

**HOUSING FINANCE TRENDS: THE UNITED STATES of  
AMERICA, INDIA, EUROPE, THAILAND  
AND SOUTH AFRICA**

**By**

**Dr. Paul Hendler and Mr. Morgan Pillay**

(2004)

**INTRODUCTION:**

During recent years the attention of housing policy makers and practitioners at all tiers of government has shifted to the provision of finance. Housing finance is arguably more than simply an aspect of the overall housing delivery system: it is a key factor enabling the effective and efficient delivery of housing products. But the provision of housing finance is subject to the macro-economies within which the various housing finance systems are located. It is useful to compare the performance of housing finance systems in various countries in order to establish guidelines for the effective and efficient delivery of housing.

This paper summarizes the salient features of the Housing Finance Systems of five countries: the United States (US), India, Central European countries utilising the *Bausparkasse* system, Thailand and South Africa.

The paper analyses the main trends in each country in respect of the role of the state and market forces, the extent of regulation, the determination of interest rates, the type of loan products, underlying collateral and the legal enforcement of liens, and the degree of specialization in services associated with housing finance.

## **THE UNITED STATES HOUSING FINANCE SYSTEM**

The US Housing Finance System is characterised by the predominant role of the market, particularly the mortgage-backed securities market, and a critical role played by government-initiated and supported conduits in guaranteeing securities. The mortgage lien is enforced in the country, making mortgages real collateral. Interest rates for housing loans are set by the market. Loan origination, underwriting and servicing have emerged as core business functions carried out by specialised business agencies.

For most of the Twentieth Century housing finance in the US was raised through specialised housing finance vehicles (the Savings and Loans institutions) from deposits. However, since the mid-1970s funds for housing in the US have increasingly been raised through the vehicle of securitisation and the trading of securities on the secondary mortgage market. In terms of the securitisation vehicle lenders originate mortgage loans

with end-users, which loans are then pooled, securitised and sold to investors. Securitisation emerged in the context of a chronic shortage of housing funds, and has made it possible to inject huge quantities of funds into the mortgage home loan market by effectively quantifying and pricing the two most likely risks faced by investors in this area, namely that loans will either be prepaid or defaulted on. At the end of the first quarter 1991 the US secondary mortgage market had financed an estimated \$2,74 trillion of outstanding family mortgage debt.

Securitisation manages prepayment and default risk by taking a pool of actual mortgage loans and, on the basis of a profile of the borrowers and the underlying assets, predicting the likelihood of these risks occurring and pricing the investment securities according to the risks. Whereas if an investor purchased single mortgage loans he/she would face unpredictable prepayment and default risk, securitisation distributes the knowable risks inherent in a pool of mortgage loans amongst a whole community of investors.

In practice, an entity - referred to as a conduit - purchases a large volume of mortgage loans: relatively few investors could afford the capital required to purchase these volumes. Through market research on repayment performance, mortgage loans are rated according to their borrower and asset profile. The conduit can thus accurately predict the likelihood of prepayment and default of the loans that it has purchased, and offers the investor an interest rate relative to the risk; it pools these loans and uses them as collateral for a security, with the cash flow from the security reflecting the cash flow from the underlying loan pool.

Three forms of mortgage-backed securities have emerged in the US housing finance system. The above is an example of a *Passthrough Security*, where the investor is exposed to the prepayment/default risk of an entire pool of loans rather than of a single loan, and for significantly less capital than if he/she had bought the equivalent value in individual loans.

Further securities have been created where investors do not share in the prepayment risk equally. A *Collateralised Mortgage Obligation* (CBO) creates different classes of mortgage loans for the pool, where for example Class A absorbs prepayments first, then Class B and then Class C. Thus Class A has the shortest maturity term and Class C the longest. With greater certainty about the term of maturity investors with different needs can choose more precisely the investment option suiting their needs. A further refinement of securitisation is *Stripped Mortgage-backed Securities*, where the principal and interest payments are divided among two classes unequally. For example one class may be entitled to receive all of the interest, the other all of the principal. The risk/return characteristics of these instruments make them attractive for purposes of hedging a portfolio of *Passthroughs* and hedging other assets such as mortgage servicing rights.<sup>1</sup>

The loan mechanism that has developed alongside securitisation is the Adjustable Rate Mortgage (ARM). Prior to the emergence of the ARM borrowers could fix their rates for the term. When interest rates decreased borrowers would typically refinance the loan. With the ARM mechanism the interest rate is reset periodically against a short-term index benchmark. The terms are six months, one year, two years, three years and five years. With high variable inflation - which characterised the world economy from 1975 to the late-1980s - adjustable rates were necessary in order to address the mismatch problem - i.e. the mismatch between interest paid to depositors and rates charged to borrowers. The ARM was developed to make mortgages attractive to investors during times of significant inflation.

Government intervention was a precondition for the emergence of securitisation and the development of a secondary market in mortgage-backed securities in the US. In order to provide liquidity for the secondary mortgage market the US government created various institutions to invest in mortgage bonds and also to provide guarantees to other investors. In 1968 the Government National Mortgage Association (GNMA) ("Ginnie Mae") was established to provide guarantees for securities issued by private entities. Today Ginnie

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<sup>1</sup> Cf. Fabbizio F and Modigliani F, "Mortgage and Mortgage-backed Securities Markets", Harvard Business School Press, 1992, pp: 1-14

Mae issues securities based on Junk Bonds (i.e. high risk mortgage loans), and these securities are backed by an explicit US government guarantee. In 1970 the Federal National Mortgage Association (FNMA) ("Fannie Mae") and the Federal Home Loan Mortgage Corporation (FHLMC) ("Freddie Mac") were established to purchase conventional mortgages and to issue securities using the pool as collateral. Today Fannie Mae and Freddie Mac securities are backed by an implicit government guarantee. The outstanding *Passthroughs* guaranteed by the three agencies referred to above, totaled \$1,09 trillion as of September 1991, indicating the enormous impact of government intervention in the securities market.

The market for agency *Passthrough* securities is the now the second most liquid, long-term fixed income market in the US. Thus the government has accomplished one of its goals: the expansion of housing finance through disaggregating the risks and assigning these to the parties best suited to trade them. However, the dominance of agency securities has crowded out the private sector, whose growth the government seeks to encourage in order to reduce potential liabilities resulting from its implicit or explicit guarantees.<sup>2</sup>

### **THE INDIAN HOUSING FINANCE SYSTEM<sup>3</sup>**

Wholesale funding for the Indian Housing Finance System is through a state-owned and funded institution, the National Housing Bank (NHB) of India. The interest rate is subsidised in a highly regulated market where real collateral is non-mortgage based because of non-enforcement of the mortgage lien.

Besides the NHB there are other institutional players in the housing market: the Housing and Urban Development Company (HUDCO)<sup>4</sup> provides finance for infrastructure and

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<sup>2</sup> Fabbizio F and Modigliani F, op. cit., pp: 21-38

<sup>3</sup> Diamond D and Nayyar-Stone R, "India: Heading Toward a Liberalised and Integrated Housing Finance System", in Housing Finance International, March 2001.

<sup>4</sup> HUDCO has ten housing programmes:

- urban housing
- rural housing

housing to co-operatives and state development corporations. Finance to these institutions are provided through guarantees. NGO's like Share, Basix, Sewa and others also inject funds into the housing finance system; however they are unable to deliver on scale and focus on incremental housing. Accordingly, this paper focuses on the role of the NHB, which makes the major impact on housing finance through a series of commercial, retail banking outlets.

The NHB was set up in July 1988, under an Act of Parliament. The bank is a subsidiary of the Reserve Bank of India (RBI) and therefore the largest state owned bank. In 2000 the NHB had a capital value of Rs.3500 million, fully paid up by the RBI.

The setting up of the NHB was prompted by a need to set up an apex organization. The housing sector faced an acute shortage of funds resulting in serious gaps in the supply of housing. The absence of a specialized and mature housing finance system resulted in inadequate finance for individual (end-user) loans and the supply of serviced land, building materials, cost-effective technologies and other related development services.

The NHB's mandate was to:

1. Promote the development of an effective and self-sustaining housing finance system in the country<sup>5</sup>.

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- staff rental housing
  - repairs and renewals
  - urban employment through housing and shelter upgrading
  - night shelter for pavement dwellers
  - working women ownership
  - condominium housing
  - housing through NGOs
  - housing through private builders, and
  - individual housing loans through "Hudco Niwas".

HUDCO has six infrastructure programmes, offers consultancy services, building technology and research and training. However problems are experienced with non-performing loans that arose out of the use of state guarantees to secure loans.

<sup>5</sup> According to its chairperson, Mr. Vora, the NHB aims to create a conducive and enabling environment for the efficient and smooth functioning of the housing finance system; personal interview with M Pillay,

2. Establish a network of housing finance outlets across the vast span of the nation to serve different income and social groups in different regions<sup>6</sup>.

Although established on the assumption that adequate housing will not be provided to the lower segment of the population solely through market forces, the NHB is nevertheless meant to fulfil its function within the context of market-driven housing provision. The NHB intervenes selectively in the housing market in order to expedite housing for this target group. In addition to the NHB's promotional efforts it also undertakes regulatory and supervisory measures to ensure the expansion of the housing finance business.

The NHB is largely funded by the state; in addition, the Life, and General Insurance companies have also made concessional loans to the NHB to fulfill moral obligations. To achieve the NHB's mandate a network of new Housing Finance Companies (HFC's) were created. The HFCs represent the retail interface with the customers while the NHB performs a wholesale funding role. The NHB also provides equity and loan funding to the HFC's to enable them to perform their retail function. In addition to loan servicing, underwriting and origination, these commercial institutions are allowed to take term retail deposits, which are used to finance loans. Their principal product is mortgage loans to mainly the middle-income market; they have recently made efforts to lend to the lower income segment.

Although established initially to provide wholesale funding, the role of the NHB has now extended to include the regulation - as well as the partial liberalization - of the housing finance system. It regulates the HFC's prudential and capital adequacy norms and is involved in refinancing loan books created by the HFC's.

During a visit to India by one of the authors during 2000, he was told that the NHB had investigated the viability of a secondary mortgage market based on securitization and the

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New Delhi, 2000.

<sup>6</sup> These outlets were intended to fund a wide range of activities related not only to housing but also to human settlement.

issue of mortgage-backed securities. However to date there has been no policy of creating a secondary market in mortgage-backed securities in India.

Although the NHB has established numerous retail housing lenders, these HFCs still rely to a large extent on state subsidized funding and have not diversified their funding sources. One result of the HFCs' focus on state-subsidised home loans is that commercial banks have shifted funding away from housing loans towards enterprise finance and other commercially viable activities. This system of state funding also tends to distort the market with interest rate subsidies or other forms of hidden subsidies through the use of Small Financial Institutions (SFI) that are unsustainable. The crowding out of commercial banks as well as the market distortions operates as a barrier to the emergence of a secondary mortgage market.

A further barrier to the emergence of a secondary market is the fact that credit approval for residential properties is based on the strength of co-surety signed by family and friends. This practice is widespread because enforcing the mortgage lien is a lengthy process: Indian legal procedures result in it taking several years to evict defaulters and resell the property. The fact that the property-collateral cannot be timeously enforced means that there would be no real security underlying the pool of mortgage loans (i.e. the securities) that could be sold to investors.

The future impact of the NHB on the Indian housing finance system depends on its ability to mobilize funding from sources outside the state at comparable market related interest rates: therefore the organization has an interest in investigating securitisation as a means to this end. Nevertheless, a precondition for the emergence of securitisation as a vehicle for housing finance in India is the rapid enforcement of the property lien as well as the removal of the distorting effects of state subsidies on the housing finance market.



## THE CENTRAL EUROPEAN HOUSING FINANCE SYSTEM<sup>7</sup>

Specialised mortgage banking is a core feature of the housing finance systems in the European Union (EU) countries, where the lending institutions also include origination, underwriting and loan servicing as part of their operations. This is opposite to the trend in the US where the housing finance system is integrated with the capital investment markets and loan origination, underwriting and collection are specialised, outsourced services. The focus on separate housing finance circuits in Europe is exemplified in the German *Bausparkasse* system which is also now being implemented in Central European countries that are in transition from state planned to market economies. Interest rates are market related, but in a regulated market.

The *Bausparkasse* system is a loan savings collective that is funded independently of the capital markets: that is funds are sourced from individuals who pool their savings into the system. Home loans are made from this pool of savings. Interest is agreed on contractually and fixed for the entire term. The system requires that savings represent between 40 and 50 per cent of the loan amount. The total loan amount that a borrower qualifies for, as well as the savings amount, is determined through that person's affordability. If the savings represent less than 40 per cent of the loan amount the *Bausparkasse* may grant bridging credit (at capital market interest rates).

Risk is limited through "relationship lending", and therefore there is no need for a first mortgage security over the *Bausparkasse* loan. The balance of the funds required to purchase the house are funded through a mortgage bank, and this loan is secured through a first mortgage bond. The government contributes by adding a small subsidy to the savings amount.

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<sup>7</sup> Cf. Rischke, CG "German Bausparkassen: Instrument for Creating Homeownership in the Transformation Countries", in [Housing Finance International](#), (undated).

Diamond D, "The Transition in Housing Finance in Central Europe", in [Housing Finance International](#), (undated).

To date there are more than 33 million contracts with *Bausparkasse* in Germany. The value of these contractual loans totals more than DM1, 2 trillion; 37 per cent of all households in Germany have at least one *Bausparkasse* contract. *Bausparkasse* housing loans represent 16 per cent of total housing loans annually in Germany (i.e. DM48 billion out of DM 300 billion). Between 1948 and 1996 *Bausparkasse* in Germany provided loans totaling DM1, 1 trillion: this represented 47 per cent of total housing borrowings and resulted in more than 12 million housing units.

The second factor in the European housing finance system is the mortgage banks that make loans (secured by a first mortgage over the property) to make up the balance of the purchase price. Mortgage banks commenced in the aftermath of the Prussian War (1756 to 1763) when landowners formed associations which issued collectively guaranteed debt papers (or bonds) which were secured by landed property. These bonds could be sold to third parties to raise funds. In 1852 the system was transformed with the emergence of mortgage banks which became financial intermediaries between borrowers and investors. During the inter-war period mortgage banks were established in the public banking sector and funded infrastructural and social housing projects. Since the late-1980s mortgage banks in Germany are regulated as follows: they may lend on the security of a first mortgage only; and, they may lend up to a maximum of 60 per cent of the house price.<sup>8</sup>

Currently, *Bausparkasse*, mortgage banks and commercial banks are increasingly knitted together through affiliates, joint ownership as well as products sold as a package. Bonds issued by regular banks have rates almost as low as those of mortgage banks. "Bridging loans" (at capital market rates) are often made early in the savings programme. These events indicate that there has been steady erosion of the separate, specialised housing finance circuit, and the emergence of funding connections to capital markets. These developments are having a profound impact on the transition of housing in central Europe.

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<sup>8</sup> Ball M, Harloe M and Maartens M, "Housing and Social Change in Europe and the USA", Routledge, London, New York, 1988.

The housing finance systems in the Czech Republic, Hungary, Poland and Slovakia are all characterised by funding institutions that are separate from commercial banks; nevertheless, these housing finance institutions are integrated with domestic commercial banks in that they are usually owned or controlled by a bank that is a partner to a German or Austrian *Bausparkasse*. *Bausparkasse* programmes receive the largest share of public housing subsidies in these countries, and these programmes are also the lenders of the greatest quantity of housing funds.

### **THAI HOUSING FINANCE SYSTEM<sup>9</sup>**

Commercial banks are the main providers of mortgage finance in Thailand. Alongside these banks, the Government Housing Bank (GHB) competes for business, targeting especially the lower-middle income sector. Currently, it has a 20 per cent market share. Most mortgages in Thailand are variable rate, 15-25 year mortgages, with loan-to-value ratios (LTVs) of 80 per cent or less.

The National Housing Authority (NHA), established in 1972, is a para-statal developer through which the state capital subsidy<sup>10</sup> is channeled. The NHA undertakes development projects for lower income households, using the subsidy to pay for the cost of infrastructure, with credit from sources such as GHB.

The GHB is a large institution, with over 440 000 borrowers and a mortgage loan book of over R35bn. The GHB infrastructure is extensive, with more than 120 branches all over Thailand and a staff compliment that exceeds 1700.

Two thirds of the GHB's loans are for less than R150 000, and the typical client has an income of less than R4000 p.m. While the bulk of clients are formally employed, the GHB also lends to informally employed people on a project basis.

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<sup>9</sup> Discussion between Managing Director of GHB and M Pillay, Pennsylvania, United States, June 2001.

<sup>10</sup> E.g. equivalent to the South African subsidy of R18 400 per household

The GHB offers mortgage loans either to individuals directly (55 per cent of the loan book) or on a project basis (45 per cent of the loan book), where the developer prepares applications, which are processed en masse. The GHB credit policy also allows the bank to expose itself heavily in certain projects (90 to 100 per cent, depending on the developer's risk profile). Almost all of the loans are variable rate; the rate increases with the size of loan (a form of cross-subsidization, reflecting the emphasis on lower income groups). Because the GHB's rates are typically 0.5 to 1 per cent below commercial bank rates, clients are still attracted.

The GHB achieves this competitive advantage largely because its wholesale borrowings are state guaranteed, reducing the cost of funding. Wholesale borrowings comprise 30 per cent of funding, while retail deposit taking provides 60 per cent<sup>11</sup>. The GHB is as efficient - if not more - than private banking institutions in Thailand: its spread is 2 to 2.5 per cent over cost of funds, which is comparable to other mortgage banks; operating costs are approximately 1 per cent of the value of the loan book; and, bad debts have been historically relatively low.

Despite its focus on the middle and lower income market, the GHB is a profitable institution, earning R550m before tax in 1995. One of the major successes of the GHB is its role in demonstrating to the private sector that low-income housing finance is viable and hence opening up the market, and prompting private sector-driven development of housing since 1992.

The GHB is the only example of a successful state-housing bank in the low-middle target market and its success can be attributed to the following factors:

- Its efficiency of operation.
- Its technology (heavy investment in IT, and various re-engineering efforts in loan processing/ underwriting/ servicing).
- The government guarantee, which reduced the cost of funds.

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<sup>11</sup> Porteous D and De Ridder J, Unpublished trip report on Thailand, National Housing Finance Corporation, Johannesburg, 1997.

Notwithstanding the GHB's catalytic role in the housing finance system of Thailand, NHA projects have been criticized as inflexible: for example, not allowing for *in-situ* upgrading of slums. Consequently, the Urban Community Development Office (UCDO) was started in 1992 as a pilot programme to lend to community based organizations such as savings groups and co-operatives. The UCDO has succeeded in showing how the credit system can be extended to reach further into low-income communities living in informal settlements.

### **THE SOUTH AFRICAN HOUSING FINANCE SYSTEM<sup>12</sup>**

The South African housing finance system contains elements of all the systems mentioned earlier - with the exception of a national housing bank. In the low-income segment of the housing market - representing approximately 66 per cent of the population - the state provides the finance (i.e. the capital subsidy), local government manages delivery, political committees choose the customers (the waiting list) and contractors install infrastructure and build the units. Despite an impressive output of units - approximately 180 000 per annum - they are standardised, impersonal products with little if any re-sale value.<sup>13</sup> Government intervention has clearly eliminated marketing forces from the bottom segment of the market.

While there is little evidence of either credit linked housing or a primary mortgage market in the R20 000 to R60 000 price range, there is a well functioning, established mortgage market in home loans for the remaining 34 per cent of the market (i.e. the middle income and affluent segments). Recently, micro-loans have increasingly emerged as a form of housing credit for incremental housing upgrade. The following range of institutions and institutional types make up the South African housing finance system:

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<sup>12</sup> This section is based on results of a survey of the SA housing finance system undertaken by the National Housing Finance Corporation (NHFC) during 2001.

<sup>13</sup> Cf. Hendler P, "SA affordable housing provision neglects social issues", in The Civil Engineering and Building Contractor, 33, 10, August 1999, 14-22.

- Large Banks (i.e. Absa, Standard Bank, Nedbank and First Rand Bank) (Total value of outstanding housing loan books at December 2000: R167, 1 billion).
- Small Banks (i.e. African Bank, Cashbank, Saambou, Unibank) (R51, 9 billion).
- Non banks/Start ups (i.e. micro lenders financed through the National Housing Finance Corporation [NHFC], a state-owned liquidity facility).
- Other micro-lenders (i.e. 1 334 enterprises registered with the Micro Finance Regulatory Council [MFRC]) (R12, 9 billion).
- Social housing institutions (i.e. Cope Affordable Housing, Cape Town Community Housing Company, Greater Germiston Inner City Housing).
- Provincial Development Corporations (i.e. Ithala Development Finance, Mpumalanga Housing Finance).
- Non Government Organisations (i.e. Utshani Fund, Habitat for Humanity, Urban Sector Network).

While the big banks have staff with developed technical skills and excellent computerised systems for loan servicing, their outreach is mainly to high and middle income individuals. Smaller banks have developed good relationships with low to medium income clients and have sound loan servicing systems in place.<sup>14</sup> Non banks, Start-ups, Micro-lenders, provincial development institutions and Non Governmental Organisations (NGOs), while having good relationships with their client base, tend to lack the discipline and systems of the private sector. While they have deep outreach into the low-income sector their capacity to expand their business as well as conduct it effectively and efficiently is in doubt. This is perhaps the reason behind their relatively low volumes of housing finance business to date.

Since the closure of the Mortgage Indemnity Fund during 1998 mortgage finance has had a minimal impact on the low income segment of the housing market, although the

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<sup>14</sup> This point should be qualified following the news of huge losses on the micro loan book of Absa's Unifer as well as Saambou's serious liquidity problems, both apparently brought on by inadequate credit risk assessment of micro-lenders for whom loans were approved by Thuthukani (Saambou-owned micro-lender) and Unibank (Unifer-owned micro-lender).

mortgage vehicle remains the primary form of financing middle to higher income housing. Mortgage finance is reportedly unaffordable and difficult to access, for low-income earners. Micro loans have become the main form of housing finance for middle to low income borrowers. Between 45 and 95 per cent of the latter say that they use loans for home improvement (i.e. the purchase of building material and renovations to existing structures).

Overall, the capacity of retail finance is dwindling in the face of increasing housing demand.

### **CONCLUSION:**

The housing finance systems in India, Germany/Europe and Thailand, are state-driven and highly regulated; in Germany/Europe and Thailand loans are secured through mortgages and the legal system is effective in ensuring the enforcement of the lien. In India interest rates are subsidised, micro loans are the main financial product type and property liens are for all practical purposes unenforceable. Of the state-driven, highly regulated housing finance systems, the German one has delivered massive volumes of formal units; the output of the Indian system is mainly informal housing; whereas in Thailand - where interest rates are not subsidised - the government housing bank has prompted private sector lending through its own efficient performance. However, the performance of the Thai Housing Bank remains an isolated example of success by a government housing bank.

In contrast the US housing system is market driven and relatively unregulated, although government sponsored agencies and state mortgage insurance guarantees appear to have played a critical role in establishing a secondary mortgage market. The astronomical increase in funding brought about through the securitisation vehicle has resulted in the delivery of an equally large number of housing units. The emergence and impact of a secondary mortgage market in the US is interesting because the housing finance systems of all the other countries referred to are facing efficiency and liquidity problems which

are propelling them in the direction of securitisation and integration with capital markets. This process is happening to a greater or lesser degree in each country, depending on the particular predispositions and obstacles to liberalisation of specialised housing circuits and their integration into the capital markets.

In South Africa the housing finance system has little impact on the low-income segment of the population: RDP housing is funded wholly through the government's capital subsidy. The absence of market relations at the bottom end of the market is resulting in relatively small, standardised units that lack the basic privacy required for social development. Attempts to expand credit into this market through micro loans have been characterised by initiatives that have yet to demonstrate sustainability. Micro lending is a high-risk area and micro lenders still require to learn how to quantify, price for and manage the risks. A sophisticated and effective housing finance system exists for the middle and upper income segments of the housing market: variable rate mortgage loans are the vehicles for housing finance here. Some securitisation of loans has been initiated through SA Home Loans.

The challenge at the bottom end of the market, however, is to establish a primary mortgage market for housing finance.