon.

4. Conclusions

118. The South African bond market is illiquid according to the standards of the
world’s most developed financial markets. Secondary-market illiquidity is the outcome of
a lack diversity among investors, intermediaries and issuers. Lack of diversity owes
itself to uniform investor expectations. There are several technical improvements, such
as improving the settlement system, which can improve liquidity at the margin, but these
improvements will not be enough to create a bond market with the depth, breadth and
resilience to finance social upliftment in the immediate future. The bond market is inadequate to the task primarily because investors are uncertain that fiscal and monetary controls are, or will be, in place to ensure that rand-denominated bonds will pay real rates of return.

119. An increase in foreign participation, which can be fostered by the lifting of exchange controls, will almost certainly help the rand market to develop. But foreign participation cannot be expected to play the same critical role in securing large volumes of funds for development as was the case in Germany upon unification. The credibility of German monetary policy had been well established and was not questioned. As a result foreigners had the necessary level of confidence to be active purchasers of German Unity bonds, as well as other DM-denominated financial instruments.

120. Policy makers in the new South Africa will therefore have to depend upon yield enhancements to strengthen the rand bond markets. Enhancement programs, to be successful, must be structured in a way that accommodates the underlying weaknesses in the market. The market cannot absorb a diversity of bond issuers. If introduced on a significant scale, prescribed investments could be an invitation to investors to give up any expectation of fiscal discipline over the long run unless the most stringent fiscal, monetary and financial conditions are meticulously and consistently met by the government authorities. Likewise, unfunded or open-ended guarantee programs (whether based on explicit or implicit government guarantees) similar to those driving the U.S. government agency markets are very unlikely to work in South Africa during the transition period due to operational risks. They are likely to undermine the process of building monetary and fiscal credibility and thereby further postpone the day when investors feel confident about investing in rand fixed-income instruments. For the same reason, a tax-exempt local government bond market is likely to be unsuccessful.

121. A Japanese-style postal savings system to fund development projects is more realistic to the extent that it would not necessarily undermine fiscal discipline. However, its success in South Africa would hinge on a fundamental change in the savings habits of relatively wealthy South Africans. To induce households to shift their financial savings from contractual savings instruments to specially designated retail deposit instruments, the tax benefits currently enjoyed by the former would have to be shifted to some extent to the latter. During the transition period, such an approach might initially focus on community bank deposits. However, it would likely yield only very limited results in terms of the volume of funds that could be attracted. Side effects to taking this approach would also need to be anticipated.

122. For these reasons, the most promising approach to raising and channeling a large volume of funds for public-sector development programs is three-pronged. It would consist, firstly, in centralizing and standardizing public-sector funding operations while creating stringent controls both on the aggregate amount of public-sector borrowing and on the way that public funds can be disbursed. Secondly, it would shift a portion of the tax burden from bond investments to equity investments, while adjusting the mechanism and timing according to which taxes are applied to pensions and differentiating between traditional and risky classes of equity. Thirdly, technical and regulatory market reforms
would be introduced as soon as possible, as they can be expected to generate some benefit to the rand market even if it is small.
Annex 1

Public Sector Borrowing Requirements

Under the three macroeconomic scenarios (A, B and C) examined in the World Bank's Discussion Paper No. 7, the rand capital market's capacity to absorb government and government-related securities can be expected to experience considerable pressure over the next four years. Tables 1 and 2 present the trend in key variables that determined the supply and demand for domestic public-sector borrowing in the rand capital market between 1960 and 1993, as well as projections of those trends under the scenarios for three four-year periods between 1994 and 2005. Gross domestic savings provide an indication of the volume of funds available within South Africa for tapping. The net increase in consolidated government domestic debt plus scheduled debt redemptions reflect the actual volume of borrowings that took place in previous years; some of these borrowings were undertaken in the market, whereas others were not subject to free market conditions. New issues of public-sector securities in the domestic capital market indicate the actual market borrowings that took place. Excluded are the purchases of securities by the Public Investment Commissioner, the Reserve Bank and the Corporation of Public Deposits because these were not undertaken under free market conditions (PIC) or did not reflect investor demand (SARB), or both. Also not included are the government-guaranteed debt of the TBVC countries and other indirect obligations of the central government, which stood at R27 billion in 1993.

Table 1 presents the absolute trends measured in rands, whereas Table 2 presents the relative trends, measured as a percentage of key macro-economic variables.

<table>
<thead>
<tr>
<th>Table 1</th>
<th>(in current rand billion)</th>
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<tr>
<td>Gross Domestic Savings</td>
<td>2.2</td>
</tr>
<tr>
<td>Projected, Worst Case Scenario(A)</td>
<td>128.9</td>
</tr>
<tr>
<td>Projected, Med. Case Scenario (B)</td>
<td>137.5</td>
</tr>
<tr>
<td>Projected, Best Case Scenario (C)</td>
<td>139.9</td>
</tr>
<tr>
<td>Net Increase in Government Domestic Debt + Scheduled Redemptions</td>
<td>0.3</td>
</tr>
<tr>
<td>Proj. Fiscal Deficit (Sc.A) + Redemptions</td>
<td>47.5</td>
</tr>
<tr>
<td>Proj. Fiscal Deficit (Sc.B) + Redemptions</td>
<td>44.3</td>
</tr>
<tr>
<td>Proj. Fiscal Deficit (Sc.C) + Redemptions</td>
<td>43.8</td>
</tr>
</tbody>
</table>

Note: New issues in Domestic Capital Market of Public Sector Securities excluding purchases by the PIC, SARB and CPD.
### Table 2
(in percent)

<table>
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<tr>
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<tr>
<td><strong>Gross Domestic Savings (as % of Current GDP)</strong></td>
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<td>Projected, Worst Case Scenario (A)</td>
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<td>Projected, Med Case Scenario (B)</td>
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<td>Projected, Best Case Scenario (C)</td>
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<tr>
<td>New Issues in Domestic Capital Market of Public Sector Securities excluding purchases by the PRC, SARB and CPD (as % of Gross Domestic Savings)</td>
<td>N/A</td>
<td>N/A</td>
<td>21.3</td>
<td>23.0</td>
<td>23.0</td>
<td>30.0</td>
<td>32.3</td>
<td>49.7</td>
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<tr>
<td>Net Increase in Government Domestic Debt + Scheduled Redemptions (as % of Gross Domestic Savings)</td>
<td>13.6</td>
<td>15.6</td>
<td>17.8</td>
<td>17.6</td>
<td>41.0</td>
<td>44.2</td>
<td>58.7</td>
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<tr>
<td>Proj. Fiscal Deficit (ScA) + Redemptions (as % of Gross Domestic Savings)</td>
<td>35.6</td>
<td>25.7</td>
<td>35.1</td>
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<tr>
<td>Proj. Fiscal Deficit (Sc B) + Redemptions</td>
<td>32.7</td>
<td>8.0</td>
<td>-9.1</td>
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<tr>
<td>Proj. Fiscal Deficit (Sc C) + Redemptions</td>
<td>31.9</td>
<td>3.4</td>
<td>-9.2</td>
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<tr>
<td>Net Increase in Government Domestic Debt + Scheduled Redemptions (as % of GDP)</td>
<td>35.4</td>
<td>44.4</td>
<td>44.4</td>
<td>39.3</td>
<td>78.7</td>
<td>73.7</td>
<td>97.9</td>
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<tr>
<td>Proj. Fiscal Deficit (ScA) + Redemptions</td>
<td>7.6</td>
<td>5.1</td>
<td>5.4</td>
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<tr>
<td>Proj. Fiscal Deficit (Sc B) + Redemptions</td>
<td>7.4</td>
<td>2.1</td>
<td>-2.3</td>
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</tr>
<tr>
<td>Proj. Fiscal Deficit (Sc C) + Redemptions</td>
<td>7.4</td>
<td>1.2</td>
<td>-3.1</td>
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**Sources:** Staff estimates based on South Africa Reserve Bank Bulletin and results of World Bank's South Africa Macro Model
Annex 2
The Tax Treatment of Bonds vs. Equities in South Africa

In general, interest income on bonds is taxed at the taxpayer's marginal tax rate whereas dividend income from equities is tax exempt. Dividends are exempt from taxation at the investor level because they are subject to taxation at the corporate level as profits; hence, South Africa avoids double taxation of dividends. Capital gains on all property are, in principle, untaxed. Amortization gains on bonds are taxed as income. For example, if an investor buys a bond with a face value of 100 for a price of 90, he is taxed on the difference between 90 and 100 when the bond matures, as if it were interest income. However, if the investor were to sell the bond before maturity for 102, he would be taxed on the difference between 90 and 100, and not on the difference between 90 and 102. The 2-point premium is considered a capital gain and is therefore exempt from tax. Under the current system, the amortization tax is applied when accrued interest is paid out; this will soon change to taxation an accrual basis.

There are exceptions to the above rules. Non-financial corporations are subject to a 15 percent additional tax on all net dividends. (Dividends are measured on a net basis because non-financial corporations receive dividend income on equities held as financial assets and they pay out dividends on the equities they have issued.) Insurance companies are taxed on two thirds of their dividends at the same marginal tax rate as they pay on interest, which is 43 percent. Insurance companies pay taxes on investment income only deducting a 55 percent allowance for expenses.

Under a new system for taxing life insurance companies, which is scheduled for full effect in 1995, dividends will be completely exempt from taxation when they are earned on investments made with funds subject to taxation. Expenses will be fully deductible. The marginal tax rate on interest income will be 40 percent. Life insurers are not taxed on investments in pension funds and pension annuities. The income from these funds, regardless of source, will be taxed at individual tax rates when an individual receives benefits.
Annex 3
Municipal Bond Markets in Japan and the United States

The mechanisms adopted by local governments in the United States and Japan to finance their debt differ substantially. U.S. local authorities rely on an exemption of state and local bonds, called municipal bonds, from federal taxation, whereas Japanese local authorities borrow primarily from banks.

The tax exemption of U.S. municipal bonds has made them attractive to investors in high marginal tax brackets. Because individuals primarily fall into this category, 65 percent of municipal bonds are held by individuals, either directly or through mutual funds. No other segment of the U.S. bond market has such a high representation of household accounts.

Until recently, the municipal bond market was subject to less stringent reporting requirements by the regulatory authorities than the corporate bond market. Particularly stringent disclosure rules, however, are now thought to be necessary to protect municipal bond investors in light of their lower average level of sophistication in comparison with institutional investors as well as the very checkered credit performance by municipal issuers. The Securities Exchange Commission (SEC) has recently put out for comment more stringent reporting requirements for municipal bond issuers. The regulatory concern is that investors should be aware that the Federal government will tend to let smaller municipal issuers work out their own credit problems, at possible financial loss to investors. This has induced rating agencies to rate municipal bonds, and terms of access consequently differ significantly across issuers. In this respect, direct access to the U.S. bond market plays a disciplinary role on local authorities in the United States; if a local or state government does not keep its financial house in order, its funding cost rises. Larger local authorities are treated differently, as evident in the cases of New York City and Washington, D.C. more recently.

In Japan, over 60 percent of local government debt financing takes the form of loans rather than securities. Banks are active in providing loans to local governments as well as local government corporations. Decentralization is not as extensive as would first appear, however. About 45 percent of the funding to local governments and local government corporations occurs through a central government financial institution, the Japan Finance Corporation for Municipal Enterprises, which issues debentures, primarily to banks and the Trust Fund Bureau of the Ministry of Finance. This method of financing suggests that the financial decisions of municipalities in Japan are more affected by central government priorities than are those of smaller local authorities in the United States.
Annex 4

Government Guarantee and Credit Programs in Japan and the United States

The United States sponsors several credit programs, among which are the Farm Credit Banks and the Federal National Mortgage Association (Fannie Mae). Both government sponsored agencies issue debt and hold a balance sheet consisting of loans to their constituents. In this sense they are development banks. Importantly, each has a sizeable, though limited, credit line to the U.S. Treasury in case it experiences trouble in raising cash.

Their methods of providing funding constituents differ significantly. Fannie Mae insures individual mortgages that are pooled and sold directly to investors as standardized securities. Fannie Mae’s balance sheet resembles an investment bank’s insofar as it is used to buy and sell securities it guarantees - that is, to provide liquidity to the market for insured mortgages. The Farm Credit Banks, in contrast, operate like banks. They raise funds to make loans and the loans are not sold in the secondary market. Farm loans, unlike home mortgages, are not backed by a physical asset. Lack of collateral makes them riskier. Farm loans, unlike home mortgages, are also not pooled and repackaged into a standardized commodity. For both reasons investors and traders are less inclined to participate in a secondary market for farm loans than for mortgages insured by Fannie Mae. When a farm credit is in trouble, the borrower must be managed, an activity that is better performed by a single lender than by the securities market. The credit problems of the Farm Bank have been substantial. In 1988, Congress established a new agency, the Farm Credit Assistance Corporation to assist in funding the Farm Credit system.

It has sometimes been difficult for individual government-sponsored agencies to access the capital markets, even in a bond market as broad as the U.S. dollar market. In 1974, Congress established the Federal Financing Bank (FFB) to provide funding assistance to individual agencies. The FFB funds its balance sheet by issuing bonds in the market, and its own creditworthiness is enhanced by legal access to a line of credit from the U.S. Treasury. The growing off-balance sheet exposure of the U.S. government has been a source of major concern with respect to its fiscal policies.

Japan also has a number of government-sponsored development banks, including regional development funds, housing funds, local development funds, small business funds, and agricultural and fishery funds. In contrast to the United States, these agencies are often funded indirectly by the government-owned Postal Savings System, through the Ministry of Finance Trust fund. The Ministry of Finance manages the trust fund, and it determines allocation. The gross amount of funds available, however, is partially determined by the amount of funds collected through the postal savings system. The size of the postal savings system is determined by the interest rate it pays relative to that prevailing in the banking system. This is subject to negotiation between the Ministry of Finance and the Postal Ministry. Postal savings deposits no longer enjoy a tax advantage, and the negotiated interest rates currently stands above the rate offered by banks.
Japan, Singapore, Malaysia and Sweden are four countries where the largest institutional investors have been subjected to prescribed investments, but where the policies have not been detrimental to financial markets.

**Japan**

Japanese banking organizations during the period of high growth in the 1960s accounted for over 75 percent of the assets of all financial institutions in Japan. They were subject to prescribed asset requirements on two levels - one explicit and the other implicit. An explicit prescribed asset policy was applied to Japanese banks, whereby they were required to buy a fixed percentage of central government debt at a price negotiated between the banks and the Ministry of Finance. During the high growth 1960s, this program was hardly constraining, as central government bonds made up less than 0.10 percent of bank assets, and bonds of local governments and government corporations represented only 3 percent of bank assets.

In addition, Japanese banks were subject to implicit prescribed asset requirements through moral suasion and other administrative schemes. The government’s purpose was to allocate credit, not to government development programs, but to the major corporations engaged in building export markets. In addition, bills issued by major corporations were discountable by banks at the Bank of Japan, enabling corporate borrowers to access funds in the capital markets at favorable rates. The implicit nature of the prescribed asset policy makes it difficult to determine the proportion of bank lending that was voluntary, i.e. subject to negotiation between bank and borrower, and the proportion due to moral suasion.

It is clear that the interest rates at which credits were negotiated between major borrowers and the banks, with or without the guidance of the government, were quite high during the 1960s, relative to bank deposit costs. The spreads between interest-earning assets and interest-bearing liabilities after non-interest expenses often measured over 150 basis points at large Japanese banks, compared to a recent history of around 30 basis points. This evidence in itself does not indicate that large corporate borrowers paid market rates for their funds, however, as part of the large spread resulted from interest rate ceilings on deposits.

Nevertheless, there is evidence that the lending rates observed in the 1960s were market-related, and it is provided by the impact of stresses on the banking system in the mid-1970s. Corporate demand for credit from financial institutions (mostly banks) dropped from an average of over 60 percent of external borrowing in the late 1960s and

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These data are from Japanese Bankers Federation as reported in Bank of Japan, Economic
early 1970s to less than 20 percent in 1977 and 1978. This decline would suggest that
interest rates on bank credit had been substantially higher than the cost of alternative
(external) sources of funds. Banks responded to the decline in business by cutting
interest rates on corporate credits. Spreads between interest-earning assets and interest-
bearing liabilities fell to less than 10 basis points at large banks in 1978.

When banks had to cut loan rates to compete with external sources of financing, the
explicit prescribed asset program became binding. This was also the time in the late
1970s and early 1980s when government borrowing expanded dramatically. Bank
investments in central government securities increased to 7.4 percent of their assets by
1979, and all eligible public-sector bonds reached 12 percent of bank assets. The interest
rates at which banks had been forced to buy bonds in the late 1970s were, by 1979,
substantially below the market interest rates that were beginning to be reported in
emerging Japanese capital markets. In 1979, net losses on Japanese bank securities
portfolios stood at 58 percent of income before taxes and certain extraordinary items. Pretax return on assets fell to 36 basis points in 1979, a low level by international
standards and down 30 basis points from just five years earlier. By the early 1980s, the
Ministry of Finance abandoned its prescribed asset policy for government bonds.

The pressures on Japanese banks to buy bonds at interest rates favorable to the
government came from a worsening government fiscal situation in the late 1970s. During
the high growth period of the late 1950s and 1960s, government demand at all levels for
credit from financial institutions never exceeded 25 percent of the financial assets of
financial institutions and, by the mid 1960s, had fallen to just over 15 percent. This
figure includes bonds held on the balance sheets of private financial institutions issued by
the central government, local governments, and government enterprises, and loans and
other assets held by government financial institutions. By the early 1980s, government
demand for funds increased to over 36 percent of financial institution assets. Much of
the government demand for funds in the late 1970s was financed through the postal
savings system, which, at that time, enjoyed a tax advantage over bank deposits. Banks
and their regulators responded by pushing up deposit ceilings, which contributed to a
narrowing of bank spreads and profitability.

Thus, even in fiscally conservative Japan, easy government access to credit through
prescribed asset programs and through government financial institutions had a negative
impact on the performance of financial institutions. The macro economic effects of the
program, however, were muted by the strong underlying economy and the Ministry of
Finance’s ultimate commitment to fiscal discipline.

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$^*$ These data are from the Bank of Japan’s series on “The Financial Statements of Principal

$^'$ Losses on securities were not generated from sales but by a required writedown in securities
values when market prices fell below book value.
**Singapore, Malaysia and Sweden**

In Singapore and Malaysia the national provident funds placed over 90% of their funds in government securities. Because the authorities pursued sound macroeconomic policies, however, they were able to pay positive real rates of interest on provident fund balances. In Singapore, the authorities have refrained from investing all the funds in local development projects but have accumulated a substantial pool of foreign exchange reserves.

Among OECD countries, Sweden had long imposed prescribed asset ratios on pension funds and insurance companies. These favored bonds issued by specialized mortgage credit institutions and yielding returns that were slightly below market rates. Although prescribed investments have been lifted in recent years, their adverse impact on the financial performance of the Swedish pension funds has been contained by the near-market level of interest rates on mortgage bonds.

One drawback of the use of prescribed investments in Singapore, Malaysia and Sweden has been that rates of return on provident and pension fund balances, though positive in real terms, have been much smaller than those achieved by private pension funds in countries where pension funds have enjoyed greater freedom of investment, such as the United Kingdom and Chile.
END

World Bank