Housing Finance in Chile: Primary and Secondary Mortgage Financing

by Claudio A. Pardo

This article will provide a review of the private housing finance system in Chile. The material in this paper is derived from a comprehensive study of the Chilean housing and housing finance systems prepared for the Inter American Development Bank and forthcoming in a conference proceedings volume.1

INTRODUCTION

Term financing remains scarce in Latin America due to a limited supply of loanable funds with final maturity of over one year. This has been a perennial deterrent to the process of capital formation in the region, in particular undermining the development of long-term housing financing, which traditionally requires amortization spans of 10 to 30 years to have a massive reach. This scarcity of adequate funding—in the face of clear signs of ample housing demand—appears to be a major factor fueling the housing shortage so apparent across the region.

Chile has been successful in reducing its housing gap. This has become the trend since at least 1989, once the country left behind the damaging impact of the 1982 to 1985 external debt crisis, which brought about massive, across-the-board housing loan restructuring. The rapid growth experienced by the economy since the mid-80s has been essential to solving this housing gap.

In addition, there has been strong and permanent political commitment by the state to solving the housing problem, which has translated into an active and direct government housing program for lower income families, accompanied by substantial fiscal budget allocations. For middle and higher income families, the source of financing solutions has come from rapidly expanding local financial markets. This has included a solid capital market development with new institutional investors providing the necessary underpinning of long-term financing.

National Data

Chile currently has a population of some 14.8 million and slightly over 4 million housing solutions. Today each housing solution provides a roof for about 3.7 people. This ratio, according to 1992 census figures, was 4.1 people per housing solution, so recent improvements are significant. At the time of the census, some 20% of the families were living in dwellings that did not comply with minimum basic standards.

Although it is difficult to establish a solid number for the housing gap in Chile, government estimates indicate that the country requires some 82,000 new housing solutions a year in order to accommodate current rates of new family formation and avoid a further widening in the gap. Levels of construction above this figure also mean that some of those Chilean families still living in shantytowns and other informal housing arrangements are able to move up to dwellings meeting minimum standards.

On average in the last three years, the supply of new housing solutions has reached some 135,000 per year. Even at these construction levels, Chile must persevere for several more years for its long-standing housing shortage to disappear entirely. However, the tide appears to have turned for the good and the social benefits are being reflected in important improvements in the material quality of life of the Chilean society as a whole.

Source of Solutions

As suggested earlier, the provision of housing solutions in Chile rests basically on two separate but related pillars. On the one hand, there is the government action through a demand-oriented subsidy-cum-financing program for basic housing that favors lower income families.

On the other, there is the competitive marketplace, where private demand and supply interact, mostly for housing priced above...
US$10,000. In this market, banks and other financial companies offer a variety of long-term financing plans for housing acquisition. Some 58% of the families that acquired a new dwelling in 1997 found their housing financing solution in this competitive market.

From the perspective of capital market development, this fully private segment of the housing market—that is, that supplying housing financing to families considered creditworthy by loan originators—is clearly the most relevant, as dwellings traded in it are of a higher value and normally involve higher levels of financing.

As in the case of new housing, financing for the growing although still not fully developed second-hand housing market often originates in the financial markets, which adds depth to the intermediation process. Thus, the sections that follow will place most of the emphasis on market-driven housing financing. However, the financial role of the government is recognized, in particular to the extent that its intervention is a source of financial distortions, particularly when it comes to the lowest priced units in the housing market.

Market-supplied Financing Capacity

Today, Chilean financial markets are able to offer housing financing for terms of up to 30 years, with most of the private lending concentrated in the 15- to 20-year range. Mortgage financing returned to the Chilean economy in the ’70s following the introduction of long-term, inflation-indexed instruments by the now-defunct savings and loan institutions.

But it was only in the mid-1980s that long-term housing financing was able to take off decisively, following the consolidation of the fully funded private pension system introduced in 1981. Since then, the presence of these and other well-established institutional investors has contributed heavily to the capacity of the capital market to absorb mortgage-backed securities. Today these investors have an aggregated portfolio of securities related to housing financing equivalent to some US$8.75 billion.

The leading originator of these mortgage-backed securities is the universal banking system prevailing in Chile, where the State Bank (“Banco del Estado”) concentrates on supporting government housing programs aimed at lower income families.

Many factors no doubt have contributed to the development and maturing of housing financing in Chile. This process is indeed not the result of a single component but rather of a well-balanced, complex mix of economic, political, legal and financial ingredients, properly attuned to meet the particular characteristics of the Chilean housing reality. This notwithstanding, it is worthwhile to try to identify the main lessons offered by the Chilean experience, since they could be of interest for future efforts to develop other housing financing markets in the region. By the same token, an effort also will be made to focus on some of the weaknesses of the Chilean model, so as to avoid repeating some of the same mistakes elsewhere.

EVOLUTION OF HOUSING FINANCING IN CHILE

Housing financing through the issuance of mortgage bonds has had a long history in Chile. Specialized mortgage banks following the French model started to operate in Chile near the end of the last century. It was an active business until 1930, when mortgage credit represented about half of the loan portfolios of banks with the private sector. These bonds were issued mostly in local currency and at fixed interest rates.

The hard times brought about by the Great Depression and persistent high inflation, a main feature of the Chilean economy until recently, all but killed housing financing. Only the legal framework for mortgage-backed securities remained in place, which was fortunate in the sense that it made easier the re-establishment of the mortgage bond as the leading security for housing financing decades later.

In 1959 a fruitful experience was launched with the creation of the National Savings and Loan Association system, which included the novelty of inflation-index, long-term mortgage-backed loan operations. Indexation was the key to attract private deposits in an inflation prone country such as Chile.

Savings and loan institutions made good use of their monopoly to issue new instruments denominated in “Unidades de Fomento” (UF), a unit of account adjusted daily to reflect increases in the Consumer Price Index over the previous month. The UF also allowed savings and loans institutions to lend long term at fixed real rates. By doing so, they were able to automatically capitalize the inflation component of an equivalent nominal interest rate. This drastically reduced the near-term cash flows needed to service long-term mortgage loans in a high inflation environment. In fact, these inflation-indexed credits have equal monthly installments in real terms, so each nominal payment goes up at the rate of the CPI inflation—with a lag of one month.

Although demand for indexed long-term loans by potential housing buyers proved to be sensitive to accelerating inflation, at least demand stayed strong enough to justify the existence of savings and loan institutions during periods of high inflation. (In fact, families did not have any other option for long-term housing financing.) This experience showed that demand was much more resilient than the supply of loanable funds in an uncertain macroeconomic environment. In essence, increases in nominal salaries proved to offer a reasonable degree of hedging against two-digit inflation, so that at
least demand for housing did not disappear entirely in an inflationary environment.

The supply of funding, on the other hand, is highly sensitive to inflation and to an uncertain macroeconomic environment, and in this respect the protection offered by the UF proved essential to attract the necessary funding to support housing financing.

Despite some difficulties, the National Savings and Loan Association system worked reasonably well until 1970. Then, its problems started as a result of the mismatch between the short-term nature of its deposit base in relationship with the long-term maturity profile of its loan portfolio. This plus political instability and three-digit inflation were the main culprits behind the final collapse of this mortgage lending system in the early 1970s.

Attempts to develop a robust secondary market for the mortgage-backed loans on the books of savings and loan institutions never prospered—and a market for mortgage-backed securities did not materialize. The attempts that were carried out were limited to loan sales linked to short-term repurchase agreements, which were used by savings and loan institutions mainly to quickly raise liquidity in times of need.

Housing Finance Today

Chile today has a housing financing system that was put together basically in 1976 with the introduction of a universal banking system and the authorization given to banks to offer UF-indexed mortgage-backed bonds, time deposits and other term obligations. Since then, the banking system has been the main originator of housing loans, mostly financed by the sale of their long-term mortgage-backed bonds in the Santiago Stock Exchange.

In recent years, these bonds, issued as an obligation of the originating bank, have been the leading long-term fixed-income securities traded in Chile. They are primarily bought by local investors, increasingly by the new institutional investors that have appeared in the market as a result of the rapid development of the Chilean capital market.

However, the reintroduction of mortgage bonds to the capital market in 1978 after an absence of almost 50 years required the establishment of an initial purchasing power for these bonds by the Central Bank. Eventually, the capital market came to accept these instruments, which received a decisive boost with the introduction of the private pension system in 1980. These pension funds and the life insurance companies that also appeared in the market—and that provide life insurance protection to workers and sell annuities to them when they retire—have a natural appetite for these safe, liquid and long-term financial instruments. Today, these bank-issued mortgage-backed securities—or mortgage bonds—constitute the backbone of housing financing in Chile.

More recently, a second financial instrument, the so-called "Endorsable mortgage credit" or EMC for short—the "mutuo hipotecario endosable" in Spanish—appeared in the market. Today, EMC has become another important financial instrument for the provision of financing to the Chilean housing market.

This new lending instrument was introduced to the market in 1986, and its main originators are banks and mortgage credit companies—"Administradores de Mutuos Hipotecarios Endosables." The EMC are endorsable loans backed by a mortgage on a property, similar to the mortgage loans granted by financial institutions in the United States. EMC have become particularly attractive to life insurance companies, which since 1989 have developed as important players in the expanding Chilean capital markets. These institutional investors have shown a growing appetite for EMC, which meet their needs for long-term duration financial investment denominated in UF and payable in local currency.

THE MORTGAGE BOND

The outstanding stock of mortgage bonds—or "Letras de Crédito," as they are called in Chile's Banking Law—stood at US$10.68 billion at the end of 1997. As already explained, these bonds represent liabilities of the issuing bank. The origination process and main characteristics of these securities are described in Title XII of the Banking Law, which deals with mortgage-backed lending by banks.

The bank’s client guarantees the servicing of the bond by offering as collateral a specific, perfectly identified property. Normally, such property is the same as that whose purchase is made possible by the liquidity provided by the sale of the associated mortgage bond, but not necessarily so. The face value of the issued bond can be for up to the equivalent of 75% of the market or appraised value of the property given as collateral.

Mortgage-backed lending operations by banks can be either for general financing purposes or for housing financing, which at the end of 1997 stood at US$6.23 billion or 58% of the total stock in mortgage bond outstandings. Chilean mortgage bonds are bearer securities issued in series of equal interest rate, currency of denomination and amortization schedule.

A bank issues a bond in order to provide liquidity to its client in need of credit. In essence, the issuing bank "lends" the mortgage bond to its clients, rather than lending the money directly. Thus, once the mortgage bond has been issued, this has to be sold in order to secure the liquidity needed by the client.
Normally, these mortgage bonds are offered for sale in the securities market—e.g., the Santiago Securities Exchange. The issuing bank is not required to guarantee a price for its bonds, which are sold at market value. Figure 1 shows the main players and their inter-relationships when a mortgage bond is used in connection with a mortgage-backed bank lending operation. Figure 1 illustrates this using the example of housing financing. Mortgage bonds have both pros and cons as instruments for housing financing. Some of their pros are:

- Mortgage bonds are perceived to be a better credit-risk than other liabilities of the issuing bank. This is so because mortgage bonds have a preferred treatment if the bank goes through liquidity difficulties. Thus, their interest rates normally are on the low side relative to alternative sources of term financing.
- The credit risk associated with a mortgage bond is much lower than that of the particular lending operation behind it, and the home buyer shares in the benefits derived from the bond’s low interest rate. Indeed, there is a great deal of competition among banks for the housing financing business, which has reduced spreads considerably in recent years for mortgage bond-financed operations.
- When mortgage bonds are used for housing financing, the securitization of each lending operation is automatic, on a one-by-one basis. This simplifies the process of securitization, since there is no need to pool together several mort-

Figure 1. Mortgage Bond Financing
gages in order to securitize them. This is particularly attractive when capital markets lack financial depth or sophistication.

- Mortgage bonds issued by core Chilean banks have wide acceptance in the market place, which provides them with ample demand and liquidity in the local secondary market. Prices for these bonds—and consequently their implicit interest rates—tend to show less market volatility than most other fixed-income securities of similar duration.

However, there are also some cons:

- There is uncertainty for the bank’s client about the exact amount of money the sale of the bond will bring when it is sold in the securities market. If the bond is sold below its par value—which is not uncommon—the home buyer will have to get additional funds from other sources in order to complete the financing of his/her home. (However, sometimes banks are willing to guarantee their par value or buy them for their own investment portfolio.)

- The maximum loan-to-value ratio allowed by law is 75% of the appraised or market value, whichever is lower, of the property offered as collateral. For many new home buyers this means a demanding prior savings effort, independently of how easily they are able to meet monthly mortgage payments—which cannot go above 25% of their income in the case of mortgage bond financing. Often, this high level of prior savings means that new home buyers must postpone their buying decision.

- Outstanding mortgage bond balances remain a liability of the issuing bank until extinguished. The same is true of the associated loans registered on the asset side of the balance sheet. This means that the bank has to maintain sufficient capital and loan-loss reserves to cover the risk associated with their mortgage loans, which cannot be sold to a third party. This tends to limit the asset expansion capacity of banks issuing bonds, which can translate into higher intermediation spreads and, consequently, higher interest rates for the homebuyers.

**THE ENDORSABLE MORTGAGE CREDIT**

Endorseable mortgage credits or EMC are loans backed by a first mortgage or equivalent collateral. These financial instruments, which were designed to be easily transferable, can be originated either by banks or the so-called "Mortgage credit companies." The latter are single-purpose financial companies regulated by a special law and whose business is mortgage financing via EMC. This financial instrument is newer to the market than the mortgage bond, although it has gained acceptance rapidly in recent years, having reached an accumulated stock of US$2.42 billion at the end of 1997.

The regulations that govern EMC operations are issued by the Superintendency of Banks, which follows the general guidelines provided by the Banking Law in its Title XI, dealing with financial operations of commercial banks. EMC share many of the same features of loans financed by mortgage bonds, although they differ in a few important respects.

In particular, current norms limit the maximum debt-to-property value ratio to 80% and cap the monthly payment-to-income ratio at 30%, which are more generous ratios than those allowed for lending using mortgage bonds. Another difference is that EMC are not considered securities—as is the case with mortgage bonds. EMC were designed with the thought that originators would sell them to authorized institutional investors, mainly secondary market conduits that would proceed to bundle and securitize them.

However, originators today tend to keep large amounts of EMC in their books. Most of the current interest in purchasing EMC comes from life insurance companies, which have enough purchasing power to diversify the risk implicit in individual EMC by the sheer volume of EMC in their portfolios.

The securitization of EMC still is an incipient practice in Chile, although the Securities Law explicitly addresses the issue of securitization of EMC in detail. However, the current legal framework in place is still unfriendly, which has slowed the process towards a more massive securitization of EMC. Figure 2 uses the example of housing financing, although EMC are also often used for general purpose financing.

As in the case of mortgage bonds, there are some pros and cons associated with EMC financing. Among the pros are the following:

- Originators can easily transfer EMC to eligible institutional investors by simply endorsing them to the buyer. This allows originators to erase these assets from their balance sheet, which tends to lower the cost of financial intermediation, benefiting also the home buyer.

- The fact that EMC are less constrained in terms of the loan-to-value ratio and payment-to-income ratios than the mortgage bond, gives more flexibility to the originator to fit the mortgage loan to its customer's needs.

- EMC allow potential homeowners to know for sure the amount of cash they are going to receive from the originator, which is not always the case with the mortgage bond.
Some of the cons that exist in the current Chilean environment are:

- The securitization of EMC is still cumbersome and difficult to execute. However, the government is seeking modifications to the Securities Law that are expected to facilitate securitization in general, including EMC.

- In part because of the current difficulties with securitization, EMC still do not have a wide market reach, as they are mostly used for commercial real estate transactions and for higher priced housing.

- EMC still tend to be more expensive for the average home buyer than the mortgage bond option. However, eventually, when securitization of these financial instruments becomes the norm rather than the exception, it is likely that EMC will be able to compete efficiently with mortgage bonds in a broader price range of housing transactions.

VOLUME OF HOUSING FINANCING AND PRINCIPAL PLAYERS

Besides the government programs run by the Ministry of Housing (MINVU), the principal originators of housing financing in the Chilean market are banks and mortgage credit companies. From the point of view of capital markets' development, the latter two...
Table 1. Mortgage-backed Housing Financing (by Originator in US$ million at 1997 prices, stock at year end)

<table>
<thead>
<tr>
<th>Year</th>
<th>Outstanding Mortgage Bonds</th>
<th>Banks</th>
<th>Endorsable Mortgage Credits</th>
<th>Other Mortgage-backed Lending by Banks</th>
<th>Endorsable Mortgage Credits</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>State Bank</td>
<td>Other Banks</td>
<td>Total</td>
<td>%</td>
<td>State Bank</td>
<td>Other Banks</td>
</tr>
<tr>
<td></td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td></td>
<td>(4)</td>
<td>(5)</td>
</tr>
<tr>
<td>1986</td>
<td>297</td>
<td>1,451</td>
<td>1,748</td>
<td>81%</td>
<td>171</td>
<td>228</td>
</tr>
<tr>
<td>1987</td>
<td>288</td>
<td>1,494</td>
<td>1,782</td>
<td>78%</td>
<td>258</td>
<td>254</td>
</tr>
<tr>
<td>1988</td>
<td>293</td>
<td>1,478</td>
<td>1,771</td>
<td>77%</td>
<td>284</td>
<td>253</td>
</tr>
<tr>
<td>1989</td>
<td>447</td>
<td>1,654</td>
<td>2,101</td>
<td>58%</td>
<td>660</td>
<td>789</td>
</tr>
<tr>
<td>1990</td>
<td>651</td>
<td>1,658</td>
<td>2,309</td>
<td>59%</td>
<td>654</td>
<td>819</td>
</tr>
<tr>
<td>1991</td>
<td>815</td>
<td>1,615</td>
<td>2,430</td>
<td>63%</td>
<td>33</td>
<td>9.9%</td>
</tr>
<tr>
<td>1992</td>
<td>1,002</td>
<td>1,694</td>
<td>2,696</td>
<td>66%</td>
<td>70</td>
<td>1.7%</td>
</tr>
<tr>
<td>1993</td>
<td>1,228</td>
<td>1,948</td>
<td>3,177</td>
<td>70%</td>
<td>144</td>
<td>2.5%</td>
</tr>
<tr>
<td>1994</td>
<td>1,354</td>
<td>2,114</td>
<td>3,468</td>
<td>75%</td>
<td>133</td>
<td>2.5%</td>
</tr>
<tr>
<td>1995</td>
<td>1,663</td>
<td>2,753</td>
<td>4,415</td>
<td>77%</td>
<td>221</td>
<td>3.9%</td>
</tr>
<tr>
<td>1996</td>
<td>1,937</td>
<td>3,462</td>
<td>5,399</td>
<td>77%</td>
<td>370</td>
<td>5.3%</td>
</tr>
<tr>
<td>1997</td>
<td>2,153</td>
<td>4,077</td>
<td>6,230</td>
<td>75%</td>
<td>618</td>
<td>7.5%</td>
</tr>
</tbody>
</table>

Source: Información Financiera, Superintendencia de Banco e Instituciones Financieras
Revista de Fáctores, Superintendencia de Valores y Seguros

The State Bank received in the past collateral for a small portion of its portfolio from the government housing program. It only includes mortgage bonds issued under the special rules for housing finance.

groups of players, including the State Bank, are the most interesting players, since they originate basically all mortgage lending that places the privately generated housing supply among final users. Moreover, they keep large amounts of mortgage-backed assets on their books, to the tune of a figure rapidly approaching US$9 billion.

Table 1 provides an historical perspective and illustrates the rapid accumulation of housing financing assets by these two sets of originators in the last decade or so. This table also illustrates the point that mortgage bonds have been the most relevant and traditional of the instruments used for housing financing in Chile. Mortgage lending backed by mortgage bonds for direct housing financing stood at US$6.2 billion at the end of 1997. That year alone there were close to 54,000 new housing financing operations that used mortgage bonds. This meant that by year-end 1997, there were over 440,000 outstanding mortgage bond-financed housing operations on the books of 15 banks offering this financial product.

Notwithstanding this, endurable mortgage credits (EMC), as already mentioned, are becoming increasingly an attractive alternative to the mortgage bond. In fact, figures for 1997 show that the stock of EMC (including credits for housing and general financing) increased that year US$649 million, which is equivalent in value to 42% of the net expansion in outstanding mortgage bonds. However, since the use of EMC has been concentrated in the financing of the more expensive housing, the actual number of operations does not match the participation rate observed when this is measured in value terms.

It should be stressed that the figures in Table 1 are somewhat misleading for assessing the relevance of EMC financing today. This is so because EMC originators often sell these credits to institutional investors soon
after their origination. This means that originators delete those EMC that are sold from their balance sheets. (As already explained, banks that issue mortgage bonds have to keep the associated mortgage bond on their books until their total extinction.)

In order to draw a better picture of the relevance of EMC as credit instruments for mortgage financing, it is necessary to account not only for those EMC held by originators, but also those in the hands of institutional investors, who acquired them in the secondary market. The figures in Table 2 illustrate the point.

The numbers show that other than originators held some 37.5% of the outstanding EMC balances at the end of 1997, despite the fact that these instruments are not rated securities, as each EMC carries a different credit risk level.

Table 2. Holders of Mortgage Credit

<table>
<thead>
<tr>
<th>By Holders</th>
<th>Stock of EMC (US$MM)*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1996</td>
</tr>
<tr>
<td>1. Banks</td>
<td>642</td>
</tr>
<tr>
<td>2. Mortgage Credit Cos.</td>
<td>398</td>
</tr>
<tr>
<td>3. Life Insurance Cos.</td>
<td>601</td>
</tr>
<tr>
<td>4. Real Estate Investment Cos.</td>
<td>121</td>
</tr>
<tr>
<td>5. Conduit Cos.</td>
<td>10</td>
</tr>
<tr>
<td>TOTAL</td>
<td>1,772</td>
</tr>
</tbody>
</table>

*Includes EMC for housing and general financing.

Nevertheless, a market for them has developed among institutional investors other than secondary market conduits that specialize in the securitization of EMC. The fact that some 62.5% of EMC remained in the hands of originators at the end of 1997 illustrates the point that the securitization of pooled EMC is a business opportunity still waiting to happen in the Chilean capital market.

Indeed, at the end of 1997 there were US$39 million equivalent in securitized EMC on the books of investors, the result of the first series of pooled EMC sold as securities by the only operating conduit company active in the Chilean market.

By contrast, the stock of mortgage bonds issued by banks—for housing and general purpose financing—stood at the equivalent of US$10.7 billion at the end of 1997. The gain experienced during that year with respect to 1996 was US$1.56 billion.

Practically all of these easily tradable securities are denominated in UF, as is the case with EMC financing, that is, in the inflation-indexed unit of account that is widely used in Chilean financial markets. The figures in Table 3 show the breakdown of mortgage bonds by type of investor at year-end 1997:

There are other types of mortgage-backed instruments being used for housing financing. By far the most relevant other mortgage-backed lending today is being done by banks. Other mortgage-backed housing lending by banks appears to have peaked in the late '80s or early '90s, as suggested by column (3) in Table 1. However, it still accounted for some US$970 million at the end of 1997.

In the past, banks have used this type of lending to complement the longer-term EMC and mortgage bond financing. For example, this has been traditionally the case when mortgage bonds are sold in the market at a discount over their face value or when banks want to grant a client a larger loan than mortgage bonds and EMC price/collateral rules allow—75% for bonds and 80% for EMC. Normally, these complementary credits are medium term and use a second mortgage as collateral.

There are no other significant sources of financing today geared for the housing market. However, mortgage-backed securities and housing leasing could prove to be important investment vehicles in the future to supplement available sources for housing financing. All told, the accumulated stock for all mortgage-backed instruments in the hands of originators, institutional investors and others has been growing fast in Chile in recent years. As shown in Table 4, there was some US$14.2 billion in mortgage-backed financing outstanding at the end of 1997.

Table 3. Investors in Mortgage Bonds

<table>
<thead>
<tr>
<th>Type of Investor</th>
<th>Mortgage Bond Holdings* (US$MM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Pension Funds</td>
<td>5,247</td>
</tr>
<tr>
<td>2. Life Insurance Cos.</td>
<td>2,151</td>
</tr>
<tr>
<td>3. Other Insurance Cos.</td>
<td>58</td>
</tr>
<tr>
<td>4. Foreign Investment Funds</td>
<td>3</td>
</tr>
<tr>
<td>5. Mutual Funds</td>
<td>384</td>
</tr>
<tr>
<td>6. Other, including Banks</td>
<td>2,833</td>
</tr>
<tr>
<td>TOTAL</td>
<td>10,675</td>
</tr>
</tbody>
</table>

*Mortgage-backed financing (US$MM)

Table 4. Mortgage Funding Instruments (year-end 1997)

<table>
<thead>
<tr>
<th>Type of Instrument</th>
<th>Mortgage-backed Financing</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Mortgage Bonds</td>
<td>10,675</td>
</tr>
<tr>
<td>2. Endorsable Mortgage Credits</td>
<td>2,421</td>
</tr>
<tr>
<td>3. Other Lending by Banks</td>
<td>968</td>
</tr>
<tr>
<td>4. Mortgage-backed Securities (EMC-based)</td>
<td>39</td>
</tr>
<tr>
<td>5. Housing Leasing</td>
<td>75</td>
</tr>
<tr>
<td>TOTAL</td>
<td>14,178</td>
</tr>
</tbody>
</table>
THE PRICE OF HOUSING FINANCE

Chilean families have benefited since the mid-1980s from a rapidly expanding housing financing market. Originators have introduced new products so the set of financial options available for those families seeking to buy a dwelling also has broadened. Increased competition has been the main motivation behind this change, which has been supported also by new legislation.

Competition also has resulted in lower housing financing costs for the average family, particularly in recent years. However, tight monetary policy in an environment of fast economic growth and declining inflation has meant higher funding costs for originators, so not all the benefits of more competition in the intermediation process have reached the final borrower. This is illustrated by the figures in Table 5.

The figures in Table 5 show that the spread has declined significantly in the recent past. However, the interest rate on mortgage bonds demanded by the market actually has increased somewhat, which has meant that the final rate paid by the borrower has not shown the dramatic drop observed in the spread retained by originating banks. These interest rates are for UF financing; that is, they represent real interest rates.

Available information for EMC financing shows a similar interest rate behavior, although it suggests that interest rates for this type of financing are around half a percentage point over the final rate for mortgage bond financing. This higher overall cost for EMC is explained by the higher risk faced by investors when they buy EMC instruments, so they demand higher interest rates.

It is likely that a more intensive use of securitization in the future will be able to reduce the cost of holding and funding EMC-based housing financing, particularly if the new securities are able to get into the portfolios of private pension funds. It is even plausible that these EMC-based securities one day will carry lower interest rates than mortgage bonds, if the recently announced government-sponsored legal reforms become the law. Indeed, this would mean that securitization of EMC would be less demanding of capital requirements on the part of issuers than mortgage bonds, which always remain on the balance sheet of the originating bank.

Cost of Funding Stays High

Paradoxically, despite a rapidly growing supply of loanable funds by institutional investors and others, the cost of funding for originators has remained high in Chile. There is still a big, unfavorable gap when funding rates are compared with those in developed markets, such as the United States. This is an encompassing phenomenon affecting all economic activity in Chile and not only housing financing.

Fortunately for the final borrower, real wages have been growing strongly in recent years. Also, there has been a lengthening in loan maturity schedules, which has benefited final borrowers and allowed them—at any given interest rate—either to buy more expensive housing or reduce the amount of their monthly servicing payments.

The reduction in the intermediation spread charged by originators is in itself an interesting development, particularly since the levels observed today are quite competitive even with those charged in more mature markets abroad. Certainly, they are about the lowest in the region, which gives hope that when financial and macroeconomic conditions turn around and become more favorable, housing financing will be able to benefit from lower funding costs and approach final rate levels similar to those of some developed economies.

Chilean financial markets, moreover, have shown that they are capable of supplying large quantities of loanable funds for housing financing, a feature that is likely to remain in the future.

Several factors have supported the drop in the intermediation spread. Enhanced competition in mortgage lending by the banking system and economies of scale derived from a larger number of mortgage transactions and volumes of financing have certainly helped. In addition, the introduction of EMC as an alternative to housing financing and the appearance of mortgage companies also have made the origination process more competitive.

Besides, the banking system, the main originator of mortgage financing, has been able to increase its overall lending efficiency over the years. Not only has the banking industry improved its overall operational efficiency, but it also has been able to improve the overall quality of its loan portfolio—including mortgage lending.

This has been the result to a great extent of the lessons learned from the banking crisis of the early 1980s and a much improved and effective regulatory effort. There is no ques-

Table 5. Real Interest Rates on Bond-financed Housing

<table>
<thead>
<tr>
<th>Rate Paid on the Bonds</th>
<th>Spread Charged by Originating Bank</th>
<th>Rate Paid by Borrower</th>
</tr>
</thead>
<tbody>
<tr>
<td>1988 5.95%</td>
<td>3.08%</td>
<td>9.03%</td>
</tr>
<tr>
<td>1991 6.21%</td>
<td>2.88%</td>
<td>9.10%</td>
</tr>
<tr>
<td>1994 6.35%</td>
<td>2.43%</td>
<td>8.78%</td>
</tr>
<tr>
<td>1997 6.58%</td>
<td>1.91%</td>
<td>8.47%</td>
</tr>
</tbody>
</table>

Source: Información Financiera, Superintendente de Banca e Instituciones Financieras
tion that the long stretch of solid economic growth of the Chilean economy also helped while it lasted.

Impact of Tight Money and Recession

Now that the macroeconomic environment is less favorable, with the onset of a worldwide crisis, there will be an opportunity to test the real strength gained by financial markets, and the banking system in particular, over the last 15 years or so. By the end of 1998 mortgage rates had gone up substantially following abnormally tight liquidity conditions which had caused a pronounced inversion in the yield curve.

But mortgage lending at the end of 1998 was still being offered, although at much higher rates and in an unusually wide range (from UF + 9.7% to UF+11.8% per year). Today, the Chilean economy is in a recession, for the first time since the early '80s. With domestic expenditure substantially down from a year ago, construction of new housing is considerably depressed, so the government recently introduced temporary but important tax breaks to motivate a reduction in the large stock of unsold new dwellings.

A relaxation on the monetary front also has caused a substantial drop in short-term interest rates, although real long-term rates remain on the high side. This plus a two-digit unemployment level is likely to contribute to a slow recovery in mortgage financing activity.

As to the ancillary and other costs associated with putting a mortgage loan on the books of the originator, most of them remain reasonably under control. One exception is the property registry fees. In Chile this is the domain of the "Conservador de Bienes Raices," a privately run office that benefits from this natural monopoly. Stamp and registration taxes amount to 0.6% of the price of the dwelling, if it has a surface of 140 square meters or less and complies with other specifications listed in Decree-Law 2, a piece of legislation that gives preferential tax treatment to smaller dwellings. Otherwise, these taxes are equivalent to 1.2% of the value of the property. A summary of the direct transactional costs for a typical Decree-Law 2 dwelling are listed in Table 6.

Table 6. Transactions Cost of Mortgage Credit

<table>
<thead>
<tr>
<th>Transactional Costs (US$)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Value assessment</td>
<td>Between 95 and 100</td>
</tr>
<tr>
<td>2. Title search</td>
<td>Between 95 and 100</td>
</tr>
<tr>
<td>3. Stamp and registration tax</td>
<td>0.6% of property value</td>
</tr>
<tr>
<td>4. Registration</td>
<td>Between 700 and 725</td>
</tr>
<tr>
<td>5. Notary</td>
<td>110</td>
</tr>
<tr>
<td>6. Fire and title insurance</td>
<td>20</td>
</tr>
<tr>
<td>7. Other insurance*</td>
<td>20</td>
</tr>
</tbody>
</table>

* It pays off the entire debt in case of death of the borrower: "Seguro de desgravamen."

The figures in Table 6 show that for a typical dwelling traded in the market for US$40,000 equivalent, the incurred ancillary costs are in the order of US$1,100 or some 2.75% of the purchase price. This adds a significant amount to the total cost for the new homeowner. Not much is heard in the marketplace about efforts to reduce current levels of ancillary costs associated with home buying. However, they should go down in percentage terms if the standards of more developed markets were to be used as a benchmark.

SOME CONCLUDING REMARKS AND LESSONS LEARNED:

To put in place a housing financing operation requires that at least three basic functions be carried out adequately.

1. The origination process has to find the client with the right qualifications, who wants to buy a sound housing unit with a price that matches his financial profile.

2. Long-term financing is normally required, so the capital market has to provide the right type of financial instrument and the investor willing to take the risks involved while holding the fixed-income asset to its duration.

3. Then, when the lending operation is in place, maintenance services must be provided so that there is a timely servicing of the mortgage and a reasonable rate of return can be made by all those that made the financing possible.

Of course, to get all this to work well is not easy, least of all at an affordable price. Experience in the region has been mixed, and often important components of the package are missing. A sound and efficient banking system is a requirement, as is a reasonably developed capital market.

Moreover, all these components of the financial puzzle have to operate in a macroeconomic environment that is frequently far from perfect. It is not surprising that housing shortages exist in the region. The complexity of the issues involved certainly demand that a concerted and well-coordinated effort be made by both the financial and public sectors. These efforts should focus on formulating the right set of policies and on putting in place the right financial architecture and institutions.

The Chilean Situation

Chile has been reasonably fortunate in being able to reduce its shortage of adequate housing. No doubt significant additional efforts should be made, but overall a reasonable architecture and a sound set of institutions for housing financing are in...
place. Financing is still quite expensive, but at least it is available and reachable for most that qualify for it.

Within this general picture, it is urgent to improve government housing programs to avoid market distortions at the lower end of the price range, and most of all, to eliminate the moral hazard introduced by poor debt servicing practices on the part of MINVU. Furthermore, a constant effort has to be maintained to continue improving capital markets legislation and regulations.

The bias among institutional investors towards concentration, particularly in the private pension industry, is a matter of concern. Also, it is important to stay vigilant so that the beneficial impact of competition is maintained among originators.

As to market efficiency, there has been for some time a steady reduction in the lending risks faced by the Chilean banking system. This in combination with growing competitiveness in originating loans has brought intermediation costs down substantially and has given housing financing a broad reach within the population.

Basically, the three main sources of risk for banks and other originators are now approaching levels seen in more developed financial systems abroad. Credit risk has been contained by the practice of using loan-to-value ratios in the 75% to 85% range, while industry standards do not allow payment-to-income ratios much above 25%. While land and property titling and mortgage registration tend to be expensive, the process works effectively and mortgage collateral is well established. On the legal side, foreclosure procedures for mortgage lending are expeditious and have been well tested.

Interest and Liquidity Risks

The other two basic risks, interest and liquid-uity risk, also have been reduced to reasonable levels by the banking industry, with the support of the capital markets. In this respect, the wide use of inflation-indexed financial instruments has been crucial. It is hard to overemphasize this point in an economy where inflationary pressures have been endemic, although today price increases are relatively contained. The lessons of the past have been learned, so today there is practically no mismatch between mortgage lending maturities and their funding base.

Without the development of a solid group of institutional investors, there would have been little long-term funding available. The availability of inflation-indexed securities such as mortgage bonds and EMC has been successful in satisfying the needs of these institutional investors. The role played by pension funds no doubt has been crucial. However, a review of current policies and practices seems to be in order.

Capital market development has meant that Chile now has plenty of funding available for the housing industry. Among the three largest institutional investors, private pension funds (US$30.8 billion), insurance companies (US$9.4 billion) and mutual funds (US$4.5 billion), they had some US$44.7 billion under management in their portfolios at the end of 1997.

They are well positioned to absorb large amounts of housing financing and control the interest and liquidity risks that banks alone could not easily handle, given their deposit base. All this has important repercussions on overall market efficiencies and has allowed broader access by families to private market financing.

Despite all this progress, however, funding rates have remained high in Chile across the board, which the current financial crisis in world markets has exacerbated. The current crisis is testing the overall architecture for housing financing and its institutions. A more lasting success will be achieved only when a new macroeconomic equilibrium that incorporates much lower funding interest rates is in place.

NOTES


2 Mortgage bonds and EMC are used primarily for direct housing financing. However, they also are commonly used to provide general-purpose term financing with a property as collateral. For example, in the case of mortgage bonds, general purpose financing accounted for 42% of all bonds outstanding at the end of 1997. However, even when classified as for general purpose, mortgage bonds and EMC often are used for other housing financing related needs, such as refurbishing, expansions or for purchasing second properties.

3 The Unidad de Fomento or UF is a unit of account calculated and published by the Central Bank of Chile and based on the variations of the Consumer Price Index (CPI). In the first few days of every month, a table is published by the Central Bank with daily values for the UF based on the variation of the CPI the month before. The daily values of the UF in the table apply from day 10th of the current month to day 9th of the following month. That is, the UF values are lagged some 40 days with respect to the actual inflation as registered by the CPI. The UF is used as a second currency in the Chilean financial markets, although all actual payments are made in the peso equivalent. For example, instruments denominated in UF and due on August 31, 1998, were converted to pesos at the rate of 14,398.73 pesos per UF.