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Feasibility Study Regarding A Secondary Mortgage Market in South Africa

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FEASIBILITY STUDY REGARDING A SECONDARY MORTGAGE MARKET IN SOUTH AFRICA

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FEASIBILITY STUDY REGARDING A SECONDARY MORTGAGE MARKET IN SOUTH AFRICA

EXECUTIVE SUMMARY

Housing finance in South Africa is in transition. The large commercial banks are struggling to serve the newer parts of the market profitably, while at the same time trying to respond to the appearance of aggressive smaller competitors eying the large spreads charged on loans to the higher income groups. New models of lending to previously which could unbanked parts of the population are being developed and expanded rapidly in response to the tapping of large new demands for housing-related credit. New financial technologies are being imported and adapted throughout the market. Meanwhile, the populace, politicians, and policymakers are watching the clock tick on the high expectations for a major improvement in housing market access for low and moderate income households.

The question is whether a secondary mortgage market has a role to play in South Africa. Our answer is a qualified yes. On one hand, we do not see an immediate interest of the large commercial banks in any sort of secondary funding mechanism, given the current interest rate environment and relatively low need for liquidity by the banking sector at present. Given a change in this scenario, the value of a secondary mortgage market to the banking sector would increase significantly. Furthermore, so long as mortgages have a 50% risk weighting for the banking sector's capital purposes, shifting the credit risk off the books of the banks is not likely to result in an overall reduction in cost of capital. The other attraction of long term wholesale funding, the deduction of liquidity risk, does not seem to be highly valued by current lenders.

The promise of a secondary market lies in its potential for funding new entrants into the market, either at the upper-middle or lower-middle portions. In the upper-middle portion, it may be attractive for a new entrant to pioneer a secondary market channel, not to achieve a lower direct cost of funds, but to avoid the indirect burden of setting up a branch system to harvest retail funds as well. Such purely wholesale funding could permit the development of a lower cost centralised lender which could substantially undercut the high spreads of traditional lenders.

It is our judgement that the private sector is capable of developing such an arrangement on its own and should be allowed to do so without being pre-empted by a government sponsored effort. The government, however, should assist by updating regulations to facilitate securitisation and other forms of wholesale fund raising by both banks and non-banks.

The National Housing Finance Corporation (NHFC) is specifically mandated to address the need for wholesale funding for lenders focussed on low and moderate income households. NHFC has already begun to offer secondary funding to some such lenders, and is actively planning how best to expand this role. We endorse this effort in general, and in particular, we endorse the plans to manage risks by arranging for greater regulation and supervision of the sector and by seeking advice from Fannie Mae on managing portfolio risks.

There is some potential for NHFC to assist in creating a secondary market window for the upper -middle market. This should be a lower priority activity for NHFC and should be restricted to circumstances creating limited risk exposure and where the need for quasi-public intervention is clear.

With respect to the specific question of whether or not South Africa is ready for securitisation, we conclude that securitisation is a viable funding structure for this market. Securitisation, like all other secondary market funding mechanisms, must provide advantages over the existing funding mechanisms in order to be attractive. As discussed above, in the years to come, a change in the interest rate environment and/or a change in banking institutions' liquidity requirements could motivate a move towards securitisation. If South Africa is to securitise mortgages, a number of issues would need to be addressed including sources of credit enhancement, including the possibility of NHFC providing it, structuring a securitised issuance according to the desire of investors who are accustomed to fixed rate instruments, addressing pre-payment risk, and structuring around some of the unique features of South African mortgage loans. In addition, a number of administrative matters would need attention including the elimination of the Transfer Tax and Stamp Duty which burden the transaction costs of securitisation, and relaxation of the Deposit Taking Institutions Act of 1990 which limits the entities which can lawfully enter into a securitisation.

FEASIBILITY STUDY REGARDING A SECONDARY MORTGAGE MARKET IN SOUTH AFRICA

PART I

INTRODUCTION AND OVERVIEW

There have been enormous changes in economic and financial forces accompanying the political shifts in South Africa this decade. These changes have included the opening up of the South African economy and financial system to foreign entry as well as greater access by South African entities to world technologies and resources. These changes are reshaping the way that business is done, including the business of financing housing. At the same time, the political shifts are creating new business, especially with respect to financing housing for the portions of the population previously excluded from access.

The result is a renewed interest in a technique of financial intermediation which has gained global attention in the last ten years. That technique is the use of secondary market sources for funding housing loans. Sometimes going by the term "securitisation," sometimes simply called a secondary mortgage market, secondary funding can be a more efficient way to fund either the traditional housing finance market or the emerging broader market.

This report collects and examines the available evidence on the question of what role secondary market funding may play in the near future. The goal is to provide both the National Housing Finance Corporation of South Africa (NHFC) and the United States Agency for International Development (USAID) with the background and analysis needed to guide them in their separate and cooperative efforts to improve the access to housing funds for all households, and especially lower and moderate income households.

Part II discusses the nature of secondary market funding for mortgage lending and briefly examines five major types of secondary markets in use elsewhere in the world. Part III provides a summary picture of the housing finance market in South Africa, including the rapidly evolving portions specialising in low and moderate income households. Part IV looks at the broader financial and capital markets, sources of funds, modalities of operation, and the capital market's likely pricing and structure for a potential secondary market funding mechanism. Part V builds on these observations to draw some specific conclusions about how and where a secondary market function might develop and thrive and provides an overview of the structural constraints to securitization in South Africa.

PART II

THE ROLE OF SECONDARY MARKETS IN HOUSING FINANCE

In casual conversation throughout the housing finance world, people will comment that secondary markets for mortgages seem like a good idea. Moreover, there is a certain amount of conventional wisdom about what kinds of secondary market procedures (SMPs) are most desirable. Like much conventional wisdom, there is some truth in such observations but also a good bit of mis-statement. This section describes what a SMP is and what some general types of SMPs are, reviews the success of some SMPs from around the world, and identifies the information needed for determining the prospects for a SMP in South Africa.

TYPES OF SECONDARY MORTGAGE FUNDING MECHANISMS

The term "secondary" is intended to follow the "primary" market for mortgages, which consists of financial institutions which make the loans initially. The term was originated in the U.S. where mortgages themselves were actually being sold in a secondary market after origination by a lender in the primary market. It is most often used today to refer to secondary funding of mortgages after origination, whether through sale of the mortgages, through their use as collateral, or through other forms of large-scale, longer-term fund raising (in contrast to "retail deposits") directly or indirectly backed by the mortgages.[1]

The originator of housing loans operates in the "primary" market and will be called a primary mortgage lender (PML) because of that, whether a small or major lender. It is possible for a single entity to be a PML and still fund itself, in whole or in part, through a secondary (i.e., wholesale) funding mechanism. The PML may operate the SMP itself or the SMP may be operated by an independent secondary market institution. Each of these types of secondary funding mechanisms is of interest here and will be examined below. However, we shall reserve the use of the term "secondary market institution" (SMI) to those entities, such as Fannie Mae in the United States, that are not PMLs themselves but raise funds through secondary market mechanisms for use only by others who act as PMLs.

Under this broad understanding of secondary mortgage funding, there is a wide range of alternative approaches being practised around the world. The use of any system depends on the circumstances prevailing in the housing and financial markets of the individual country.

The simplest type of SMP involves the issuance by the primary lender itself of an unsecured debt instrument. Historically, a major limitation of such funding was that investors were usually less confident about the longer term status of any single lender and thus saw long term debt issuances

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[1] In this process, negotiable securities are usually created as the mode of accessing the capital markets most cheaply; but what is called "securitization" of the actual mortgages is only one model of wholesale funding.

as relatively risky.[2] Because of this, lenders will find it easier to raise funds from wholesale investors through liabilities which are essentially the same as those offered retail depositors, e.g., short-term debt. Such a limited type of wholesale funding, essentially a large denomination retail deposits could be considered to be secondary market funding, but is actually a less stable funding base than retail deposits.

One way of dealing with the fears about the long term solvency of the lender is to form banks whose only business is very safe mortgages of specific restricted characteristics (i.e., mortgage banks). Then the bonds are collateralised by all of these very safe assets of the lender. In case of default on the bonds, ownership of the mortgages would pass to the bondholders. Such a system was the first form of SMP, developed about 150 years ago and still in extensive use in Germany and Scandinavia.

A small variation of this is for a PML to back individual secondary market issuances with specific low risk mortgages. Unfortunately, this can introduce an element of heterogeneity in the bonds, with the prepayment and safety of any particular bond depending on the specific mortgages backing it.

Another small, but important variation on this approach is for an independent intermediary to pool together such mortgage-backed debt instruments of a number of institutions and issue its own bonds on a larger scale and with even greater assurances of payment, i.e., a true SMI. Such an institution has an incentive to check on the quality of the mortgages that serve as collateral for the loans made by the SMI to the PMLs and in turn back the bonds issued by the SMI. Several countries have created such a special institution, usually sponsored by the government, which monitors and enforces such standards and provides its own blanket guarantee to bonds that it issues to the public. The implicit or explicit government guarantee is placed only on top of the substantial, monitored guarantees of the PMLs.[3]

Alternatively, the SMI can actually purchase the loans from the PMLs, thereby taking on whatever risks pertain to them. This may be attractive if the cost of equity and/or debt is lower for the SMI than for the PMLs or if it allows a more efficient degree of specialisation in the lending process.

The last structure in this continuum is for the ownership of the mortgages to effectively pass from the primary lender to investors, a procedure usually referred to as "securitisation." Securitisation is the most direct sort of linkage between a retail loan and a long term investor, and it requires significant structuring with respect to legal and financial issues.[4] For example, usually involves setting up a legal entity (special purpose vehicle) which owns the mortgages and selling rights to

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[2] This is not as much an issue today, at least in financial markets where credit ratings are accepted as capturing most or all of the information needed to evaluate the credit risks of loans to housing lenders.

[3] One way of viewing such an SMI is as a separate institution that pools together as collateral the very best mortgages from several banks or other lending institutions and uses that collateral to offer bonds that are nearly risk-free to long-term investors. The ownership of the mortgages stays with each lender and the SMI accesses the debt market much like a PML with a portfolio of very low risk loans.

[4] A concise but comprehensive report on the complexities of securitisation was prepared by Deloitte, Haskins and Sells, called "Securitisation in South Africa: An Introduction."

all cash flows into that legal entity, as is done in the U.S. It also usually involves the shifting of much more credit risk and cash flow risks than other types of SMPs.

The greatest advantage of securitisation for the lender is the shedding of all risks with respect to the loans. Of course, by the same token, there is an additional burden on the investors to carefully manage their exposures. In the U.S., many securitisations are done under the auspices of a government-sponsored SMI, which organises and monitors all steps in the process. However, this need not always be the case in the U.S., and is never the case in the U.K.

Unfortunately, it is not easy to know in advance that a SMP will prosper, i.e., that PMLs will find it is cheaper or better in practice than relying on bank deposits of all kinds. The outcome depends on the evolution of the overall debt market, including its liquidity; the perspectives of the banks and the natural long term investors in bonds, the pension and insurance sectors; operational cost considerations; legal, tax, and regulatory factors; and the attitudes of the borrowers to different types of loans.

THE ADVANTAGES OF SECONDARY FUNDING

The volume of business of a SMP depends on three things:

1) the risk-adjusted cost of SMP funds vs. other funds

2) the volume of loans being made of different types

3) the volume of lending being done through different channels

As we shall see, these are highly inter-related factors.

Why might SMP funding be lower cost? As noted above, the major motivation historically for SMPs was the reduction of perceived credit risks. Lenders to the SMP, i.e., the bondholders, are willing to make funds available through the SMP at a lower rate or better terms than regular deposits based on a lower risk profile of a SMP. In actuality, there may also be liquidity, tax or regulatory advantages to investing through a SMP.

Another cost advantage of the SMP can arise from its mode of operation. By raising funds through bonds or bond-type securities in large denominations on an organised market and providing funds in large amounts to the PMLs, a SMP may be cheaper than operating an office with tellers and other staff handling the current and time deposits of individual account holders.[5] However, to the extent that spreads between deposit rates and other rates fully reflect the costs of deposit-taking, this advantage may be minimal.

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[5] There are not only savings with respect to the operational infrastructure. If a PML is able to fund loans without taking deposits, it is not part of the money creation mechanism and thus need not bear the costs of regulations and procedures governing banks.

A more subtle advantage that a SMP can offer an investor is that of raising funds in a form, usually medium- to long-term debt, often with a fixed rate, that is more desirable to certain investors than the typical short-term deposit or certificate.

There are two additional risk reducing advantages that a SMP can offer a PML, both with respect to the funding it uses to make loans. First, the funding can be more closely or exactly matched to that needed for the loans, either in maturity or in variability of the interest rate. Secondly, the funds can be more reliably available than other sorts of funds.

Finally, there is the financial calculus of debt versus equity. The cost of equity funding tends to be higher than for debt because of the risks borne by equity investors. Since all loans held in portfolio by a lender contain part equity funding, as well as debt, the total cost of funds may be higher than the cost of funding from a SMP which shifts the risks elsewhere. But this is not automatically true, because the risk must go somewhere. Since it must be absorbed by an SMI, a third-party insurer, or the investors, there will be a cost to be included in the all-in cost of funds.

In summary, the cost advantages of a PML using a SMP over retail deposits can be classified as:

1) Lower credit risk from viewpoint of investors;

2) Lower taxes, reserve requirements, other regulatory considerations for PMLs or investors;

3) Lower transaction costs for the PML based on the scale and term of fund raising;

4) More desirable structure and scale of SMP securities for investors given long-term, fixed-rates and greater liquidity;

5) More desirable structure of SMP funding for PMLs which reduces liquidity and interest rate risks; and

6) Lower cost of equity for risk bearing through the SMP than through lenders.

Without one or more of these advantages in cost or other terms, a SMP will not be used at all. With some of the advantages, the SMP may be used for funding only certain sub-segments of the housing loan market or at certain times. If its advantages as a funding source are significant, a SMP can become the primary source of funds for housing loans.

As noted above, there are two other factors that interact with the cost advantage to determine the use of a SMP. The first is the extent that the desires of mortgage borrowers match the kind of funding best accessed through a SMP. For example, the cost advantage may be with respect to the premium that wholesale investors want for lending for a long term or at a fixed rate or for both long term and fixed rate, relative to the market cost of short term deposits. In general, institutional investors have a much greater willingness to invest their funds for longer terms and, in some financial systems, also at fixed rates. If borrowers also want to borrow long term at fixed rates (depending on how prepayment risks are handled), then a SMP may be a better way of funding the market.

The second factor is the extent to which there are complementarities among the gathering of retail funds, the making of housing loans, and the long term servicing of those loans. In the classic retail banking model, the same infrastructure which is used to offer retail deposit services is used to administer the loan function. However, in some countries, it has proven to be significantly cheaper to separate all of these functions. Funds are raised through one institutional structure (a SMP), loans are originated through another (a centralised lender), and loans are serviced through yet another (a servicer).

All of these points can be well illustrated by examining a number of SMPs in the world and analysing the degree of success of each model and the reasons for that success.

ASSESSING THE FIVE MAJOR SMPs

A. **German-style Mortgage Banks.** A good place to start a tour of the world's SMPs is with the oldest one, the mortgage banking concept as practised in Germany, Austria, and Denmark. It is not based on any complex financial engineering, but on the simplest type of risk reduction mechanism. As noted above, mortgage banks are legally distinct from ordinary banks and can make only a narrow range of loans. This minimises the risks they can take on and thus reassures the buyers of mortgage bonds that the quality of their investment will not be diluted over the relatively long time until maturity.[6]

By any measure, they have been very successful, providing large amounts of mortgage funds for over 100 years. This is because they have been able to benefit from nearly all of the cost and other advantages noted above, including (1) low risk, and a strong regulatory agency which ensures this; (2) various regulatory and tax advantages, such as requirements that pension funds buy only government bonds or mortgage bonds and restrictions on commercial banks issuing bonds; (3) low fund raising costs because bond markets are well developed; (4) a large demand for longer term bonds by rapidly growing insurance companies and pension funds; and (5) borrowers interested in loans with the same terms as bond buyers, but not retail depositors.[7] Moreover, this sort of wholesale funding, specialised purpose, and low-risk lending has allowed the German mortgage banks to have extremely low operating margins as low as 50-100 basis points.

This situation has permitted the mortgage banks to issue bonds at rates just a few basis points more than for government bonds, to find a large and relatively liquid market for those bonds, and

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[6] The German and Austrian mortgage banks primarily limit their risk by only lending up to 55 percent of market value. The Danish mortgage banks go up to 80 percent, but require that all borrowers be liable for any overall shortfalls in collateral (joint and several liability).

[7] In Germany, the bonds usually have medium terms (3-10 years), low scheduled amortization payments and no prepayment risk. The borrower receives a loan that amortises over 40 years, but the rate is re-fixed every few years, depending on the period chosen by the borrower, and prepayments in between bear the full financial cost of any premium on the bond due to a decline in interest rates.

to meet the needs of many borrowers. However, as markets and borrowers have changed, so has the importance of mortgage banks and mortgage bonds. Removal of tax and regulatory advantages has reduced the advantage over bank deposits in Denmark. In Germany, the large commercial and savings banks are considered so safe that they can issue bonds on terms almost as good as the mortgage banks, and they suffer none of the restrictions that are imposed on the mortgage banks.[8] In addition, there has been greater interest by borrowers in variable rate mortgages which are better funded by deposits rather than bonds. The net result is that only about 20 percent of the mortgage funding in Germany now comes through mortgage banks.

B. Unsecured Wholesale Funding for Depositories.[9] The same forces have been at work in Britain as in Germany, but from the opposite starting point (i.e., with an initial dominance of deposit-based lending). Until 1980, Britain relied on savings banks (called building societies) for the great bulk of their housing loans, which in turn relied on retail savings deposits. This dominance was supported by regulatory barriers to competition by commercial banks and de facto co-ordinated setting of rates. While in the past, loans had been offered at fixed rates, the appearance of inflation in the 1960s prompted a shift to floating-rate loans, well suited to funding through retail deposits. Deregulation in the early 1980s prompted aggressive entry by commercial banks, primarily funded by a mix of retail and wholesale funds.

During the 1980s both the building societies and the commercial banks shifted more of their fund raising towards the simple SMP of issuing medium- to long-term unsecured debt, based on the general credit rating of the institution, which in turn is based on the institution's capital and the presence of strict government regulation and supervision. There is no central secondary market institution involved and no earmarking of loans as collateral, nor do the institutions fully match the terms to maturity of their borrowing and lending. They are free to switch between funding sources as market conditions dictate.

The growth of this sort of funding has been encouraged by stronger capital adequacy rules and the increased reliance of world capital markets on internationally accepted credit ratings. Deepening of swap markets has also allowed lenders to offer fixed rate securities to fund floating rate mortgages. Another development in UK financial markets, a trend away from term deposits as a savings vehicle, has further encouraged the tapping of wholesale funding.

It is instructive to note that in Germany and in Britain, medium- to long-term debt issuances by deposit-based general lenders are today viewed as bearing the same low risk as the original SMP, the German-style mortgage bank. This suggests that managing credit risk, the original motivation for setting up special structures for accessing wholesale funds, which is what drove

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[8] In other words, they can set their underwriting criteria more liberally, they can use deposit-funding instead of bonds whenever that is cheaper, and they also offer the customer the full range of banking services. One result of this evolution is that most mortgage banks are now subsidiaries of regular banks and really operate as bond issuing arms of the banks, to the extent that this type of funding is cheaper.

[9] The fund raising process by German mortgage banks is also the issuance of "unsecured" debt, but the banks have been structured to effectively provide strong and specific security, while building societies and other depositories have a variety of creditors, debtors, and risk exposures. It is for this reason that the German mortgage banking is seen as a distinct type of SMP.

German mortgage banks, is not much of a driving force today. This appears to be nearly as true in South Africa.

Government-Sponsored Refinance Windows for PMLs. A third variant in SMPs combines the features of the German-style mortgage bank with the desire for wholesale fund raising by regular depositories. Specifically, an SMI makes loans to the PMLs on an over-collateralised basis and the SMI uses its scale and extra low credit risk to raise wholesale funds. This allows the PMLs to take on more risk than a German mortgage bank can and also to draw upon retail funds or wholesale funds as the market and their needs change. The cost to them is that, in principle at least, they have to "cleanse" themselves of the risk by over-collateralising their loans from the SMI in order for the SMI to be viewed in the market the way that German mortgage banks are, i.e., extraordinarily low risk.[10]

The first such SMIs were the Federal Home Loan Banks (FHLBs), which were set up in 1932 to provide liquidity for savings institutions in the U.S.[11] They operate by issuing debt with an implicit government guarantee and then lending the funds to depository PMLs, which pledge as collateral an amount in mortgages greater than the amount of the loan. All of the risks of the mortgage loans stay with the lender; the intent is to provide a partial source of refinance for further lending as well as to offer a ready source of liquidity for portfolio management.

How important are the FHLBs? As measured against the activities of SMIs that buy loans, such as Fannie Mae, they are a relatively small portion of the total funding scene (see Annex II-A for an overview of the SMIs in the U.S.). FHLB loans to PMLs are approximately $130 billion compared with funding outstanding from the other U.S. SMIs of almost $2 trillion. However, the FHLBs are considered to be an important element in the housing finance system, especially for many smaller PMLs. For those PMLs who wish to hold loans in their portfolio rather than sell them to an SMI, the FHLBs stand ready to provide liquidity if trends in their own deposit base deviate from trends in their loan portfolio. The cost of funds from FHLBs is very competitive and the acquisition of the funds from them is relatively easy.

An institution similar to an FHLB exists in France, the Caisse de Refinancement de Hypothecaire. The French institution is also relatively small, with loans outstanding of less than US$ 20 billion. This is largely because it has not been utilised by the large commercial banks which tend to dominate the home loan market and which have access to subsidised long term funds through the French contract savings scheme and through wholesale funds. However, it has been a critical source of refinance and liquidity for the smaller lenders, especially the few centralised lenders operating in France.[12]

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[10] Of course, if the SMI is government-sponsored and has an implicit government guarantee, the SMI can choose to not impose this sort of credit-enhancement and simply take on the extra risks itself.

[11] It may be confusing as to why there is more than one FHLB. There are 9 regional banks, a left-over from the days when communications were more difficult and banking was very localised in the United States. Today, the FHLBs operate a joint system with essentially each Bank being a regional office dealing with the individual PMLs but fund-raising being centralised, much as Fannie Mae does also.

[12] A network of "centralised lenders" (called finance companies) have been operating in France since the 1950s, funded primarily out of wholesale funds raised by large parent bank holding companies and by issuances of the CRH. Although once capturing almost 20 percent of the market, their market share shrank

In 1987, Malaysia also established an SMI of this type, called Cagamas. Because wholesale funds of any kind are not readily available to Malaysian banks, Cagamas has grown to be a major source of funding and has encouraged the entry into home lending of a number of additional banks. It has been estimated to provide 20 percent of all funds for mortgage lending.[13] A similar SMI is being established in Jordan at present for the same reason.

A variation on this is for an SMI to offer wholesale funds to lenders without taking any specific collateral, other than a first lien on the lender's assets. This can be done without impairing the SMI's credit rating if the SMI is government-sponsored, but it behooves the SMI to set and monitor standards for its borrowers. This approach has been taken in India, where the National Housing Bank has refinanced low rate loans out of subsidised funds without taking specific collateral. It has recently moved to requiring the borrowing housing finance institutions to have a satisfactory credit rating. This approach does not make sense in the U.S., because the government is already guaranteeing the depositors, thus effectively putting a government-backed lender to the PML on a second tier.

A government-sponsored SMI is also in a position to simply offer to buy mortgages for its own portfolio. In this case, there is no overcollateralisation and the SMI could be taking on significant risk. In the U.S., such an operation started in 1938, when the original Fannie Mae, a government agency (now Ginnie Mae), started buying loans that had already been insured by the FHA (Federal Housing Administration). There seemed to be no additional credit risk being taken on by the government.[14] The private Fannie Mae today still buys mortgages in this fashion, financed by issuances of unsecured straight debt, not mortgage-backed. Presumably it could securitise all of these loans instead, but it chooses to retain some in portfolio with the purpose of capitalising on its implicit government guarantee for the benefit of its private shareholders.

Government-Sponsored Mortgage-Backed Securities. As noted above, starting in 1938 the original Fannie Mae actually bought loans from lending institutions. These purchases were financed by bond issuances that originally had the full guarantee of the U.S. government. This arrangement of buying loans by issuing bonds had a significant drawback: the bond issuances counted as government debt. In an effort to reduce the apparent government deficit, Fannie Mae was privatised in 1968. However, its residual presence in the government, Ginnie Mae, introduced a new procedure, whereby it would offer its blanket guarantee to pools of mortgages already insured by the FHA. This procedure finally induced private sector investors to buy such pools, and thus the "securitisation" of mortgages was born.

Securitisation remained a relatively small part of the market through most of the 1970s, despite some refinement of it by another government-sponsored SMI, Freddie Mac (which catered to the savings and loan sector). The new private Fannie Mae continued the practice of buying loans

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to five percent after the commercial banks were permitted full access to the mortgage market in 1987.

[13] The nature of Cagamas is sometimes misunderstood. Cagamas executes a purchase of the actual mortgages, much as Fannie Mae does. However, it does so only for securing its access to them as collateral. The purchase agreement leaves all risks with the originator and mandates repurchase by the bank at the end of the term of the loan from Cagamas to the bank.

[14] In contrast with this statement, attempts to get private investors to directly buy pools of FHA-insured loans, instead of directly government-guaranteed bonds, failed.

and issuing straight debt, mostly with short maturities, much as the PMLs themselves were doing. Most of the credit risk was being taken by private mortgage insurers and the presence of the insurers and Fannie Mae and Ginnie Mae allowed American-style "mortgage bankers," lenders without any deposit base and no portfolio holdings, to operate.

Securitisation really only came into its prime after the upsurge in interest rates in the late 1970s reminded portfolio lenders, including Fannie Mae, of the interest rate risk they were taking by lending long at fixed rates and free prepayment. It became clear that the cash-flow risks of such lending had to be shifted elsewhere, possibly to investors. At the same time, the government began encouraging sales of below-water mortgages off the books of lenders by allowing the amortising of the loss.[15] Fannie Mae was in no position to hold these mortgages either, so it plunged into an expanded program of securitising them, providing blanket pool insurance, but passing on all prepayment risk. This surge in securitisation provided the scale to increase market interest and drive down liquidity premiums.

Note that the popularisation of securitisation as a SMP was not driven by either a desire to maintain liquidity by the PML or to shift credit risk from the SMI, which, along with any mortgage insurer involved, retained all the credit risk. It was the desire of the PMLs to indulge in an accounting loophole and of the SMI to shift the various interest rate risks posed by freely-prepayable fixed rate loans (i.e., really only fixed if rates go up, otherwise refinanceable if rates go down). Still today, most securitisations involve shifting no credit risk to investors, only cash flow risks.[16]

This issue of prepayment would not be so important if the housing loans had interest rates which varied with short-term interest rates in the capital markets. But an extremely important characteristic of U.S. housing finance is the strong preference of both borrowers and many investors for obligations with long-term fixed rates, combined with a strong preference by borrowers to be free to prepay loans at any time.[17] This situation makes secondary market funding unusually attractive compared to fixed deposits of any kind, and sale to one of these kinds of SMIs, the preferred approach for making fixed-rate loans. Even when Fannie Mae chooses to hold such a loan in portfolio, it attempts to fully hedge its interest rate risk exposure.

The dominance of these SMIs in the fixed-rate loan sector has also allowed the mortgage banker, who can exploit fully any cost savings achievable by separating the functions of origination, funding, servicing, and risk bearing, to become the largest type of lender in the US. However,

[15] The proposition was that the institutions could sell their low-rate loans at, say, 70 percent of face value, not book the loss immediately, then use the cash to originate new higher rate loans. This kind of desperate thinking by regulators directly contributed to the ever larger losses incurred in the 1980s.

[16] The mortgage securities market in the U.S. received another big boost when tax laws were changed to allow the special purpose vehicle to manage the cash flow from the mortgages in ways that focused the risks on just those holders most interested in taking it (often as a speculation or hedge). This innovation is called the Collateralized Mortgage Obligation, "CMO," and it substantially increased the advantage of funding fixed-rate loans through securities.

[17] It is notable that in France, the borrowers strongly prefer fixed-rate loans with rights of prepayment, but investors do not like long-term fixed rate bonds with right of prepayment. Thus, this type of fund-raising has not been successful.

it is essential to note that, for those loans made at variable rates, not fixed rates, these supposed advantages are not sufficient to overcome advantages to bank origination and funding, despite the extremely high state of development of the securitisation market. (Servicing, however, is frequently sold to a specialist organisation.) Such loans typically continue to be held by banks and savings and loans and funded primarily out of savings deposits. Thus, while the overall share of mortgage-backed securities (issued through Fannie Mae, Freddie Mac, Ginnie Mae, and some private issuers) in housing funding averages over 50 percent, it varies over time depending on the preference of borrowers for fixed or variable loans, something which depends on public psychology and the difference between short-term and long-term interest rates.

It is also very instructive to note that similar kinds of SMPs in other countries have not been as successful. As noted below, the attempt to set up mortgage securitisation in Britain has floundered because the borrowers do not greatly prefer fixed-rate loans, investors are willing to make funds available at a low cost to lenders on an unsecured basis, and the private SMIs have had to pay large amounts to get their mortgage-backed bonds guaranteed by private insurance companies or otherwise credit-enhanced, a guarantee that the U.S. SMIs get implicitly from the government for free. Canada set up a government-sponsored institution like Fannie Mae, but it also has not been a major source of funding, primarily because borrowers are willing to borrow at variable rates of interest (often only reset every few years). If Americans used primarily variable rate loans and Fannie Mae was viewed as having no government backing, the market for securitisation would be much smaller.[18]

In an effort to summarize the Government-Sponsored Mortgage Backed Securities market, the following exhibit provides an overview of the various secondary market institutions in the U.S. and gives an explanation of the role each of these organisations plays in the U.S. secondary mortgage markets.

In the order of their founding, the important SMIs are:

Federal Home Loan Banks: Founded in 1935, originally owned by government, gradually sold to lending institutions (originally only served Savings and Loan institutions). No government guarantee, but viewed as having one implicitly. Provides advances to housing lenders from 3 months to 10 years, fixed or variable rate, collateralised by residential mortgages with 20 percent excess collateralisation. Total assets about US$ 120 billion.

Federal National Mortgage Corporation (Fannie Mae): Founded in 1938, originally owned by the government, but privatised in 1968. Originally bought only loans guaranteed by the Federal Housing Administration (FHA), using funds raised by issuing government-guaranteed debt. Since privatisation, buys all sorts of housing loans, keeping about one-third in portfolio and securitising about two-thirds. Total assets and securitisations about US$ 1 trillion.

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[18] Recently, Fannie Mae and Freddie Mac have been required to meet capital adequacy norms similar to that required of fully private entities. This has reduced their advantageous leveraging, but still leaves them with access to funds at a spread over U.S. government obligations that is smaller than a top rated corporation would pay.

Government National Mortgage Corporation (Ginnie Mae): Founded in 1968, at the time of privatising Fannie Mae. Fully government-owned. Does not buy any loans, but offers a blanket government guarantee on pools of government-insured (FHA or Veteran's Administration "VA") mortgages to be used in securitising them. FHA- insurance is limited to median priced housing and VA loans tend to at the lower end of the spectrum given that only veterans buying their first home qualify under this program. Total guaranteed pools about US$ 400 billion.

Federal Home Loan Mortgage Corporation (Freddie Mac): Founded in 1970. Originally owned by the Savings and Loan institutions, and catering to buying their mortgages, but now fully competitive with Fannie Mae and primarily issuing mortgage-backed securities. Total assets and securitisations about US$ 600 billion.

Private Mortgage-Backed Securities. In the late 1980s in Britain, there appeared a slightly different type of SMP, operating on the basis of US-style securitisation, but with the credit risk entirely absorbed by private entities. This funding arrangement permitted the creation by the private sector of "centralised lenders" to compete with the banks and building societies. The centralised lenders do not have extensive branches of their own, but instead work through independent brokers and insurance agents. In essence, the centralised lenders operate as competing Fannie Maes, much as would be the case in the United States if the government-sponsored securitisers were to lose their government sponsorship.

There were several elements to the ability of the centralised lenders to enter the market at that time. First was the low overhead of originating loans through an existing network of agents. Second was the willingness of large insurance companies to provide blanket insurance on the mortgage pools. Third, there was greater interest on the part of borrowers to take out loans with fixed rates, something easier to fund through bond issuances than deposits. Fourth, rates on bank deposits had been competed by banks to high levels relative to bond issuances, eliminating any advantage to raising funds through branches. Because of these considerations, the market share of centralised lenders jumped to 13 percent by 1987 which was half that of the commercial banks.

This success did not last long. The costs of retail deposits fell, the cost of mortgage pool insurance rose, the regulatory environment turned negative, and the interest in fixed-rate loans declined. Several centralised lenders ceased operations and their overall share has been low since 1990. The market has evolved away from shifting credit risks to insurance firms and towards a senior/subordinated structure which appears to be cheaper, but still the market share has not rebounded.

This same mechanism did not proliferate in France when tried in the early 1990s. The total of the costs of issuance, credit enhancement, and the premium that investors wanted for bearing prepayment risk was too great compared with other funding sources. These other sources include subsidised contract savings as well as regular deposits. Another deterrent in both France and Britain has been an inclination of borrowers to go to their retail financial institution for mortgages instead of a specialised mortgage origination entity.

However, it remains notable that the financial and legal structure of securitisation no longer requires the presence of a government-sponsored entity to give blanket assurances. Once the legal structure is supportive of it, its use is limited only by the costs of intermediation and of obtaining a high credit rating. Clearly, though, securitisation is not necessarily more attractive than other forms of SMP.

WHAT ABOUT SOUTH AFRICA?

What can be concluded from the experience elsewhere about the likely success of a SMP in South Africa? It is informative to review the circumstances under which SMPs have been found to be useful.

German-style mortgage banking was very useful originally because it sharply limited the credit risk of the bonds issued by the banks. However, strong regulation and independent credit ratings have permitted bond issuance by depositories at nearly the same spreads.

Thus, British-style unsecured bond issuance provides building societies and banks with access to wholesale funds without setting up a special SMP. It seems to meet the needs of the lenders for reducing liquidity risk and economies of scale in fund raising, but does not provide any shifting of the interest-rate risks of making fixed-rate loans (except to the extent that the bonds are callable).

Liquidity facilities such as the Federal Home Loan Banks and Cagamas have been effective in helping smaller depositories in particular to manage their treasuries. They can be a safe method of interposing an implicit government guarantee between such lenders and investors and providing greater liquidity to investors by making larger issuances.

Securitisation by government-sponsored SMIs has been very successful in the U.S., primarily because it permits the shifting to investors of the large interest rate risk prominent in the long term, fixed rate, prepayable loans popular among U.S. households. Part of this success is also attributable to (1) a coincidental build-up of Wall Street activity in the area, (2) some advantages to "centralised lending" and (3) the presence of the implicit government guarantee.

Securitisation by totally private SMIs was a major factor in Britain for a while. Its principal advantage was in permitting the development of lower cost centralised lending. However, these operational cost advantages have not proven to be large enough to maintain a major market share.

An interesting variant on securitisation appeared in 1996. An entity owned by the government of Argentina, the Banco Hipotecario National, issued mortgage-backed securities on the international market backed by its own guarantee and two subordinated tranches equaling 15 percent of the total issuance amount, as well as a 24-month reserve fund. The underlying mortgages had been made in U.S. dollars, mostly at a floating rate indexed to LIBOR. The bonds were rated by Duff and Phelps. The motivation for the offering seems to have been the tapping of the burgeoning demand for relatively low-risk emerging market debt as a relatively inexpensive source of capital. It is possible that such an arrangement would be relevant to South Africa.

We conclude from the experience in other countries that the success of a SMP depends entirely on many elements unique to the prevailing circumstances in that country. It depends on the costs of deposit-funded lending, both in terms of raising funds and also with respect to originating and servicing loans. It depends on the cash flow characteristics of the loans themselves, and how well they match the preferences of retail depositors relative to large, longer-term investors. It depends on the credit risks of the loans, the cost of capital to the PML needed to bear those risks, and the cost of capital to other entities which could bear those risks. Ultimately, it also depends heavily on economies of scale, not only in terms of operating a SMI or developing the liquidity of debt issues, but in terms of pushing all parties along a steep learning curve.

Thus, an answer can be forthcoming only after the characteristics of the housing finance sector, including the lenders, the borrowers, the loans; and of the financial sector, especially the investors and intermediaries, are well understood. We turn to these issues next.

PART III

AN OVERVIEW OF THE HOUSING FINANCE IN SOUTH AFRICA

The traditional housing finance market is large and well developed and is the main form of credit extended by the commercial banks. Such lending has survived reasonably well the difficulties of high inflation, recession and political transition. Currently, it seems to be undergoing an increase in competition and innovation, including possibly some further experimentation with securitising mortgages. In addition, there is an exponentially increasing amount of lending to the emerging market, including innovative approaches to lending for housing.[19]

LENDERS

The great bulk of lending for housing purposes is by commercial banks out of their own funds and for their portfolio. The commercial banking sector (which is examined in more detail in Part IV) is organised primarily around several large bank groups, which in turn are closely aligned with groupings of other entities in the financial sector, such as insurance companies. The four major groupings, in order of asset size, the size of their mortgage book and share of the mortgage market (as of March 97), are detailed on the following page.

The disparities between share of all banking assets and share of mortgage assets primarily reflects the degree to which commercial banks acquired building societies in the early 1990s. Major changes in the banking laws at that time removed barriers between banking segments, including advantages that building societies had which gave them control of the mortgage market. Commercial banks then moved into the mortgage market aggressively, but some also bought the existing books and facilities of the major building societies. Today, all banks consider mortgage lending to be their primary form of advance, followed by short-term overdraft and instalment credit.

The four major bank groups hold about 85 percent of the mortgage loans (called "mortgage bonds" in South Africa), as measured by value. The rest were made by a variety of smaller entities, some of which are simply smaller banks. However, since 1994, there has been a growing presence of two entirely different types of lending. At one extreme are investment groups and merchant banks which have begun to offer "private banking" services to the most affluent households in the country. They include mortgage loans as a major part of that package of services.

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[19] There are two very useful sources for more detailed information about the housing loan market in South Africa. The first is Volume One of an extensive report entitled "End User Housing Finance," completed in October 1996 by Matthew Nell & Associates for Lance Bailey and Associates under contract with USAID. The second, by Mary Tomlinson for the Centre for Policy Studies and USAID in September 1995, is entitled "The First Million Is The Hardest" which discusses the various institutions related to the government's housing initiatives.

	Total Assets (R. bil.)	Total Mortgage Book (R. bil.)	Market Share
1) ABSA Group - Allied - Trustbank - United Bank - Volkskas Bank - NuBank	127	45	36 %
2) Standard Bank - Standard Bank	107	27	21%
3) First National Bank - First National Bank - Future Bank (common ownership)	86	12	9%
4) Nedcor - NedBank - Permanent Bank - People's Bank	79	23	18%
All Others	100	20	16%
TOTALS	**499**	**127**	**100%**

At the other extreme is the growing amount of secured and unsecured lending being made by banks and finance companies in the form of small loans for the purchase, improvement or incremental construction of modest housing. At this point, it appears that this kind of lending totals over R 2 billion, and is growing rapidly. Although this amount is a fraction of that in the traditional mortgage market, the number of households being assisted will probably exceed the traditional market in a few years. The institutions catering to this part of the market include Altfin, Cash Bank, King Finance, and Rural Finance Facility.

FUNDING

In South Africa, the commercial banks gather funds in the usual ways, through offering current and deposit accounts. However, the household sector, which had traditionally provided most of those accounts, no longer provides the bulk of the banks' resources.[20] In 1996, only a third of all deposits were from households, with the balance coming through the wholesale short-term funds market, including from offshore sources. One important source of deposits is the

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20 Changes in tax laws and consumer preferences have shifted the flow of household funds from bank deposits of all kinds to insurance and provident fund products. For example, in the 12 months ending September 1996, deposits by insurers and pension funds grew by 42 percent, and from individuals by only 13 percent.

government (central and provincial), which gives a certain amount of direct leverage over the banks. This leverage is used by the Reserve Bank to influence liquidity.

The large banks maintain the top short-term credit rating to facilitate access to foreign funds. Their overnight liquidity needs are balanced by borrowings from the Reserve Bank at the Bank Rate, which is set to be somewhat higher than the cost of wholesale funds. The wholesale fund market primarily consists of large negotiable certificates of deposit (NCDs). NCDs are issued at rates which are about 50-100 basis points above retail deposit rates. Presumably, the retail deposit rate tends to respond to the cost of NCD funding, rather than vice-versa. NCD rates are currently about 15.4 percent. Notably, the spread of NCDs over similar term government debt averages only 75 basis points.

Overall, more than half of the outstanding deposit resources have terms of less than 31 days. Only about 5 percent is over one year. On the other side of the balance sheet, the majority of the outstanding advances have more than five years remaining to maturity. The funding situation pretty much demands a floating rate environment, except to a very limited extent. It also suggests that the banking sector has to be conservatively regulated, since there is no deposit insurance offered and liquidity could dry up quickly for any bank thought to be of doubtful solvency.

Tapping the deposit market is much more difficult for a new lender, especially one specialising in lending to lower income households. Any institution that takes any kind of deposit is considered to be a bank under the current law and as such is subject to the extensive banking regulations. This minimises the likelihood of finance companies bidding for public deposits against mainstream banks. It also technically prevents any non-bank lender from issuing debt or raising wholesale deposits, although there is no public purpose served by preventing knowledgeable entities from making loans as they wish. An equally important barrier is the tendency of conservative institutional investors in most countries to stick to well known entities, despite the potential for additional yield in lending to lesser known institutions. Few investment managers want to have to explain how the ratio of reward to risk was very attractive and served as sufficient ex ante compensation for the potential of the borrower defaulting, unless they can point to many others being equally foolish.

PRODUCTS

As of 1996, the great majority of outstanding and new loans being made by commercial banks to the mainstream upper market were characterised as follows: secured by a first lien on the house, self-amortising over a term of 20 years, an interest rate that was unilaterally subject to change by the lender, and subject to prepayment at any time at a nominal or no cost. In general, down payments (deposits) were 20 percent or less. No mortgage insurance was asked in cases of lower down payments, but other aspects of creditworthiness were examined.[21]

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[21] There is no general mortgage insurance available in South Africa. In other countries without such insurance, lenders usually charge a higher rate according to the ratio of the loan to the value ratio (LTV) of the house, at least when the LTV exceeds 80 percent. Since 1990, competition between banks in South

There are some small variations around this standard design. Some banks are offering an initial rate fixed for a period of 1 to 5 years in return for agreement to pay a prepayment penalty. Prepayment penalties are limited by law to 3 months of interest and in practice have been difficult to collect based on market competition. However, current enviroment of strong expectations of a declining rate environment, the presence of term savings on the liability side of the banks, and the ability to hedge in the derivatives market are supporting some cautious fixed-rate lending.

There are two variants of another mortgage product being commonly offered known as the "access bond." Access bonds are mortgages which allow renewed borrowing as well as flexible pay-offs of all or part of the principal balance. The simplest type is where any early repayments can be taken back out again as credit. The maximum principal outstanding tracks that scheduled at the origination of the loan, but at the high real after-tax interest rates prevailing on mortgages and low after-tax yields on savings, it is attractive to be able to credit excess cash against the mortgage and yet retain the liquidity of a savings deposit.

The second version of an access bond is written to permit renewed borrowing up to the maximum amount of the initial principal. Unless the term is extended at the time of renewed borrowing, this loan implies that the potential for the repayment burden exceeds the normal underwriting ratios. On the other hand, the presence of significant inflation tends to mitigate the likelihood that these ratios will be breached. Overall, however, this product does place increased burden on the house value as collateral, since some borrowers will take advantage of this capacity precisely when their income situation is more perilous. It is not clear that any special criteria are applied to qualifying for such a loan.

A very important variant of the standard mortgage loan is the so-called "affordable housing loan." After the elections in 1994, banks worked together through the Association of Mortgage Lenders to set minimum underwriting standards for loans to the lower-middle income group. These guidelines call for offering loans up to the full cost of the house plus transaction costs, as long as there is coverage of 20 percent of the total loan amount by one or a combination of the following: (1) pledge of provident or pension fund, (2) guarantee by the employer (the usual case for civil servants, who do not have a specific provident fund benefit), or (3) purchase of a guarantee of up to half of the amount from the Home Loan Guaranty Corporation (HLGC). Amounts received under the government's capital grant subsidy scheme to low income households can also be contributed in lieu of cash deposit. The guidelines for an affordable housing loan further spell out the maximum payment-to-income ratios, requirements for life insurance and a National Home Builders Registration Council defect warranty.[22]

This type of lending forms the core of mortgage-secured loans made to those earning less than R3,500 per month. The average size of these loans is less than a third of the size of the average traditional loan and the banks appear to be experimenting with the pricing to see what will generate a desirable return. Currently, most banks are charging a 1-3 percent premium over the

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Africa has pushed up LTVs ratios, but not caused rates to differ according to LTV.

[22] The NHBRC defect warranty combines a program of vetting and registering builders with the formation of a reserve fund for repairing defects in homes built by registered builders who have gone out of business.

standard mortgage rate (from which the best traditional customers can get a discount of up to 1 percent), depending on loan size. The term is usually only 10 years and the rate is floating.

Despite the effort on behalf of banks to address the home loan requirements of the lower end of the market, many observers have found that mortgages are not necessarily an appropriate instrument for this segment of the market. Borrowers in this group do not want loans with a 20 year maturity; they much prefer a shorter term. The floating rate associated with standard mortgages in South Africa is often misunderstood by borrowers in this group, resulting in feelings of exploitation when interest rates rise and consequently, a greater inclination towards defaulting. Furthermore, borrowers in this part of the market feel that repossession of their homes in the event of default is an additional exploitive measure by banks. These borrowers prefer to borrow at fixed rates, for shorter periods, on an unsecured basis, even if that means lower proceeds and higher real costs to them.[23]

From the banks' perspective, the principal issue with respect to these affordable housing loans is what rate they can recover the extra administrative costs of making and servicing such small loans. Since the smallest affordable loans (under R25,000) are about one third the size of the largest (R50-65,000), it is not surprising that the premium varies by 300 percent. The banks feel that this premium does not leave much for any extra credit risk and may not even cover the extra operational costs.[24]

Since 1994, the banks have been trying to service the very bottom of the housing finance market, as measured by income and loan size, through a completely different type of product, called the microloan. These are not the sort of loans labelled in the development literature as microenterprise finance (commonly less than US$ 500), but simply loans that are very small by mortgage standards, shorter term than standard mortgages and carrying a fixed interest rate of between 20 and 25 percent. Moreover, they are available without the burden of providing a mortgage on the property. Instead, they are secured entirely by a pledge on the provident fund assets.

Because the pension fund law requires that the loan be used for housing in order to pledge pension assets, this kind of loan is usually for building core housing or for housing improvement. A large share of the loans seem to be associated with self-builders who have acquired a serviced plot with the assistance of a government subsidy and are prepared to build housing progressively.

This kind of lending is being actively pursued by the commercial banks. This may appear to mean that these banks are actively seeking business from many lower-income clients. However, this kind of lending is done on a wholesale basis through employers, unions, or pension administrators, with no contact with individuals or even servicing of individual accounts. From

[23] "Mortgage bondage: Financial institutions and low cost housing delivery," Mary Tomlinson, Center for Policy Studies, September 1997.

[24] It should be duly noted that it is rare in developing countries that the local politics allow lenders to charge higher rates on smaller loans (more likely the reverse is true). As a consequence, such lending usually occurs only by government dictate. The flexibility of the political system in this regard is very commendable.

a risk-return perspective, this lending provides banks with a higher margin than their traditional mortgage lending without a significantly greater amount of risk.

A large part of the low-income population does not have access to enough pension fund assets to secure an adequately sized loan, despite being formally employed. This part of the market is catered to by non-bank finance companies, who are often called "alternative" lenders. The premise of this kind of lending is that a borrower who has had a steady job in the formal sector has a reliable source of income for a medium-term loan of 2-3 years. The key to accessing that "security" is the cooperation of employers to garnish the paycheque regularly, and employment that is relatively immune from retrenchment. The underwriting criteria for this kind of lending may include size of employer and years of service, but does not include reference to credit histories, monitoring of the use of funds, or any title to real property. To illustrate the value of payroll deduction to a lender, most lenders have found that the cost of tracking an individual after he has left his employment generally do not justify the effort and hence, they may simply right off the loan at that point in time.

These lenders have been growing rapidly, based on their ability to work with employers and low-income individuals in ways that keep credit losses low and because they charge the significantly higher rates of interest needed to make such lending profitable (effective rates over 40 percent). In this regard, these lenders are making use of a provision of the Usury law that exempts from usury regulations loans in amounts under R 6,000 with terms of no more than 3 years. What data exist suggest that about half of this lending is used for housing, most often for modest upgrading of "non-standard housing" (i.e., shacks).

In brief, the current housing finance market can be summarized as follows:

	Source	Monthly Income	Size of Loan	Security	Term in Years	Rate	Fixed or Floating Fate
Traditional	Banks	R3500+	R65,000+	80-100% Mortgage	20	19-20%	Floating
Affordable	Banks	R1500 - 3500	R25,000 - 65,000	80% Mortgage + Pension/HLGC for 20%	10	12-23%	Floating
Micro	Banks/Alt Lenders	R750 -2500	R6,000 - 25,000	Pension (80% of benefit)	3-10	20-25%	Fixed
Unsecured	Banks/Alt Lenders	R750 - 2500	less than R6,000	Payroll Deduction	2-3	30+%	Fixed

It is notable that, in contrast to earlier efforts to go downmarket in lending, none of the Affordable, Micro or Unsecured loans is showing unusually large credit losses. The traumas of past "bond boycotts" and failed foreclosure actions have led to the creation of new approaches to underwriting and securing loans. The primary reason for differences in applicable rates is not credit risk, but size of loan relative to operational costs.[25] One implication of this situation is that many lenders are pushing as hard as they can to do more business in the emerging sector.

STRUCTURE OF INTEREST RATES

The benchmark for the determination of the mortgage interest rate is the prime lending rate. The mortgage rate is usually slightly less than the Prime Rate. Currently the Prime Rate is 20.25 percent and the discount is 25 basis points, yielding a Mortgage Rate of 20 percent. The Prime Rate is usually set at a fixed spread over the Bank Rate, although the Bank Rate does not move directly with banks' average cost of funds. The premiums and discounts in this entire structure of interest rates are neither fixed, nor do they fluctuate very much. The current structure seems to reflect a claim by the banks that they need a gross spread of about 3.5-4.0 percent over their all-in cost of funds to cover the costs on their mainstream mortgage lending.

During the apartheid era, the real interest rate paid on government debt was often negative because government enforced prescribed asset allocations which required institutional investors to allocate a portion of their portfolio to government bonds. In addition, world real interest rates were low, South Africa was largely closed off from world capital markets, and domestic investment opportunities were limited. The prescribed assest allocation regulations were eliminated in 1989. Since 1994 real domestic rates have been high and rising. Currently, the spread between the rate on short-term government debt (about 14.5 percent) and near-term inflation (about 8-9 percent) is about 6 percent. The combination of the higher real rates and the large operating spreads of banks has real mortgage rates over 10 percent. This situation suggests that nominal rates may fall sharply eventually as inflation, the real rate, and possibly the operating spread all fall together in the near future.

There are also prospects that inflation will stay lower in the future. During the 1980s inflation was firmly in the range of 10-20 percent. Since 1992, it has tracked between 6 and 10 percent. As the financial markets become fully integrated with world markets, there will be great pressures towards the monetary and fiscal discipline needed to keep inflation in this range or lower. This may usher in a period of more affordable housing credit and the greater use of fixed-rate lending.

The behaviour of the banks with respect to the timing of changes in the mortgage rate has elicited a good bit of commentary. Not only do the major banks raise and lower their rates together, but they generally exhibit a reluctance to pursue any lending policies or banking strategies which are markedly different from the industry norms. All of this feeds the impression that they are competing with each other in only limited ways. Such behaviour contributed to survival during the apartheid era, but may be subject to significant stress in the coming period, as new domestic and foreign entrants into banking compete for markets.

[25] Another source of rate differences is what might be termed administrative and business risks. These include the potential for loss due to mistakes made by parties other than the borrower, such as mistakes made in designing and setting up IT systems or in entering data, which are especially likely when developing a new product and its related set of administrative functions. These mistakes can translate into defaults and credit losses, but not because the basic model was risky.

The new forces of competition have already provoked the introduction of discounts to the Mortgage Rate for qualified borrowers, usually those who are both lower risk and more likely to generate additional income for the bank through the purchase of other banking services and products. To the extent that this reflects variation in perceived credit risks, a de facto element of mortgage insurance (albeit self-insurance by the bank) is entering the market. To the extent that it is for cross-selling potential, the banks may be disappointed by the lack of loyalty. But it is a first sign of the potential effect of increased competition on the mortgage market.

IMPLICATIONS FOR THE POTENTIAL FOR AN SMP

No matter how one measures it, the cost of bank intermediation appears to be quite high today. The simplest measure of spread, that between the cost of funds to the government, about 14.5 percent, and the rate on mortgage funds, about 20 percent, is 5.5 percent. In contrast, this spread is typically less than or equal to 2 percent in Britain, Germany, and the United States. Alternatively, one can focus just on the spread between the cost of wholesale funds (which, at about 15.3-15.5 percent, is less than 1.0 percent over the government rate) and the mortgage rate, yielding a gross operating spread of 4.5 percent. This sort of spread is common in commercial banks which have a wide range of costly and risky activities, but not in institutions of any sort that primarily deal in home loans.[26]

A SMP may be successful if it permits lenders to operate profitably at a smaller margin. There are two modes by which the appearance of a SMP may reduce this spread. First, the SMP may be able to reduce the spread in the cost of funding between the rate on government debt and the cost of funds (including operating expenses) to the banks. Second, it may facilitate the entry of a new category of lender, one relying on SMP funding and specialising in originating and servicing mortgage loans at a lower cost. We shall consider the first question in the next chapter, after examining further the structure of the full financial sector, the current determination of the cost of funds, and the expected transaction costs of raising funds through a SMP, especially securitisation. We shall consider the second question further here before returning to it in Part V.

What could be creating the need for such a large gross operating spread? There are several important contributors, including operating costs, the cost of capital, risks, and simply reserve requirements.

Starting with reserve requirements, there is only a 1 percent cash reserve and an additional 4 percent in government notes to make up the liquidity reserves, as a percent of deposits. At current interest rates, this would add only about 22 basis points to the cost of funds (COF).

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[26] Data on mortgage spreads in Denmark, France, Germany, the U.S., and the U.K. can be found in the monograph, "Housing Finance in Developed Countries: An International Comparison of Efficiency" by Douglas Diamond and Michael Lea, published as Vol. 3, Issue 1, of the *Journal of Housing Research*, Fannie Mae, 1992.

Then there are the risks of intermediating funds for mortgages. These not only include the obvious risk of non-repayment, but also a significant risk of lacking sufficient liquidity under all circumstances. This risk is specifically related to making long-term loans out of short-term deposits. Even though the real effective duration of such loans at normal rates of repayment and at current rates of interest is probably less than 6 years, the absence of deposit insurance injects a significant potential for a run on a bank. South African banks seem to be managing this risk at present by maintaining more than enough capital so as to avoid any market inclinations towards a run. Nonetheless, this situation raises the risks to the equity investors in the banks and the amount of excess capital that management will prudently maintains.

It is difficult to put a number on the premium required to compensate for the liquidity risk of making mortgages. However, since the largest single business of the banks is making housing loans, most of the liquidity risk in this activity should already be included in the overall required rate of return on capital for banks, along with the normal business risks.

That brings us to the cost of capital. In general, every 100 rand lent by a bank must include at least 8 rand of capital. This capital adequacy rule is set by the Reserve Bank and conforms with norms prescribed by the IMF and the Bank for International Settlements to assure confidence in offshore banks everywhere and congruity in the costs of operation across countries. In practice, banks maintain higher levels of capital as a conservative management practice.

However, residential loans secured by a mortgage are considered to pose only half the risk of an unsecured loan and thus are granted a 50 percent risk weight which is at the discretion of the Reserve Bank, and in conformity with international guidelines. Thus, roughly only 5 rand of capital is needed for every 100 rand of mortgage lending. The international standards relating to capital reserves are known as the Basle Standards. The Basle Standards call for 50 per cent risk weight for loans secured by real estate as a minimum. Most countries follow the 50 per cent standard for home loans, and some countries go above 50 per cent for loans secured by commercial real estate.

What is the cost of the 5 rand of required capital? This cost must reflect the fact that the equity investors in the bank face real uncertainty about their rate of return for a host of reasons, and also have many other competing uses of their funds. The cost can be estimated from the price of the shares on the exchange relative to the earnings of the company. However, a portion of the capital of a bank typically comes from a second-tier of capital, often issued as subordinated debt paying a higher rate of interest than usual bonds but still cheaper than simple equity. The proper figure depends also on the expected tax treatment of dividends and capital gains.

In any case, more than one bank has indicated that they calculate their cost of capital at about 26 percent. At that rate, the portion of the gross operating spread that provides the required returns on equity is about 0.5 percent. That is, the cost of 95 rand of wholesale funds and 5 rand of capital is 16.0 percent on 100 rands of loan, or 0.5 percent more than the cost of funds.

That leaves 4.0 percent in gross operating margin. It does not appear that lenders are experiencing credit losses in excess of 100 basis points on their portfolios of loans made since 1994. If we take this to be the maximum necessary premium for credit risk, that leaves a spread of 3.0 percent for operating costs, which is a high figure by international standards.

According to the Council of South African Banks (COSAB) and independent observers, South African banks have operating expenses far higher than international norms.[27] Some parties blame this inefficiency on the necessity of having a nationwide branch network. However, this same consideration applies to most other countries. Countries such as Chile and Malaysia have much lower operating costs, with Malaysia at less than 1 percent. The major difference appears to be the lack of aggressive competition in the South African market during apartheid, as well as lack of access to advances in automation and advanced operational techniques. Casual observation of banking practices and staffing is consistent with the conclusion that nothing yet has pushed the banking organisations to operate as cost efficiently as possible.

These comments are particularly pertinent to mortgage lending, where extreme competition in the developed countries has forced streamlining and careful cost allocation and pricing. Even under present operating cost conditions in South Africa, it appears that banks may be allocating too much of their operating costs on to pricing their mortgage products relative to actual costs. There definitely has been cross-subsidisation between from large or low-risk borrowers to small or higher risk borrowers, since rates have been the same for both, with no differentiation between someone borrowing at a 90 percent LTV ratio vs. a 60 percent LTV. There may have been cross-subsidisation from mortgage lending to other kinds of advances, since it is hard to imagine that the costs of originating and servicing mortgage loans are as high as seems to be ascribed to them.

[27]The review of the banking sector by SBC Warburg in January 1997 reported a comparison of operating expenses across 10 countries, from Britain to Singapore, including South Africa, and found that all but Columbia had much lower rates of operating expenses than South Africa.

PART IV

CAPITAL MARKETS IN SOUTH AFRICA: POTENTIAL INVESTORS IN MORTGAGE-BACKED ASSETS

OVERVIEW

Capital markets in South Africa are relatively well developed. In comparison with other developing countries, South Africa has a relatively liquid and well capitalized stock exchange, a sizeable domestic government bond market, a deep and liquid bond market for parastatal companies, a number of institutional equity investment funds, an active futures market, a range of unit trust offerings, and several offshore sovereign debt issues outstanding. Moreover, there is a very low level of government intervention or distortion and relative ease of entry by new entities.

The institutional investor market is relatively sophisticated and is dominated by insurance companies, pension funds, and unit trust managers. In addition to the domestic players in these markets, with the recent re-integration into the world economy, South Africa has experienced the entrance of a number of foreign asset managers into its arena over the last 36 months.

In spite of the relative sophistication of the markets and the players involved therein, the market for long-term debt securities is a relatively shallow one. Institutional investors have a very strong bias in favour of equity instruments. This bias is the result of several factors: a) depth and therefore relatively greater liquidity in equity markets vs. debt markets; b) high real interest rates, and relatively narrow spread on yields required between debt and equity returns, thereby minimizing the advantages of debt to issuers; c) large capacity of banks to lend to corporates thereby minimizing the demand for corporate debt on the issuer side; d) tax advantages associated with long term holding of equity investments relative to debt; and e) a general lack of knowledge and exposure to debt instruments which creates a misperception relative to the risk parameters of debt instruments.

On the other hand, there is a market in short-term wholesale funds. Banks utilise this market for a substantial part of their funding. There is no form of secondary market at this time. There has been one mortgage securitisation in South Africa, known as MS101. This offering was motivated by a desire on behalf of the issuer, the United Building Society (now part of the ABSA group), to test the waters for mortgage securitisation. This experiment will be discussed in greater detail below.

INSTITUTIONAL INVESTORS IN SOUTH AFRICA

Insurance Companies. The large insurance companies in South African manage about R600 billion in assets. Within the industry, there are two major companies, Sanlam and Old Mutual which together control about 60% of the market. The industry is dynamic and reacts to a number of important structural changes that have been evolving subsequent to the elections in 1994. Among the important developments that the industry is responding to are the following:

a) tax law changes which require these historically tax exempt entities to now pay tax; b) the Reserve Bank's approval of asset swaps in 1995 thereby allowing insurance companies to have some offshore investments; c) gradual removal of exchange controls which will ultimately allow even greater offshore diversification; and d) greater disclosure requirements in their financial statements; e) preparing for the implications of the growing rate of AIDS among the South African population.

Ranking of Long Term Insurance Companies by Assets (in Rand millions)

Insurer	Total Assets	Year End of Data
Old Mutual	198000	June 1996
Sanlam	133000	December 1996
Liberty Life	69847	December 1995
Southern Life	32856	March 1996
Momentum	22792	June 1996
FedSure	14683	December 1995
Metropolitan Life	10910	September 1996

Source: Finance Week 200: A Survey of Business Achievement, 1997.

As the following table demonstrates, the insurance industry invests the largest portion of its assets in equities in the form of ordinary shares (55%). The second largest allocation is to fixed income debt securities, primarily those issues by the Republic of South Africa. This allocation is about 20% in total (Government Fixed Interest Securities - 12,9%; Public Enterprises Fixed Interest Securities - 1,8%; Local Authorities Fixed Interest Securities - 0,7%; and Other Fixed Interest Securities - 2,6%). Fixed Property makes up the third largest asset allocation at about 8%.

South African Long Term Insurance Industry Asset Allocation in 1997

Item	Total Assets in 1996 (Rand Billions)	Percentage of Overall Assets
Coins, Bank Notes, and Deposits	319	66
Government Fixed Interest Securities	628	129
Local Authorities Fixed Interest Securities	34	7
Public Enterprises Fixed Interest Securities	89	18
Other Fixed Interest Securities	125	26
Ordinary Shares	2692	554
Mortgage Loans	8	2
Loans Against Policies	117	24
Loans to Public Sector	23	5
Other Loans	90	19
Fixed Property	375	77
Other Assets	355	73
TOTAL	**4855**	**1000**

Source: South African Reserve Bank Bulletin, Sept. 1997.

South African Insurance companies are very oriented towards equities, and less oriented towards debt securities when compared to their international counterparts. The chief investment officers of South African insurance companies choose equities for a variety of reasons: a) perceived and real liquidity of the equities market; b) high and volatile inflation rates creating pressure to avoid exposure to fixed rate debt; c) stamp duty due on transfer of corporate debentures of 0,5% (government bonds, however, are exempt from this duty); and d) lack of depth in market for alternative corporate exposure, ie., few corporate bond issues outstanding.[28]

[28]One bond trader suggested that South African institutions are loathe to invest in bonds vs. equities due to bonds' sensitivities to political and economic news. While equities move relative to these factors as well, the value of government bonds is directly tied to political and economic events, and in a country with a

Insurance companies' second largest investment position is in government bonds. The fact that the insurance industry overall invests about 20% in bonds seems to be a holdover from the days in which government regulations forced insurance companies and pension funds to invest 20% of their assets in government bonds. This prescribed asset allocation regulation was abolished in 1989, and institutions are no longer required by law to buy government bonds. Today, the institutions are governed by the Pension Fund Act which does provide maximum amounts for various asset classes, but these regulations are now designed to protect beneficiaries from poor financial management, rather than implementing a policy objective of ensuring private sector funding of government activities.

Sources in the investment industry indicate that by practice, many of the large, old line insurers continue with a 20% allocation to government bonds based on their historic comfort in doing so according to the old prescribed asset regulations. Many of the newer entrants to the market trade their government bond portfolios more actively and their allocation at any point in time may range from zero to thirty percent.

Insurance companies have found property to be a relatively low performer and as a result, are currently looking to reduce their portfolios in property. The returns that they have earned over the last many years in commercial property have been single digit. In particular, many of the institutions had sizable holdings in the Johannesburg central business district and the values of those properties have dropped by extraordinary magnitudes over the last couple of years.

Insurance companies in South Africa have absolutely 0% invested in residential mortgages and a negligible 0,3% direct investment in commercial mortgages at present. If they were to add such mortgage investments to their portfolios, the primary advantages would be to provide another vehicle for matching their long term liabilities, a means of diversifying their portfolios, and the opportunity of earning a spread pick-up over government bonds. To date, however, there has not been a convenient vehicle for the institutions to invest in residential mortgages as this business has been conducted by the banks and they have had little desire to sell off these portfolios as they are the primary contributor to the banking industry's profit margin. There has not been much demand for commercial mortgage loans because much of the commercial property has been owned by the large institutions themselves and they have chosen to fund their acquisitions on a pure equity basis. As the large institutions unbundle their property portfolios, however, there may be some diversification in the ownership profile of the buyers and some of these buyers may prefer or require debt financing for their acquisitions.

The liability structure of the insurance companies is indeed generally long. Nearly 50% of the liabilities of the industry are pension/provident obligations (industry total of R212 billion in 1997). The market feels that it is able to match its long term obligations fairly well with the current menu of investment alternatives. The longest issuances in the market seem to be purchased by offshore investors with the local market preferring to buy long term investments in the 8-13 year maturity range. A successful issuer of new debt must constantly evaluate where

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relatively greater degree of political risk, portfolio managers are reluctant to take a high exposure to bonds.

there are duration gaps in the market in order to fulfill an unmet market demand. At present, the greatest bulk of the industry's liabilities are concentrated around the year 2010. Thus, a potential issuer of new bonds would do well to develop a product in line with this maturity.

Pension Funds. The South African pension fund industry (defined as including both pension funds and provident funds) can be divided into three categories: privately managed funds, official funds and private self-administered funds. The largest category of pension funds are those defined herein as privately managed funds, which are generally underwritten and managed by insurance companies. The official funds are those funds administered by the Department of Finance, Transnet, Telkom and the Post Office. Private self administered funds are registered in terms of the Pension Funds act and include certain foreign funds registered in South Africa, funds established in terms of industrial agreements and certain state controlled funds exempted from the Pension Funds Act.

The size of the respective markets are as follows:

	1997 Total Assets (in Rand Billions)
Privately Managed Funds	550 (approx)
Official Funds	149
Private Self Administered Funds	121

Source: Alexander Forbes

There are over 17,000 privately managed funds in South Africa. These funds cover over 15 million members. The annual contribution inflow is about R40 billion. The vast majority of these funds are underwritten and managed by the asset management divisions of the insurance companies. These funds are subject to the Pensions Funds Act (the "Act") which was enacted in April 1996. The Act provides for a compulsory board of management for each fund comprising at least 4 members, with the members of the fund having the right to elect a minimum of 50% of the board. The Financial Services Board is the regulating entity responsible for enforcing the Act. Beginning in 1996, retirement funds have been taxed at the rate of 17% on their interest and rental income. Previously they were tax exempt.

Historically the privately managed funds have been defined benefit, but there has been a growing trend over the last several years towards defined contribution and now both exist, although the majority of funds remain defined benefit. The trade unions, especially COSATU affiliates, led the negotiation for defined contribution programmes which became a substantive issue in annual wage negotiations. They believe that defined contributions better serve the needs of the larger population in South Africa for a number of reasons: a) members retiring to outlying rural areas prefer lump sum payouts as there is little infrastructure to facilitate the collection of monthly payments; b) the principle of defined contribution is more easily understood; and c) withdrawal benefits under defined benefits programmes were penal as workers often only received a return of their own contributions together with minimal interest thereon. Defined contribution plans generally return the employer contributions as well.

The pension fund industry is South Africa has seen a substantial rise in claims over the last few years due to death and disability claims owing to a growing AIDS epidemic.

Privately Managed Funds allocated their assets as follows in 1997:

Privately Managed Funds - Approximate Asset Allocation in 1997

Asset Category	Percentage
Equities:	
- Mining	16%
- Non-Mining	46%
Total Equities	62%
Bonds	20%
Property	8%
Cash	10%
TOTAL	100%

Source: Survey of Retirement Fund Investment Managers, Alexander Forbes, June 1997.

Interestingly, the asset allocation of the official public funds is very different. In crude terms, the official funds and the privately managed funds have an inverted allocation of equities to debt: the official funds are roughly 20% equity and over 60% debt, while the privately managed funds have allocated their assets in the reverse: roughly 20% debt and over 60% equity.

Official Pension Funds - Asset Allocation in 1997

Asset Category	**Percentage**
Total Equities	21%
Bonds:	
- Central Government	47%
- Local Authorities	1%
- Public Enterprises	10%
- Other	9%
Total Bonds	67%
Property	2%
Cash	8%
Other	2%
TOTAL	100%

Source: South African Reserve Bank Bulletin, Sept. 1997.

With the trend from defined benefit towards defined contribution funds, the investment risk is being transferred from the employer to the employee. The trustees are feeling the burden placed on them in determining investment strategy when they are accountable to the individual members who now carry the risk. As a result, there is an increasing trend towards involving members in the investment decisions. A common approach being taken by many funds is to hold two portfolios: one for younger members with a more aggressive investment strategy which includes a higher allocation of equities for long term growth; and secondly a more conservative portfolio into which members are transferred upon reaching a certain age. This second portfolio has a higher current income component and a lower volatility in principal which is more appropriate for members approaching retirement age.

Banking Sector. The banking sector in South Africa has total assets of about R500 billion as of 1997, reflecting a growth in assets over the previous year of about 20%. The market is dominated by five major players: ABSA, Standard, First National Bank, Nedcor and NBS Boland.

Asset allocation by the banking industry was as follows in 1997:

Banking Industry Advances Allocation in 1997

Asset Category	**Percentage**
Mortgages	39,8%
Corporate Loans	21,0%
Instalment Loans	17,5%
Retail Loans	7,5%
Bills	5,7%
Foreign Loans	3,9%
Credit Cards	2,3%
Pref Shares	1,5%
Public Sector	0,9%
TOTAL	100,0%

Source: Quarterly DI 900 Analyses of Individual Banks, March 1997

Most of the growth in the sector's assets is coming from a growth in mortgage lending. Corporate overdrafts grew by 21,6% over the last year vs. 18,4% for the previous year, reflecting the upturn in the economy and the greater demand for corporate borrowing.

ABSA is the largest mortgage lender in the market with a market share of 36%. Standard is second with 21% with Nedcor close behind with 18%. FNB has 9%.

The banking sector is funded by deposits, loans, repurchase agreements, capital and reserves. The largest of these sources is unsecured deposits drawn from a wide range of sources. Deposits increased by 14,7% in 1997. Obviously this growth does not keep pace with the growth in assets and as a result, the banks are turning to foreign funding more and more to fund their lending activities. Foreign funding increased substantially by 70% in 1997. The unweighted ratio of capital to assets (plus contingencies) is 7,2%. Deposit maturities are heavily weighted towards the short end with about 64% being short term.

The banking sector also holds a significant portion of government stock, totalling approximately R18 billion as of December 1996. In addition, they held approximately R5 billion in other interest bearing bonds and approximately R8 billion in equities.

The major industry forces at work in the current environment include shifting market priorities, lowering costs, using technology more effectively, and creating products and services more suited to the majority population. These forces are being driven by a major increase in competition over the last few years. Historically there have been only a handful of local banks who dominated the market. There are now more than 50 foreign banks in the South African market. None of the foreign banks have approached the retail market due to the high costs associated with establishing a branch network. Most of the foreign entrants are focussing on cross border, corporate finance, and infrastructure markets.

One important feature of the SA bank market is a high degree of cross-subsidisation of products and customers, and no or little differentiation in usage or risk profile. This creates an opportunity for niche players who are able to provide specialized services or products at prices less than the big, full service banks.

GOVERNMENT BOND MARKET

The total size of the government bond market is approximately R350 billion. The primary issuers in this market are the sovereign (RSA), Eskom, Telkom and Transnet. The following table shows how much each of the major issuers represents as a portion of the market as a whole:

South African Listed Bond Market at August 1997

	Nominal Amount of Issue (Rand billions)	Percentage of the Total Market
RSA	278.5	79.7%
ESKOM	23.2	6.6%
Telkom	6.6	1.9%
Transnet	19.4	5.6%
Other	21.6	6.2%
TOTAL	349.3	100.0%

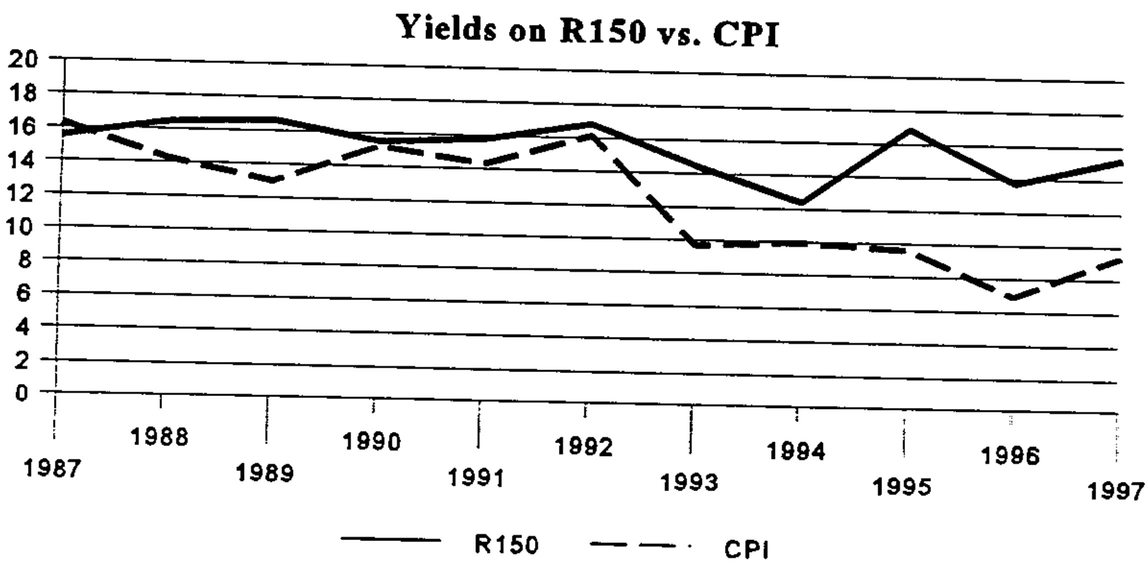
Source: Bond Exchange Journal, October 10, 1997.

In 1996, what was previously an industry association, the Bond Market Association, became the Bond Exchange of South Africa (the "Exchange"). The Exchange now has over 75 members including broker dealers, issuers, insurance companies, banks, etc. The Exchange lists rand denominated debt securities issued by central and local government, public enterprises, and major corporates. Among important developments that have occurred over the last few years in this market include the shift to an electronic settlement system as opposed to the traditional manual, physical system. This change helps to bring the South African bond exchange up to international standards. A second important development in this market will be the reduction in the long settlement period of 14 days to 3 days, which is expected to occur before the end of 1997. The long settlement period created distortions in the pricing of bonds: essentially the market has been a forward market for the sale of bonds two weeks into the future. By moving to a three day settlement period, the bond market will benefit through a reduction in credit, counterparty and settlement risks faced by market participants. The exchange has suffered from failure to deliver in the past, in particular with respect to certain offshore parties. The new, shorter settlement period should increase foreign participation in the South African market.

There is a general sense by some informed parties that the Republic of South Africa guarantees the debt of the parastatals (i.e., ESKOM, Telkom, and Transnet). The reality is that the guarantees of the debt for these parastatal organisations is subject to interpretation of their guarantee agreements. In general, it would be fair to say that Transnet's debt is indeed guaranteed, Eskom is not guaranteed, and the agreement between the government and Telkom is the one most subject to interpretation. In the past, government has not always charged the parastatals for the value of the guarantee. Going forward, government will be reviewing this matter more closely and is likely to move to a more consistent, market related fee structure to parastatals for the use of the sovereign guarantee.

The benchmark long government bond is the R150. Trading in the R150 alone represents about 33% of all trading done on the Exchange in total. The R150 is actually not one bond issue, but the consolidation of several RSA issues with the same coupon of 12% fixed, and similar maturities. The principal outstanding on the R150 is about R17,6 billion. Maturities on the R150 are February 2004, 2005, and 2006.

The yield on this bond has been as follows relative to CPI:



Source: Bond Exchange Journal

Most government bonds are held by insurance companies and pension funds. There is no data (according to the Bond Market Association and confirmed by several major market participants) which would provide a breakdown to show what percentage of the bond market is held by the respective investor groups, i.e., what percentage of the RSA bonds are held by insurance companies vs. pension funds, vs. banks, for example. This information would be useful to collect and disseminate as the bond markets develop.

Over the period from July 1, 1996 through June 30, 1997, there were 11 new listed bond issues introduced to the South African market through the Exchange. These issues totalled R13 billion. The 11 issuers of these bonds were broken down as follows: 5 - RSA; 3- Infrastructure Finance Corporation (Inca); 1 - Land Bank; 2 - Lesotho Highlands.

An interesting comment on the South African bond market in 1997 is the sizeable growth in trading of South African bonds offshore. This market is divided into two categories: Non-resident trades and offshore trades. Non-resident trades are defined as transactions undertaken between offshore parties and South African parties. Offshore Trades are defined as transactions undertaken between one offshore party and another offshore party. The volume of non-resident trading more than doubled between August 1996 and August 1997 and now represents nearly 30% of total market volume in South Africa. Offshore Trading has also increased dramatically and represents approximately 20% of total market volume. Therefore, non-resident and offshore trading combined now represent about 50% of total market volume of trade activity in South African bonds.

This reflects the significant foreign interest in the South African bond market. It also suggests that the appetite of foreign investors should be taken into consideration as new bond markets develop.

Further evidence of the buoyant foreign demand for South African bonds has been the very strong development of the Eurorand market. A Eurorand issue is defined as a rand denominated bond listed on a European bond exchange. This market allows South African borrowers to tap foreign capital without currency risk. Thus far, two South African issuers have tapped the Eurorand market: Eskom and the Development Bank of Southern Africa. Other issuers of Eurorand offerings have included the World Bank and the European Investment Bank. These issuers sought to raise rand denominated debt to fund their activities based in rand, thereby eliminating for them as well exchange risk exposure. The Eurorand market typically has maturities longer than those of the local market. Thus the market allows borrowers to tap large capital markets, without currency exposure and at longer maturities. Rand denominated debt has a relatively high yield (relative to other emerging market debt) and as a result, offshore investors, particularly those with emerging market funds or an international component to their portfolios, find the rand denominated debt a way to increase their yield performance.

Yields on government bonds are driven by expectations of future short term interest rates. The yield curve for government bonds is slightly inverted at present. The inverted yield curve suggests that investors believe that short term interest rates, in the long term, will be below their current level.

The municipal bond market is a sub-sector of the government bond market which merits some specific commentary. Of the R350 billion rand bond market, approximately R9 billion (2.6%) is local authority issued debt. Much of this debt was issued prior to 1989 when prescribed asset allocations were still in force, and institutional investors were mandated to buy this debt. Furthermore, it was previously believed that central government was guaranteeing the debt.

Subsequent to the elections in 1994, the new central government has made an official determination that it will not guarantee the debt of local authorities.

Local governments have experienced a major financial deterioration over the last several years as these newly democratic entities have begun to strive to provide a broader range of social and infrastructural services to the mass population. This has resulted in an increasing rate in defaults on these obligations. In the current environment, most of this paper is not traded and if it were to be traded, would do so at a very steep discount. Central government is addressing this issue in a variety of ways, including the launch of Project Liquidity which is a financial monitoring system designed to sound an alarm bell as the financial condition of a municipality reaches a critical point, thus allowing central government to intervene and, theoretically, manage the municipality out of the problem.

A number of potential strategies are underway to assist in the development of the local bond market, including the early efforts of the Infrastructure Finance Corporation (Inca) which has been established to serve as a conduit to on-lend to local authorities to finance infrastructure projects. However, it would be fair to say that as of this writing, the municipal bond market in South Africa is not active for new issues, and highly illiquid and discounted for outstanding issues.

CORPORATE BOND MARKET

As mentioned earlier, the corporate bond market in South Africa is small. There are a number of reasons for this. First, South African corporations are relatively undergeared by international standards, thus minimizing the demand for debt from any source. A typical large South African corporate has a gearing ratio of about 20%, which is well below international standards. Second, the banks in South Africa are relatively well capitalized and as a result, have been able to serve the relatively modest borrowing requirements of the corporate sector. Third, a functioning corporate bond market requires a market-wide acceptance of measurement standards for credit risk. While there have been domestic rating agencies in South Africa for many years, the market does not place much value in the ratings. Investors are loathe to rely on the credit underwriting of other parties. Hence, this impedes the development of a traded market in corporate bonds. Fourth , given that the banks have been able to service the market with relative ease, the transaction costs of issuing corporate debt are high relative to bank borrowing.

There have, however, been a few corporate bond issuances. South African Breweries issued R1 billion in bonds in 1992 with a 7 1/2 year maturity (in 2000). The bonds carry a fixed rate coupon of 14%. The issuing bank to these bonds, Standard Corporate and Merchant Bank, is obligated to make a market in these bonds. The bonds were not rated, but were purchased on the known strength of the issuer, South African Breweries. Today, these bonds are trading at a spread of about 75 basis points over the R150. This narrow spread indicates that the market perceives these bonds to have a relatively low risk, perhaps something along the lines of a "AAA" rating from a rating agency. This spread is similar to corporate spreads in the U.S. It may be indicative of the required yield on an issuance rated "AAA" by an SMI. If the SMI is government sponsored, it should be even narrower.

In addition to the South African Breweries issue, Sappi, South Africa's largest producer of pulp and paper issued US$200 million in convertible bonds in 1995. These bonds were purchased by offshore investors and no South African company or individual was allowed to purchase the bonds based on foreign exchange controls for this US dollar denominated issue.

SOUTH AFRICAN ASSET BACKED SECURITIES

The South African market has experienced two issues of asset backed securities to date. The first involved mortgage collateral, the second involved lease receivables.

MS101. Mortgage Securities 101 was issued by United Building Society (now United Bank, part of the ABSA group) in 1990. The size of the issue was R250 million. The maturity is 2009. The debentures were issued in two classes: a Class A of R225 million which was senior in order of preference of payment of capital and interest to the Class B of R25 million. Both classes carry floating interest rates linked to United's mortgage rate. Only Class A was sold through the offering while Class B was held by United.

United's motivation in undertaking this issuance was to test the waters for securitisation. They had no real need for liquidity, and they could have funded their mortgages at a cheaper cost. The bonds were not rated by a rating agency. The primary investors in these securities were Sanlam, Liberty Life, and Old Mutual. These investors purchased the bonds on the basis of the strength of United's reputation. It is not believed that the investors had a good understanding of the securities that they were purchasing, but were primarily looking to earn a current return higher than that which they were earning on their gilt investments.

In retrospect, persons involved in the issuance believe that there were several important lessons learned from this offering which provide guidance for future mortgage backed offerings: a) the issue was too small in size; as a result, the bonds have not been actively traded and holders do not have much liquidity; b) there should be a greater understanding of the performance characteristics of the mortgages being sold; in this case, the mortgages were thought to have a 7 year average life, but in reality, a disproportionate amount of the mortgages were pre-paid in the first year; c) a mechanism should have been put in place to deal with the volatility in principal balances created by access bonds; d) transaction costs were high as the mortgages had to be re-registered thus incurring stamp and transfer duties.

Asset Securitisation Limited (Sasfin). In 1991, Sasfin Asset Securitisation Limited issued R30 million of debentures backed by instalment agreements which had been held on the books of Sasfin (Pty) Limited. Sasfin (Pty) Limited is a lease finance company which provides credit to small and medium sized businesses for the purchase of machinery such as photocopiers, vehicles, and other office or light manufacturing equipment. The installment agreements typically have a term of no more than 60 months and bear a floating rate which is linked to the Prime rate. Prepayments on the agreements are allowed but are subject to significant prepayment penalties.

The debentures had the benefit of credit enhancement from Credit Guarantee Insurance Corporation of Africa Limited (CGIC). CGIC is one of the largest credit insurance companies in South Africa. Its major business line is the insuring of domestic and export credit risks and the reinsurance of risks underwritten by South African and foreign credit and bond insurance companies. CGIC's cover in this securitisation was to underwrite the full risk of failure of the end-users of the lease agreements to pay on the installment agreements up to R12,5 million on the issue amount of R30 million.

An additional feature of CGIC's cover was that there was a "claw-back" provision to Sasfin (Pty) Limited. This feature meant that CGIC had underwritten their insurance cover based on Sasfin's historic default/loss rates. In the event that the defaults and losses on the portfolio being securitised were greater than the experience on which CGIC based its underwriting, Sasfin would bear financial exposure to these greater losses. This feature was deemed important as a mechanism to motivate Sasfin to manage the agreements which formed the collateral for this issuance to the same high standards which they employ when the assets remain on their books.

Based on the quality of the collateral and the credit enhancement, the debentures earned a "AA" rating from Republic Ratings, a South African rating agency. The term of the debentures was 20 years from the date of issue. The interest rate on the debentures is floating and is paid quarterly, in arrears at a rate calculated by subtracting 1,8% from the published Prime rate. The rate may only adjust once per quarter. The debentures were listed on the Johannesburg Stock Exchange ("JSE") at the time of listing.

Sasfin's motivation for undertaking this securitisation was its need for liquidity. Sasfin needed additional capital to expand its business and securitisation of its existing portfolio provided access to additional capital. Despite the "AA" rating of the bonds, investors were not eager to take the paper. The rating meant very little to investors and they were not willing to rely on the underwriting of the rating agencies. Sanlam was a major buyer of the issue, as well as some small overseas investors to whom Sasfin was already known. The transaction costs associated with the Sasfin offering were lower than those of the MS101 due to the fact that transfer duties were not payable on these assets whereas in the case of mortgages, they are.

The Sasfin issue authorized the issuance of R250 million at any time up until 2006. The first issuance in 1991 was for R30 million. Since that time, Sasfin issued an additional R30 million in 1992 and an additional R8 million in 1997. There have been certain changes to the structure of the debentures over the intervening years. First, the insurance provided by CGIC has been replaced by over-collateralization. The issuer found that the investors were willing to accept over-collateralization as a substitute form of credit enhancement, and it is less expensive than the premiums paid to CGIC for its cover. Secondly, the debentures were de-listed from the JSE in 1997. The issuer found that the investors did not find value in the listing, and hence, reduced the costs of the debenture structure by eliminating the listing fees and associated administrative costs with being listed. Investors have found that the debentures are not liquid due to the small size of the issue. Therefore, the listing on the JSE did nothing to enhance the liquidity of the bonds, but merely added to the administrative burden associated with managing the issue.

ADVANTAGES AND DISADVANTAGES OF INVESTING IN MORTGAGE-BACKED ASSETS

In countries with developed secondary markets in residential mortgages, insurance companies and pension funds are the primary investors in mortgage-backed assets. In the United States, investors purchase the mortgage-backed securities of secondary market institutions such as Fannie Mae, Freddie Mac and Ginnie Mae. Mortgage backed securities are also held by certain banks in the United States who prefer to keep their mortgages on their books in a more liquid form. In Europe and the United Kingdom, investors purchase the securities of primary mortgage making institutions such as banks, building societies, and centralised lenders.

Mortgage backed securities offer institutional investors in these markets a number of advantages: a) the ability to match long term liabilities with long term assets; b) strong performance based on highly diversified pooling of many small assets; c) higher returns relative to similarly rated credit risk; d) good liquidity based on the size of mortgage markets in most countries.

On the other hand, investors in mortgage backed assets must be concerned with the prepayment risk inherent in these instruments. Depending on the structure employed in the creation of the security, mortgage backed instruments can potentially return the investor's principal faster than projected, thereby leaving the investor with the need to re-invest his proceeds at a time and possibly at a return different than what he anticipated when he purchased the security. In addition, this concern also contributes to the volatility in the market valuation of the security.

MARKET INTEREST IN INVESTING IN MORTGAGE SECURITIES

Political Risk. Investors view the mortgage market in two groupings. First is the middle to higher end market; in short, the "white" market. Second is the low end; in short the "black" market. Because the black market has in the past used mortgage payment boycotts (along with rent payment boycotts, utility payment boycotts,etc.) as a means of voicing their political dissension, investors are concerned about the potential default rate on loans made to black borrowers. In addition are the issues relating to taking back the property which secures the mortgage. Despite the well defined laws governing foreclosures, as a practical matter, it is very difficult for lenders to gain possession of a property subsequent to a default on the mortgage loan. Investors are concerned about these matters and would look for some sort of government or other high quality guarantee in order to get comfortable with these risks if the collateral security is mortgages made to the black market. Investors do not perceive a high degree of political risk when the mortgage collateral is in the white market.

Over the last two years, the Mortgage Indemnity Fund (MIF) has been a key element in providing comfort to the banking community with respect to political risk in black markets. The MIF was launched in 1995 as a wholly government owned company established as part of the Record of Understanding in 1994 between the Department of Housing and the Association of Mortgage Lenders. Its purpose has been to provide coverage to accredited lenders in the event that they were unable to repossess properties via normal legal channels. The MIF was established as in interim measure with a three year horizon until such time as it was anticipated that the political climate in South Africa would be normalized. The MIF has been successful at unlocking access to finance for the black community and has achieved its original targets. As such, it is expected to wind down operations in May 1998 as per its original charter. At such time, any coverage associated with its activities will also cease to exist.

Credit Risk. As has been noted earlier, institutional investors in South Africa do not rely on credit ratings by rating agencies and prefer to do their own underwriting. That being said, it is also true that much of their own internal underwriting is heavily reliant on the borrower's reputation in the market. Investors would have a very positive reaction to an issue brought to market by one of the banks. Independent of what the legal obligations of the securitisation structure may or may not put upon the originator of the mortgages, there is a strong sense that the involvement of one of the big banks would give much comfort to institutional investors.

At least one of the rating agencies has a model for evaluating the risk of a specifically South African residential mortgage portfolio. While it may be possible to have mortgage securities rated, this should not be viewed as a major factor in encouraging the South African institutional investors to buy the bonds.

More likely than not, the next mortgage securities issue in South Africa will need to carry the guarantee of government or another high quality credit in order to persuade South African institutions to buy the bonds.

Return. Investors will be looking for a spread to government stock of about 50 -200 basis points if they are to invest in mortgage securities. They will need this spread "pick-up" in order to compensate them for the lesser degree of liquidity in mortgage securities, at least in the early days of the market. Investors indicate that they will only view the bonds as being truly liquid if they can buy or sell upwards of R50-100 million without moving the market price for the bonds. Such is not the case today for the R1 billion issue of South African Breweries debentures. This is, however, true for many of the RSA bonds, including the R150 which has R17 billion outstanding. Thus, in order to reduce the premium required for liquidity constraints, the issuance would have to grow to well over R1 billion before investors would achieve the liquidity levels they seek.

Fixed vs. Floating Rate. Investors would prefer fixed rate bonds. The government bond market in which they currently participate is a fixed rate market. While there is certainly a strong bias in favour of fixed rate, investors said that they would not rule out floating rate debt.

The growing swap market in South Africa provides additional opportunities for either the issuer or the investor to swap the floating rate mortgage bond coupons into a fixed rate obligation on the bonds. One consideration with respect to the swap market is that the pricing of a floating to fixed rate swap may become uneconomic beyond a term of a couple of years.

Term. Investors would ideally like to see a duration on the bond of about 7-10 years. They are not keen to go out much longer than 10 years.

Social Responsibility / RDP Objectives. Investors feel little or no pressure, from neither internal nor external forces, to invest in developing South Africa's infrastructure. Hence, the potential appeal of contributing to the development of the housing sector creates no additional incentive to investors in making a decision to invest in mortgage securities.

Taxable vs. Tax-Exempt Interest Income. Some countries have found that making the interest earned on mortgage securities tax exempt provides an incentive for institutional investors to invest in such securities. South African fund managers are evaluated based on their pre-tax performance. Hence, there is no value to be derived, at least in the current environment, from pursuing a structure to make the interest on mortgage securities tax exempt.

Prepayment Risk. Investors are not familiar with prepayment risk in general as the bond markets in which they operate have not had much, if any, experience with callable bonds. From what they do know about the matter, they are not keen to accept prepayment risk. As mortgage securities by definition contain a certain degree of prepayment risk, this is an important obstacle to be addressed in the issuance of mortgage backed securities in South Africa, as it is elsewhere.

Market Depth. With an existing bond market of R350 billion, an insurance industry asset base of nearly R600 billion and a pension fund industry with a combined asset base of over R800 billion, there appears to be more than sufficient capacity for the capital market to absorb the development of sizeable mortgage security market.

Conclusions. South African institutional investors would be prepared to invest in their "ideal" mortgage backed security today if it reflected the following characteristics: fixed rate, no more than 10 year maturity, credit guarantee by SA government or other very high quality guarantor, no pre-payment risk and a spread to RSA bonds of 50-200 basis points.

These terms would be difficult to achieve in the current market given the nature of the mortgage collateral being originated by the banks (floating rate, 20 year term), and the low cost of short term wholesale funding. A spread of over 100 basis points over government bonds would make a securitisation unattractive.

However, we believe that the institutions are relatively open-minded and desirous of learning about new products and instruments. There is a fierce competition in the market and each manager is striving to improve his investment performance relative to his industry peers. To the extent that mortgage securities were priced to allow a spread "pick up" in the fixed income portfolio, there seems to be a high enough degree of desire to allow for the development of the market. There may be more flexibility in the acceptable terms than indicated in these preliminary discussions.

Furthermore, the institutional investors are open to being educated on the mortgage market and are keen to move in the direction of international markets. They are all aware of the fact that their overseas counterparts have significant mortgage securities holdings, and this knowledge seems to be a comfort to them as they consider the possibility of investing in these same securities.

Another factor to be considered is the offshore market. This study involved interviewing institutional investors based in South Africa. As was noted earlier, there is a very active offshore market in South African bonds. Given that some of these offshore investors undoubtedly are also players in the mortgage backed markets of other countries, there may be a lower hurdle to overcome in convincing these investors of the merits of South African mortgage backed bonds. Thus, the huge spread that South African institutions might demand could possibly be smaller for offshore investors who do not perceive the risk at the same high level as South African investors who are completely unfamiliar with mortgage bonds at this point in time. These offshore investors are more likely to place value on a rating by an international rating agency (three of which are now on the ground in South Africa: Standard and Poors, Duff and Phelps and IPCA), and as a result, might demand a lower premium. Furthermore, the offshore investors in RSA bonds and Eurorand issues have a preference for longer maturities as is likely to be characteristic of a South African mortgage backed bond.

PART V

POTENTIAL USES OF SMPs IN SOUTH AFRICA

As noted in Part II, the potential for securitisation or any other kind of SMP in South Africa could only be considered after a reasonably complete picture is compiled of the market for housing loans, the sources and costs of funding options, the operations of lenders, and the forces affecting the housing finance market. We now have all the pieces needed to put the puzzle together and see what the picture might look like.

The potential advantages of a PML using a SMP in lieu of retail deposits, as discussed in Part II, included:

1) Lower credit risk from viewpoint of investors, translating into a lower spread over government debt

2) Lower reserve requirement taxes, other regulatory considerations for PMLs or investors

3) Lower transaction costs for the PML (scale and term of fund raising)

4) More desirable structure and liquidity of SMP securities for investors (long-term, fixed-rates, large issuances)

5) More desirable structure of SMP funding for PMLs (reduces liquidity and interest rate risks)

6) Lower cost of equity for risk bearing through the SMP than through lenders

7) Lower operational costs through specialisation.

Do any of these apply in the context of South Africa?

1) **Credit Spreads** - *NO* It appears that the commercial banks, including relatively smaller ones, can access the short-term wholesale funds market at attractive spreads over short-term government rates. Spreads of less than 100 basis points do not leave enough potential advantage for a PML to bear the cost of setting up a SMP. This is particularly true since it appears that the market attaches at least a 50 basis point premium to anything other than government debt, simply due to less liquidity.

2) **Other Advantages** - *NO* At this point, the required reserves against deposits are small and not very costly, so that a method of raising funds that was exempt from reserve requirements offers no significant advantage. There are also no tax advantages or prescribed investment requirements that would attract investors to mortgage-backed securities.

3) **Lower Transaction Costs** - *NO* It appears that the NCD market is so well developed and the bond market so undeveloped that, if anything, the costs of issuing a long-term security exceed the cost of issuing a series of short-term ones. It will be worthwhile doing so only if the longer term brings with it other advantages.

4) **Structural Advantages to Investors** - *NO* At this point in time, the sorts of debt that banks would want to issue, long-term at some spread over a floating rate benchmark, do not seem to be attractive to investors. Also, it appears that the NCD market is relatively liquid while the non-government bond market is relatively illiquid.

5) **Risk Advantages to PMLs** - *MAYBE* The PMLs are generally not taking any interest rate risk at this point. The small amount of fixed rate loans being made are presumably for a term that can be matched to fixed rate liabilities. The PMLs are, however, taking significant liquidity risk because their liabilities are much shorter than their assets. They can deal with this by trying to match these profiles more closely or by keeping their risk exposures and capital reserves at levels that ensure continued access to short-term wholesale funds. They seem to have chosen the latter approach, perhaps because of the relatively low cost of equity capital or perhaps because there have been no damaging bank runs.

6) **Relative Cost of Risk-Bearing** - *MAYBE* Some SMPs involve the shifting of credit risk to a third party, such as an insurance company or investors. It is possible that either party may be willing to accept that risk at a lower cost than the cost of capital to the PML. In the case of banks, the cost is a function of the cost of capital, which has to reflect the possibility that the bank can pursue a large number of risky activities, and the somewhat arbitrary determination of the Reserve Bank that mortgage loans are half as risky as unsecured lending. An insurance company or investors entity may determine that the risks are such that its equity holders are willing to bear it at a lower cost.

Sifting risk from the originator of a loan to a third party risk-bearer introduces an element of "moral hazard", i.e., an incentive for the originator to "cheat" in underwriting the loans or in selecting loans to securitise. In the South African context, shifting of risk will be made more likely if banks are required to put a higher risk weight on the portion of their secured loans which are really not well secured, i.e., those mortgages over 80 percent LTV.

7) **Advantages to Specialisation** - ***YES*** As developed below, this is a possible basis for developing a SMP. For a number of reasons, the operational costs of banks are much higher than normal and, as shown in Britain, even normal operating spreads are subject to entry by new lenders making the maximum use of low-cost funding, origination, and servicing techniques.

Based on this analysis, we see at least three scenarios under which a SMP might flourish in South Africa.

A) Centralised Lending to the Upper/Middle Market

B) Government-Sponsored Refinance for Lenders to Emerging Markets

C) Popularity of Fixed Rate Lending

A. CENTRALISED LENDING

We conclude that securitisation or any other SMP does not pose significant enough cost advantages for the major banks to develop it as an alternative to their current sources of funds (that does not mean that the banks would not use it if the mechanism already existed). However, the development of a SMP might be worthwhile for an entity seeking a new primary means of funding, to permit the offering of loan services in direct and low-cost competition with the banks, without developing the costly infrastructure of a full-service bank.

Based on our understanding of the current spread on mainstream mortgages, it appears that the mortgage market is ripe for such new entrants. The banks seem to be burdened by operational and pricing practices, and perhaps a non-innovative mind set, which creates an opening for a new entrant to originate loans at rates up to 200 basis points lower than the current Mortgage Rate. The banks seem to recognise this situation themselves, by virtue of the fact that some already offer their best clients such a lower rate. Also, it is evident in our judgement that current pricing, while not reflecting collusion, is also not reflecting any strong competitive efforts in regard to price.[29]

The absence of strong price competition reflects the fact that it is not easy to set up a new banking network to compete, especially if it is to be a complete banking operation, offering the full array of services to a full array of clientele and seeking retail deposits. Despite those difficulties, there are already institutions moving firmly towards operating in the more profitable niches of the market, taking advantage of the presence of a degree of cross-subsidisation in the traditional one-price-and-product-fits-all approach. These new banks, such as Investec and Rand Merchant Bank, have strong supporters and have been able to tap the wholesale funding market at costs not much higher than that faced by the major banks. This has allowed them to focus on providing banking services at the high end of the market, where transactions are larger and safer, per rand costs are lower, and quality service is more valued, all without developing an extensive, and expensive, branch network.

The ripples of competition from new entrants and foreign banks are being felt first in the niches of the market. However, there may be sufficient profits achievable in the traditional mainstream mortgage loan business to tempt new entrants to invest in creating a new low cost mortgage delivery system. At the heart of the system would be some kind of SMP, whereby the lender could obtain reliable funds at an attractive price, and focus its energies on marketing just housing loans at substantially lower spreads and perhaps with new products. The new lenders would also

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[29] In fairness, it must be noted that no financial institution with a large existing book of long-term loans wants to pursue price competition, even for larger market share. Cutting the spread on new business requires (or ends up forcing) the bank to cut it on existing loans. In the absence of aggressive new entrants, it would be very natural for the major banks to maintain large spreads on their long-term loan book and cross-subsidize more intense price competition on short-term lending.

be taking advantage of whatever economies that might exist in splitting up the various functions involved in current modes of lending, and specialising in just portions of that array.

Such a scenario should sound familiar, since it is what developed in the 1980s in Britain. New lending entities, called "centralised lenders", began originating loans without developing a network of offices, by using local real estate brokers or insurance agents to source loan applications, and raising funds through the issuance of securitised mortgages benefiting from full credit enhancement by major insurance companies. Tapping into a burgeoning market for long-term debt, they were able to raise funds at an all-in cost similar to that of the building societies and to take advantage of low-costs of origination and automated methods of servicing to undercut the pricing of the traditional lenders. Moreover, as the securitisation market developed, it allowed these lenders to look for new designs and options to offer borrowers that also appealed to investors, including fixed rate loans.

Such lenders have long existed also in the U.S., where they are called "mortgage banks". They were the original customers for the former government-owned Fannie Mae, issuing government guaranteed mortgages and selling them to Fannie Mae, which raised funds at attractive government-guaranteed rates. That system evolved into the true securitisation process which today is used by most lenders to fund their fixed-rate loans. Mortgage banks today have the largest part of the market, based on service and low-cost origination, and the ability to shift all other parts of the lending process, including fund-raising and servicing, to other specialists.

Is such a scenario likely in South Africa? There are several negative factors, such as the relatively shallow state of the bond market, the strong barriers in existing legislation against innovation and entry into the securitisation market, and the low likelihood of being able to offer a fixed-rate mortgage product. But there is one strong incentive, which is the large spreads for the existing lenders. Further positive considerations in favour of the emergence of centralised lending are the climate of innovation and competition that has appeared, especially with the entry of foreign banks; great interest in encouraging housing; and also perhaps little sympathy in preserving any advantages of the large banks, especially when most modern financial systems are encouraging activities such as securitisation. Last, but not least, the technology of securitising mortgages is readily available for import from any number of sources.[30]

Still, there are several cautionary lights which may deter investors placing a multi-million rand bet on centralised lending. The first is simply the fact that many of the innovations needed to bring it all to fruition can readily be copied by competitors who do not need to bear the development costs.

Second, the big banks themselves have "deep pockets" and may respond by cutting their short-term profits to keep any new competitor from getting well-established. The caveat to this

[30] There is at least one simple way around a number of the roadblocks. A large institutional investor could directly fund a centralised lending operation. There would not have to be any securitisation, at least initially, and the institution would not be classified as a bank. Moreover, it would avoid any moral hazard present in a transfer of risk.

temptation is that cutting the mortgage rate across the board will devastate profits on the existing book of loans, but not doing so would invite large scale prepayments.

The third consideration is that the key to success will be a cost of funds not too much more than current rates on NCDs. However, the cost of funds will depend heavily on (1) the credit quality of the issuer (perhaps a government or other very high quality guarantee) (2) the acceptance by investors of credit ratings as a replacement for a familiar name or in depth evaluation of each issue and (3) the development of greater liquidity in the non-government bond market. Once again, the first entrant will bear the greatest costs with respect to these matters and later followers will reap the benefits.

The fourth caution is that the highly politicised nature of lower-income lending may make entrants hesitant that they may be burdened with explicit or implicit "community reinvestment" requirements that are not well-suited to their model of operation. Centralised lenders to the upper/middle income market would not naturally have the apparatus to provide the type of service needed to originate and service mortgages in a low-income setting. On the other hand, they may be able to contract out these functions to those that do, such as the alternative finance companies.

The last major concern is the burden placed on lenders under current law of having a banking license if they raise funds by issuing debt. This severely limits the arrangements that can be made by a non-bank financial company to intermediate funds to housing. This provision is a recognised anachronism, however, and we expect it to be removed and or modified in the next few years.

Credit enhancement remains one of the challenges involved in moving in this direction. The US market, and recently the Australian market, benefited from the presence of a government-sponsored guarantee mechanism which obviated the need for private credit enhancement at the beginnings of the market. The UK market tapped into what was already a well-developed private mortgage insurance system to add to each pool a level of pool insurance that would cover residual losses not covered by the primary insurance and also assured a timely cash flow to investors. None of that exists here and some alternative may need to be developed.

Of course, one alternative is that the centralised lender hold enough capital itself to provide a good rating for the securities. However, given that it faces a number of other business risks, it would probably be more effective for a diversified insurance company to provide the cover.

A related question is whether mortgages themselves could be made safer, specifically to develop better quality to access the securitisation market at better rates. One approach that seems attractive is to have all borrowers provide a claim against their pension accumulation for any exposure over even 75 percent LTV. If such a move can really reduce the risk of loss to very low levels, more supportive of pool insurance, then it may be worth the while of the borrower and the industry.

We have not spoken about the exact nature of a SMP to support centralised lenders. It could take the form of a German-style mortgage bank if the government agreed to provide the legislative and regulatory support for such an approach. It could take the form of a private or government sponsored refinance facility, where all the risks stayed with the lender, but the lenders as a group could achieve greater economies of scale of debt issuance. However, it appears that the most likely route would be through securitisation, in the mode of the centralised lenders in Britain. In this model, each lender securitises its own loans and shifts the credit risk either to an insurance company, a special tranche of investors who take the first losses, keeps the risk itself against its own capital.

Note that this is not quite the same as the Fannie Mae model, where private mortgage insurers take on most of the risk and a government sponsored entity takes on the rest and plays the role of a middle man between investors and lenders. The UK experience has shown that such a government sponsored middle man is not necessary and the US experience has shown that such an entity must be regulated to prevent it from abusing its position. In any case, unless the government gets involved one way or another, the lenders will be on their own to develop acceptance of their product with domestic and offshore holders of South African debt.

It appears to us that the most likely route would be through securitisation, in the mode of the centralised lenders in Britain. Note that this is not quite the same as the Fannie Mae model, where a government-sponsored entity plays the role of a middle-man. Unless the government gets involved one way or another, the lenders will be on their own to develop acceptance of their product with domestic and offshore holders of South African debt.

Will such a market develop? There are definitely a number of strong reasons against seeing such a market develop, especially without some government assistance, at a minimum in the form of providing legislative support for securitisation and possibly with respect to credit enhancement. There is also the problem that the size of the high-quality middle-class market is not very large in absolute terms, so economies of scale may not be easy to reach. But the temptation will remain as long as spreads are so large in mortgage lending.

An alternative resolution of this "tension" would be that one or more of the large banks will break ranks and start pricing its products more closely to the relevant marginal costs. We would not expect to see this before the bank had sharply pared down its overhead and increased its efficiency in order to survive the ensuing price war.[31]

B. REFINANCE FACILITY FOR LOWER-INCOME LENDERS

The traditional loans are not the only part of the housing finance market which could benefit from the entry of new, non-bank lenders. There is a consensus that traditional mortgage products are not appropriate for the majority of the lower income market for the following reasons :

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[31] Some of the banks seem to be moving towards "rationalised" pricing based on relevant costs. The real problem is that the cost structures of all the large banks are out-of-line with an efficient mortgage origination operation. Only if a bank can reconfigure its operational approach to the market can it aggressively price mortgage lending to the bulk of it.

(1) unfamiliarity with mortgages, (2) land and housing which has no clear title, (3) desire to upgrade their housing progressively, and with disposable incomes too small to absorb significant economic shocks.[32] A portion of this market is being addressed by the traditional banks through wholesale lending through employers and unions firmly secured by pledges of pension benefits. It is arguable that the banks have a comparative advantage in that part of the market, since it is actually closer to corporate finance.

However, there is a large part of the market which can not be serviced through large-scale pension-backed lending. This is where the traditional banking model breaks down, since what is needed is both a direct interface with the individual (non-traditional) client and a keen eye to operational efficiencies owing to small loan sizes. This is also a natural market for new entrants, practically requiring a bottom-up reformulation of procedures and attitudes to serve this market efficiently.

Fortunately, there have already appeared a number of entities trying to serve this market. These include Cashbank, operating from the traditional banking model; Rural Finance, operating as a non-bank financial company making secured loans; and Altfin and King Finance, operating as non-bank financial companies making unsecured loans based on payroll deductions. None of these operate as centralized lenders, as they all have local branch presence. However, all of them have focused on centralising their processing and management information systems so as to achieve efficiencies and tight control of costs.

Cashbank is the only one of these lenders that is allowed to take deposits, but it must be careful not to spend too much on seeking retail deposits. So far its funding needs have been met from retail and some longer-term wholesale sources, while the other lenders are not permitted this option under the banking laws. All of these lenders will need ready access to funds if they are to grow as rapidly as their market potential seems to be growing and to achieve the scale of lending that will support very efficient operational systems.

How can these entities tap secondary market funding, or even just short-term wholesale funds? They are clearly not in a position to pioneer a market in securitised loans based on the lending that has been done to date based on the small volumes involved for individual issuances, the perception that their lending is very risky, and the fact that their model of lending is relatively new and untested. The answer is that the government, presumably through NHFC, will intervene in various ways to provide such access. This could take the form of NHFC becoming a SMI itself (most likely) or by it offering credit enhancement facilities. In either case, NHFC should try as hard as possible to avoid the politics that are inherent to any parastatal company, and to attempt to act in a totally commercial manner: manage its risks prudently while at the same time accepting that it is shouldering a certain amount of uncertainty for the valid social goal of giving this part of the market a greater opportunity to fully develop. At the same time, however, the activities of NHFC in this regard should make it easier for developing a SMP for other entities.

[32] This view is well articulated by Mary Tomlinson in "Mortgage Bondage: Financial Institutions and Low-Cost Housing Delivery," Centre for Policy Studies, Research Report # 56, September 1997.

C. THE APPEARANCE OF FIXED RATE LOANS

A second scenario that might change the calculus of securitisation for the banks might be increased popularity of fixed-rate financing among the general public. This kind of lending is not well-suited to the liability structure of banks and could be a spur to them to seek either new liabilities or to push ahead with direct securitisation.

It is highly speculative at this point to foresee the appearance of a yield curve that would make long-term fixed rate lending attractive. If and when the expected sharp decline in short rates materialises, most borrowers will breathe a sigh of relief and be happy to watch the mortgage rate decline for the ensuing year or so. At some point, though, the prospect of a new upward cycle in rates may shift thinking towards trying to lock in the low rates. The question at that point is whether the fear of higher rates is greater among investors or borrowers and also what premium investors would demand and borrowers be willing to pay for the option to prepay.

As noted above, there are prospects that South Africa will join the ranks of developed and developing countries which have persisted with the fiscal and monetary discipline conducive to relatively low and stable long-term rates. This event would be supportive of fixing rates to some extent. The result could be at least a greater incidence of fixing rates for at least 3-5 years. If this were to become common enough, the banks may find that they want to extend the term of their wholesale borrowing, and perhaps also shift some of the prepayment risks, through some kind of SMP.

SUMMARY CONCLUSION

In sum, we do not see any obvious incentives sufficient to make securitisation or any other SMP attractive to the large banks at prevailing interest rates. This situation could change, particularly if another entity created the securitisation market or if fixed-rate lending became more popular.

In contrast, new entrants into the upper or lower parts of the market would find a SMP very useful for providing funds at a enough scale to allow them to expand in a cost minimising manner. In the case of the traditional mortgage market, such funding would allow the growth of a centralised lending operation. We would expect that such an institution would be able to undertake the arrangements necessary to create and market mortgage securities.

A SMP is also needed by those institutions catering to the low and moderate income borrowers. Creating such a SMP is part of the mandate of NHFC and may assist the creation of a SMP for the rest of the market.

In the event that South Africa does develop a SMP, it is important to note some of the structural constraints that would need to be addressed. Below are four significant constraining factors that could impact South Africa's ability to effect a securitisation of its mortgage loans at the most efficient pricing and with the most optimal terms and conditions.

Management Information Systems. If and when South African banks choose to securitise their mortgage portfolios, a constraining factor will be the ability to provide accurate, comprehensive data on the characteristics of the portfolio in electronic form, in an expeditious timeframe. At present, the banking industry could generally be characterized as not having the adequate management information systems in place to accomplish this task. Many banks still maintain mortgage borrower files in paper form. Those that do employ information technology to manage their mortgage portfolios do not maintain comprehensive records of relevant data items such as: loan to value ratios, payment to income ratios, default history broken down into 30 days/60 days/90 days/ 120 days or more, etc. The banking industry should invest in improved information technology for their mortgage divisions. This investment should provide management benefits if its own, even if the bank should choose not to securitise its mortgage portfolio.

Standardization of Documentation. A securitisation of mortgage loans would require that all of the mortgage documentation be standardized. Each mortgage and loan agreement should have the same terms, conditions, language, etc. At present, within any one bank, various formats may be used and in some cases, language may be negotiated specifically with an individual borrower. In preparation for securitization, banks should move towards standardizing their legal documentation.

Transfer Tax and Stamp Duty. As the law currently stands, the sale of a mortgage from a PML to a special purpose vehicle requires the re-registration of the mortgage as well as the payment of transfer tax and stamp duty. In order to create a more liquid market in mortgages, the exemption of these taxes should be considered as they are currently imposing an additional transaction cost onto a securitisation. Countries with large and active securitisation markets do not impose such taxes on the transfer of a mortgage subsequent to its origination.

Restriction on Entities Allowed to Securitise. The Deposit Taking Institutions Act of 1990 limits the entities which may enter into a securitisation to "deposit taking institutions," essentially banks. Clearly this restriction impedes the development of the securitised market by providing protection to banks should a competitive market in securitisation otherwise develop. Consideration should be given to revising this legislation so as to allow non-banking entities the opportunity to securitise their portfolios.

APPENDIX 1: RESEARCH CONTACTS

NAME			TITLE	COMPANY
Mr.	Lee	Bartlett	Senior Manager, Affordable Housing	ABSA Bank
Mr.	Piet	van der Westhuizen	General Manager, Credit and Risk	ABSA Bank
Mr.	Richard	Mkhatshwa	Manager, Advances Division	African Bank
Mrs.	Debbie	Banyard	Senior Director, HomePlan	Alexander Forbes
Mr.	Franz	Pretorius	Managing Director	Alternative Financing
Mr.	Richard	Hayne	Manager	BOE NatWest
Mr.	Allen	Jones	Manager, Market Operations	Bond Exchange
Mrs.	Christine	Glover	Director	Cash Bank
Mrs.	Sharon	Trail	General Manager	COSAB
Mr.	Bob	Tucker	Chief Executive Officer	COSAB
Mr.	Dave	King	Executive Chairman	Duff & Phelps Credit Rating Co.
Mr.	Pierre	Venter	Senior Manager, Affordable Housing	First National Bank
Mr.	Joshua	Mafolo	Equity Analyst	Metropolitan Life
Mr.	Dion	Nothard	Investment Analyst	Metropolitan Life
Mr.	Neville	Karsen	Acting Director General	Ministry of Housing
Mr.	Nkululeko	Sowazi	Chief Executive	Mortgage Indemnity Fund
Mr.	Jurie	Bester	General Manager, Treasury & Financial Risk Management	National Housing Finance Corporation
Ms.	Annelies	Jacobs	Equity Funds Manager	National Housing Finance Corporation
Mr.	David	Porteus	Senior General Manager of Operations	National Housing Finance Corporation
Mr.	Pieter	Marais	Assistant General Manager, Mortgage Lending	Nedcor Bank
Mr.	Mark	le Roux	Senior Portfolio Manager	Old Mutual Asset Managers
Mr.	Dave	Rossouw	Portfolio Manager	Old Mutual Asset Managers
Ms.	Jill	Mann	General Manager, Treasury	Rand Merchant Bank
Mr.	Hannes	Du Preez	General Manager	Rand Merchant Bank
Mr.	Chris	Hock	Managing Director	Rural Finance Facility
Mr.	Francois	Kellerman	Senior Manager	Sanlam Investments

NAME			TITLE	COMPANY
Mr.	Jonathan	Stewart	Senior Manager	Sanlam Investments
Mr.	Hendrie	Van Zyl	Senior Manager	Sanlam Investments
Ms.	Jocelyn	Armstrong	Manager, International Structured Finance	Standard Corporate and Merchant Bank
Mr.	Paul	Hewitt	Manager, Interest Rate Products	Standard Corporate and Merchant Bank
Mr.	Prakash	Mangrey	Senior Manager, Finance and Planning	The Standard Bank of South Africa

Appendix 2: Bibliography

Banking In Southern Africa, Business Day Survey, May 1997.

Bond Exchange Journal, Bond Exchange of South Africa, Sept. 1997.

Cameron, Bruce. "The Withdrawal of Pension Fund Surpluses Will Be Rigidly Controlled," Financial Services Board Web Site, Oct. 15, 1997.

Credit Guidelines in Respect of Individuals Applying for Affordable Housing Finance, The Association of Mortgage Lenders of South Africa, May 30, 1996.

Diamond, Douglas, and Lea, Michael,"Housing Finance in Developed Countries: An International Comparison of Efficiency," Vol. 3, Issue 1, Journal of Housing Research, Fannie Mae, 1992.

"Employee Benefit Trends in South Africa: An Overview," Alexander Forbes Web Site, Oct. 1997.

End User Housing Finance, Volume One: Resource Document. Community and Urban Services Support Project, Lance Bailey and Associatges, Inc., Oct. 1996.

Finance Week 200 for 1997: A Survey of Business Achievement, April 17-23, 1997.

Financial Services Board 1997 Annual Report.

Peterson, G.E., and Phelps, P.M., Municipal Credit Enhancement in South Africa: Strategic Opportunities for USAID, April 1997.

Prospectus for the Issues of Debentures, Asset Securitization Limited

Prospectus for the Issues of Debentures, Mortgage Securities 101 (Pty) Limited.

Quarterly DI 900 Analyses of Individual Banks, March 1997, CA Ratings.

Securitization in South Africa: An Introduction, Deloitte, Haskin, and Sells.

SMK Investment Research, June 1996.

South African Reserve Bank Bulletin, September 1997.

South African Banking Review, SBC Warburg, January 1997.

Steyn, Greta. "Government May Launch Eurorand Bond", Business Day, Oct. 13, 1997.

Survey of Retirement Fund Investment Managers, Interim Update, 30 June 1997, Alexander Forbes Publication.

Tomlinson, Mary. "Mortgage Bondage: Financial Institutions and Low-Cost Housing Delivery," Centre for Policy Studies, Research Report #56, September 1997.

Tomlinson, Mary. "The First Million is the Hardest: Will the Consensus on Housing Endure?" Policy Issues and Actors, 8(9), Policy Review Series, Johannesburg, CPS, Sept. 1995.

Appendix 3: Results of Abt Associates' Questionnaire on Mortgage Loans sent to all Major South African Commercial Banks

Note: The response rate was very low because the data needed are not easily accessible. The substantive results are presented below for reference.

General Conclusions:

Average Loan Size: Between 100,000 and 150,000.

The term of a loan is 20 years more than 90% of the time.

Loan-To-Value Ratios

The general standard is a 90% LTV. However, the major commercial banks lend at over 90% loan-to-value for a significant portion of their loans. Another significant portion of loans is under 80% loan-to-value.

Income to Payment Ratio

More than 95% of all loans have an income to payment ratio of under 30%, with most being between 15% and 30%.

Gross Monthly Income of Borrowers

Large commercial banks tend to cater to higher income borrowers. Smaller banks lend according more to a niche market of high or low income borrowers. In both cases, there are very few loans to people who earn under R3,000 per month.

Loans in Arrears and Foreclosed

All banks showed significant numbers of loans in arrears for over 90 days, but relatively low numbers foreclosed on. This seems to indicate some general difficulties with payments.

Interest Rates

Almost all loans are variable, at the prevailing bond rate, which currently is at 20%. A tiny portion of loans are capped. Fixed rate loans are rare.

Prepayments

Banks do not keep readily-accessible data on prepayment activity. This information is essential for successful securitization.