Housing Finance in the United Arab Emirates

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Introduction

The United Arab Emirates was formed in 1971 by seven formerly independent sheikdoms.

	Population 2003
Abu Dhabi	1,591,000
Dubai	1,204,000
Sharjar	636,000
Ajman	255,000
Ras Al-Khaimah	195,000
Fajairah	118,000
Umm-Al-Quiwan	62,000

The country is a true federation with the individual Emirates having a great deal of autonomy. Indeed, they are generally viewed as "City States". They compete with each other to attract business and in a number of respects have quite different characteristics.

Each of the Emirates is run by its ruling family with no parliamentary system. The result, however, has been a very stable political structure combined with well run government services, both of which have been essential to attract international business.

The key feature of the Emirates is that the population is predominantly non-nationals. Emirate nationals comprise just 20% of the total population. The population has been growing rapidly at around 6% a year, almost entirely as a result of immigration. Foreign nationals are recruited to work in all parts of the economy, from construction to transport to financial services.

The UAE is a very wealthy country, largely thanks to oil. The economy has grown rapidly, if erratically, and inflation has been under 3% for the last five years. The general level of interest rates is low. The three-month interbank rate has been under 2% since 2002 and bank lending rates have fallen to under 6%.

Housing and housing finance for UAE nationals

The UAE has plenty of money to look after its residents. In practice, most nationals have been housed by the State and nationals have little need to borrow large amounts to fund their housing. The State has built housing directly and given it to nationals. However, the circumstances in which the properties can be resold are severely restricted and they cannot be mortgaged.

Low and middle income people are entitled to a 15,000 sq ft plot of "granted land". Those earning under AED120,000 ($33,000) a year are also entitled to a grant of AED500,000 ($136,000) to pay for the design and construction of a home. People with incomes in excess of AED120,000 are entitled to an interest free loan over 25 years of between AED500,000 and AED750,000. They can top up this loan with personal loans from commercial banks.

The opening of the market in Dubai

Until recently, it was not possible for non-nationals of the UAE (and with some restrictions nationals of Gulf Co-operation Council countries) to own property. In 2002, the government of Dubai announced that non-nationals and non-residents would be allowed to own housing on a freehold basis. The announcement has been followed by a dramatic take off in the housing market with both demand and supply rising very rapidly. The way that this has happened and the way that house purchase has been financed is probably unique in the industrialised world.

This initiative by Dubai needs to be seen in the context of the Dubai economy generally. The Government is planning a massive expansion of the economy including new facilities in trading, tourism and financial services. There is a liberal business environment and low taxes, all designed to encourage entrepreneurial activity. The population is planned to increase from 1.2 million to over 2 million by 2010.

There is no doubt that in 2002 there was a huge pent up demand among long term non-national residents in Dubai to purchase their properties. Many had been living in Dubai for years and fully intended to make it their home for life. They had been paying rents at a very high level which would have paid for the cost of their housing perhaps several times over. To these people the opportunity to own was gratefully received and many were among the initial purchasers of properties.

At the same time, a number of other factors contributed to make Dubai an attractive place in which to own a property and to have residency. As a direct consequence of 9/11 much money owned from within the Middle East was repatriated from the United States and other foreign markets and was looking for a home. The Dubai property market has provided such a home. Dubai has also been attractive to nationals from the Middle East, particularly Iran, and the Indian Sub-Continent, as a result of its strength as a business and financial centre, low tax regime, good quality of life and physical location.

The government did not confine itself to stimulating demand. It also took positive steps to provide a supply of housing to meet the demand. The tactic has been to designate large zones as being available for housing to be owned by non-nationals. Three developers, all effectively backed by the State, Emaar Properties, Nakheel and Estithmaar, have led the developments on the designated zones. They have had the benefit of land being "gifted" to them by the State.

The developments are not of single units but rather of massive estates comprising both apartments (particularly in the coastal areas) and villas, together with all the supporting infrastructure and facilities such as golf courses, marinas, shopping malls and restaurants.

It is helpful to note some of the major developments and also the pricing of them.

Emaar's projects include –

- Dubai Marina, described as a "city within a city", comprising 1,026 apartments and 64 luxury villas. The apartments' prices range from AED488,000 ($133,000) to AED1,050,000 ($286,000). Eventually there will be 19,000 units at the Marina.
- A number of developments under the general heading of "Emirates Living". These include the prestigious Emirates Hills development comprising 640 single family detached villas, together with a golf course, and four other developments. These developments will have a total of 9,000 units.
- Burj Dubai, which will be the tallest tower in the world. The apartments will be in six towers and provisionally prices range from AED600,000 ($163,000) for one bedroom apartments to up to AED2 million ($545,000) for the largest apartments.

Estithmaar has just one development, Jumeirah Beach Residence, which comprises 36 residential towers with 6,400 apartments and four hotel towers with 4,000 rooms. Prices range from AED315,000 ($86,000) up to AED1,200,000 ($327,000) for four bedroom apartments.

Nakheel Properties is best known for its projects that are offshore, built on reclaimed land. The Palm Jebal Ali has already been completed, villas and town houses having been sold at prices ranging from about AED2 million ($545,000) to AED5 million ($1,360,000). The Palm Jumeirah is a similar development. The Palm Deira was announced in November 2004 and is already being marketed in the UK. The individual islands will be for sale and the purchasers can then do what they like on them. Nakheel is also building Jumeirah Village, comprising 7,000 villas.

Almost all of the developments are sold out almost immediately they go on sale and generally well before construction has started let alone been completed. In 24 hours in September 2004, Nakheel sold all 7,000 villas in Jumeirah Village. The developers differ to some extent on their requirements for deposits and stage payments. Nakheel requires a 15% deposit and then regular payments during construction. Emaar requires most of the purchase price to be paid on completion. Estithmaar has required four payments of 25% at various stages of the process.

However, as yet, no land law has been enacted in Dubai and purchasers are not able to register title to their property and cannot raise finance to purchase the property by means of a conventional mortgage loan. It is therefore a very interesting question as to why the market has taken off.

The developers clearly trust that the market will continue booming as they are still involved in massive developments. On the whole, house buyers trust the major developers as they are in effect part of the State. The developers give a "certificate of beneficial ownership" and in effect run their own title registration services, in co-operation with the official Lands Department. There is total confidence that the developers will not go bust and that they will not treat purchasers badly.

There is a further element of trust in that there is a general belief that the law will be changed so that the purchasers of property will have full legal title and not just the security of a sale and purchase agreement with a developer.

Finally, and perhaps most importantly, purchasers have confidence that the market will continue its rapid rise and that they are bound to make a profit. This confidence in the market, combined with trust in the developers, has been more than sufficient to outweigh what are regarded as legal technicalities which will soon be put right.

The normal pattern is for developments to be sold off plan with the purchaser putting down just a 10% deposit. With the expectation that prices will continue rising, this has resulted in many speculators coming into the market, buying blocks of properties and then reselling them at a significant profit. Some of the developers are sufficiently concerned about this that they have taken steps to prevent it, for example by increasing the deposit or by requiring more prompt payment of the full purchase price.

Financing house purchase

In an advanced industrialised economy such as Dubai it would be normal to expect that commercial banks would finance house purchase as part of their mainstream business. However, banks, particularly

international banks, have a particular mindset when it comes to financing house purchase. The basic requirement is that the bank should have a mortgage on the property such that if the borrower defaults then the bank has the property as security and can recover its loan. Banks also seek other reassurance, for example that if the developer defaults during construction the borrower is protected, that there are accepted appraisal standards and also that the necessary legal processes and procedures are in place to ensure that the purchaser has good title to the property and that the bank's rights as mortgagee are protected.

None of these conditions were fulfilled and therefore the commercial banks were unwilling to finance house purchase other than through a limited amount of personal loans which in any event can be for no more than AED250,000 ($68,000).

In practice, there has not been a huge demand for loan finance. Many of the developments have yet to be completed and accordingly in some cases only the initial deposit has been paid. Most of the properties have been bought by speculators who have not needed to borrow. Where people have bought for their own occupation, they have often done so precisely because they have surplus funds. It is probably the case that for properties bought for occupation fewer than 20% have required loan finance and where loan finance has been needed this is for less than 60% of the purchase price.

Because Dubai is an entrepreneurial economy the reluctance of the banks to provide loans to finance house purchase quickly resulted in alternative mechanisms, mainly in the form of specialist finance companies established by the developers.

Recognising the need for loan finance, Emaar took the initiative to establish its own mortgage lending company, Amlak in 2002. The company has obtained all of its funding from its parent, Emaar Properties, although it plans to raise funds from other sources as well. In 2004, the company floated through an initial public offering in which 55% of the shares were offered to the public, the remaining 45% being retained by Emaar. This increased its issued share capital to AED750 million ($204 million). In October 2004 the company was capitalised at AED2,295 million ($625 million).

Purchasers of houses built by Emaar Properties are directed towards Amlak although they are free to borrow from other sources. It is estimated that Amlak finances about 10-20% of all Emaar sales but probably about 90% of those which require loan finance. Amlak's outstanding loans at the end of 2003 were AED128 million ($35 million). By the end of 2003 the figure had increased to AED531 million ($145 million).

Amlak has provided fairly conventional loans for house purchase, its average loan to price ratio being around 60-65%. Amlak is in the process of transferring its entire mortgage business to a shari'a basis. That is, instead of the borrower being charged interest, Amlak technically owns the property, leasing it to the "purchaser" and transferring the property to the purchaser at the end of the lease period. In practice, the effect is the same as a conventional mortgage loan. The lender has more security in the event of default because it owns the property.

Amlak were first in the market and probably accounted for well over half of loans to finance house purchase in 2003. Its market share can be expected to fall over time as other financial institutions enter the market. It is seeking to diversify its mortgage business and will now lend to purchasers of developers other than Emaar.

Tamweel is similar to Amlak in many ways and was set up by Nakheel which has a 50% shareholding. The remaining 50% is owned by the Dubai Islamic Bank. Nakheel was established in 1997 and currently has AED270 million ($74 million) capital. The company is intending to make a public offering of its shares. Although it was established by Nakheel, it will lend on properties built by any of the developers. Tamweel is operated entirely on an Islamic principle.

How the market will develop

The housing finance market in Dubai can be expected to go through a period of evolution that can probably be predicted with reasonable accuracy. Because there was a huge demand for housing finance that the banks were unwilling to meet, other institutions, notably Amlak and Tamweel, have come into the market. They have demonstrated that there is a big market and that the lending, so far at least, is safe and secure, notwithstanding the unsatisfactory legal framework. The mainstream banks recognise that this is a market they cannot afford not to be in and that they might risk losing their customers to banks that provide housing finance services, particularly given that it is a common practice for banks to require that salaries are paid into an account with the bank as a condition of making a housing loan.

Not surprisingly, the mainstream banks are now looking at entering the market and a number of banks, particularly HSBC, have taken positive steps. It is to be expected that the banks will continue to take a market share, particularly if the issues on property law and residency are resolved satisfactorily. Amlak, in particular, has already demonstrated its desire to diversify both internationally and domestically and can be expected to become more like a mainstream bank. Both Amlak and Tamweel will move away from their close links with particular developers. It is possible that the mainstream banks will consider an alliance of some form with either Amlak or Tamweel.

Assuming there are no great shocks in the market, it is reasonable to predict that within five years or so the bulk of new funding for home loans will come from mainstream banks with specialist lenders having niche positions in the market.

As the market expands, and if the legal issues are satisfactorily resolved, then the mortgage rate can be expected to decline. At present the 6.5% variable rate for mortgage loans looks high in relation to the cost of funds. It should fall if bad debt experience is minimal and as unit

administrative costs decline with the rising volume of business. Shuaa Capital is forecasting that Amlak's cost income ratio will fall from 32% in 2003 to 10% in 2007, a good indication of how a rising volume of business reduces costs.

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Building Sustainable Housing Finance Markets: Proceedings of The Housing Finance Roundtable in the Andean Region[1]

By Gerardo M. Gonzalez[2]

1. Introduction

There is a remarkable need to support the design and the implementation of sound housing finance policies in Latin America and the Caribbean intended to enhance access to housing and, as a result, an improved living standard for a greater share of population. The World Bank and its affiliate, the International Finance Corporation (IFC), have been greatly involved in many housing finance activities in the region providing with both funding and expertise. As far as the Andean region countries are concerned, both the World Bank and the IFC maintain an increased interest in providing support for the housing policies and identifying and structuring viable housing finance transactions. The initiative of holding the *Housing Finance Roundtable in the Andean Region* was launched by the World Bank and the IFC as a way to achieve a better understanding of lessons in housing finance and policy issues relevant for the region and to present the World Bank Group´s experience in this area. The Roundtable was also conceived as a timely opportunity to establish the grounds for upcoming projects in the Andean region that require financial and technical cooperation.

In the implementation of the Roundtable, the World Bank Group worked closely with two major institutions, also greatly involved in the development of mortgage markets through funding and other incentives in one case, and through technical co-operation and expertise in the other: Fondo Mivivienda, the leading publicly-owned, second-tier mortgage bank in Peru; and the Inter American Housing Union (UNIAPRAVI), an international organization headquartered in Lima which performs as a trade association for housing finance and other sectoral institutions in the Americas. The Roundtable, held in Lima, in April 2004, was attended by 172 participants (including senior governmental officers, top private sector executives, and experts) from 17 countries and four international organizations.

Building sustainable housing finance markets was the central topic of the Roundtable which was aimed at being a forum of discussions on a wide range of issues relevant to both primary and secondary mortgage markets, housing finance policies, and the infrastructure required to support housing finance systems. The Roundtable focused on exploring constraints on the development of housing finance markets in the Andean region and on reviewing successful practices to increase access to housing. The Roundtable included a private sector workshop which dealt with practical lessons in order to stimulate private sector involvement in housing finance.

Discussions emphasized the overall idea that the creation of sustainable housing finance markets must be supported by a public-private partnership and a stable macroeconomic scenario. Two major challenges were identified: on one hand, the need to enhance affordability of housing finance alternatives for lower-income segments; and on the other hand, the need to foster long-term funding for housing finance. In order to overcome these challenges, the Roundtable highlighted policy practices intended to enlarge primary mortgage markets making them accessible to a previously underserved population. Also, the Roundtable focused on principles and practices to stimulate linkages between mortgage markets and capital markets and, particularly, to develop secondary mortgage markets. The Roundtable put a special emphasis in experiences seeking to achieve an improved risk management as a pillar to make mortgage lenders less vulnerable to credit and market risks. Being a long lasting process, it is necessary to be patient and persevering as well as to be careful and thoughtful with the implementation of subsidies. There is a lot of experience, both in the region and globally, so that it is critical to establish a robust networking of knowledge and expertise in this area.

The primary objective of this paper is to collate the main ideas that were presented at the above-mentioned Roundtable. As a

[1] Jointly sponsored by the World Bank and the International Finance Corporation (IFC) with the cooperation of the Inter American Housing Union (UNIAPRAVI) and Peru´s *Fondo Mivivienda*, and held in Lima, Peru, on April 27-28, 2004.

[2] Peruvian economist graduated at the *Pontificia Universidad Católica del Perú* with a master´s degree in economics from the University of Toronto, Canada. The usual disclaimer applies. The author was formerly Resident Representative of UNIAPRAVI.

Table 1. Housing deficits in selected Andean countries (number of dwelling units)

Country	Quantitative deficit	Qualitative deficit	Total deficit
Colombia [1]	1,132,433	975,859	2,108,292
Peru	325,998	907,001	1,232,999
Venezuela	176,000-264,000	1,424,000-2,136,000	1,600,000-2,400,000

[1] Data comprise the urban sector only.

Source: Beatriz Uribe (2004), "*Experiencia en políticas y financiamiento de vivienda: el caso de Colombia*,"; Cecilia Esteves (2004), "*Atención de las necesidades de vivienda en el Perú: el papel de Mivivienda*," y Jacobo Rubinstein (2004), "*Política y financiamiento de vivienda en Venezuela*," unpublished presentations.

result, this paper should be useful both to record the main findings and recommendations of the Roundtable for further dissemination, and to serve as a guide for subsequent policy analysis on the basis of a number of critical lessons learnt.

2. Housing policy and housing finance experiences in Latin America

There is no dispute regarding the tremendous impact that housing finance exerts on development globally. From the viewpoint of households, housing finance enables them to purchase an asset which will represent their largest single investment. As Pamela Lamoreaux pointed out,[3] it is estimated that personal residences account for 75-90% of household wealth worldwide, which amounts to three to six times their annual income, and housing represents 40% of the monthly expenditure of households worldwide. From an economic development standpoint, investment in housing accounts for 15-35% of aggregate investment worldwide, and residential construction accounts for 5% of the labour force worldwide, while real estate services (including finance) constitutes 4% of the labour force worldwide.

However, to a greater or a lesser extent, all Latin American and Caribbean countries face huge housing deficits as shown in Table 1 for a number of selected Andean countries. In Colombia, the quantitative deficit in the urban sector affects 15.4% of total urban households and, if existing dwelling units which need any kind of improvement are added, total deficit impacts on 28.7% of total urban households. In Peru, 26% of total housing deficit is explained by lacking dwelling units and, in addition, there is a new demand for housing of about 90,000 units yearly. In Venezuela, the housing deficit is heavily explained by the qualitative deficit which accounts for 89% of the total deficit.

This adverse situation highlights not only the magnitude of the housing deficit but also the ineffectiveness of housing and housing finance policies implemented in the past. The review of a number of Latin American experiences in this respect leads to the overall conclusion that these huge and growing housing deficits are a combined result of wrong policies and a number of barriers. On one hand, the State has traditionally been seen as having an active role both as a direct housing builder and lender. The instruments used to perform this role have prevented the private sector from being an active participant in the housing sector. For instance, the use of subsidized interest rates or ceilings to the interest rates in the mortgage market have impeded the expansion of a sustainable housing finance market. Within inflationary contexts, the real value of mortgages has tended to vanish, thereby heavily constraining the long-term sustainability of the housing finance market. When the State has performed a role as a direct lender for housing, this lending has been heavily associated with hidden subsidies and high rates of arrears, even after governmental intervention with repeated debt relief mechanisms. For example, in Chile the role of the State as a low-income housing lender has been rated quite unsatisfactory by some authors who, in turn, assert that this policy practice has enlarged an already large moral hazard.[4]

In addition to wrong policies, the poor record in meeting housing needs can also be explained by the impact of a number of barriers. One of these is the low purchasing power of an important share of population which has become a limiting factor for accessibility to market-oriented mortgages and housing. The typical response has been to set administrative controls over the cost of housing finance which, as has been

[3] See Pamela Lamoreaux (2004), "The IFC´s Role in Developing Housing Finance," unpublished presentation.

[4] See Claudio Pardo (1998), "Housing financing in Chile: the experience in primary and secondary mortgage financing," paper presented at the IDB Conference "*The development of mortgage securitization in Latin America and the Caribbean*," Washington, DC, November; and Eduardo Rojas (1999), "The long road to housing reform: lessons from the Chilean experience," in *Sustainable Development Department Best Practices Series*, Inter American Development Bank (IDB), Washington, DC, July. Also see Sergio Almarza (2004), "*Creación de mercados financieros de vivienda sostenibles*," unpublished presentation.

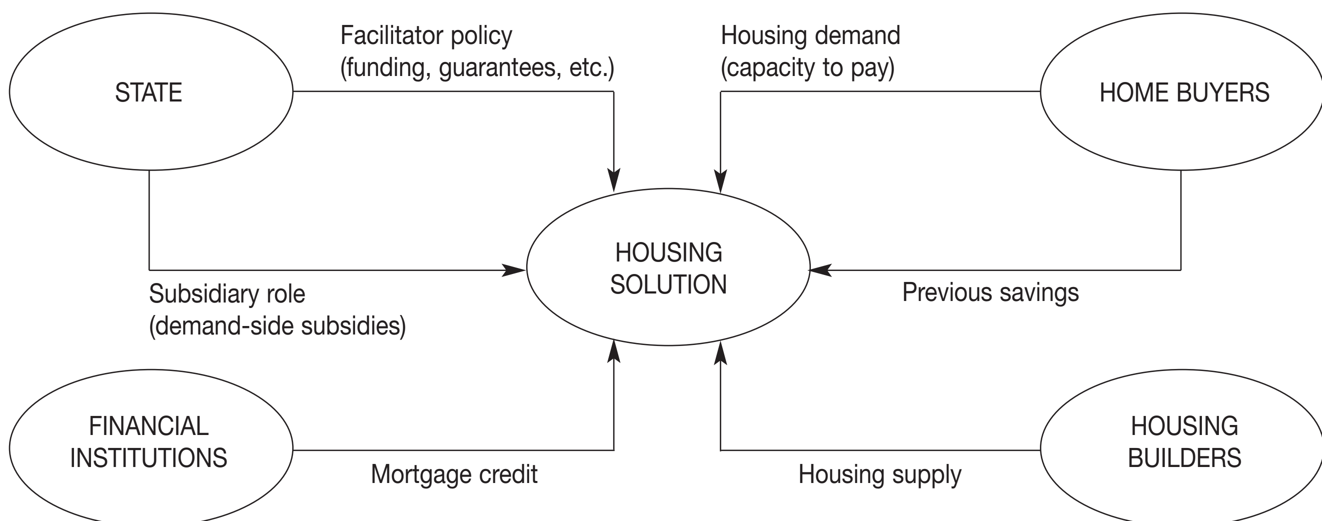
noted, did not favour mortgage market development. Another barrier emerges from the macroeconomic arena and it is related to inflation – and some times, hyperinflation – as well as domestic currency depreciation which have posed serious difficulties to the availability of long-term finance as required for housing acquisition purposes. The typical response has been the creation of a wide range of alternatives – from floating-rate to single- or double-indexed mortgages – seeking to protect the profitability and viability of mortgage lenders. While this might be true to a limited extent, within the context of highly volatile economies – because of high inflation and devaluation rates and growing interest rates – these mortgage schemes have adversely affected the capacity of borrowers to pay. In fact, there are cases in which market risks – i.e., macroeconomic shocks – have given rise to credit risks in the housing finance systems, leading them – in the extreme case – to their collapse. For example, the default rate of mortgages soared, banks abandoned mortgage lending, and costly governmental intervention took place as a consequence of the so-called Tequila crisis in Mexico in 1994-95.

The limited growth of formal mortgage markets and the unsuitable terms of accessibility for lower-income families of the existing housing finance alternatives have resulted not only in huge unmet housing needs but also in the search for housing solutions beyond the formal channels. As a result, land invasions and informal settlements are remarkable features of the urban growth path in many Latin American cities. In turn, these informal settlements have evolved over a long period of time on the basis of self-construction, a process which has been inefficient and explains the bulk of the current so-called qualitative housing deficit.

Currently many countries have replaced former housing policies with a heavy intervention of the State as a direct builder and lender with more market-oriented policies. In the Andean region, Colombia, Peru and, to a lesser extent, Bolivia are examples of this kind of efforts, as were documented;[5] but there are other relevant examples in the rest of Latin America as are the cases of Chile, Costa Rica, El Salvador, Mexico, among others. In the market-oriented approach, the State is basically to have a role as a facilitator of the private investment in the housing sector and a subsidiary role designed to ensure equity so that all families, whatever their economic condition, will have the possibility of finding a housing solution commensurate with their efforts and economic capacity. Within the framework of these revised policies, the intervention of the State is aimed at supporting the conditions for an enhanced accessibility to housing for lower-income groups (including those with very limited debt capacity). For instance, demand-side direct subsidies are an integral part of housing policies in most Latin American countries today as a way to transform potential demand into actual demand for housing. This instrument is expected to remain as one of the key roles under responsibility of the State. (See Diagram 1.)

As a part of these revised housing policies, the responsibility of housing lending, including options for lower-income families, is basically transferred to the private sector agents. However, the State can play an active role in enhancing the expansion of mortgage credit availability by inducing a decrease in credit costs. This can be done

Diagram 1. Key elements and concurrent agents in revised housing policies



[5] See Beatriz Uribe (2004), op. cit.; Cecilia Esteves (2004), op. cit.; and Walter Kreidler (2004), "*Programa de financiamiento de vivienda en Bolivia*," unpublished presentations.

by mitigating market risks and credit risks from a position in which a publicly-owned institution performs a role of second-tier bank.[6] As market risks are concerned, swaps can be implemented so as to simultaneously avoid that both mortgage lenders and borrowers can be adversely affected by macroeconomic shocks which eventually may give rise to credit risk situations, as is the case of Mexico (see Box 1). Regarding credit risk management, the role of the State should focus on providing insurances – e.g., mortgage insurance – as well as on stimulating good practices in mortgage origination and servicing as a pillar of a sustainable housing finance system. For instance, two publicly-owned second-tier institutions such as Mexico´s SHF and Peru´s Fondo Mivivienda are reshaping their functions and products towards this direction rather than keeping their primary role of funding private financial intermediaries for mortgage origination.

Box 1. Mexico: the case of a wage-inflation swap in the mortgage market

Since 1999 in Mexico mortgages have been originated with a market risk hedge that is intended to cope with extraordinary or permanent decreases in real minimum wages so as to allow borrowers to pay minimum wage-indexed mortgages while lenders can extend inflation-indexed mortgages. To this purpose, a swap is implemented under the current administration of *Sociedad Hipotecaria Federal*-SHF (at the beginning, it was administered by its predecessor FOVI) through the financial intermediaries. The cost of the swap is shared by the borrower and the Federal Government: the former currently pays a 71 basis points prime, which, in conjunction with a credit line backed by the Federal Government, is giving rise to a fund intended to meet either a temporary lack of payment flows or to face severe crises situations. This fund is arranged so as to be able to support a 25% deterioration in real wages over a 30-year period. If the fall is higher (lower), SHF would incur (obtain) losses (profits). Thus, this is a case in which a public sector participation is combined with a commitment of borrowers so as to share the cost of a hedge useful to mitigate macroeconomic shocks impacting on the mortgage activity.

In seeking the expansion of mortgage credit availability, it should be noted that there is a significant room to enhance the penetration of mortgage activity in all countries. Table 2 shows that the mortgage portfolio/GDP ratios in Latin American countries lie well below the ratios in developed economies such as the United States and the European Union, thereby indicating that only a small share of existing dwelling units has been acquired with a mortgage. The same effectiveness of demand-side direct subsidies heavily depends on the availability of suitable mortgage credit opportunities for those beneficiaries who have some debt capacity. In fact, as Beatriz Uribe reports, more than 20% out of the total approved subsidies in Colombia has not been disbursed because of lack of access to mortgage credit for beneficiaries.[7] On the other hand, since there is a significant need for home improvement as a way to mitigate existing housing deficits, housing microfinance is another product that is deserving a growing attention within the revised housing policy agendas. The need to enhance housing finance alternatives for lower-income families – both mortgage and microfinance – poses important challenges to financial intermediaries given the relatively high administrative costs of small-sized loans, the unsuitable funding sources, and the difficulty of family earning verification, among other constraints. A number of innovative products – such as household contract savings programs as a way to demonstrate loan eligibility – are being implemented to overcome these constraints.

Table 2. Mortgage portfolio/GDP ratios in selected countries *(percentages)*

Country(ies)	Ratio
United States	53
European Union	36
Chile	14
Colombia	4.5

Source. Beatriz Uribe (2004), "*Experiencia en políticas y financiamiento de vivienda: el caso de Colombia*," unpublished presentation.

In order to enhance long-term funding, a major lack of most Latin American housing finance systems, it may be useful to foster linkages between housing finance markets and capital markets. The existence of a secondary mortgage market may serve this purpose, while publicly-owned institutions may concentrate their efforts in providing guarantees not only on mortgage originations but also on mortgage-backed bonds and securities and other kinds of issues. In this respect, there are already concrete initiatives underway such as in Colombia with several securitization deals completed and, to a lesser extent, in Mexico and in Peru, where the agenda for publicly-owned second-tier institutions is markedly set towards replacing their typical funding role for an innovative guarantor role.

The eventual success in managing both market risks and credit risks, thereby strengthening the primary mortgage market, will positively influence the creation and the development of a secondary mortgage market. Currently this is not only favoured because many Latin American countries have seen the surge of domestic institutional investors that manage growing typically long-term domestic savings as a result of privatization of pension funds, but also because these agents are in a better position to absorb and disseminate market risks impacting on mortgages, taking into account the long-term oriented structure of

[6] See Guillermo Babatz (2004), "El papel de Sociedad Hipotecaria Federal en el desarrollo del programa de vivienda en México," unpublished presentation.

[7] See Beatriz Uribe (2004), *op. cit.*

their liabilities. As is the case in several Latin American countries, there is a growing demand for debt instruments in the domestic capital markets which can partially be met by mortgage-related debt instruments.

3. Policies for social housing

As has been argued, informal human settlements have proliferated in most Latin American cities, producing huge social and economic costs in terms of lack of public space, deficient public services, exposure to natural disasters, environmental pollution, etc.[8] It is estimated that costs of regularizing existing infrastructure in these informal settlements are from twice to three times higher than costs associated with developing planned settlements.[9] This task creates a fiscal contingency which puts pressure on governmental finance. The recommendation is straightforward: it is necessary to shape sound policies for social housing (i.e., housing that can be afforded by the poor) that allow cities to grow efficiently and the poor to have access to opportunities for developing progressive housing. Within this framework, a number of key components of any program for social housing were identified, namely: land production, property rights, subsidies, and microfinance.

In order to enhance accessibility to housing for lower-income families, there is a need to create an institutional framework which exerts pressure on permanently decreasing housing prices. One way to accomplish this is to reform the grounds of land production. Typically urban regulations influence the minimum housing price in each city and, as a result, determine which share of the population can afford a formally-produced housing unit. In order to overcome these constraints, and based on the experience of Metrovivienda in Bogota, Colombia (see Box 2), the role of the State as a land producer can mitigate costs and risks associated with social housing production, thereby exerting a downward pressure on privately-produced social housing pricing. Furthermore, there is a multiplier effect in relation to the role of the State. Based on the above-mentioned Colombian case,[10] fiscal investment for producing a social housing unit is one fifth of that needed in the traditional role of direct construction by the State, the time elapsed in recovering fiscal investment is reduced to 25% of the time associated with the traditional model, and the amount of portfolio recovery is increased up to 2.5 times the amount allowed by the traditional model. This case also shows that a new formal low-cost house building industry has emerged which has been able both to increase the average size of a social housing unit and to decrease its minimum price as a result of cost and risk mitigation associated with land urbanization and technological innovation by the private sector.

A second major component of any program for social housing refers to property rights on land and housing. Given the important informal settlements which lack formal titles, it may be necessary to launch an urban property formalization program. A program of this sort is expected to provide tenancy safety and, consequently, an incentive to improve the quality of the housing occupied as well as a better position for credit eligibility. A formalization program comprises a number of components, namely legal and institutional reforms, a physical and legal inventory of informal housing units and lots, a regularization of the housing unit or lot itself (e.g., tenancy background, plan drawing, etc.), and a regularization of individual properties and their registry. In 1998 a formalization program was launched in Peru intended to establish clear-cut information on the physical location and the legal property of urban lots in informal settlements for a proper registration. This program is being conducted by a publicly-owned agency – COFOPRI – with the support of a financial co-operation of the World Bank. As Felipe Morris states,[11] a number of research studies show a positive socio-economic impact of this program in terms of an improved life quality standard. For instance, there is empirical evidence that access to credit has increased in

Box 2. *Metrovivienda*: the case of a land bank in Bogota, Colombia

Metrovivienda is a publicly-owned (local government), second-tier land bank established in Bogota, the capital city of Colombia, in 1998. It is aimed at producing urbanized land – i.e., with public services, roads, and equipment – for its sale to private sector builders who compete within the market in producing low-cost housing units which, in turn, are sold at their own risk. This firm and its working model respond to a facilitator approach, based on the market functioning but contravening its failures. The working scheme of *Metrovivienda* comprises three stages. The first consists of obtaining non-developed land in the periphery of the city. The second refers to the urbanization of land, including designs and works; as a result, land will be ready to build housing and other types of buildings (e.g., schools, markets, etc.). The third is the sale of urbanized lots (*manzanas*) to developers specialized in producing and selling low-cost housing under regulation and control of *Metrovivienda* as far as maximum pricing and mimimum specifications are concerned. Revenues that accrue from the sale of urbanized lots are used by *Metrovivienda* to undertake new projects on a sustainable basis.

[8] See Andrés Escobar (2004), "*Prevenir la marginalidad: el papel de los niveles del Estado y el caso de Bogotá*," unpublished presentation.

[9] See again Andrés Escobar (2004), op. cit., and Bruce Ferguson (2004), "*Hacia ciudades sin barrios: nuevas políticas y programas de vivienda social*," unpublished presentation.

[10] See again Andrés Escobar (2004), *op. cit.*

[11] See Felipe Morris (2004), "*El rol de los derechos de propiedad en la política social para vivienda: la experiencia peruana*," unpublished presentation.

formalized areas though it is a process that takes time. Furthermore, the newly-formalized housing tenant is a good borrower as ratios of portfolio quality indicate. There is also evidence showing that a housing tenancy with a property title is associated with a higher investment in upgrading the housing unit. This research also provides an estimate of US$925 being the impact of titling on the increase of property value, which is equal to 25% of average value of non-titled properties. Taking into account that the above-mentioned program has titled more than 565,000 properties, the gross economic benefit of this formalization program equals US$523 million.

The third component of any program for social housing is related to subsidies. As Marja Hoek-Smit maintains,[12] there is a wide range of subsidies in Latin America, most of them linked to housing finance: at the funding system level (e.g., non-market special tax funds), at the borrower level (e.g., interest rate subsidies by special tax funds), at the production level (e.g., land subsidies), and crisis-related borrower subsidies (e.g., loan or payment forgiveness). Taking into account that there are many disastrous examples of finance-linked subsidies – e.g., because of the prevalence of high hidden costs and inefficiencies or macroeconomic volatile conditions that make subsidies too costly – a strong recommendation emerged to revise the type and scope of subsidies according to the targeted sectors. In revising the subsidy regimes, the first question to be tackled is why subsidies are needed. There are two major reasons. The first is more straightforward and relates to social equity. The second is to enhance market efficiency. Accordingly, a number of key principles for designing subsidy regimes is taking place (see Box 3).

In designing housing subsidies, authorities must consider the appropriate types of subsidies depending on the different market segments since their needs and capabilities differ from each other. For the low-income market segment, subsidies should focus on improving living conditions and increasing new suitable housing options. Sizable, long-term, mortgage-guaranteed credits are not suitable for a low-income population with very limited indebtedness capacity. Since mortgage finance markets do not work for this segment, subsidies should be intended to provide grants for home improvements and to the strengthening of the microfinance industry. For the (lower) middle-income segment, subsidies should be aimed at increasing affordability to formal housing options. These may include up-front demand-side subsidies but also some housing finance-linked subsidies which may address various risks and costs faced by private mortgage lenders (e.g., origination subsidies to meet the administrative costs of originating small-sized credits as is the case of Chile).[13] Finally, for the (upper) middle-income segment, which typically comprises the largest recipients of subsidies, the main problem to be addressed is the efficiency of the housing finance system in order to make housing less expensive. To reach this segment, subsidies should focus on reducing risks and costs in housing finance which are reflected in the interest rates, thereby widening accessibility to housing finance, rather than providing grants to beneficiaries. Subsidies which provide incentives to originators in terms of interest rate risk- or prepayment risk-guaranteed funding are some examples in line with this focus.

Box 3. Shifts in perception of subsidies in the housing sector

The key principles in designing subsidy regimes in the housing sector are as follows:

a) Subsidies are being intended to enhance the functioning of markets, and not to crowding them out.

b) Subsidies are being oriented to foster access to credit markets.

c) Subsidies are performing as an incentive, rather than a hand-out, so that beneficiaries must contribute to the solution of their housing problem depending on their economic possibilities.

d) The provision of subsidies is giving priority to transparency in substitution of hidden subsidies.

The fourth component of any program for social housing concerns housing microfinance which consists essentially of small short-term credits for financing a progressive home building and improvement process. As Bruce Ferguson argues,[14] only a small share of households can qualify for a traditional mortgage to purchase the least expensive commercially built unit. Thus, a significant segment of households builds over a long period of time with no or little institutional support. For this segment of the population, small credits could be useful, and desirable, to build homes progressively (e.g., to expand and improve the core unit). Housing microfinance can address the typically large effective demand for housing improvement lending. On the other side, since housing microfinance has typically short-term maturities, microfinance institutions can better fit the terms of their assets and liabilities, thereby overcoming the typical mismatch involved in traditional mortgage lending when funded with short-term liabilities.

Perhaps more importantly, housing microfinance is characterized by underwriting requirements which fit better the conditions of lower-income households than traditional mortgage lending does. As is well known, for eligibility, mortgage

[12] See Marja Hoek-Smit (2004), "Designing effective housing subsidy systems," unpublished presentation.

[13] See again Sergio Almarza (2004), *op. cit.*

[14] See Bruce Ferguson (2004), *op. cit.*

lending typically requires that borrowers can demonstrate a permanent, sufficient and verifiable source of income as well as a legal tenancy of the property, but lower-income families can seldom meet all of these requirements. In turn, short-term maturities and small-sized amounts associated with housing microfinance, together with additional instruments such as non-traditional collateral and innovative criteria to determine credit eligibility, can ease the accessibility to this sort of housing finance for lower-income families. The feasibility of housing microfinance in addressing the demand for housing improvement lending for lower-income families can be demonstrated by an increasing number of successful experiences: Mibanco´s one in Peru is remarkable. Housing microfinance can also be useful in providing the credit component, usually missing for lower-income households, thereby supporting the effectiveness of increasingly widespread up-front demand-side subsidy regimes as an integral part of revised housing policies.

4. Fundamentals for expanding primary mortgage markets

As was stressed, throughout Latin America, and particularly the Andean region, mortgage markets are far from being developed and mature financial markets. Not only there is a huge room to increase penetration in primary mortgage markets but also the scarce credit available is hardly affordable for the lower-income population. In addition, there is a strong lack of long-term funding and mortgage lending typically faces significant credit and market risks. The expansion of primary mortgage markets is also important given the relevance of a well-developed primary market to support the creation of a secondary mortgage market which allows the establishment of linkages with the capital market. The latter, in turn, is supposed to provide the mortgage market with two necessary components: (a) long-term funding; and (b) risk atomization, but the creation of secondary mortgage markets cannot substitute for primary market development. In fact, there are numerous examples of publicly-supported secondary market institutions that do little or no business due to a non-existent or weak primary mortgage market.

To expedite the expansion of primary mortgage markets, some recommendations can be made based on a number of experiences. First, as far as the role of the State is concerned, a direct performance of the State as a builder and as a lender has typically proven to be harmful with respect to the efficiency of the housing finance market. Publicly-owned mortgage lenders usually have poor quality underwriting, politically motivated lending, inappropriate instruments, and weak or non-existent risk management; in the end, they tend to crowd out private sector lending. Instead, the primary role of the State should be to enable the development of mortgage markets through the creation of the proper infrastructure for, and the elimination of barriers to, lending. The State can accelerate the development of mortgage markets by improving the legal and regulatory framework – e.g., an efficient and inexpensive title and lien registration process. Also, it may be quite relevant for the State to perform a second-tier banking role, to foster, from this position, the development of the mortgage market by providing either funding or guarantees, and by enhancing better practices such as standardization.

As explained above, subsidies are needed but hidden subsidies do not help markets to work. For instance, interest rate subsidies are clearly inefficient since they often last beyond the needs of the borrowers and seldom reach the most needy; also their opportunity cost is difficult to track. Moreover, interest rate subsidies do not favour a secondary market development because the asset yield does not compensate for risk. Experience demonstrates that in order to reach lower-income households, it may be necessary to establish some incentives for the private lenders to provide these groups with affordable housing finance options. This is the case – for instance – of mortgage origination subsidies recently implemented in Chile.

On the other side, incentives must also be in place to allow available funding, particularly long-term funding, to flow towards housing finance. In this respect, the design of mortgage products is important not only to provide, or maintain, affordability to borrowers but also to meet the needs of investors. A good example of this is the implementation of the above-explained inflation-indexed mortgage, along with a swap, providing borrowers with coverage in the Mexican mortgage market following the so-called Tequila crisis in 1994-95. Responding to market conditions, mortgage lenders are to play a crucial role in balancing the diverse interests of borrowers and investors.

A major challenge for any primary mortgage market is to offer affordable loans to lower-income families with market-driven mechanisms. To this purpose, programs and products offered by mortgage lenders, supported by sound governmental policies, must be capable of addressing typical borrower constraints. Taking into account that there is a wide range of customers with diverse needs, there is a significant room for addressing housing finance market niches. For instance, in Mexico one of the leading sofols manages, via a mutual entity, a savings program that has been designed to allow informal economy customers that cannot prove complete income requirements and those with no credit history, to establish payment capacity and creditworthiness, and to save for the down payment.[15] More recently, similar programs have been implemented in Peru: they are essentially contractual savings programs that, upon a period of time, are prerequisite to apply for a demand-side direct subsidy and/or a mortgage loan. In Chile and Mexico innovation has considered the availability of mortgage loans to purchase used dwelling units; in doing so, a secondary market of used dwelling units is being fostered.

[15] See Manuel Campos (2004), “Improving mortgage product design for low income housing and underserved markets,” unpublished presentation.

There are also examples in which some interest rate reduction – either explicit or implicit – is offered when payments are made on time, thereby increasing affordability of these loan programs, as is the case of *Fondo Mivivienda* in Peru with the so-called *Premio al Buen Pagador*, or premium to good payer (see Box 4). As was also argued, the effectiveness of all of these products also relies on a good servicing practice. For instance, in Panama, there is a legalized practice of charging the monthly mortgage installments directly from the payroll of borrowers,[16] while in Mexico mortgage lenders (*sofols*) make use of specialized collection systems, namely on-site booths, hand delivery of account statements, etc. To the extent that these programs and products contribute to enhance affordability, thereby widening mortgage markets, to improve the performance of mortgage lending, to attract available funding, and to increase profits for lenders, solid pillars will develop on which sustainable primary mortgage markets will be able to expand.

Box 4. Peru: *Premio al Buen Pagador* in Mivivienda mortgage loans

Fondo Mivivienda´s mortgage loans comprise, from 2000, the so-called *Premio al Buen Pagador*, an incentive to increase affordability by lowering the monthly payment or, which is the same, the implicit interest rate of the loan. This is divided into two parts, one being a concessionary share equivalent to 20% of total loan, to be paid semi-annually. If the borrower fulfills all the monthly payments for the non-concessionary share (equivalent to 80% of the total loan) within a semester, he/she is exempted from paying the concessionary installment for that semester. In those semesters in which the borrower does not benefit from the *Premio al Buen Pagador*, the concessionary installment for that semester is prorated in the following semester in six parts; thus, the borrower must pay timely the installments corresponding to both shares of the loan, in order to be elegible for the benefit in the following semester. Though Mivivienda mortgage loans allow prepayments, in order to access to the *Premio al Buen Pagador* benefit they can only be made 10 years after origination.

Liquidity risk and credit risk are major deterrents to expanding primary mortgage markets. On the former side, mortgages are long-term and illiquid assets, while, as will be emphasized later on, depositary institution lenders usually have short-term funds and this mismatch often induces them to limit or avoid mortgage lending. On the credit risk side, there are high transaction costs in underwriting mortgage assets which may preclude sale and securitization and individual lenders may not be able to adequately diversify mortgage credit risk. In order to manage liquidity risk, liquidity facilities may be useful as long as they may provide lenders with loans or purchase on recourse from lenders. With the purpose of deterring credit risk, mortgage insurance may be relevant as long as it can spread risk across lenders and areas, as well as reduce risk by requiring improved documentation and underwriting – enforcing standardization – and monitoring lender performance. In both cases, the State can play a direct role – e.g., owning a liquidity facility or investing in a mortgage insurer – or a catalyst role – e.g., performing as a bond market-maker or providing co-insurance for private providers.[17]

As was noted earlier, the agenda of a number of publicly-owned, second-tier mortgage institutions is giving considerable room for developing guarantee schemes, including mortgage insurance. To this respect, the well-developed experience of the Canada Mortgage and Housing Corporation was thoroughly reported.[18] In Canada, mortgage insurance is mandatory in mortgage lending with loan-to-value ratios higher than 75%. This practice facilitates protection for lenders against a portion of the costs related to homeowner mortgage defaults or foreclosures and, in so doing, has benefited the financial system by enhancing access to affordable housing, promoting standardization and transparent lending practices, and acting as a credit enhancement and audit verification to support securitization. In this country, mortgage insurance has been a powerful instrument to achieve an improved risk management by disseminating credit risk and reducing systemic risk. Since mortgage insurers share the risk, they are motivated to demand quality credit information, property valuations, and underwriting standards.

Additionally, the application of technology may perform as a key factor to attain a successful expansion of mortgage lending.[19] In this respect, the U.S. mortgage market experience may be a relevant reference for emerging markets. First, technology may contribute to faster, more responsive and cheaper loan applications since automated processing reduces time, improves accuracy and facilitates the creation of databases. Second, automated underwriting can reduce cost and improve fairness in mortgage lending by allowing nearly instantaneous decisions and a standardized and more objective origination process. As was reported by Lea, based on technology, today a credit approval may take in the United States as short as 20 minutes, while in 1994 the same task took no less than two days. Third, automated property valuation speeds origination because of on-line availability of information on recent sales data of comparable properties, which eases property price analysis, as well as reduces possibilities of fraud. Fourth, technology also facilitates

[16] See John Rauschkolb, "Developing regional and specialized mortgages companies in small economies," unpublished presentation.

[17] See Britt Gwinner, "The role of the State in developing and funding mortgage markets: lessons and best practices," unpublished presentation.

[18] See Jay Thakar (2004), "Developing mortgage insurance products in emerging markets," unpublished presentation.

[19] See Michael Lea (2004), "Expanding primary markets: programs, processes and technology," unpublished presentation.

improved risk management by providing on-line access to portfolio data which constitute a useful input for a better product design, pricing, and funding. Fifth, servicing technologies – such as electronic payment options and automated account information – improve customer service, reduce risk and increase profits. Finally, technology also contributes to improved delinquency management because available data may be used to identify potentially weak borrowers and, as a response, to deal with them on the basis of pro-active counselling strategies. As can easily be recognized, all of these contributions of technology to improving origination and servicing processes in the primary mortgage market provide better grounds for a successful development of a secondary mortgage market.

5. Funding strategies to support sound primary mortgage markets

Many argue that appropriate funding – i.e., stable, long-term, lower cost, low risk funding sources – is the most difficult ingredient needed to sustain a housing finance system. From the viewpoint of funding, market-oriented housing finance has typically relied on a financial intermediation process in which long-term mortgage origination has been supported by deposit-taking instruments. This has been the case whether mortgage origination has been undertaken by specialized housing finance institutions (e.g., savings and loan associations or housing banks) or non-specialized housing finance institutions (e.g., commercial banks with mortgage portfolios). As long as liabilities are based on (predominantly) short-term deposits, this financial intermediation process involves a potential maturity mismatch. In fact, there are numerous examples where this approach to funding has resulted in financial market instability and limited capability to grow soundly or, even worse, eventual collapse. A deposit-based housing finance system may face another limitation when deposits are raised on a variable-interest rate basis which prevents the intermediaries from originating fixed-rate mortgages. Other problems include currency mismatch.

The genuine objective of housing finance institutions to seek an appropriate asset/liability maturity matching may pose an important barrier for mortgage lending to expand when this is predominantly funded on the basis of a deposit-raising model. As was noted,[20] the case of Peru is a good example of this issue. Over the last five years, mortgage credit has been growing more rapidly than any other type of credit while recording, at the same time, a lower default rate. Based on reasonable assumptions, it is estimated that mortgage credit could increase by US$1.4 billion over the next 10 years; this would double the current balance of mortgage credit in the Peruvian banking system. But this growth would be difficult to realize if it were supported only by medium-term deposits (the so-called *CTS* deposits), together with other minor instruments (e.g., mortgage bonds and other bonds), which allow financial intermediaries to match asset/liability maturities.

Furthermore, the Peruvian mortgage market presents another striking feature. Given the prevalence of a highly-dollarized economy and financial system, a currency mismatch exists, not for financial intermediaries -their assets (i.e., mortgages) and liabilities (i.e., *CTS* deposits) are both predominantly denominated in foreign currency-, but for mortgage borrowers, whose income is denominated in domestic currency but their mortgage borrowing is held in foreign currency. In the event of a devaluation, this situation could impair borrowers´ ability to pay and, consequently, create a potential credit risk for mortgage lenders. Thus, a major challenge is to generate medium-term, fixed-income, domestic currency-denominated resource-raising instruments to fund the expansion of the mortgage market in Peru.

The traditional deposit-based model for funding housing finance poses not only a maturity mismatch constraint but also heavily depends on the credit quality of the mortgage lender. In addition, as long as all the functions in the mortgage business are concentrated in the same institution – i.e, origination, fund raising, servicing, etc – all the subsequent risks remain concentrated on the balance sheet of that institution. In seeking to overcome this kind of constraints, a model based on specialized participant agents has been analysed which is useful to raise funds from the capital markets. This alternative model has a number of advantages but one particularly important is its ability to allow risk atomization, particularly when it is associated with the issuance of mortgage-backed securities: risk is no longer associated with the lender or issuer but with the underlying assets (mortgages). This distinctive feature, for success, demands specialization, information availability, transparency and, remarkably, appropriateness of the mortgage product in meeting the needs of the purchaser of home. As a result, it can facilitate a more appropriate funding, in both volume and terms, for housing finance, thereby benefiting the end borrower with a more dynamic and less costly mortgage lending.

There are a number of initiatives towards setting legal and institutional frameworks necessary to implement this alternative model in Latin America. For instance, in the case of Colombia,[21] the currently prevalent Housing Law enacted in 1999 comprises a number of provisions to allow and enhance a significant shift in funding mortgage lending. To this end, two instruments – mortgage-backed bonds (*bonos hipotecarios*) and mortgage-backed securities (*titularización hipotecaria*) – are regulated in order to enable long-term resource mobilization from capital markets towards mortgage markets.

On the other side, financing residential construction has also led to a search for

[20] See Walter Bayly (2004), "*Estrategias de captación de recursos para el sostenimiento del mercado de hipotecas: el modelo basado en a captación de depósitos en el Perú*," unpublished presentation.

[21] See Alberto Gutiérrez (2004), "*Desarrollo de la titularización hipotecaria en Colombia*," unpublished presentation.

alternative funding sources as in the case of *sofols* (mortgage banks) in Mexico. In 2003 the *Sociedad Hipotecaria Federal* (SHF), the predominant funding source of *sofols*, stopped funding new bridge loans for residential construction and is instead providing guarantees. Following this change, *sofols* have developed market funding through the domestic debt capital market, through domestic and international commercial banks and through securitization (including construction-related bridge loans). It is worthwhile noting that the proceeds from securitizations will be used to fund housing construction loans as long as financing is available for the individualization of the loans. As a result, these new funding sources have contributed to decreased dependency on SHF funding, have allowed a greater flexibility in the development and implementation of new products for developers with better conditions, and have fostered strict controls in loan origination, administration and loan individualization, thereby mitigating risks.[22]

Within this model, a number of agents or instruments may be particularly relevant to boost funding from the capital market and to provide the mortgage market with efficiency.[23] On one side, based on a high financial capacity, warehouse lending can provide intermediaries with shorter-term, revolving lines of credit. One way to enhance efficiency in the market is by establishing origination criteria that foster standardization. On the other side, the existence of conduits, whether they are related to the warehouse lender or not, may play a relevant role by providing a significant capacity to store mortgages and to assume interest rate and liquidity risks associated with this task. The role of conduits may also be important at the time of needing investment capacity to purchase subordinated bonds. In addition, management risk may also be supported by the implementation of a wide range of hedging alternatives to mitigate market risks in funding mortgage activity, for instance, to cope with interest rate risks or, as explained above, exchange risks which eventually give rise to credit risks adversely affecting lenders. As has been the case of one outstanding experience – Fannie Mae´s one in the United States – the widespread availability of numerous derivatives for risk management has allowed financial institutions to meet effectively the huge demands of mortgage borrowers for long-term, fixed-rate loans.

6. Fundamentals and options for developing secondary mortgage markets

The development of a secondary mortgage market can play a significant role in creating sustainable housing finance activity. Basically, two major benefits can be highlighted. On one side, the existence of a secondary mortgage market should contribute to provide liquidity and to diversify funding sources by creating a linkage with the capital market. By using secondary market mechanisms, it is possible to recycle funds before original maturities, thereby providing mortgage lenders with liquidity for new originations and lessening the need for new capital. By accessing the capital markets, mortgage lenders have additional, and more appropriate in terms of maturity, funding. A secondary market is more crucial for specialized non-banking financial institutions (e.g., *sofols* in Mexico) but, for depository institutions, can also serve as a stabilizer taking into account that their deposit bases can become volatile and can allow fixed-rate lending when no derivative options are available. On the other side, a secondary mortgage market should allow an improved risk management by transferring market risks to capital market participants who have a better capacity to deal with them. Risk atomization should give rise to efficiency earnings in resource mobilization, thereby making mortgage finance less costly to borrowers and more profitable to lenders.

A number of pre-conditions necessary for establishing a secondary mortgage market were noted. The four most critical factors are the following: (a) a sufficient legal, tax, and regulatory framework; (b) a robust primary mortgage market; (c) capital market preparedness and appetite for mortgage-backed debt instruments; and (d) economic incentives for secondary market participation.[24]

Laws and regulations applicable must allow an easy and cost-reduced true transfer of assets to secondary market and capital market investors, cost-reduced and time-saving foreclosure procedures, and tax and accounting rules which do not render securitization uneconomical vis-à-vis other funding sources. One key aspect is, as was remarkably noted, the need to insulate mortgages to be securitized, or backing bonds, from any insolvency and remote bankruptcy of the originator or the issuer. In effect, laws and regulations must be shaped to ensure a true sale of mortgages which are to be securitized, thereby enabling investors to access the benefits of the collateral in the event that the originator enters insolvency. The need to previously notify, and/or to get a consent from, the borrower in order to complete a legal transfer of property of the collateral may also deter a more expeditious process. As was maintained, this factor contributed to the delay in the implementation of mortgage securitization in Mexico.[25]

Laws and regulations should also constrain the probability of an issuer entering insolvency or bankruptcy by establishing, for instance, provisions that limit the

[22] See Kathleen Towle (2004), "Financing residential construction in emerging economies," unpublished presentation.

[23] See José Landa (2004), "*Diseño de facilidades de liquidez eficaces para el sostenimiento del financiamiento hipotecario para vivienda*," y Gonzalo Ortiz de Zevallos, "Developing hedging mechanisms to mitigage market risks in funding mortgage facilities," unpublished presentations.

[24] See, for example, Soula Proxenos (2004), "Essentials for secondary market development," unpublished presentation.

[25] See Brigitte Posch (2004), "*Consideraciones legales y regulatorias en las securitizaciones*," unpublished presentation.

purpose of the issuer only to the issuance of securities, or provisions that restrict the capacity of the issuer to get indebted. On the other side, effective and efficient foreclosure laws and enforceable liens on property are required to minimize loss severity in the case of defaults. Judicial foreclosure regimes often take too long and, if time usually devoted to enforce liens and to sell the property is added, the whole process turns out to be even longer and more costly. As was asserted, when existing laws and regulations do not embrace these fundamentals, legal reforms will be necessary to foster financial institutions to intervene in the mortgage markets and in the capital markets. From the viewpoint of taxation, a tax-neutral special purpose vehicle could help to develop secondary mortgage markets; otherwise, if the assets are taxed when mortgages are passed to the special purpose vehicle and also when the security is sold to investors, double taxation might render the securitization deal unprofitable.

A secondary mortgage market requires a robust primary market to develop, for which a number of critical elements is required: macroeconomic stability, marketability and liquidity of the housing market, a sufficient network of quality primary market lenders, product standardization across the industry, and alternative credit enhancement options to overcome insufficient credit quality or lack of data. On this basis, each function performed in the primary mortgage market – such as loan origination, underwriting, funding and loan closing, loan servicing and loss mitigation, and criteria, timing, and management of loan default – should contribute to develop a product appropriate for secondary market operations. In other words, underlying mortgages for securitization should be high-quality assets with a long-term profitability, low default and foreclosure rates, predictable and steady loan performance, and standardized. Uncertainty or unpredictability of loan performance will cause investors to demand higher returns on the mortgage-backed securities and rating agencies to require greater credit enhancement.

The existence of reasonably deep capital markets is crucial for the development of a secondary mortgage market. A fairly solid institutional development for the capital market includes an investor understanding of the investment vehicle, an interested and active investor base, an efficient and regulated clearing-house infrastructure, and information service providers. For instance, independent, credible rating agencies are required to assess the relative risk of mortgage-backed securities issues; otherwise, investors must rely on their own ability to conduct this task making it a more costly and time-consuming process. The size of the capital market matters: a domestic capital market with a well-endowed resource base is expected to provide mortgage-backed debt instruments with liquidity, while the international capital market should provide, whenever possible, a complementary demand-side support for such debt instruments.

Finally, the development of a secondary mortgage market requires a number of economic incentives in order to help overcome barriers that make this progress more difficult. These barriers may be related to funding as expressed in terms of a liquidity crunch for lenders; to credit risk, for which an enhanced credit guarantee issued by a third party may be useful; to interest rate risk; to risk-based capital and taxation, for which a capital relief for holding a security and a favourable taxation of securities may be implemented; among others.

In developing a secondary mortgage market, particular market conditions should be accurately assessed in order to make a choice between mortgage-backed bonds (MBB) or mortgage-backed securities (MBS). While both of them commonly share some prerequisites such as the existence of efficient mortgage collaterals and sound macro-economic scenarios, they differ from each other.[26] As is well known, basically MBB remains to be a debt obligation of the originator (and, at the same time, the issuer) which is collateralized by pools of mortgage loans that stay on the originator´s balance sheet; for them, some regulatory eligibility criteria – e.g., first mortgage, limited LTV or debt-servicing-to income ratios – are applied in order to ensure a special quality of the underlying portfolio. MBB feature a contingent transfer of credit risk just in case of insolvency of the issuer, and the originator assumes the market risks on the basis of asset/liabilities management techniques. On the other hand, MBS are fundamentally based on the true sale and bankruptcy remoteness principles; as a result, MBS are issued by a special purpose vehicle as off-balance-sheet instruments, while payments associated with securities are based on the direct allocation of mortgages cash-flows without recourse to the originator. The issuance of MBS, using homogeneous pools of mortgage loans, involves a transfer of market risks to investors, and a transfer of credit risk to credit enhancers (e.g. guarantors) or to investors.

When both instruments are compared, they both need robust legal frameworks to be implemented, but MBS are a somewhat more complex instrument requiring perhaps more time to develop. In this regard, a larger critical mass may be very important: large volumes ease periodical, sizeable issues, while sporadic, small issues are costly – first-time issues face high costs – and do not provide the market with enough liquidity. In turn, MBB may be less costly as long as neither external credit enhancement nor large overcollateralization is required, and they involve simple, standardized financial instruments easy to value and to trade. A major challenge for MBB is to mitigate prepayment risk taking into account that the capital market may not accept call options, while a major challenge for MBS is the availability of a market for credit risk because, in the absence of external credit enhancement, securitization requires either costly cushions (e.g., overcollateralization) or credit risk retention by the originator. The typical candidates for MBS are specialized, non-deposit taking institutions in a market with no or few derivatives available, while the typical candidates for MBB are commercial banks

[26] See discussion by Olivier Hassler (2004), "Mortgage bonds or mortgage-backed securities," unpublished presentation.

with "natural hedges" (i.e., diversified assets and liabilities with different durations) and/or external hedging instruments.

The development of secondary mortgage markets in Latin America, and particularly in the Andean region, remains a relatively incipient process. Within this context, the promising case of Titularizadora Colombiana (TC) was thoroughly documented (see Box 5).[27] Since its establishment in 2001, TC has run over a significant share of the above-mentioned relevant elements. The work of TC is based on a well-established legal framework with a remote bankruptcy-typed special purpose vehicle called *universalidad*. In addition to the currently performed functions by TC, such as appointing originators and servicers, selecting loan portfolio, structuring issues, purchasing portfolio and issuing securities, following up securitized loan portfolio, and administering the special purpose vehicle, it is anticipated that TC can provide issuers with guarantees and hedges (*coberturas*) in the future. In terms of future developments, TC is planning to use for a next issuance a performance scoring which will allow a methodology for selecting the loan portfolio to be securitized; and an origination scoring which is expected to allow a more expeditious process for purchasing and storing mortgage loans. TC is also working on the establishment of a database with mortgage loan performance information – i.e., payments, pre-payments, and defaults – which is to be useful to implement a statistical portfolio management.

Box 5. Titularizadora Colombiana: a leading secondary mortgage market institution

Titularizadora Colombiana (TC) is a specialized secondary market institution established in July 2001 within the framework of the 1999 Housing Law in Colombia. Its shareholders are five mortgage banks in Colombia with the partial partnership of the International Finance Corporation (IFC). As of 2003 year end, TC had completed four securitization deals totaling US$720 million, having securitized about 15% of the outstanding mortgage portfolio in Colombia. By the time of the Roundtable, TC was about to complete a non-performing mortgage-backed securitization deal, which was successfully marketed in May 2004, totaling about US$150 million. Yield at the time of issuance was lower from one deal to the following, showing a growing confidence and acceptance by investors. TC is currently the biggest private debt-instrument issuer in Colombia and the biggest mortgage-backed securities issuer in Latin America.

The experience of TC shows a number of benefits derived from securitization, including generating additional funding for mortgage lending, controlling maturity and interest rate risks for mortgage originators, increasing return rate for originators, lessening new capital requirements, improving mortgage standardization across the industry, fostering the development of capital markets, and diversifying investment portfolios, all of them with a minimal intervention of the State. The achievement of other benefits – an increased competition in the mortgage industry, lower interest rates, more stability in the mortgage activity, and an increased specialization – is expected in the future. Some major challenges to be faced by TC include to accomplish securitization deals equivalent to 40% of outstanding mortgage loans in the next five years; to make further progress in non-performing mortgage-backed securitization; to make securitization profitable enough with no need of tax privileges which are only temporal; and to securitize social housing-oriented mortgage portfolios for informal sectors. Broadly speaking, the experience of TC in developing a secondary mortgage market is quite illustrative as regards the importance of the fundamentals previously explained: a robust primary mortgage market, an appropriate legal and regulatory framework, a fairly developed capital market, standardization (of mortgages and securities) across the industry, and an initial commitment and support by the State.

[27] See again Alberto Gutiérrez (2004), *op. cit.*

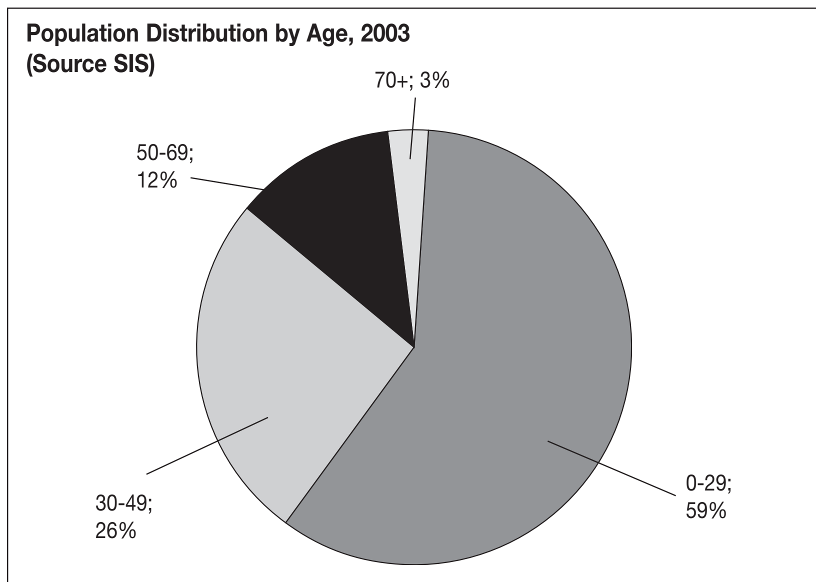
Housing Finance Practices and Development of a Secondary Mortgage Market in Turkey

By Onur Özsan, Director, Oyak Konut[1] and
Cem Karakas, EVP, Oyak Konut[2]

1. INTRODUCTION

Turkey, being one of the largest economies of the World, still lacks an appropriately functioning housing finance system. In the last couple of years there has been increased awareness in the public and private circles for the urgent need of cultivating a system that would alleviate the shortfalls in the Turkish economy in the housing finance front. Nonetheless, Turkey has to act swiftly to reverse the opportunity costs it has incurred to date due to the lack of such a system.

Inadequate urban planning, illegal urbanization, and chronic shortage of metropolitan residential units have produced the dominant conundrum in the Turkish real estate market. The policy choices adapted to date have been ill advised; consequently more than half of the dwelling stock in Turkey is not properly licensed. A chronic shortage of funds channeled to the housing finance market left about 40% of the existing housing stock in need of renovation. These are all inhibiting factors for an appropriately functioning housing finance system, yet they also create an immense demand for such. Given the market characteristics and existing infrastructure, Turkey is set to be one of the largest housing finance markets among the emerging economies.



Recent developments in the Turkish economy have created a better environment for longer-term debt and investment tools. As the government's domestic debt requirement diminishes, investors are seeking alternative tools with reasonable risk grades. Mortgage backed investment instruments have gained significant popularity in Turkey within the last 10 months. These instruments will also foster home ownership rates among the less-served households. In order to create the appropriate regulatory environment for such a market, the government has drafted a bill which would amend certain laws in order to minimize the regulatory impediments against a robust mortgage market in Turkey. Although regulatory developments are very important, they should be coupled with low inflation and interest rates and a stable macroeconomic environment.

This paper discusses the existing primary home loan market practices, the regulatory

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infrastructure, the need for a secondary market and the impediments, and the developments in housing finance market in Turkey.

2. DEMOGRAPHICS

a. Population Characteristics
As per 2003, the population of Turkey amounts to 72 million with an annual growth rate of 1.8%. The age distribution of the population signals a significant future need for new housing that would vastly surpass the levels required in the past. Approximately 60% of the population is below the age of 30. The trend towards diminishing household sizes is yet another factor that further imbalances the supply-demand equilibrium.

b. Household Income and Affordability of Housing
Income is distributed relatively unequally in Turkey where the wealthiest 20% of households receive over 50% of the income generated in Turkey. Urban households constitute only about half of the population, but earn nearly 75% of the income. This uneven income distribution signifies the fact that Turkey, being a large country in terms of population, is inhabited by a segment that is as wealthy and as large as many developed countries around the world. Annual household incomes per quintiles are given below in Table 1.

c. Dwelling Stock
Due to the earthquake in 1999 and economic crises in 2000 and 2001, housing production has significantly declined. There were two main reasons for the sharp drop in housing production figures; first of all the government temporarily ceased issuing construction and occupancy permits and secondly purchasing power of nearly 80% of the population diminished significantly.

The total number of housing units as of 2004 June is estimated to be above 17 million. This number, however, includes summer homes, second homes, and shantytowns. Hence, when analyzed in conjunction with the demographic data, there appears to be growing demand for quality housing units at an affordable price that will continue well into the future. This would add up to the existing metropolitan housing shortage of approximately 1.5 million units.

d. Home Ownership
In 2003, there were 16,070,093 households in Turkey. The most updated statistic (2000 census data) suggests that 68.2% of the total households are homeowners (10,959,803 households). 23.9% of them are leaseholders, 2.1% of them live in government housing and 4.9% of them are neither leaseholders nor own their houses. Culturally, home ownership is the most adopted means of investment. Socially, Turkish families tend to be homeowners rather than being tenants. Since institutional housing finance mechanisms do not exist, home ownership is financed mainly through family resources. Both these similar longitudinal data and other demographic analyses indicate that the typical tendency towards home ownership is disturbed towards tenancy mainly due to the lack of adequate financial structures to foster homeownership.

3. PRIMARY MARKET PRACTICES

Mortgage lending in Turkey has been mainly limited through a chronically high inflation rate and resulting high real interest rates. The high domestic debt requirement of the Turkish Treasury and adversely high interest rates offered by domestic debt instruments causes a crowding out effect in the secondary bond market. This phenomenon indirectly affects the cost of funds available for mortgage lending and inhibits growth of retail banking in general.

There is a need to provide predictable take-out financing to help spur housing production. An unintended effect of an inadequately functioning primary mortgage market is that it affects the willingness of developers to construct homeownership units, which over time, can lead to a shortage of housing units, particularly at the more affordable price points. Construction companies and developers build housing units that they know they can sell. Having a predictable source of mortgage finance, which potential homebuyers can access to purchase new units from homebuilders, helps homebuilders to construct housing.

Most homeowners in Turkey had to procure their home without resorting to mortgage lending. Less than 1% of the households had an outstanding mortgage balance. Mortgage debt outstanding was a mere

Table 1 Annual Household Income by Quintiles, 2002/03 (Source: SIS)

Quintiles	Turkey		Urban		Rural	
	2002	2003	2002	2003	2002	2003
Total	100.0	100.0	100.0	100.0	100.0	100.0
1st	5.3	6.0	5.5	6.1	5.2	6.4
2nd	9.8	10.3	9.7	10.3	10.3	11.0
3rd	14.0	14.5	13.9	14.5	14.7	15.0
4th	20.8	20.9	20.5	20.8	21.7	21.2
5th	50.1	48.3	50.4	48.3	48.0	46.3
GINI Coefficient	0.44	0.42	0.44	0.42	0.42	0.39

0.224% of the GDP in 2003, a record for the Turkish mortgage lending industry. This compares to 71% in the US and 45.7% in EU.[1]

A McKinsey and Company study claims that the mortgage market in Turkey could reach USD $20-$30 billion over time: based on a top down comparison, if Turkey's mortgages/GDP reaches 4 to 5 percent similar to other emerging countries, the mortgage market could reach US $20 -$25 billion, or alternatively based on a bottom-up estimation, if the private rental ratio drops to European levels through mortgage financing, the size of the market could reach US $25-$30 billion."[2]

The mortgage lending activity through the retail banks is illustrated in Table 2 below.

Although the target market for mortgage lending activities is assumed to be middle income families, outstanding mortgage loan amount per person suggests that these persons are mainly upper level income families. In other words, families with some amount of wealth accumulated for downpayment can receive adequate funds towards home ownership. The families in need of funds for home ownership are not able to participate in the demand side of the market as they are seldomly capable of getting involved in housing transactions. As mentioned above, such families are either tenants, live in a family-financed dwelling or in illegal dwellings.

Since lenders have to bear high risks caused by duration mismatch and do not have the means of hedging it properly, they target families with lower risk profiles. This behaviour leaves a wide segment of families underserved. This group is targeted by governmental agencies to a very limited extent but this approach is far from being adequate.

Lenders, mainly commercial banks, disburse loans at branch level. Branches take the application, conduct the real estate appraisal, check for borrower risk and underwrite the loan. Servicing could be done by any other branch of the same bank regardless of having done the origination or underwriting.

a. Products

Lenders extend loans to borrowers who wish to purchase a single-family detached/semi-detached/apartment style home. The lenders generally rely on the appraisal company's determination of the eligibility of the property subject to transaction. Some lenders have their own staff to do the appraisal.

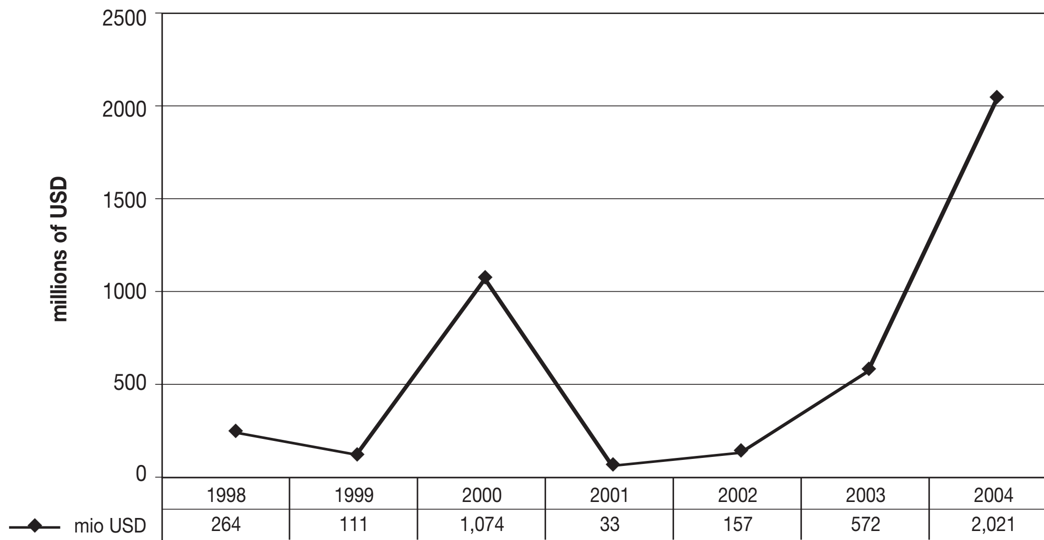
The lenders offer a combination of Turkish Lira (TL) – denominated, and either dollar, or, Euro denominated home loans. The most popular products are fully-amortizing 36-month and 60-month loan products, although lenders will utilize pricing as a way to discourage the use of the 60-months. The average life of a typical mortgage loan

Table 2 Mortgage Lending Through Retail Banks (Source TBA)

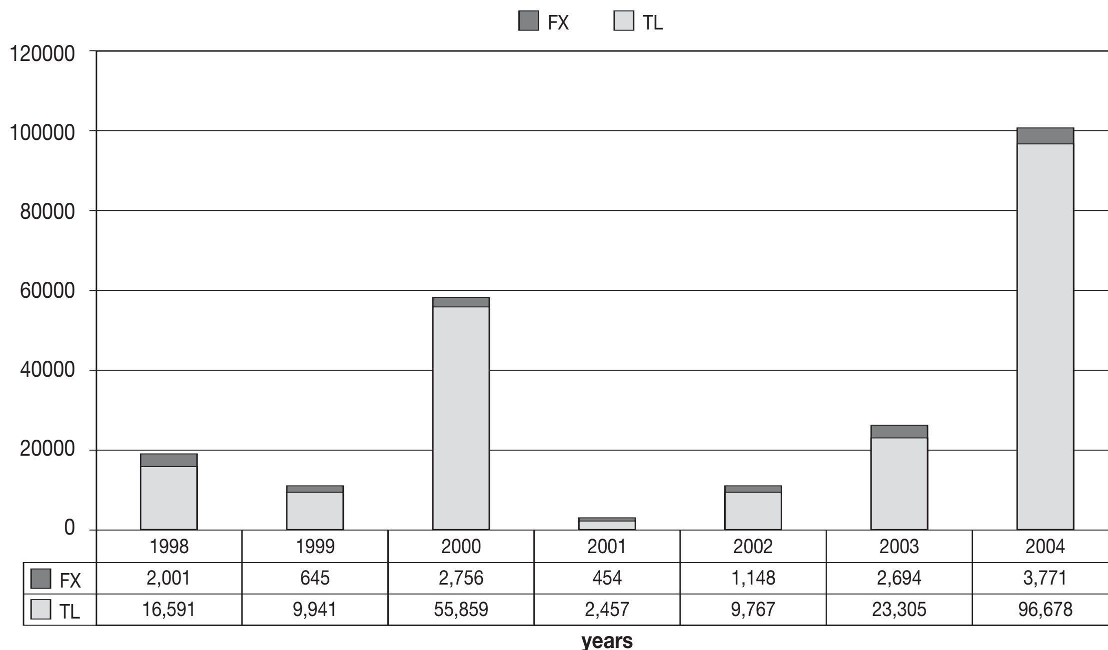
Years	Currency Denomination	Number of Home Loans	Extended Loans (US$)	Outstanding Loans (US$)
1998	**TL**	16,591	166,008,071	107,652,583
	FX	2,001	97,833,177	88,185,452
	Total	**18,592**	**263,841,249**	**195,838,035**
1999	**TL**	9,941	70,375,791	67,687,305
	FX	645	40,668,731	73,100,092
	Total	**10,586**	**111,044,522**	**140,787,397**
2000	**TL**	55,859	828,907,297	737,521,548
	FX	2,756	245,605,886	172,589,861
	Total	**58,615**	**1,074,513,184**	**910,111,409**
2001	**TL**	2,457	12,231,509	190,936,807
	FX	454	21,015,410	53,080,172
	Total	**2,911**	**33,246,918**	**244,016,979**
2002	**TL**	9,767	80,697,328	104,490,789
	FX	1,148	76,402,961	82,309,618
	Total	**10,915**	**157,100,288**	**186,800,407**
2003	**TL**	23,305	371,117,673	384,126,263
	FX	2,694	200,710,287	188,287,412
	Total	**25,999**	**571,827,960**	**572,413,675**
2004	**TL**	96,678	1,658,601,341	1,477,227,273
	FX	3,771	362,733,234	340,280,924
	Total	**100,449**	**2,021,334,575**	**1,817,508,197**

[1] European Mortgage Federation, 2003

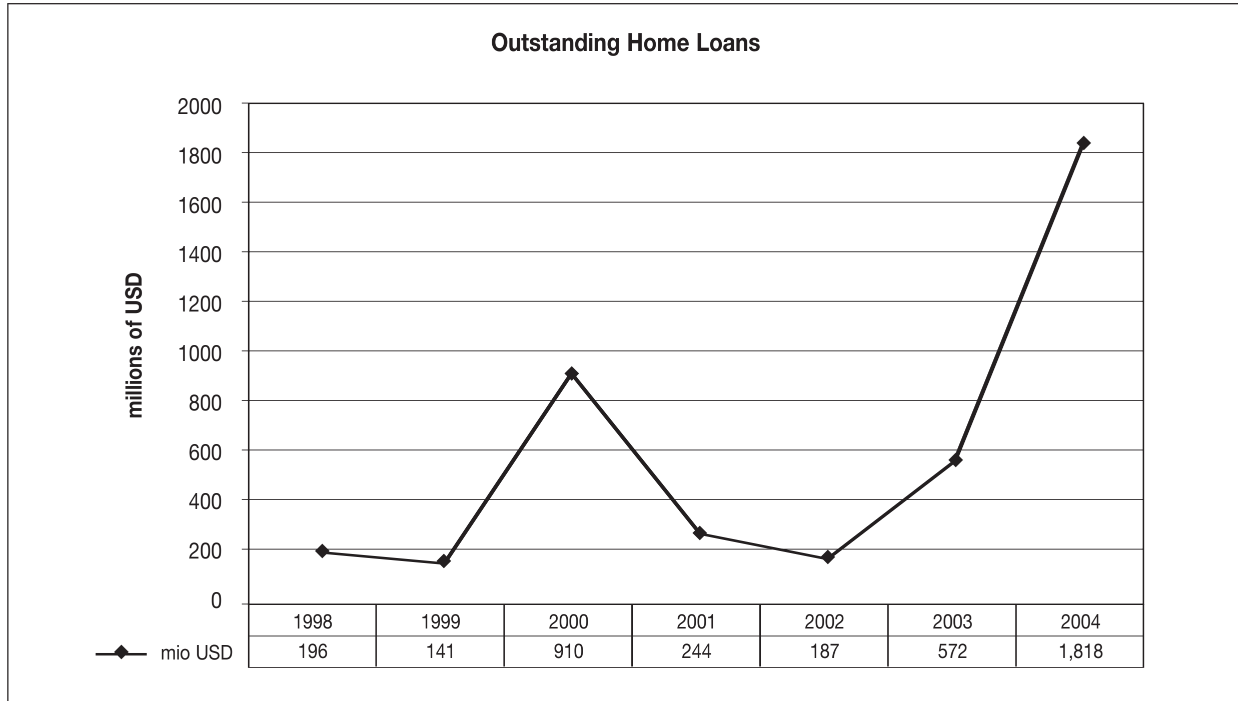
[2] "Residential Construction Report-2002." McKinsey Global Institute



	1998	1999	2000	2001	2002	2003	2004
mio USD	264	111	1,074	33	157	572	2,021



	1998	1999	2000	2001	2002	2003	2004
FX	2,001	645	2,756	454	1,148	2,694	3,771
TL	16,591	9,941	55,859	2,457	9,767	23,305	96,678



is as short as 24-36 months due to prepayments.

Mortgage lending has been limited for a number of reasons. First, lenders are limited to providing only fixed-rate mortgages under the Consumer Law, which requires a lender to provide a borrower with the exact amount of monthly loan installments through the life of the mortgage. This requirement, in effect, prohibits the origination of adjustable-rate mortgages (ARMs). While such loans can contribute to a high default rate when rates rise, particularly with lower-income borrowers who cannot absorb the payment shock, ARMs are often used in economies like Turkey, which have had high-inflation rates. In an effort to meet market demand for ARMs, Turkish banks have been extending foreign exchange denominated loans with longer terms and better interest rates, simply because they are not allowed to extend ARMs in TL; however, this results in sizable foreign exchange liabilities being carried on their balance sheets. Foreign exchange denominated loans are quite welcome by upper level families, given a generally higher level of financial sophistication, but are not ideal for those of lower income who may not be as financially sophisticated.

Macroeconomic conditions, such as those resulting from the 2000 and 2001 crises, have had a limiting effect on mortgage originations, as can be seen in Table 3 below. High inflation rates during those crises resulted in the purchasing power of

Table 3 Current Monthly Mortgage Interest Rates (Source: Akbank, Oyakbank, HSBC, Garanti, Isbank)

	Akbank		Oyakbank		HSBC		Garanti		Isbank	
Term (years)	FX	TL	FX	TL	FX*	TL	FX	TL	FX	TL
1	0.70	1.60	0.70	1.55	0.74	1.95	0.70	1.65	0.70	1.55
2	0.70	1.60	0.70	1.70	0.74	1.85	0.70	1.65	0.75	1.55
3	0.70	1.60	0.75	1.70	0.74	1.65	0.70	1.65	0.75	1.55
4	0.75	1.60	0.75	1.70	0.74	1.65	0.75	1.65	0.80	1.55
5	0.75	1.60	0.75	1.70	0.74	1.59	0.75	1.65	0.80	1.55
5+	0.75	1.60	0.80	1.65	0.74	1.59-1.55-1.49	0.75	1.60	0.80	1.55

* There is no constant data for FX loans disbursed by HSBC. It is stated that the rate varies according to the loan amount. 0.74 is the average.

nearly 80% of the population being diminished significantly. And, because lenders are limited to originating fixed rate mortgages, they will only originate short-term mortgages only. Terms have very recently extended to 8-10 years (table 3). Lenders still seem to be serving the mortgage needs of upper income households, as families of lower income need longer repayment periods to make a mortgage affordable.

Mortgage lending has also been limited because there is no source of liquidity. Lenders are funding mortgage loans from their deposit base, and have a fundamental mis-match between assets and liabilities. Without a functioning secondary mortgage market, mortgage lenders limit their mortgage lending.

Although the maturities promoted by lenders are quite similar, there is a significant difference in interest rates. The interest rates on home loans of the largest mortgage lenders at the time of writing are provided in Table 3. Mortgage loan rates in Turkey are quoted on a monthly basis.

b. Servicing

There are multiple ways that home mortgage borrowers may repay their mortgages: via a branch, via a direct debit to their bank account, or other electronic means. At time of closing, the borrower receives a repayment schedule from the lender. It is important to note that the default history throughout many lenders is minimal, i.e. less than 1%. They sustain minimal losses to date on their mortgage lending operations, even during the crises.

c. Auxiliary Elements

For an effective mortgage market, there must be well-developed support professions that provide reliable third-party information and services to the lenders and potential homebuyers, as well as well-formed information networks, such as associations.

i. Consumer Risk

There are two main external sources of credit risk information in Turkey: The Central Bank of Turkey and Consumer Credit Bureau (KKB). Independent of the data acquired from these institutions, most of the lenders utilize their internal credit scoring systems.

Lenders also utilize certain ratios to ensure that a loan applicant's income is enough to pay the mortgage.

If the Consumer Credit Bureau/Central Bank reports are negative, the borrower has insufficient income or insufficient funds for down payment, the applicant may be denied. The Central Bank is a provider of bad credit information, where KKB offers a range of products including good and bad data of the consumer.

According to the KKB, all major banking institutions are members of the KKB. The proof of this is the fact that 95% of all consumer lending in Turkey is originated using the KKB's services. Currently, there are approximately 45 million records in the KKB's database

ii. Real Estate Appraisal Services

The real estate appraisal industry within Turkey is growing. There are currently more than 100 licensed appraisers in Turkey. The role of an appraiser is to provide a reliable estimate of the value of a property that serves as the loan's collateral. However, there is not much available data for an appraiser in Turkey to work with, as there is currently no computerized database of real estate sales prices. An appraiser inspects and investigates the subject property (for example, outstanding liens; other debt owed, such as water, sewer, or real estate taxes; and zoning issues), as well as derives valuation information from a wide variety of sources, including their own data files, property listings, and brokers or agents who are specialized in specific areas, districts, or neighbourhoods. Historical data is generally not reliable - depending upon the neighbourhood and the economic climate, (e.g. three month old data may be considered to be "old"). As a result, approximately 80% of an appraiser's work is "done on the street" because there are no computerized records.

Loan to value ratios (LTVs) are applied to the appraised value of the real estate property. Some lenders have their in-house appraisal staff and some outsource this service. In the case of in-house appraisal services, the valuation is done quite conservatively. However, LTVs in these cases go as high as 85-90%, where the in-house appraisal value is lower than the market levels. On the other hand, the majority of lenders outsource this service to certified real estate appraisal companies. In these cases, LTVs are around 60-75% depending on the lender.

iii. Insurance Services

Hazard and Earthquake Insurance is required by all lenders. This has been a requirement since 1999 and is provided by Turkish Catastrophe Insurance Pool (TCIP). TCIP takes the first loss position and private insurers take the second loss position. The annual premiums due to TCIP are collected by private insurance companies from the home owners and then forwarded to TCIP. Earthquake insurance rates are not fixed. They are determined according to the type of dwelling and the earthquake zone it is in.

Most of the lenders require that the borrower have in place a life insurance policy that would remain in effect over the term of the mortgage. Such a policy would help to cover the full repayment of the loan in the event of borrower's death. Such policies seem to be available for only one-year time horizons, even though most mortgages terms exceed one year. Hence, borrowers must renew their policy annually (at least during the term of the loan).

Private mortgage insurance services are not prevalent in Turkey. Extensive studies already conducted suggest that there is no urgent need for mortgage insurance as this will increase the cost of funds for borrowers.

Title registry offices are by far the most robust governmental institutions in Turkey. Studies conducted by banks suggest that over the last thirty years there had been only a few cases of faulty registrations, and those were due to fraud. In addition, most of the lenders re-check the building and land registries before closing on a mortgage

loan. Therefore, there is no need for title insurance.

d. Key Government Participants in Housing Finance

In Turkey, there are a number of governmental agencies that have roles in the housing finance system. The key agencies are the Housing Development Administration ("HDA") and the Capital Markets Board ("CMB"). Additional regulatory agencies that have also an impact on the housing finance system include the Banking Regulation and Supervision Agency ("BRSA"), the Ministry of Finance, the Treasury, and the Central Bank.

Currently there is a draft being discussed at the parliament about establishing a secondary market institution that would buy outstanding mortgage portfolios which conform to standards of this institution, from the lenders in order to provide liquidity to the market. This act also suggests certain tax incentives and provisions from some laws such as foreclosure law. Ill-functioning foreclosure law is one of the biggest impediments towards a robust mortgage-lending program. In Turkey, foreclosure on properties of defaulted borrowers can take as long as four to five years. With the envisaged implementation of a foreclosure law coupled with a new consumer protection act, the government hopes to eliminate certain impediments and define the standards of "conforming" mortgage loans These acts are expected to provide the long expected standardization of the primary mortgage market besides liquidity.

3. Legal and Regulatory Infrastructure

a. Title and Lien Registration

Well-established property registration and foreclosure laws are essential for successful implementation of a mortgage lending system and these exist in Turkey. Currently, lien records are kept locally, at the Title Registry Office that covers the area where the property is located. In most cases, entries are made by hand. The real estate transaction is first recorded in the log journal, which keeps records of the date of the transaction. In this context, the Title Registry Office directory is the official file of the transaction. Since the transfer of the ownership and recording of the lien is done simultaneously at the title registration office, there is very little room left for human error. If any, the state is liable for mistakes made – it is responsible for recovery of losses of an owner that have resulted from mistakes made by the State.

b. Loss Mitigation and Foreclosure

"Loss mitigation" is the process a lender undertakes to work with a borrower to find alternative payment solutions to cure a delinquency.

According to Consumer Law, for a mortgage to be in default, the borrower must have missed two consecutive payments and not responded within 7 days to the written notice sent by the lender. Banking Law requires that the bank establish a loan loss reserve for all of the borrower's outstanding consumer loans after two consecutive missed payments on any consumer loan that it has originated to that borrower. This implies that if a borrower has missed two consecutive payments on a car loan, then the bank has to establish a loan loss reserve for that loan, as well as any additional credit that the bank has extended to that borrower, for example, on the home loan, even if it has been paid on-time. This regulation creates a burden on the commercial bank by causing it to keep more reserves than are necessary for performing mortgage loans. Such regulations force banks to adopt more conservative lending guidelines.

c. Bonds and Securities

The banking system in Turkey is quite developed. Although some of the banks have extensive cross border asset securitization, none has been involved in securitization of mortgage assets primarily because of limited volume of outstanding loans. In spite of adequate laws and regulations for domestic asset backed securitization, due to poor market confidence and crowding-out caused by the Turkish Treasury, these banks choose off shore placement practices. If the conditions were in favour of such domestic placements, there would still be certain restrictions on the sale or transfer of mortgage loans from one bank to another. This situation tends to favour the use of mortgage bonds over off-balance sheet methods such as mortgage-backed securities. At present the stock market is more developed than bond and fixed-income markets.

4. EVOLUTION OF A SECONDARY MORTGAGE MARKET IN TURKEY

There are a number of reasons why a secondary mortgage market has not yet developed in Turkey. Macroeconomic conditions, paired with an inadequately development capital market, seem to be the greatest inhibitors. For example, high domestic debt requirement of the Turkish Treasury and adversely high interest rates offered by domestic debt instruments causes a crowding out effect in the secondary bond market. Hence, mortgage banks have only limited access to capital market funding for their mortgages. This phenomenon indirectly affects the cost of funds available for mortgage lending and dilutes growth of retail banking in general.

As has been previously discussed, mortgage lending in Turkey has been limited by high inflation and high interest rates – two conditions requiring the design and implementation of alternative mortgage instruments. The development of appropriate primary and secondary mortgage market financing will increase the liquidity and lending capacity of mortgage lenders, increase housing affordability, and facilitate the wealth accumulation by individual households.

Mortgage lenders in Turkey are mainly commercial banks. Funding for mortgage loans is done through savings deposits. The average term of savings deposits is less then two months. Therefore, even mortgages with 5-8 years maturity create an enormous amount of risk load on banks' balance sheets. Secondary markets will

provide the long-term funds required to disburse longer-term mortgage loans at the primary market level.

Currently there is a draft being discussed at the parliament about establishing a secondary market institution that would buy outstanding mortgage portfolios, which conform to their standards, from the lenders in order to provide liquidity to the market. The suggested secondary market entity will assume some conduit (Fannie Mae-like) functions and some other functions of FHLB, VA and German mortgage banks. This institution is expected to provide standardization to the primary market.

This act also suggests certain tax incentives and provisions from some laws such as foreclosure law. Foreclosure law is one of the biggest impediments towards a robust mortgage lending program as with the current implementation of this law coupled with the new consumer protection act, foreclosure on properties of defaulted borrowers can take as long as four to five years. By eliminating certain impediments and defining the standards of “conforming” mortgage loans, this act is expected to provide the long expected standardization to the primary mortgage market besides liquidity.

Tax exemptions, faster foreclosure procedures, exemptions from consumer protection law and some other incentives and exemptions are also defined in this draft.

Most important of all, the new draft will enable the lenders to extend ARMs despite the consumer protection act.

5. CONCLUSION

There is a tremendous expectation for a robust mortgage market to be up and running in Turkey. All the players are putting a lot of resources into this development. However, for a mortgage lending system to be as effective as it is in western economies, first of all, macroeconomic stability should be achieved. Secondly, until all the elements of a robust mortgage system is adequately in place, “mortgage lending” practices should be implemented on housing development projects as “pilot programs”. This approach would enable the lenders to create homogeneous pools of mortgages. On the other hand, minimizing the cost of land for housing development purposes through proper regulation and utilization of state owned lands would play a crucial role in making housing more affordable, at least until a robust domestic mortgage market is in place. Thirdly, a local investor appetite towards mortgage-backed bonds should increase. This appetite is expected to increase as the crowding out effect in the domestic bond market diminishes in the short run. Finally, regulatory infrastructure should be in place. In other words, in order to eliminate certain legal impediments, certain laws, such as the tax laws, consumer protection law, foreclosure law, etc have to be amended. These amendments are expected to be in effect within 2005.

Until the above-mentioned prerequisites are met and a domestic secondary market is evolved, lenders may choose to utilize funding their mortgages through cross border placements.

Buyer’s equity (down payment) plays a crucial role for affordable monthly payments. Housing savings fund systems is one of the methods to help the buyers raise equity shares. There is a law of incorporation for a housing savings fund issued by Housing Development Administration in 1995 in place without secondary regulations necessary for implementation. Housing finance through savings funds support the primary market in reaching a volume where secondary market transactions would fit the economies of scale.

Korean Mortgage Markets: Transition to Securitizations

By Seung Dong You[1]

I. INTRODUCTION

Mortgage securitization[2] is new in the mortgage markets in Korea. The Korean Mortgage Backed Securities (MBS) market has grown both domestically and abroad as a result of the expansion of the Asset Backed Securities (ABS)[3] market since the establishment of the legal framework for mortgage securitization in 1998 and 1999. The Korean government enacted new legislation to (1) further the development of the secondary mortgage market and (2) reduce financial risks in the primary mortgage market by promoting long-term mortgages. A fully government-supported Secondary Mortgage Market Enterprise (SMME) was launched, and it issued KRW[4] 3 trillion MBS in 2004. After the kick-off of offshore Residential Mortgage Backed Securities (RMBS) transactions in late 2002, three cross-border RMBS deals were successfully completed in 2004 to probe a new funding source. Moreover, the size of the Commercial Mortgage Backed Securities (CMBS) market has been increasing, and CMBS notes are being backed by cash flows from various types of real estate.

This article provides updated information on the mortgage markets and discusses the latest development in mortgage securitization in Korea. It begins with the evolution of the ABS market and recent developments in the RMBS and CMBS markets. Second, it explains the conditions of the primary mortgage market, reviews the accomplishments of the new Government Sponsored Enterprise (GSE), and provides detailed information on cross-border RMBS transactions. Third, it covers the recent development in the CMBS market and key features of CMBS, and then concludes.

II. TRENDS IN SECURITIZATION MARKETS

Legal Framework

Three acts govern the securitization business in Korea: the Asset-Backed Securitization Act (ABS Act), the Korea Housing Finance Corporation Act (KHFC Act), and the Mortgage-Backed Securitization Company Act (MBS Company Act). Under the provisions of the ABS Act, all assets including residential mortgages that create cash flows are securitized; the other Acts[5] permit securitization of only residential mortgages.

Evolution of the ABS Market

The ABS market has steadily been evolving since its establishment under the financial corporate restructuring promotion plan initiated in 1998. The demand for Collateralized Bond Obligations (CBOs) and Collateralized Loan Obligations (CLOs) was high immediately after the enactment of the ABS Act for the purpose of disposing of the enormous burden of Non Performing Loans (NPLs) at banks; from 1999 to 2001, KRW 17.7 trillion in primary CBOs and CLOs were issued, and KRW 23.4 trillion in NPLs were securitized. Credit card ABS was the predecessor of CBOs and CLOs and accounted for nearly half of the volume in the ABS market; in 2001 and 2002, credit card ABS accounted for 47% of the KRW 90.7 trillion in ABS issued. However, the sudden increase in ABS issuance has given rise to side effects such as a deterioration in asset quality. Thankfully, a new product, auto loan ABS, held up well amidst the turmoil in the credit card sector (Hani and Batchvarov 2004 p. 31), and the real estate backed securities notes have emerged in

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[2] Securitization is the process of pooling and repackaging residential or commercial mortgage loans originated in the primary mortgage market into securities that are sold to investors in the secondary mortgage market.

[3] According to S&P, in 2003 Korea accounted for 82% of the overall Asian securitization market, excluding Japan and Australia. Meanwhile, according to the database of Merrill Lynch, Korean ABS accounts for nearly 60% of offshore Asian ABS issuance volume. (Hani and Batchvarov (2004. p.3)

[4] KRW 1,008 = USD 1 as of March 3, 2005.

[5] The MBS Company Act was enacted in January 1999, and the KHFC Act passed the National Assembly on December 23, 2003. The KHFC Act states that the mission of KHFC is to contribute to the development of the national economy and to promote the housing welfare through the long-term and stable supply of housing funds through securitization in such forms as mortgage-backed securities and the credit guarantee business. The ABS Act was enacted in September 1998.

Table 1 ABS New Issuance

(Unit: KRW trillion)

Year	1999	2000	2001	2002	2003	2004
ABS (% Change)	6.8(-)	49.4(629.3)	50.9(3.1)	39.8(-21.8)	39.9(0.1)	27.0(-32.3)
(Factoring Companies)	1.7	6.1	21.5	28.1	19.2	8.5
No. of Issuance	32	154	194	181	191	170

Source: Financial Supervisory Services (FSS)

Table 2 RMBS Issuance

(Unit: KRW billion)

	Domestic		Cross-Border	Total
	KHFC(KoMoCo)[1)]	Others[2)]		
2000	1,279	377	-	1,656
2001	743	477	-	1,220
2002	528	12	411	951
2003	327	-	-	327
2004	3,016	-	2,031	5,047
total	5,893	866	2,442	9,201

Source KHFC, FSS

Note 1 KHFC manages the trust accounts that were originally established by KoMoCo.
2 New State Capital and WooRi Capital issued RMBS under the provisions of the ABS Act.

the market as well. Although the ABS market has contracted since 2002, new types of assets such as receivables of airfares, steel, oil, and internet service fees are slated to be securitized. Table 1 shows the outstanding volume of newly issued ABS from 1999 to 2004.

Recent Developments in the RMBS Market

The RMBS market has experienced two major changes since its inception in 2000. First, the Korea Housing Finance Corporation (KHFC) was established in March 2004 and wholly owned by the Korean government. It was created through a merger with the first government and private MBS joint venture, Korea Mortgage Corporation (KoMoCo), which completed nine MBS transactions totaling KRW 2,877 billion. Second, the first offshore securities backed by Korean residential mortgages were issued in December 2002, and three transactions followed in 2004.

After introducing long-term fixed-rate mortgages with maturities up to 20 years, KHFC issued KRW 3 trillion RMBS in 2004 as shown in Table 2. It also assumed KoMoCo's business including the right to manage KoMoCo's trust accounts in March 2004.[6] Factoring companies such as New State Capital and Woori Capital failed to issue additional RMBS after 2002 because of fierce competition with commercial banks. In a low interest rate environment, they could not accumulate an adequate volume of underlying assets for securitization because of high funding costs to originate mortgages. For the offshore RMBS transactions, Samsung Life Insurance and Korea First Bank completed four deals to explore a new funding source.

Emerging CMBS Market

The CMBS market in Korea has been growing. As the ABS market matures, institutional investors feel comfortable investing in real estate-backed products, and general contractors with low credit ratings, to whom traditional real estate lenders hesitate to originate commercial mortgages, take advantage of off-balance sheet financing. The preferential tax treatment for Special Purpose Companies (SPCs) or Project Financing Vehicles (PFVs) has encouraged increased CMBS issuance. Under the ABS Act, which governs the issuance of most CMBS products, and the Corporate Tax Act reformed in 2004, the dividends of SPC, a bankruptcy remote paper company, are deducted to estimate its income as long as it pays out at least 90 percent of its taxable income as dividends. Also, 50 percent of registration taxes and

[6] KoMoCo is in the process of liquidation after the transfer of its operations to KHFC.

acquisition taxes on real estate owned by SPC are exempt in order to promote corporate restructurings. As shown in Table 3, in 2004 the issuance volume of CMBS backed by cash flows from real estate development projects more than doubled, and 37 transactions (22 per cent of the 170 ABS deals in 2004) were completed.

III. THE GROWING RMBS MARKET

1) Primary Mortgage Market

The primary mortgage market has expanded rapidly since 1999. As shown in Table 4, the volume of outstanding mortgages at commercial banks nearly doubled from 2001 to June 2004. The low interest rates fuelled speculative demand by home buyers, and as nearly every commercial bank and other financial institution has entered the mortgage market due to the relatively lower credit risks in the primary market compared to the corporate loan market, competition between originators has been hot, to say the least.

There were previously few long-term fixed-rate mortgages available. If there were any at all, the interest rates were too high. Based on the figures in Table 5 released by the Financial Supervisory Services (FSS), more than 75 percent of mortgages have maturities of less than three years. In 2003, the maturities of mortgages were mainly less than five years: just 13.1 percent of the outstanding mortgages had maturities greater than five years. As shown in Table 5 and Table 6, most mortgages are short-term interest-only variable-rate mortgages. Banks that mobilize short-term savings to fund mortgages obviously cannot assume the risks associated with long-term fixed-rate mortgages, even though these are precisely what most borrowers prefer. According to the survey by Kookmin Bank in 2004, the average maturity of mortgages that homebuyers would choose is 10.37 years, and 67.9 percent of respondents prefer fixed rates to variable rates. In the primary mortgage market, there is indeed a great deal of unmet demand for long-term fixed-rate mortgages among Korean homebuyers.

Table 3 CMBS Issuance for Development and SOC projects

(Unit: KRW billion)

Year	2003		2004	
	No	Amount	No	Amount
Development Projects	16	735.9	37	1,624.6
SOC Projects	1	500.5	3	638.5

Source FSS

Table 4 Outstanding Volume of Mortgages at Commercial Banks

(Unit: KRW trillion, %)

	2001	2002	2003	2004.6
Outstanding Mortgage Balance	85.4	131.3	152.4	161.3
(Increase)	(-)	(53.74%)	(16.07%)	(11.67%)[1]

Source FSS

Note 1 annualized figure

Table 5 Mortgage Maturities

Years	M < 1yr	1 yr <= M < 3yrs	3 yrs <= M < 5yrs	5 yrs <= M	Total
2001	21.2 %	52.8 %	7.6 %	18.4 %	100 %
2002	18.7 %	62.6 %	6.3 %	12.4 %	100 %
2003	27.8 %	50.0 %	9.1 %	13.1 %	100 %

Source FSS

Table 6 Mortgage Portfolios of Three Major Commercial Banks as of Oct. 2004

	Fixed Rate	Variable Rate	Total
A bank	10.8%[1)]	89.2%	100%
B bank	0.2%	99.8%	100%
C bank	4.6%	95.4%	100%

Note 1 73 percent of fixed rate mortgages are mixed forms of fixed and variable rate mortgages

2) Korea Housing Finance Corporation

Establishment of Secondary Mortgage Market Enterprise

This new government-owned entity was established to facilitate the provision of mortgages on a long-term and stable basis, thereby helping increase social welfare and furthering the development of the national economy. The SMME is positioned similarly as GSEs in the US, the Canada Mortgage Housing Corporation, or the Hong Kong Mortgage Corporation. Table 1 summarizes KHFC's median-to-long-term effects on the national economy. To raise public confidence, the SMME is chartered by a more favourable act than the MBS Company Act. Perhaps most importantly, the government and the Bank of Korea wholly financed the capital funds of the GSE. The main business line of this new entity, the successor of KoMoCo, is purchasing mortgages to securitize them up to 50 times its equity capital under its guaranteed MBS program. Other lines of business are its mortgage portfolio business, issuance of Mortgage Backed Bonds (MBBs), and providing credit to lenders to support mortgage origination.

Securitization Commitment Program and Eligible Mortgages

KHFC completed seven RMBS transactions totaling KRW 3 trillion from June to December 2004. To issue MBS and promote origination of eligible mortgages, it developed a unique securitization commitment program. Under the program, KHFC provides participating lenders with underwriting guidelines, including mortgage terms and standard loan documents.

Eligible mortgages are designed to promote home-ownership, stabilize the primary mortgage market, and allow issuance of long-term MBS. The standard maturity is 20 years, though 15-year or 10-year maturities are also available. They are standard fixed-rate mortgages with an optional one-year grace period. Prepayment is permitted on them with penalties of 2.0 percent of the remaining balance if the mortgage is prepaid within the first one-year, 1.5 percent if repaid within the following two years, and 1.0 percent if repaid within the next two years. No penalties apply after five years. Based on the guidelines of the FSS, eligible

Chart 1 Overview of KHFC and its Mid-to-Long-term Effects

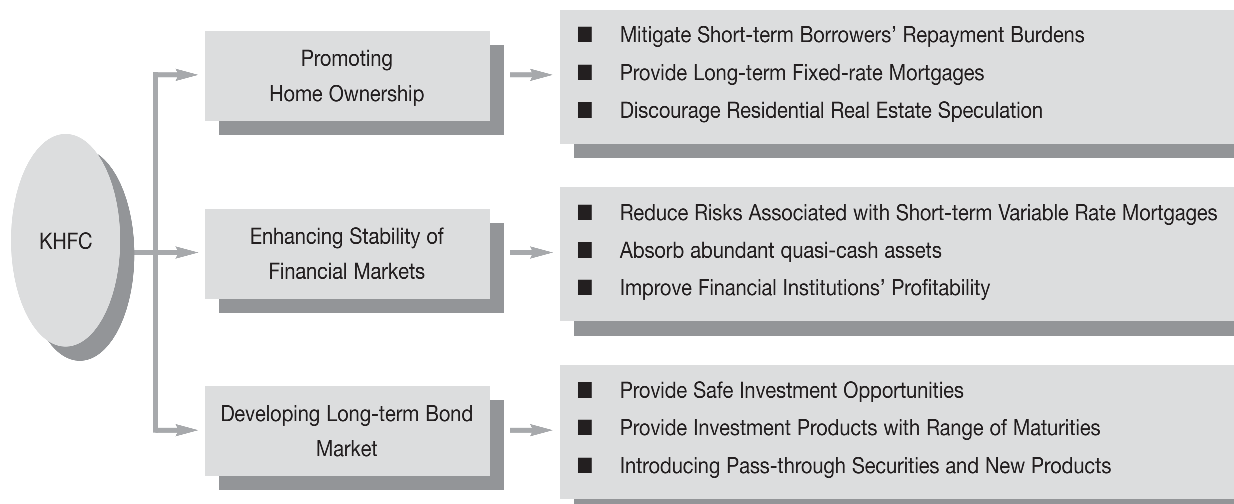


Table 7 Characteristics of KHFC Mortgages Originated in 2004

Avg. mortgage amount	69 million	Avg. House price	125 million
Avg. Mortgagee's Age	38.2 yrs	Avg. Borrower income	28.2 million (per annum)
Avg. LTV ratio	59%	Seoul Metropolitan Area	64.8%

Source: KHFC

Table 8 Bond Origination by Maturity in 2004

(Unit: KRW trillion)

Maturity	Total Bonds		Major Bonds[1]		MBS	
M < 5 yrs	273.0	77.5%	163.2	77.7%	0.53	17.4%
5 yrs <= M <10 yrs	57.4	16.3%	30.6	14.6%	1.23	40.8%
M>=10 yrs	21.7	6.2%	16.3	7.8%	1.26	41.8%
Total	352.1	100.0%	210.1	100.0%	3.02	100%

Note 1 Monetary Stabilization Bonds, government bonds, and municipal bonds

mortgages under the KHFC program have an LTV of 70 percent. However, mortgage lenders are required to cap their lending at 60 percent LTV. The mortgage rate is a single base rate (5.95 percent as of March 2005) determined by KHFC for every qualified borrower.

Contributions to the Korean Finance Market

KHFC has laid the foundation to upgrade the mortgage market by proposing innovative fixed-rate long-term mortgages in the primary mortgage market and by providing long-term MBS in the secondary mortgage market.

In the primary mortgage market, KHFC was issuing mortgages via twenty-one originators as of March 2005, rather than buying mortgages already held by financial institutions in their portfolios. It provides the standard underwriting guidelines and asks partner originators to review the parameters, as some did not examine them before. For example, KHFC considers the borrower's income a key factor because it applies ratios of maximum Debt to Income (DTI)[7]. Before the establishment of KHFC, most originators did not review the borrower's income because mortgages were heavily collateralized. With sound collateral, originators did not always need to apply very stringent underwriting criteria because they could realize additional income in the form of charges for defaults on loans or late payments. Furthermore, after working with KHFC, several originators began to originate a fully amortization basis mortgage product.

In 2004, KHFC sold KRW 3.3 trillion in mortgages to 47,841 households. It is meeting much of the unmet demand of middle-income homebuyers, as shown in Table 7. The average age of KHFC's mortgagors is 38.2, and the average mortgagor's income is KRW 28.9 million, somewhat less than the average Korean household's income of KRW 36.68 million based on the survey of Kookmin Bank in 2004.

In the secondary mortgage market, KHFC issues long-term securities, helping to develop the long-term bond market. In 2004, MBS held a 5.8 percent market share of the market for bonds with maturities of more than 10 years, as shown in Table 8. In the Korean bond market, where bonds with maturities of more than five years are considered long-term, 82.6% of KHFC MBS are long-term securities with maturities of more than five years, whereas 22.5 percent of bonds are long-term. As shown in Chart 2, most types of institutional investors put fresh money in MBS.

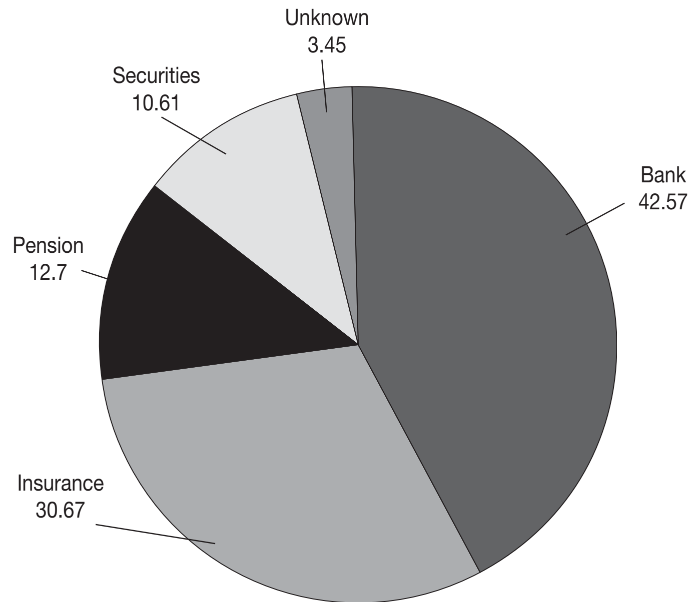
3) Cross-Border RMBS Transactions

Four cross-border securitization transactions of Korean residential mortgages were completed from 2002 to 2004. As shown in Table 9, Samsung Life Insurance Co., Ltd issued the first KRW 411 billion RMBS in December 2002, and Korea First Bank securitized KRW 2,031 billion in residential mortgages three times in the global market in 2004. To enjoy the legal protection of the ABS Act in Korea, the four securitization plans were registered on the Financial Supervisory Commission registration system (http://dart.fss.or.kr).

[7] Two DTI ratios are considered for decisions on the mortgage amount.
1) DTI1 = {(Monthly Principal & Interest Payment Amortized) / (Monthly Income)}
2) DTI2 = {(Monthly Principal & Interest Payment Amortized + Estimated Interest Payment* Amortization of Other Debts) / (Monthly Income)}

* Estimated Interest Rate = Weighted Average Loan Interest Rate published by the Bank of Korea

Chart 2 Institutional Investors of KHFC MBS in 2004 (Unit: %)



Source: KHFC

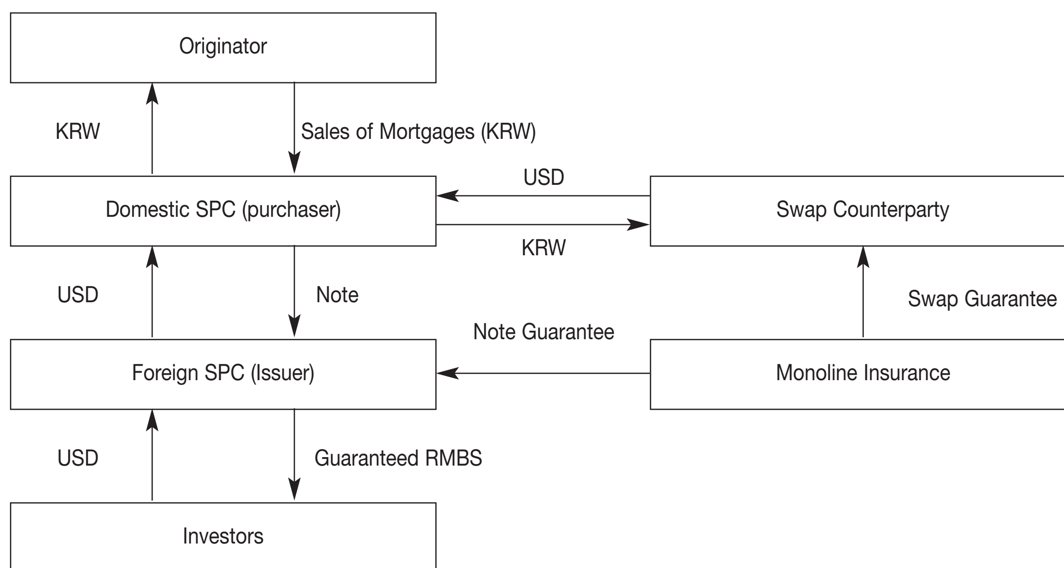
Table 9 Summary of Cross-Border RMBS Transactions

(Unit: KRW billion)

		Samsung Life Insurance Co., Ltd	Korea First Bank		
			1st	2nd	3rd
Date		2002.12.10	2004.3.29	2004.7.29	2004.12.6
Amount	Senior	364.0	588.1	378.1	787.1
	Junior	-	90.0[1]	-	-
	Sub	47.0	23.1	76.8	87.5
	Total	411.0	701.2	454.9	874.6
No of Mortgages		15,525	18,067	9,758	11,073
Type of Mortgages	Fixed	-	7.6%	2.1%	-
	Variable	100%	43.4%	63.9%	100%
	Others	-	49.0%	34.0%	-
	Total	100%	100%	100%	100%
Type of Underlying Assets	Apartments	96.6%	95.7%	95.2%	92.8%
	Others	3.4%	4.3%	4.8%	7.2%
	Total	100%	100%	100%	100%
Servicer		Samsung Life Insurance Co., Ltd	KFB	KFB	KFB
Sub Servicer		Korea Development Bank	Kookmin Bank	Kookmin Bank	Kookmin Bank

Note 1: Three junior tranches with different maturities

Chart 3 Cross-Border RMBS Transaction Diagram



The cross-border RMBS deals were pooled by mortgage loans of high quality. The underlying assets are first liens and mortgages on mostly apartments that 75.7 per cent of future homebuyers hope to buy, according to the Kookmin bank survey in 2004.

The high credit rating of structured financial products in the international bond market allowed the financial company to offer low rates. Moody's, for example, rated the Samsung Transaction Aaa[8] and the KFB transactions Aa3[9], although it assigned A3 to Korea's Sovereign rating. Four US dollar deals of Korean RMBS were structured with LIBOR-indexed coupons. The LIBOR has historically been lower than any other index rates in Korea. In addition, originators could build good reputations for their innovative financial products in the domestic and foreign bond markets.

Table 10 Issuance of CMBS backed by Equitable Mortgages and Construction Loans

(Unit: KRW Billion)

Year	No	Underlying Assets	Senior	Junior	Total
1999	1	Equitable Mortgages	190.0	37.8	227.8
2000	1	Equitable Mortgages	17.9	-	17.9
2001	8	Equitable Mortgages			
		Construction Loans	827.0	31.6	858.6
2002	17	Equitable Mortgages			
		Construction Loans	1,136.0	12.4	1,148.4
2003	22	Equitable Mortgages			
		Construction Loans	1,158.9	1.5	1,160.4
Total	49		3,329.8	83.3	3,413.1

Source: Lee and Jung (2004) p. 30

[8] S&P rated this deal AAA.

[9] Moody's rated Korea First Bank Baa3.

Nonetheless, as shown in Chart 3, the financial companies must deal with several disadvantages from structural features such as swap costs to mitigate currency and interest rate mismatches, guarantee fees on interest and principal payments of notes to international monoline insurance companies, and several expenses incurred through cross-border transaction structures. Additionally, the senior notes are protected by ample subordination as well as reserves.

IV. DEVELOPMENT OF THE CMBS MARKET

CMBS is securitization of mortgages backed by commercial real estate (Fabozzi(2001), p.1). The volume of the CMBS issued by general contractors (usually construction companies in Korea) with low credit ratings is increasing due to the limitations they experience issuing corporate bonds (Lee and Jung, p. 30). As the structure of CMBS in Korea is similar to that of ABS and is designed for the purpose of funding land costs or initial construction costs during the construction period, CMBS would be considered a sort of project-financing vehicle. Most CMBS notes in Korea are backed by equitable mortgages[10] or construction loans. CMBS backed by equitable mortgages is considered a security of high quality because equitable mortgages are expected to produce stable cash flows. The cash flows of equitable mortgages come from those who buy the apartments or the buildings under construction, whereas the general project-financing vehicle is backed by incomes generated after the completion of the project. Another popular underlying asset of CMBS is the construction loan generated by commercial banks. After the first equitable mortgage CMBS transaction of Hyundai Development Company in 1999, KRW 3.4 trillion in CMBS backed by equitable mortgages and construction loans was issued from 1999 to 2003, as shown in Table 10.

As the maturities of CMBS generally do not exceed the construction period, they are much shorter than those of ABS; construction projects usually are completed within two or three years. In comparison with other structured financial products, the volume of CMBS transactions is small. The average volume of CMBS transactions was KRW 67.6 billion in 2002 and KRW 52.7 billion in 2003, whereas that of ABS transactions was KRW 220.0 billion and KRW 208.8 billion, respectively.

CMBS notes are issued in the domestic and international markets, and are denominated in US dollars as well as Japanese yen, depending on the funding needs. New vehicles such as Asset Backed Loans (ABL) and Asset Backed Commercial Papers (ABCP) and master-trust[11] structured CMBS are being introduced to maximize the benefit of the sophisticated real estate structured products in the CMBS market.

V. CONCLUSION

The Korean MBS markets are expected to continue to grow. A thriving RMBS market will greatly facilitate the continued development of the Korean financial markets, including especially the long-term bond market. One of the main objectives of establishing KHFC was to shield the primary mortgage market from systemic risks stemming from the increased issuance of short-term variable-rate mortgages. Up to the present time, commercial banks have led the structural change in the primary mortgage market, and banks have tried to keep profitable mortgages in their own portfolios rather than transfer them to the secondary mortgage market through an SMME such as KHFC or KoMoCo. However, competition between commercial banks will cause originators to sell their mortgage assets in the secondary mortgage market in the near future. Obtaining these mortgages from commercial banks that dominate loan origination will be one of the major challenges for the success of KHFC. The volume of offshore RMBS transactions will increase because originators believe that issuing RMBS in the international financial market will raise their image and the public's confidence as well as afford them lower funding costs. Nonetheless, cross-border RMBS transactions may be less attractive due to the swap economies (i.e. decline in domestic interest rates vs. a rise in interest rates in the US) (Hani and Batchvarov (2004) p. 5) and the lack of funding needs of financial institutions with high deposit balances that generate wide spreads by holding mortgage loans.

The CMBS market is also expected to expand because contractors fund construction costs based on cash flows from the projects themselves. The development of the structured financial products market would also remove obstacles to the evolution of the CMBS market and reduce the risks associated with CMBS transactions. Nevertheless, uninterrupted preferential tax treatment is critical for the market to flourish.

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Seung-Dong You, "Investing in a Emerging Mortgage Backed Securities Market: the Case of Korea Housing Finance Corporation, *Cornell Real Estate Journal* Vol 3, June 2004.

[10] Before the completion of the construction project, the developer pre-sells the building and finances construction costs or land costs from the buyer – the future occupier – based on the stage of work. The buyer's equity grows as the buyer submits installments according to the process of construction. The future obligations of installments are called equitable mortgages.

[11] In the Korean master trust scheme, a single master ABS plan was filed with the Financial Supervisory Commission at the initial closing, and an amendment is proceeding as new assets are added to trust. (Hani and Batchvarov (2004. p.7))

The Mortgage Holding Subsidiary Concept: A Structure for Efficient Fixed-Rate Housing Finance

By Bert Ely[1]

INTRODUCTION

Although housing finance systems vary greatly across countries, reflecting differences in how these systems have evolved over the decades, recent initiatives to modernize housing finance have three underlying objectives: greater efficiency, increased choice in the mortgage products offered to homeowners, and greater safety and stability within a country's financial system.

The "mortgage holding subsidiary" (MHS) concept represents an organizational structure for achieving those characteristics, specifically in providing long-term, fixed-rate mortgages to homeowners. The MHS concept initially was developed to complement a proposal to privatize three government-sponsored housing finance enterprises in the United States – Fannie Mae, Freddie Mac, and the Federal Home Loan Banks.[2] However, the MHS concept is easily universalized so that it can be applied in any country which already has a well-developed credit market for financing owner-occupied housing. Properly implemented, the MHS concept should safely deliver more efficient housing finance than mortgage securitization or covered bond arrangements while producing longer-term, fixed-rate housing finance than is feasible with bank-like short-term deposits. This article will first explain the MHS concept and then discusses the types of cost savings MHS can deliver.

This is an especially appropriate time to consider the MHS concept since housing finance is undergoing enormous change in much of the world, and particularly in Europe.[3] In particular, market forces are being unleashed to reduce housing finance costs while broadening the range of mortgage products made available to homeowners. The MHS concept fits squarely in the middle of what is emerging in housing finance.

THE MORTGAGE HOLDING SUBSIDIARY CONCEPT

The MHS concept is quite simple, which is the essence of its efficiency — banks, savings institutions, and other financial intermediaries subject to capital regulation would form MHS to own long-term, fixed-rate residential mortgages originated by the parent institution. Shortly after a mortgage is originated, the parent would sell it to its MHS. MHS would be barred from accepting deposits or deposit-like funds from the general public. Instead, they would fund themselves entirely in the capital markets through the sale of mortgage bonds and other types of debt instruments. Because MHS would fund themselves in this manner, they should not be subject to capital regulation or other forms of bank-like safety-and-soundness supervision. In effect, MHS would strictly be passive financing vehicles with no broad public interaction.

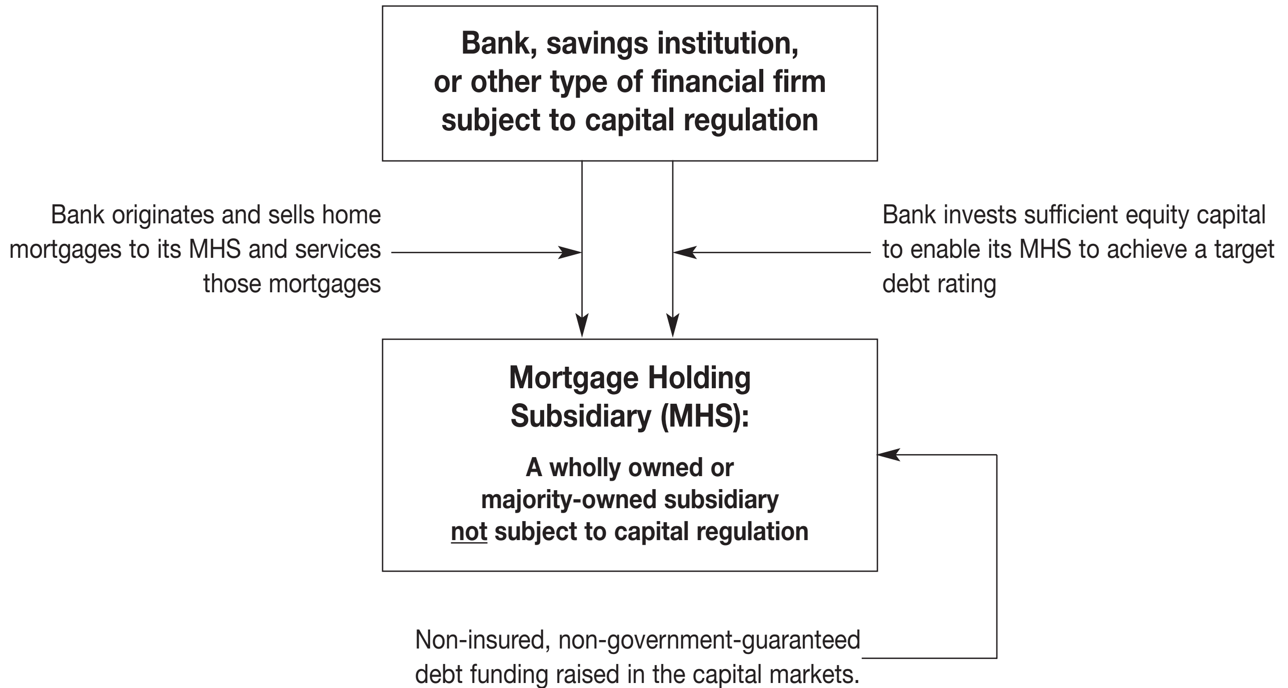
Figure 1 illustrates the relationship of an MHS to its parent bank or thrift, showing the parent-subsidiary relationship. **Figure 2** illustrates the likely balance-sheet composition of an MHS. Assets would consist almost entirely of residential mortgages while funding would consist of various forms of debt, issued in whatever form made economic sense at the time. The MHS would be capitalized with sufficient equity capital to permit it to obtain a high debt rating (at least AA) on a freestanding basis. That is, the MHS would not look to its parent for back-up capital support. The MHS's capital level would be entirely marketplace-determined. While Basel II is intended to reduce the amount of capital backing banks must hold for the residential mortgages they own, the capital markets can be much more precise in determining the amount of capital backing a particularly MHS should have since that capital level would depend upon the amount of credit and interest-rate risk that the MHS had assumed.

[1] Mr. Ely, the principal in Ely & Company, Inc., Alexandria, Virginia, is an independent financial institutions and monetary policy consultant.

[2] Wallison, Peter; Stanton, Thomas H.; and Ely, Bert (2004) *Privatizing Fannie Mae, Freddie Mac, and the Federal Home Loan Banks: Why and How*, American Enterprise Institute, Washington, D.C.

[3] Kemmish, Richard, *Are you in?*, The Banker, 04 November, 2004, page 9.

Figure 1: The Mortgage Holding Subsidiary Concept



The following are key features of the MHS concept:

- MHS would be funded in the wholesale capital markets with medium- and long-term debt, reflecting the relatively long life of fixed-rate residential mortgages. This approach parallels the widespread practice in Europe of pfandbriefe financing, or funding long-term, fixed-rate mortgages with mortgage bonds or covered bonds sold in the capital markets, largely to institutional investors.

- MHS would not be subject to any regulatory capital requirements, either simple leverage ratios or the Basel risk-based capital standards. Instead, marketplace forces would determine the capitalization of an MHS. MHS owning higher risk mortgages or retaining substantial interest rate risk would have to carry more capital than MHS with low-risk mortgages and no retained interest-rate risk. Because of the high credit quality of most residential mortgages, the tradeoff between the cost of an MHS's equity capital and the cost of its debt would tilt MHS towards capital levels that produce at least AA debt ratings, if not AAA. To strengthen the credit rating of unsecured MHS debt, MHS debt might be given a liquidation priority over other general unsecured creditors of the MHS should it become insolvent.

- There should be no limit on the number of MHS which can be chartered nor should they be chartered as banks – any bank or savings institution which wished to charter an MHS should be permitted to do so. However, the relationship between an MHS and its parent should be overseen by the parent's safety-and-soundness supervisor, strictly for the solvency protection of the parent institution. For example, in the United States, the relationship between an MHS and a parent which had been chartered as a national bank would be monitored by the U.S. Department of the Treasury's Office of the Comptroller of the Currency.

- The parent's investment in an MHS would be fully deducted from the assets and equity capital of the parent for the purpose of calculating the parent's compliance with bank capital requirements. Hence, the parent could not finance its investment in an MHS with deposits or borrowed funds.

- The parent would be barred from injecting equity capital into an MHS if that capital injection would drop the parent to an undercapitalized status. If a parent made such a capital injection, its supervisor could direct the immediate return of the capital to the parent. An illegal capital injection into an MHS should be treated on the books of the MHS as a secured loan superior to all unsecured claims on the assets of the MHS so that the capital can quickly be returned to the parent.

Figure 2: Composition of an MHS balance sheet
(not to scale)

Assets	=	Liabilities + equity capital
Residential mortgages securitized "in situ" (in-situ securitization, or ISS)		ISS debt (debt incurred by mortgages securitized "in-situ")
Residential mortgages		Callable, noncallable debt secured by the mortgages
Residential mortgages (one-family and multi-family)		Unsecured "preferential" debt raised in the capital markets
		Other unsecured liabilities
Cash + short-term investments		Subordinated debt
Other assets		Equity capital

- An MHS could issue stock to third parties (including other banks and savings institutions), subordinated debt, unsecured debt, preferential unsecured debt, covered bond arrangements, and secured debt. Secured debt could be secured by a specified group of mortgages under the "in-situ securitization" concept discussed below. For financial reporting purposes, the MHS's financial statements should be consolidated with its parent in accordance with Generally Accepted Accounting Principles.

- Because the MHS would be a passive financing vehicle, with few if any employees, it could be managed by its parent bank, it could share officers and directors with the parent, purchase mortgages from the parent (as well as from third parties), and contract with its parent to service those mortgages. This relationship would be closer than what exists in many securitization or covered-bond arrangements and hence more efficient.

- There should be no restriction on the size or type of residential mortgages the MHS could purchase from its parent or from third parties. In addition to owning mortgages on primary residences, MHS should be permitted to hold mortgages on holiday homes, apartment buildings, university dormitories, nursing homes, and other residential structures. At the same time, the MHS's parent should have complete latitude in determining which mortgages to sell to its MHS and which ones to keep on the parent's balance sheet. Quite likely, the parent would retain adjustable rate mortgages and fixed-rate mortgages with short maturities, funding them with deposits, while selling long-term, fixed rate mortgages to its MHS.[4] By the same measure, the parent might buy back from its MHS long-term, fixed-rate mortgages just a few years short of maturity.

- When interest-rate levels declined, triggering mortgage refinance activity, the MHS could lower the cost of refinancing mortgages by simply adjusting the interest rate on the mortgage and recalculating the monthly payment. It could profitably fund the lower interest rate on the mortgage by calling higher cost debt and replacing it with lower-cost debt.

- In order to operate as efficiently as possible, particularly in dealing with mortgage refinances, the MHS could, to the extent tolerated by the financial marketplace, operate as one giant mortgage pool financed by preferential unsecured debt. However, when market conditions so demanded, the MHS could create pools of mortgages

[4] An October 2003 report by consultants' Mercer Oliver Wyman, *Study on the Financial Integration of European Mortgage Markets*, for the European Mortgage Federation had this to say about funding mortgages (page 63): "The mortgage bond appears to be an efficient mechanism for funding long term fixed rate products but possibly less efficient for short-term products where the flexibility of deposits make this a more attractive option."

funded by debt secured by the mortgages, through in-situ securitization, or it could sell mortgages into a bankruptcy-remote securitization trust which would issue mortgage-based securities (MBS).

- MHS could enter into interest-rate swaps and other interest derivatives to hedge interest-rate and prepayment risk. They also could enter into credit-derivative transactions to shift a portion of geographical or credit-quality concentrations to third parties.

POTENTIAL MHS COST SAVINGS

In essence, the MHS concept would make it financially feasible for mortgage originators to originate long-term, fixed-rate mortgages that they could hold to maturity in an MHS rather than originate them for eventual sale or securitization.

The sound public-policy reason for permitting this is that ownership of an MHS should not endanger the solvency of the parent bank or other type of depository institution because the parent's investment in an MHS should be fully deducted from the parent institution's capital. Hence, should an MHS become insolvent (which should be a highly unlikely event), that insolvency would not endanger its parent's capital position. Moreover, limiting MHS to capital market funding would eliminate any rationale for applying bank-like regulation to MHS. Therefore, MHS should be highly capital efficient, which would generate significant cost savings by reducing the required profit spread incorporated in mortgage interest rates.

The cost argument underlying the MHS concept begins by differentiating the two major cost components associated with a mortgage — mortgage transaction costs (the cost of making and servicing a mortgage loan) and the pure cost of funding the mortgage.

Mortgage transaction costs

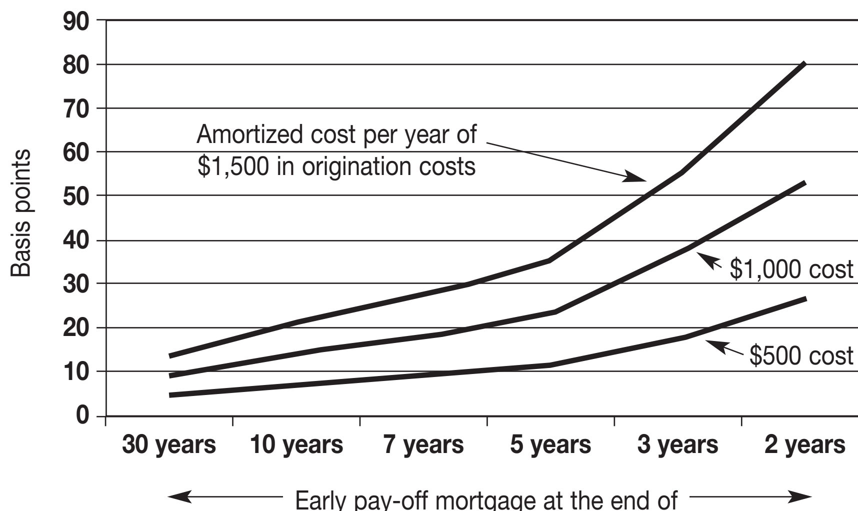
The MHS concept would enable banks, savings institutions, and other mortgage originators to reduce mortgage transaction costs – originating the mortgage and then servicing it – by originating long-term, fixed-rate mortgages to hold in their MHS rather than originating mortgages to sell in a secondary mortgage market. This would be the case because many costs in the origination process can be reduced or eliminated if the mortgage originator never intends to sell the mortgage to an unrelated party. Since origination costs vary greatly, depending on house price, mortgage amount, jurisdiction where the home is located, and how well the costs are identified and quantified, cost savings would vary from country to country.

Lower origination costs can reduce a homeowner's "all-in" mortgage interest rate by more than a few basis points. Seldom considered by borrowers, the all-in interest rate includes the amortization of any mortgage origination costs paid by the borrower, usually when the mortgage is originated, in addition to the mortgage interest rate. It is not possible to compute the all-in interest rate when a mortgage is originated if the actual life of the mortgage is not known because it can be paid off, through a house sale or refinancing, before the mortgage is fully amortized. Origination costs can add significantly to the all-in rate if the mortgage is outstanding for just a few years.

For example, if a borrower incurs a cost of $1,500 in connection with originating a $100,000 mortgage, he might save up to $500, or one-third, if the originator sells the mortgage to its MHS rather than selling it into a secondary mortgage market. Cost savings on refinanced mortgages should be

Figure 3: Lowering origination costs significantly reduces the all-in mortgage interest rate

Based on a 30-year, $100,000 6% fixed-rate mortgage



much greater, perhaps by two-thirds, or $1,000, in case of the $100,000 mortgage example. These savings can be quite substantial, in terms of the amount expended and the actual, after-the-fact all-in interest rate. **Figure 3** illustrates the all-in interest-rate reduction for origination cost savings, based on actual mortgage lives. The savings are especially significant if a mortgage is refinanced frequently.

An example will further illustrate the significant impact of reducing origination costs. Assume an original 30-year purchase mortgage of $100,000, carrying an 8% interest rate, is refinanced every three years and then the home is sold at the end of the twelfth year, triggering a mortgage payoff. Further assume the mortgage was refinanced at the progressively lower rates of 7%, 6%, and finally 5.5%. Finally, assume an initial mortgage origination cost of $1,000 and a $500 charge for each refinance. This reduction in origination costs, from $1,500 per origination or refinance, spread over 12 years, would reduce the all-in mortgage interest rate by 31 basis points.

The cost savings, in basis points, for larger mortgages is not as great - because origination costs are lower in relation to the size of the mortgage - but still significant. For example, assuming a $200,000 mortgage with the same refinancing frequency and interest rates set out above (except for a $2,000 initial origination cost), the reduction in the all-in rate of interest would equal about 22 basis points over the life of the loan. This second example highlights a key advantage of the MHS concept - the benefits, in terms of reducing the all-in interest-rate, would be proportionally greater for smaller mortgages, which tend to be taken out by lower income families purchasing inexpensive homes. This feature should enhance the attractiveness of the MHS concept for those who believe lower mortgages rates are key to making home-ownership more affordable while expanding home ownership opportunities.

Mortgage servicing costs

Mortgage originators can trim their servicing expenses by originating mortgages to meet their own servicing standards, not industry standards governing the sale of mortgages, which may require additional costs. Thus, in addition to trimming origination costs, the MHS structure should reduce servicing costs by a few basis points per mortgage dollar outstanding by (1) not requiring the originator to prepare to sell the mortgage; (2) permitting the mortgage originator to integrate mortgage servicing more closely with other services provided to the homeowner; (3) reducing credit costs because of a broader customer relationship; and (4) increased cross-selling opportunities, particularly for property-related services such as property insurance, home equity lines of credit, and credit life insurance.

It is also more likely that homeowners would finance and refinance their mortgage where they have their primary banking relationship if the bank can retain the ownership of the mortgage in its MHS. This would allow the bank or savings institution to capture the synergies of an integrated customer relationship - an element that would also result in a lower mortgage interest rate. The value of the other benefits of this closer, more integrated customer relationship would vary from country to country, but in a recent study of the European mortgage market the authors noted that “there is strong evidence from interviews with mortgage lenders that the mortgage product is increasingly being seen as a ‘gateway’ product to gain access to the customer and use as a basis for cross-selling other products.”[5]

Lowering mortgage funding costs

While MHS would fund themselves in whatever manner makes most economic sense at the time, MHS most likely would fund their mortgage assets with a combination of unsecured debt and secured debt raised through “in-situ securitizations” (ISS). Given their large asset size, MHS would issue debt in large tranches, which would make their debt extremely liquid.

Unsecured financing - an MHS could fund its mortgages with a combination of senior unsecured debt and subordinated debt, plus equity capital. In so doing, an MHS would assume full credit risk on the mortgages it owned plus whatever interest-rate and prepayment risk it did not hedge through on-balance-sheet maturity matching, callable debt, and off-balance-sheet interest-rate derivatives. The financial markets would determine the amount of capital backing for this portion of an MHS’s balance sheet, based on (1) the riskiness of the mortgages financed in this manner, (2) the amount of interest-rate and prepayment risk the MHS had retained, and (3) management’s target credit rating for the MHS debt.

In-situ securitization In-situ securitization, or ISS, is functionally equivalent to funding mortgages with MBS or covered bonds, except that with ISS financing, both the mortgages financed and the ISS debt remain on the MHS’s balance sheet rather than being moved off-balance-sheet into a securitization trust or sold to an unrelated specialized mortgage financing entity issuing covered bonds. That is, as is the case with MBS, investors in ISS would assume all interest-rate and prepayment risk while the MHS, as issuer of the ISS, would retain all credit risk. However, mortgages financed with ISS debt would enjoy substantial origination cost savings because they would not be originated for sale in the secondary mortgage market. Instead, ISS-financed mortgages would be “kept in the family” by being sold by a mortgage originator to its captive MHS.

Structuring an ISS debt financing would work as follows: The MHS would set aside a group or pool of mortgages it owned and then grant an undivided security interest in those mortgages to the purchasers of the ISS debt financing the mortgages. In effect, just these mortgages would secure the debt

[5] Mercer Oliver Wyman, “Study on the Financial Integration of European Mortgage Markets,” European Mortgage Federation, October 2003.

financing them. This financing arrangement would be comparable to a business financing a factory building with a syndicated loan secured by just that building. ISS debt could be structured as a simple pass-thru security or as a more complex, multi-tranche security. Either structure would pass through to the debt holders principal and interest payments as they were being made, less a profit and expense margin for the MHS.

In order to obtain an AA or better credit rating on its ISS debt, an MHS most likely would covenant to maintain at all times an over-collateralization of a particular ISS debt issue by a specified multiple of expected credit losses projected for the pool of mortgages securing the debt issue. Over-collateralization would ensure timely payment of principal and interest on the ISS debt. Based on the U.S. experience, the over-collateralization multiple most likely would fall in the range of 10 to 20 times the expected loss rate. For example, if the expected loss rate was two basis points annually, the over-collateralization would equal .2% to .4% of the amount of ISS debt then outstanding. Additionally, MHS most likely would guarantee the timely payment of principal and interest on ISS debt, on the slight chance that the over-collateralization proved to be insufficient during a time of severe economic distress.

Hence, the credit rating assigned to a particular ISS debt issue would reflect both the degree of over-collateralization backing the debt and the overall capital strength of the MHS. Due to the relatively low volatility of residential mortgage loan credit losses, an MHS's targeted pre-tax, pre-credit-loss return on its capital allocated to credit risk should exceed it actual credit losses, even in high-loss years. Consequently, it should be extremely rare for an MHS to dip into its capital to absorb credit losses.

Competition among MHS in selling their in-situ financing securities would force an optimal level of transparency in mortgages financed with in-situ securities, specifically with regard to prepayment characteristics. In particular, greater transparency would reduce any cross-subsidy now flowing from mortgages that prepay slowly to mortgages that prepay quickly where no prepayment penalty is charged. This cross-subsidy, which flows from the less well off to the better off, arises because the prepayment option in fixed-rate mortgages provides a benefit only when it is exercised; those who refinance more frequently tend to be higher income, more sophisticated borrowers.

By using the in-situ technique to finance mortgages originated by their parent banks, large MHS should be able to construct mortgage pools with large tranches of ISS securities. This would make in-situ securities quite liquid, which in turn would further reduce interest rates on home mortgages as marketplace competition pushed the benefits of greater liquidity through to borrowers, in the form of lower mortgage rates. Savings of even a few basis points per mortgage dollar financed would be significant, relative to a country's GDP, given the amount of home mortgage debt outstanding in most countries.

CONCLUSION

Housing finance is undergoing enormous change in much of the world, and particularly in Europe, as covered bond legislation is revised and expanded and as other forms of structured finance emerge. Basel II also will impact on housing finance in ways which are not yet fully understood. Further, there is strong interest in many countries in shifting towards a greater reliance upon long-term, fixed-rate home mortgages and away from variable rate housing finance funded largely by bank deposits. The MHS concept provides a vehicle for efficiently providing long-term, fixed-rate housing finance while maintaining the role banks and savings institutions have traditionally, and understandably, played in housing finance, yet avoiding the complexity and rigidity that Basel II capital requirements will impose on banks and other types of depository institutions.

American "Housing GSEs": Past Triumphs, Present Tensions, Possible Futures

By Alex J. Pollock

As is well known, the American housing finance system is notable for the predominant role played by the "Housing Government-Sponsored Enterprises," called for short the "GSEs." These are principally Fannie Mae and Freddie Mac, but also include the Federal Home Loan Banks (FHLBs). All are for-profit corporations owned by private shareholders, but each is chartered by a specific Act of the U.S. Congress, dating respectively from 1938, 1970 and 1932, which grants it special privileges and advantages. Estimates of the economic value of these advantages vary, but they are unquestionably worth billions of dollars a year.

In particular, Fannie and Freddie are usually (and correctly) described as operating an extremely profitable, government-created duopoly in the huge American secondary mortgage market. The GSEs are among the largest issuers of debt securities in the world, and their bonds and notes are widely held on a global basis. The GSEs represent a very large financial sector: their combined assets plus off-balance sheet guarantees of mortgage-backed securities (MBS) total about US$ 5 trillion.

Past Triumphs

A good statement of the overall goal of a housing finance system is to *help create and support a property-owning democracy*. Obviously, different countries and times choose different ways to pursue this goal. The most fundamental choice in housing finance structure is whether the predominant funding for mortgage loans will be provided by *deposits* or *bonds* – in other words, by financial institution balance sheets or by capital markets.

The GSEs can best be understood as representing a historical "paradigm shift" in American housing finance from a deposit-based to a bond-based system. The key transition year can be considered to be 1980, symbolizing the downfall of the U.S. savings and loans and the rise of the GSEs. This shift is summarized in Exhibit 1.

American housing finance from the 1940s to about 1980 was based primarily on savings and loan associations, in which savings deposits financed long term, fixed rate mortgage loans. As many observers have pointed out, this funding mismatch was an inherently unstable structure, extremely vulnerable to large increases in interest rates. The vulnerability was increased by governmental ceilings on the interest rates which could be paid on deposits, so that when rates increased, the deposits were withdrawn, which caused cyclical "credit crunches" or rationing of mortgage funding. Nonetheless, during the time of the savings and loan paradigm, the U.S. homeownership rate increased from 43% in 1940 to 65% in 1980.

The ultimate collapse of the savings and loan system in the 1980s is a story too well known to need retelling.

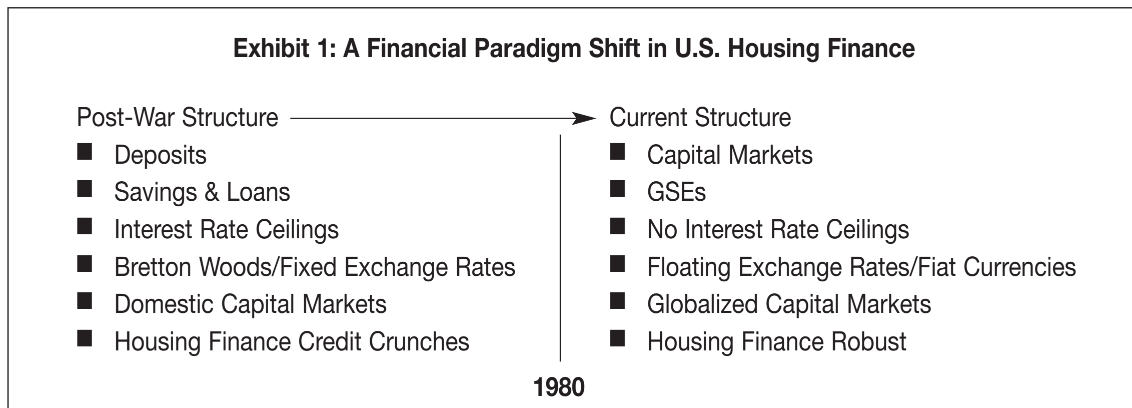


Exhibit 1: A Financial Paradigm Shift in U.S. Housing Finance

It was the insolvency and crisis of the savings and loans which made possible the rise to greatness of Fannie and Freddie, as the two GSEs filled the competitive space formerly held by several thousand savings and loans. The new GSE-based system was a distinct improvement in the housing finance structure, because it meant that long term, fixed rate mortgages could be financed with long term, fixed rate bonds and MBS. The GSEs thus represented a far better approach to the management of interest rate risk.

The interest rate risk of a mortgage finance system cannot be made to disappear – it can only be moved to one economic party or another. Exhibit 2 considers the relationship of mortgage finance elements to who bears the interest rate risk. Variable rate mortgage loans or fixed rate loans with heavy prepayment fees put the interest rate risk on the household borrowers—on average, the economic actors least well equipped to cope with it. Bond-based systems, including the use of MBS, move the interest rate risk to capital market investors, who are much better able to address it. Finally, it must be noted that by setting up deposit insurance or GSEs, the government moves interest rate risk to itself. (This may be considered just, since it is the monetary behaviour of the government in a fiat currency system which creates the extremes of interest rate risk.)

This capital market-funded housing finance structure blossomed in the U.S. after 1980. It never had any interest rate ceilings to contend with. Moreover, it developed along with the globalization of capital markets, making GSE securities available to investors worldwide. Mortgage finance no longer experienced periodic “crunches,” but operated robustly. Throughout economic and financial cycles, long term, fixed rate mortgage credit was routinely and easily available to American households.

These were real achievements of the GSE-based system.

However, the achievements came at the price of creating a non-competitive, implicitly colluding duopoly which concentrated both economic and political power. The financing advantages derived from their government support allowed the two GSEs to amass a dominating market share, up to approximately 70% of the huge American market for “conforming” mortgage loans (that is, standard loans less than a certain amount, currently about US$ 360,000).

Market power or the ability to enforce high prices for their services has been evident in the GSEs’ guaranty fees (“g-fees”). This is the annual charge they receive for guaranteeing the credit performance of MBS. Average g-fees are five times the long run average credit loss rate on mortgage loans, and in recent years have been more than thirty times credit losses on an annual basis, as shown in Exhibit 3. The estimated return on equity for the GSEs’ guaranty business is about 28% after tax.

All of this is possible only because the American government, by granting special franchises which were masterfully exploited by Fannie and Freddie, created a non-competitive secondary mortgage market. Small banks and thrifts suffer the most from this situation, because they tend to deliver the lowest risk mortgage loans, but pay the highest guaranty fees. These small institutions would benefit the most from creating more competition. The situation

Exhibit 2: Who Has the Interest Rate/Prepayment Risk?

- Variable Rate Mortgages
- Mark-to-Market Prepayment Fees

} Households

- Bond-Based Systems
- Pass-Through MBS

} Capital Market Participants

Also:

- Deposit Insurance
- GSE Balance Sheets

} Government

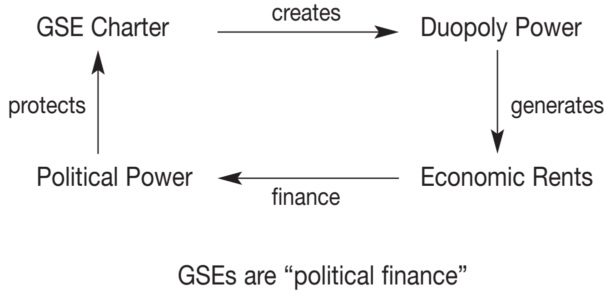
The fundamental source of interest rate risk is the money printing behaviour of the government’s central bank.

Exhibit 3: Pricing Power

Due to their market position, Fannie and Freddie are able to charge lenders, particularly small banks, excessively high “guarantee fees” in relation to the credit losses of the mortgages they originate.

	2003 Fannie Mae	2002* Freddie Mac
Average G-Fee	20.2 bps	22.0 bps
Credit Losses	0.6 bps	0.7 bps
Multiple of Losses	33.7 x	31.4 x
“Loss to Premium” Ratio	3%	3%

*Figures as of 12/31/02, revised 11/21/03



was probably not the intent of Congress, but was certainly the outcome of its actions.

This leads to the political side of the story. Under the banner of homeownership, which increased from 65% to 69% between 1980 and 2003, the exceptional profits of Fannie and Freddie have allowed them easily to finance large political lobbying forces and activities. This includes regularly recruiting into their government relations departments significant political figures and relevant members of Congressional staff. The political activity protected the economic advantages, which enhanced the profits and the means to carry on the political activity.

This self-reinforcing historical GSE dynamic is shown in Exhibit 4.

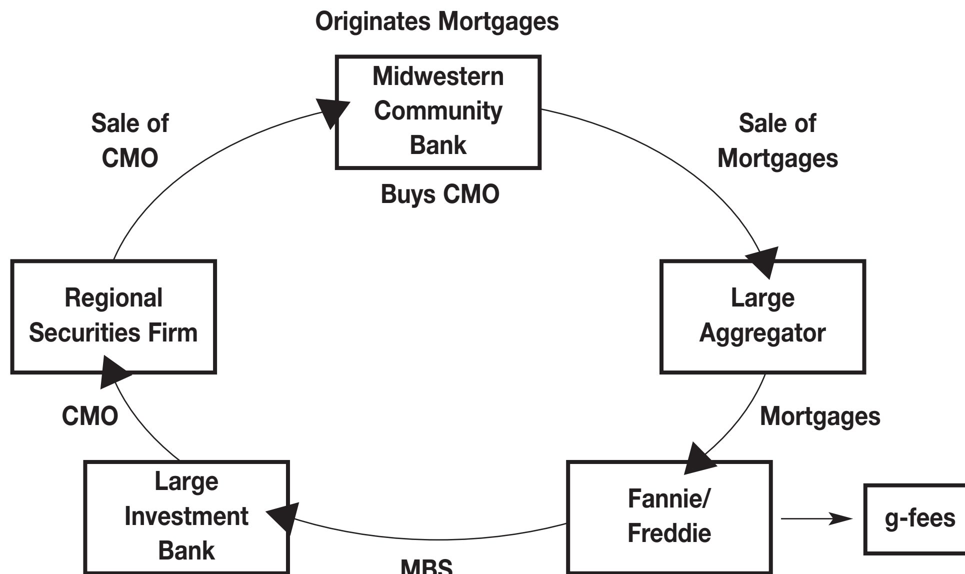
The capital market funding relationships of the GSE-based system have grown complex. An example of this, which is also touched with paradox, is shown in Exhibit 5, the "Circle of Value."

Starting at the top of the circle, consider a typical small bank (a "community bank" in American banking jargon), which underwrites and originates standard fixed rate mortgage loans. In the GSE-based system, these loans will be originated to standards set by Fannie and Freddie, very likely using underwriting software they provide. The bank does not (and should not) keep the loans in portfolio, since this would be an obvious mismatch against its deposit-funding base. Instead it will typically sell the loans to a larger mortgage banking operation, known as an "aggregator."

The aggregator in turn bundles the mortgage loans into Fannie or Freddie MBS, the source of g-fees paid to Fannie or Freddie for the life of the loans.

The MBS might well be bought by a large Wall Street investment bank, which would "slice and dice" the cash flows in order to structure Collateralized Mortgage Obligations (CMOs). The CMOs would be marketed to investors through a syndicate of investment banks including regional securities firms.

Such a regional firm might well sell the CMO to – guess who: the small bank which originated the loans in the first place! So the



principal asset ends up where it began, but only after traversing a circle in which at each point a slice of value is extracted by other financial actors. Notably, high g-fees are paid to Fannie and Freddie as the mortgage loans pass by to become MBS.

As the "Circle of Value" suggests, a highly complex infrastructure filled with highly compensated traders, lawyers and salesmen is required to maintain the GSE-based system.

Exhibit 6: Regarding the GSE of Its Day

"Admit that the bank ought to be perpetual, and as a consequence the present stockholders will be established a privileged order, clothed both with great political power and enjoying immense pecuniary advantages from their connection with the government. It is easy to conceive that great evils to our country and its institutions might flow from such a concentration of power.

If we can not at once make our government what it ought to be, we can at least take a stand against grants of monopolies and exclusive privileges."

Andrew Jackson
Veto Message, 1832

Present Tensions

Changes very surprising to most observers have occurred in the GSE system during the last two years. Fannie and Freddie find themselves in a defensive posture which would have been considered unimaginable a few years ago. The top managements of both have involuntarily "retired"—that is, been forced out, along with many other senior managers. Fannie especially is burdened by onerous regulatory restrictions. Freddie has spent more than $ 150 million revising its accounting and restating its financial reports, although its financial reports are still not current. Financial report restatements by Fannie are in process.

Two key factors appear to have triggered these changes. One is that the Executive Branch of the U.S. government became very critical, one might even say hostile, to Fannie and Freddie after they blocked the Administration's proposed GSE reform legislation in 2004. The other is that an unexpected source of vulnerability for the GSEs was created by a new accounting rule, and this vulnerability was fully exploited by their critics. Of course, Fannie and Freddie remain extremely large and important companies with a good deal of political support.

Consider the pattern of a U.S. President who is very popular in the South and West, while much resented on the East Coast, particularly in "elite" circles, leading his Administration against a large, elite, government-sponsored financial power. This could be Andrew Jackson 170 years ago rejecting the rechartering of the Second Bank of the United States, the GSE of its day. Or it could be George W. Bush and the humbling of Fannie and Freddie. An intriguing parallel!

In any case, Jackson's thoughts as he vetoed the rechartering bill in 1832, as shown in Exhibit 6, are quite apt when applied to the problems posed by GSEs today. We have the same problems of privileges for shareholders, government-sponsored profits, concentration of power, and monopolistic grants as Jackson opposed. But the focus in the current GSE debates has instead been accounting issues.

Owning fixed rate mortgage loans which are prepayable without penalty requires intensive hedging and the extensive use of derivative instruments, such as interest rate swaps and option contracts. Financial Accounting Standard 133 (FAS 133), addressing accounting for derivatives, is the new accounting rule which played such a prominent role in bringing down the managements of both Fannie and Freddie.

FAS 133 was contentious from the outset, and still is. Everybody always knew it would be complex and costly, but its effects on the GSEs have been much more impressive than anyone expected, especially the managements of Fannie and Freddie. Freddie has restated its after-tax profits since 2001 to increase them by an aggregate $ 5 billion. Fannie will have to restate its after-tax profits over the same period to reduce them by $ 9 billion in the aggregate.

These are big numbers, to be sure! Of course, the accounting result is to make Freddie appear even more profitable than before, and Fannie is still very profitable even after the subtractions. But do the FAS 133 adjustments reflect economic reality? This continues to be debated.

Neither Fannie nor Freddie strictly followed the requirements of FAS 133. While everyone agrees they should have, virtually everyone also agrees that FAS 133 is overly complex, convoluted and difficult to apply. Along with its official interpretations, it runs to more than 800 pages.

In addition to being enormously expensive to implement, FAS 133 tends in the judgment of many to make financial statements less clear, less understandable for investors, and more divergent from economic reality. In a recent survey of financial professionals, 86% said FAS 133 made financial statements less clear, 97% that it was too complex, and over 90% that is should be significantly revised or replaced. The managements of Fannie and Freddie clearly shared these views.

It appears that one source of Freddie's accounting problems was its management's conviction that FAS 133 so distorted the

Exhibit 7: GSE Legislation in 2005?

Four Possible Outcomes of Legislation:

1. Status quo.
2. Reorganize: a new regulator, which strengthens implicit guaranty and GSE status.
3. GSEs put on the road to greater competition.
4. Possible ultimate privatization.

reported results that it made sense to structure shell transactions to adjust them. That did not make sense (as truncated careers attest), but the effects of correctly applying FAS 133 to Freddie's financial statements were probably to create misleading accounting artifacts.

FAS 133 is widely considered to be a kind of "metaphysical bookkeeping," which is convoluted and confusing, distorts economics, obscures performance, and is conceptually wrong. But whatever its merits or lack thereof, it has proved to be the "soft underbelly" of regulatory and political vulnerability of Fannie and Freddie. Quite an ironic outcome.

An additional element of potential change in the GSE-based system is the "other GSE": the Federal Home Loan Banks. The FHLBs have the same government-sponsored advantages as the better-known GSEs, which allow them to compete equally with Fannie and Freddie in the debt and hedging markets. Taking advantage of this, in 1997, the FHLBs introduced a competitive secondary mortgage finance program, "Mortgage Partnership Finance" or "MPF" as an alternative to MBS.

Over 1,000 mortgage-lending institutions now participate in the FHLBs' secondary mortgage programs. An important question in GSE sector evolution is whether this competitive alternative can realize its potential. (I confess a strong bias here, being the originator of the MPF concept.) Will the GSE sector remain duopolistic or can it become truly competitive?

Possible Futures

In the wake of the accounting embarrassments and management departures at Fannie and Freddie, the main response of the Congress has been to consider changes in regulatory structure. In the U.S. Senate, the "Federal Housing Enterprise Regulatory Reform" bill was introduced earlier this year. Senator Shelby, the Banking Committee Chairman, has called GSE legislation a "top priority." The House Financial Services Committee is also planning to take up regulatory reform.

Virtually everyone involved agrees with the provisions of the Senate bill which would abolish the Federal Housing Finance Board (the FHLB regulator) and the Office of Federal Housing Enterprise Oversight (OFHEO – the Fannie and Freddie regulator), and replace them by a new combined regulator. Both the Finance Board and OFHEO have regulatory domains too narrow to make sense—they are equally unable to see the whole picture of the GSE sector and its global issuance of government-sponsored debt securities. Creating an overall view of the entire $ 5 trillion housing GSE sector is a good idea.

However, creating stronger regulation in and of itself may have an ironic unintended consequence: actually increasing the general confidence in the government's commitment to the GSEs, strengthening even further the bond market's so far unshakeable belief in the implied government guaranty, helping sell GSE bonds and MBS at tight spreads, and supporting GSE profits.

In other words, the unintended result of strengthened regulation by itself could be to enhance the government-linked status and duopoly power of Fannie and Freddie.

To address this problem, GSE reform legislation needs to become clearly pro-competitive, consistent with the fundamental principle that all regulatory reforms should be designed to be explicitly pro-competitive. The U.S. experience since the 1970s is that greater productivity and consumer benefits have been created in many industries by forcing competition on hitherto comfortable oligopolies. A notable contrast to this positive trend has been the duopoly in the huge American secondary mortgage market.

In order to achieve a competitive outcome, any GSE reform legislation might include provisions like the following:

- It could simply state that the goal of Congress, in addition to safety and soundness, is also to enhance competition. In the American setting, no one should be able to disagree with this as a fundamental principle.
- It could instruct the new combined GSE regulator that the development of regulations should include the goal of ensuring a competitive GSE sector.
- It could include a provision adding securitization to the explicit legal powers of the FHLBs. (Although it can be argued that they already have this as an implied power, such a provision would avoid any debate on the matter.) This provision would directly attack the duopoly power and excessive g-fees of Fannie and Freddie, give customers more attractive pricing, and add choice to the secondary mortgage market.
- It could mandate studies by the new GSE regulator, the Federal Reserve Board and the Treasury Department of whether the secondary mortgage

market is duopolistic or competitive, and since the conclusion of such studies is in little doubt, what could be done to enhance its competitivenenss.

As shown in Exhibit 7, there are four basic outcomes possible from current proposals for GSE reform legislation.

One is that nothing will happen in the end and the status quo will prevail, while working through the GSE accounting scandals.

The second is the creation of stronger regulation by itself, which may end up strengthening GSE status and duopoly power.

The third is in addition to a new regulator, to put the GSE sector on the road to greater competition, with the benefits of enhanced market choice, innovation, price competition and efficiency that would bring.

Lastly, there is the possibility of privatization. This is highly unlikely in any near term, but is an idea whose time may ultimately arrive. The triggering event would probably be that in the fullness of time, the GSEs themselves decide that the economic advantages of their special charters are no longer worth the regulatory restrictions and burdens they entail. That will be a story for a future day.

As of 2005, the GSE-based housing finance paradigm has been dominant in America for a generation. The immediate future provides a major opportunity which may or may not be seized. This opportunity is to begin the transition to a new housing finance paradigm: one built on competitive secondary markets instead of a government-sponsored duopoly.

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