The Chilean "Tripartite" Approach: Loans, Family Savings and State Subsidies

by Claudio Pardo

AN OVERVIEW

Chile has been a pioneer in setting up principles and mechanisms that guide housing policy for LMI households in a number of emerging countries today. The ideal direct, demand-driven housing subsidy strategy includes the following components:

1. A progressive direct grant subsidy targeted to lower-income groups.

2. A mechanism for the selection of beneficiaries based on need—the CAS survey in Chile—and on accumulated contractual household savings.

3. A supply of new dwellings, generally built and financed by private contractors, that are sensitive to home buyers' demands.

4. The state's subsidiary role in financial needs, such as providing mortgages for the poorest households and/or contracting basic housing construction when this is not spontaneously supplied by the market.

Claudio Pardo works for International Links Corp.

Under these general policy guidelines, Chile has made great strides in the last two decades in resolving its large housing shortage. Crucial to this end has been a vigorous period of economic expansion, the increasing sophistication of the domestic financial and capital markets, and a steady political commitment to solving the housing deficit. The cornerstone of the housing policy of the Chilean government (GOCH) is the promotion of homeownership by providing sizable direct subsidies to low- and moderate-income (LMI) families so that they can complete the downpayment on their first dwelling. Household savings, which are encouraged, normally become the crucial factor in determining those who will receive state subsidies. The third pillar in the "tripartite" financing is market-rate mortgage loans, which are readily available from Chile's banking sector for moderate- and higher-income households.

These principles notwithstanding, past practices by the GOCH often have deviated from the ideal, particularly because the implementation of its programs has resulted in heavier government and political involvement than desirable or anticipated. Current state policies date back to the late 1970s. Since then, the GOCH also has funded and carried the credit risk associated with the supplementary loans needed to complete the financing required to make homeowners of the poorest families. This constitutes the weakest of the three pillars of the Chilean social housing policy, especially given the historically poor loan collection record. In particular, much of the construction for the poorest families has been contracted out directly by the GOCH, which then offers the units to these households. Also, lower-income households obtain loans directly from government agencies rather than from the banks, an approach that is critiqued throughout this paper.

Thus, Chile's very impressive record in reducing the housing deficit and relying on the private sector for a substantial portion of the policy, must also be weighed against more-than-anticipated government involvement. The results of the latter have been supply inflexibility, lower mobility for the poorest families, housing market segmentation, and considerable financial moral hazard, which has retarded the access of poor families to formal credit markets.

This public commitment to social housing has required substantial public budget allocations every year, equivalent to some $420 million in 2000 alone. However, there also has been an impressive outcome, as illustrated by the fact that 322,000, or 60%, of new housing solutions in the 1994 through

1997 period received some financial support from the GOCH. Progressive subsidy policies have meant that the poorest households have received direct grant allocations from the state covering as much as 75% of the cost of each unit. Housing subsidies for moderate-income families have been much less in absolute and relative terms, although many of the households receiving vouchers also got partial credit guarantees to make it feasible for them to formally access originators in the financial market.

Chile's population is close to 15 million and there are now over 4 million housing units. This means that today each dwelling provides a roof for about 3.7 people, down from the 4.1 figure recorded by the 1992 census, when some 20% of the families were living in dwellings that did not comply with minimum basic standards. It is estimated that the country requires some 82,000 new units a year in order to accommodate current rates of new family formation and avoid a widening of the housing gap, which the Ministry of Housing (MINVU) recently estimated at 400,000 dwellings. At current levels of new construction—135,000 housing units a year prior to the recent economic downturn—Chile still will need to concentrate and divert extra resources for several more years in order to eliminate its housing shortage. However, the tide has turned and the effort already made is being reflected in important improvements in the material quality of life of the Chilean society as a whole.

Housing for higher-income families is being provided for through the free play of market forces. Dwellings supplied by the private sector, generally larger, well located and of high quality, represent the bulk of the value added in the Chilean housing sector. This amounted to about 304,000 of new housing units for the period 1994-97, or about 56% of the total. Most families purchasing these dwellings received mortgages from the financial system, including the 85,000 moderate-income families that purchased their dwellings in the open market with the support of government vouchers to complete their downpayment. Housing finance origination is done mainly by commercial banks, which routinely offer mortgages with maturities concentrated in the 10 to 20 year range but reaching up to 30 years. Chile has well functioning, competitive financial markets that provide reasonably priced housing finance in local currency through inflation-indexed credits. Normally, originators finance these loans by securing long-term funding in the local capital market, which has had a vigorous expansion since the early 1980s with the advent of institutional investors, such as private pension funds and life insurance companies. Also conducive to the development of mortgage financing in Chile has been the existence of a proven legal, regulatory, and financial framework, which has benefited from a favorable macroeconomic environment.

In summary, the provision of housing solutions in Chile rests basically on two separate but related foundations. On one hand, there is GOCH action through a demand-oriented, subsidy-cum-financing program for basic housing that favors lower-income families. On the other, Chile's competitive marketplace, where private demand and supply for housing interact, takes care of dwellings priced at the equivalent of $25,000 and up. While the government's strategy has proved effective in reducing the housing deficit, heavy state intervention has resulted in a source of major financial distortions at the lower end of the housing market—below the $15,000 unit price. Particularly damaging has been the government's political unwillingness to collect on delinquent mortgages of those receiving a direct loan from the GOCH. This has caused subsidies to be much higher than originally intended and resulted in a serious moral hazard. It has brought about a severe market segmentation with practically no spontaneous private supply of housing solutions at the lower end of the spectrum; and it has made housing availability much more difficult for new families, who are confronted with high rents, few housing options and difficulties to save for the downpayment required to access government-subsidized housing.

PUBLIC HOUSING POLICY IN CHILE

The ultimate goal of the social housing policy of the GOCH has been the accelerated reduction of the large housing deficit.[1] Basically, the strategy followed has been to favor quantity over quality of the housing solutions. This is explained by the fact that when current policies were introduced in the late 1970s, the housing deficit was quite substantial and growing rapidly. Politically, the situation had to be reversed, and hopefully be resolved in the course of a generation. Naturally, the housing problem was concentrated at the lower end of the income distribution, a segment of households where more aggressive public support was more desirable and justifiable. The result has been that most public resources spent on housing have effectively gone to provide new housing solutions for low- and moderate-income families, particularly those in the two lowest quintiles of the income distribution. Government policy has identified households in the middle of the income distribution also deserving some public financial assistance to support their efforts to buy their first home. Households in the two upper income quintiles do not receive any direct public support, except that they have benefited increasingly from the steady improvement in the terms and conditions of mortgages in the market place.

Public Policy Toward Low-Income Families

The urgency to provide housing solutions to this group of households is illustrated by the reality of 1990, when the average dwelling provided by the GOCH under its Basic

Housing (BH) program had an area of 344.4 square feet built on a site of 1,076.4 square feet. It was expected that the buyer contributed additional money and worked over time in order to complete the rough finishing used by government contractors. In today's dollars, the average price of these basic dwellings was equivalent to $6,890, which was financed, as were all GOCH housing schemes for LMI families from three sources: a downpayment by the buyer from savings, a direct government subsidy to complete the downpayment and a supplementary market rate mortgage—in this case carrying a credit risk assumed by the government.[2] Even with these basic dwellings, the government's housing program failed to reach the lowest income group, so the MINVU also offered a Progressive Units (PU) program, which considered building dwellings in two stages. This was aimed at households with an average monthly income of $90 or lower.[3] In this context, and as it will be argued in more detail later, lending issues were de facto treated as secondary by the GOCH.

Today, after substantial expansion in the Chilean economy, the emphasis is on improving the quality of the solutions offered, without sacrificing the final objective of solving the housing deficit. To put this in perspective, in 1999 the basic dwelling had 505.9 square feet on average, a significant gain over a decade ago, and was built to much more demanding specifications, while the units were placed in urban areas that came with community centers, playgrounds for children and sport facilities. The maximum direct state subsidy also has been reduced, to the equivalent of $4,190 from the previous amount of $5,990 (in today's dollars) at the beginning of the social housing strategy. In addition, the PU program is being phased out by the MINVU.

The two programs already mentioned, the BH and PU, constitute the bulk of the housing solutions for the poorest households. Most often, the supply of these dwellings is contracted by the GOCH through bids tendered to private developers. An implicit assumption by the government is that the poorest families are not bankable in the marketplace, either because of their low borrowing capacity, inability to justify a formal source for their incomes, or simply due to the high variability that their incomes demonstrate. Also, it is clear that the GOCH holds that these households are not able to acquire a basic dwelling unless the buyer is heavily subsidized: today, on average, by 61% of the value of the BH units, which are priced in the range of $6,900 to $7,950.[4] The recipient households are expected to contribute family savings of at least $299 for the downpayment. The financing is completed by a mortgage provided by the regional SERVIU, the operating agencies of the MINVU, which are spread out across the country. The largest mortgage provided by the SERVIU under the BH modality is equivalent to $2,395—or up to 35% of the unit's price—and $1,407 for the PU program—capped at 22% of the price of a progressive unit.

Actually, these supplementary loans are a residual financing item since nobody is denied a mortgage because of a poor credit history or credit assessment. In fact, there are other criteria for selecting LMI home buyers, with a practical emphasis placed on family need and prior savings efforts. What is clear from the Chilean model for social housing is that the goal of lending to the poorest segments of society is simply completion of an acceptable housing solution. Thus, the GOCH is ready to promote and finance the full cost of new dwellings geared for the poorest, less the household's accumulated savings. The government has made regular budget allocations to finance mortgages for these households independent of the collective payment records of subsidized families.[5]

As an important component of its social housing policy, the GOCH has established a well regulated system for contract savings by LMI families aspiring to receive a state subsidy for purchasing their first home. Indeed, applicants are encouraged to sign a contract with authorized savings institutions, including banks, cooperatives, etc., whereby a savings plan is agreed upon. Market interest rates are paid on the deposits. The selected financial institution later issues the savings certificate that qualifies the household to participate in the periodical subsidy calls. Given that available subsidies are scarce on each occasion, the amount saved and the persistence of the effort become the most relevant parameters in the selection process. People are indeed motivated to save for the purpose of buying their own house. Well over 1 million contract savings accounts are outstanding today, of which less than half are active. From another perspective, 595,000 households were registered in 1998 with the SERVIU, waiting to be considered for a subsidy under the variety of housing schemes available with the MINVU. In 1998, only 85,000 households actually achieved the dream of getting their own home with the support of a state subsidy.

As a rule, MINVU avoids the use of direct interest rate subsidies to support homeownership by LMI families. This is in line with the more general objective of closely targeting subsidies to those most in need. The Chilean experience is that interest rate subsidies primarily benefit the rich, in addition to being an ineffective targeting tool. This notwithstanding, the practice of direct mortgage lending by the regional SERVIU on average has resulted in substantial and unintended additional subsidies for those getting a home via the housing programs for the poorest families. Basically, they are the direct result of the poor collection track record by the SERVIU, due in part to political constraints, but also to a lack of sound management practices.

Public Housing Policy for Moderate-income Families

The housing policy for moderate-income households—basically those in the third income quintile—adheres much more closely to the subsidiary role that the GOCH prefers to play. While these families compete for a direct subsidy from the state through the system that rewards contractual savings and need, they receive their subsidy in the form of a voucher that can be used for the downpayment on a dwelling purchased in the open market. Under this, the so-called Unified Subsidy (US) program, households compete actively for the scarce state subsidies. Until last year, the minimum requirements to access a state subsidy under this program were more generous, but starting with the vouchers allocated in 2001, the government is applying the following parameters:

- A track record of at least 12 months of savings and an accumulated amount equivalent to no less than $1,950.[6]

- The purchase of a dwelling priced at not more than the equivalent of $29,940. Once the family gets a voucher, it has 21 months to locate a unit in the open market and secure the needed mortgage financing from commercial banks or mortgage companies. The mortgage cannot exceed $22,455 nor be higher than 75% of the price of the dwelling.

In general, the voucher system has worked reasonably well, with the amount of the subsidy decreasing inversely with the price of the dwelling. Until last year, MINVU used a three-tranche approach for this voucher system. Starting in 2001, MINVU has eliminated the third tranche, so new vouchers will not be available for houses priced up to $45,000 as before. Vouchers range in value from $2,994 to $3,593 for dwellings costing up to $14,971, and $2,395 to $2,994 for those costing up to $29,994. These subsidy amounts are substantially smaller than those provided to low-income families. This feature is reinforced by the fact that moderate-income families requesting a smaller subsidy have a better chance of getting one. As with all MINVU subsidies, vouchers are available only to middle-income households that do not own a property and for those that acquire it to be their principal place of residence. Also, MINVU subsidies are a once-in-a-lifetime event. All in all, close to 85,000 new dwellings were acquired under the US program in the four-year period 1994 to 1997. This represented 16% of the total supply of new housing units during those years.

MINVU has been quite successful in letting the marketplace supply housing for middle-income families. Indeed, dwellings for subsidized moderate/middle-income families are freely provided by private construction companies, which in this case, do not benefit from the turnkey government contracts often used under the PU and BH programs for the poor. Another difference is that mortgages in the case of moderate-income families normally represent the bulk of the required financing to buy a home. In the case of the US program, these are provided by the financial system after the credit worthiness of the applicant is assessed. The government also encourages this lending by providing banks and other originators with partial credit guarantees on the smaller mortgages, covering the equivalent of up to $5,990 per mortgage, but not more than 75% of the financing provided. The state guarantee also covers up to $6,000 in potential legal or other recovery costs incurred by lenders.

Mortgage bonds issued by banks have been the traditional funding vehicle for these housing loans to subsidized middle income families. The State Bank, a publicly owned commercial bank, does the bulk of the lending. The Chilean experience has shown that, with a few exceptions, there has been little interest among private commercial banks to grant small mortgages, particularly when they are not free to set the lending spread, which is capped at three percentage points for originators accessing the state guarantee. However, what is relevant from the perspective of the MINVU is that families receiving vouchers—particularly those in the first and second tranche of the US program—are able to secure a mortgage from a financial institution. This explains the generous partial guarantees that the government is willing to provide to originators. By facilitating the access of subsidized moderate-income families to the financial market, the GOCH not only avoids having to provide them directly with mortgages, but it also minimizes management costs and potential collection problems, and transfers some of the credit risk to others. In practice, this formula has brought clear gains to the GOCH, particularly when viewed in light of its much worse performance when lending directly to households.

A practice generally absent in Chile has been the use of income tax incentives on home mortgages. There is an important property tax incentive (under the rules of the so-called DFL 2 legislation) for those buying a dwelling of not more than 1,507 square feet, a size that includes the bulk of the new housing in Chile. However, this legislation is aimed at reducing property taxes and the ancillary costs associated with purchasing such dwellings, independently of how the transaction is financed. Income tax deductions on mortgage interest rate payments normally are not allowed. The exception has been a recent temporary income tax benefit for DFL 2 housing approved in July 1999, which allows for declining partial deduction of mortgage payments (interest and principal) from the taxable income base for new dwellings bought between June 1999 and June 2001. The purpose of this tax break was to give a strong time-bounded incentive to new purchases following the 1999 economic downturn that caused a severe market glut.[7])

Besides mortgages, moderate-income families can now access a new housing leasing program to secure the financing for their subsidized homes. A housing leasing law was passed; and the scheme was added to the MINVU programs as an underwriting alternative to mortgage finance, since it keeps ownership with the originator. Although this provides solid collateral to investors, the Chilean Housing Leasing (HL) program was designed primarily for those households that could not easily provide the downpayment or the prior savings requirements in the US program, young families for example, but that could comply with mortgage servicing-to-income ratios required by originators and with the contractual monthly savings of the US program. In fact, those applying for a subsidy under this scheme are covered by similar rules to those under the US program. The exception is that the lump-sum voucher is replaced by equivalent monthly installments—in present value terms—paid by the regional SERVIU to the contractual savings account of the beneficiary. Under the HL program, the beneficiary agrees with the leasing company on a monthly rent, a promise to buy the property and the future UF price of the dwelling. At the same time, the lessee continues to make additional monthly deposits into his/her contractual savings account—which is supplemented by the SERVIU contribution—so that eventually the household can complete the purchase of the dwelling. Lack of long-term funding for this new type of leasing company has been an impediment to expansion. Thus, in order to jump-start this new industry, financial support was provided to leasing companies with a USAID-funded long-term line of credit of $15 million, which has now been entirely committed.

Table 1 Terms and Conditions of Direct SERVIU Mortgages

	Basic Housing Program	*Comments*
Maximum credit size (expressed in UF)	$2,395–SERVIU modality; $2,994–Free Election modality	The mortgage is optional and complements the state subsidy and the household prior savings.
Mortgage-to-value ratio	Maximum 75%	
Maximum term	20 years	The term is adjusted so that the P/I ratio does not exceed 20%.
Payment-to-income ratio	20% of income or less than $18 per month	This eligibility criteria is not a hard constraint, since a sworn statement is sufficient compliance.
Interest rate	8% per year on inflation adjusted principal	This rate has been traditionally somewhat lower than market rates, which implies additional subsidies to recipients.
Upfront fees and commissions	$177	Ancillary costs well below market—there is an implicit subsidy provided by SERVIU.

Source: MINVU

THE MINVU SYSTEM OF DIRECT MORTGAGES

As already mentioned, MINVU direct lending goes to households in the lowest two income quintiles. Actual lending is done by the regional SERVIU, the implementing agencies of MINVU, which also deal with private contractors, and manage the subsidy scheme and the selection of beneficiaries. The role of the direct government loans in the financing of housing units for the poor was already emphasized. The implicit MINVU assumption is that, given the costs of origination and the perceived credit risks, such small long-term loans present no attraction for private mortgage originators in the Chilean market. The terms and conditions of the direct lending by SERVIU is summarized in Table 1.

A key problem with this direct lending approach is the moral hazard caused by a lack of political will to collect on the part of SERVIU, which is augmented by poor information systems and the absence of an effective collection mechanism. This situation has traditionally benefited those households that do not pay their obligations with SERVIU, discouraging the development of private mortgage sources and other financing mechanisms for the poor. Current SERVIU practices also have discouraged transactions of pre-owned dwellings with outstanding mortgages. The supply of low-income rental properties from the private sector is extremely limited, despite the relatively high rental prices paid by those waiting to own a subsidized basic unit.

Contributing to the problem has been the recurrent use of debt restructuring by the MINVU. Since 1983, there have been at least five across-the-board debt-restructuring exercises, which have borne little connection with the affordability of the mortgage for a given household. Restructuring has resulted in real losses to the value of the SERVIU portfolios, as it provided significant reduction in the debt burden of households. However, the scant information available indicates that such restructuring has had little impact on improving loan recovery; rather it has ended up "condoning" mortgage delinquency.[8] However, this is not surprising, given that all indications are that the problem with this portfolio has not been one of affordability in the first place, a perception that is reinforced by the fact that the Chilean economy has grown substantially since 1984, which has brought about a large decline in the debt service-to-income ratios of most SERVIU debtors.[9]

Originally, SERVIU collected mortgage payments directly. This is now contracted out to a private collection firm with offices across the country, which manages the process supported by the SERVIU databases. However, the decision to prosecute mortgage defaulters can only be made by the regional SERVIU, which seldom have exercised their rights in the past. Although the SERVIU portfolio is likely to have today in excess of 400,000 debtors, there are no firm public figures, which makes it difficult to come up with estimates of the losses incurred by the state due to inability or unwillingness of the regional SERVIU to collect. However, while past surveys have shown high levels of loan delinquency in the SERVIU portfolios, the number of dwellings auctioned to pay for overdue mortgages remains extremely low. To illustrate the point, a December 1992 survey in Greater Santiago (see Melo-Zañartu, 1995) found that SERVIU debtors since mid-1976 were, on average, 24 monthly debt payments in arrears plus 10 more in interest penalties. Yet records show that there were no dwellings auctioned off to pay delinquent SERVIU loans in 1992. At that time, auctions brought about by private banks due to delinquent mortgages averaged 44 per month, despite portfolio arrears of just 2%.[10]

In summary, the laxity shown by the SERVIU in the management of its loan portfolios has caused not only important market disruptions, but also has resulted in substantial additional and unintended subsidies. In fact, detailed calculations for 1993 (again, by Melo-Zañartu) valued implicit subsidies at $1,204 per household. This implicit subsidy was worth 29% of the intended or explicit one for the basic dwelling or, put another way, its annual cost would be today equivalent to some 4,000 basic units.

MORTGAGES FOR MODERATE-INCOME FAMILIES

Subsidized housing for households in the middle-income range has benefited from the active and competitive Chilean mortgage market.[11] Indeed, they have been able to access mortgage loans in the financial market with similar terms and conditions attained by households in the higher-income groups.[12] Practically all housing lending is done in inflation-indexed mortgages denominated in UF. The rapid accumulation of private savings managed by institutional investors, including private pension funds, life insurance companies and others, has transformed capital markets in the last two decades. The market provides sizable amounts of long-term funding, the underpinning of a sound mortgage market. Housing finance has benefited from this, as reflected in the close to $9 billion in housing lending by the banks.

There are basically two different types of mortgage instruments in the Chilean market today. One is the mortgage bond (the "letra hipotecaria"), which is a security issued as a liability by the originating bank on a one-to-one basis to fund a specific mortgage credit. By law, the mortgage bond can finance up to 75% of the value of the property. The other instrument is the Endorsable Mortgage Credit (EMC) or "mutuo hipotecario endosable," which is similar to the standard mortgage in the United States. In Chile, the EMC can finance up to 80% of the value of a dwelling.

Mortgage bonds have been the traditional way of funding housing mortgages in Chile and the majority of outstanding operations are of this type. This is particularly so for mortgages granted to subsidized, moderate-income families. EMC is a recent introduction to the Chilean market; EMCs are designed to be sold to secondary market conduits and securitized. However, the practice of EMC securitization is still not widespread in Chile.[13] Nevertheless, mortgage originators have been quite active in recent years with EMC, mostly to finance commercial real estate and higher priced housing. Recently, however, "Banco del Desarrollo," a private commercial bank specializing in lending to moderate- income households, has been providing EMC mortgages to this group, some of which have been sold to securitization companies and been successfully securitized.[14]

In theory, beneficiaries of the US program can go to any bank to secure a mortgage. However, in practice they tend to gravitate towards the State Bank or " Banco del Estado," which specializes in mortgages to lower-income, bankable borrowers, and which normally offers them more attractive interest rates than private originators. This bank, although owned by the state, operates under the same stringent regulatory norms applied to all banks in Chile.

To a large extent, the specialization of the State Bank has been the result of government policy that encourages this bank to be supportive of the US program. Most private banks claim to find it riskier and too expensive to address the lower end of this market. They lack the benefit of the economies of scale enjoyed by the State Bank in this market niche and, normally, are forced to quote significantly higher rates for U.S. program clients than those listed by the State Bank.[15] As a result, the State Bank has a large portfolio of relatively small mortgages; about 332,000 households were financed with its mortgage bonds as of May 1999, or 71% of the total housing loans funded with this type of security by the banking system. The figures for the State Bank are illustrative in this respect, since they show that 18% of its housing mortgage operations had some degree of arrears in mid-2000 (a year when the Chilean economy was trying to recover from its first recession in 16 years). This percentage is much higher than the industry as a whole (7.4% of mortgages in arrears). On the other hand, the portfolio is protected by the housing collateral—which contrary to the case of direct lending by the SERVIU, they routinely exercise—and the partial SERVIU guarantee behind it in the case of their US program lending.

In sum, MINVU realized that families receiving first and second tranche vouchers under its US program needed special support in order to secure a mortgage from the private banking system. Thus, it encourages all mortgage and lease contract originators to access the partial government guarantee it offers through the SERVIU. Despite this, private banks, with a few exceptions, continue to show little interest in financing moderate-income families or simply cannot compete with the rates offered by the State Bank. This suggests that major revisions to the current scheme are in order. If costs are to be further subsidized by the government, a special direct subsidy geared to cover ancillary and direct bank costs incurred to book a mortgage loan might be considered.[16]

LESSONS LEARNED AND TRANSFERABILITY OF THE CHILEAN EXPERIENCE

Sustained economic growth and sound macroeconomic policies have been key to Chile's success in making substantial inroads in solving its housing deficit. Within the context of a favorable macroeconomic environment, progress has also been the direct result of the broad-based political consensus on the need to allocate substantial amounts of fiscal resources to provide adequate housing for the poorest segments of society. To be sure, much remains to be done, as the nature of the solution is rapidly changing from one of quantity to one of quality of the housing solutions provided. Also, availability of land in major cities is becoming a constraint; and with more demanding minimum standards, the price of housing is going up. In Santiago, for example, there are major difficulties in meeting family demand for the Basic Housing and Unified Subsidy programs. Thus, the challenge will be to find more market-driven solutions for financing marginally bankable families, since reliance on additional direct SERVIU credit is not desirable.[17]

Elimination of market distortions and reduction of the moral hazard implicit in current collection practices by SERVIU is another key future challenge of Chile's social housing policy. Affordability is not the key problem, but rather the absence of political will to collect. Thus, solutions point in the direction of moving lending and collection decisions away from the SERVIU and closer to the private marketplace. Perhaps there is also a need to review current subsidy formulas, so as better to target current "implicit" subsidies only to those in need. The role of housing microfinance implemented and managed by the private sector, including non-governmental organizations, is also worth exploring. An explicit subsidy to the mortgage origination process for the less bankable families is one option.

The Chilean experience shows that strong political and fiscal commitment targeted toward the poorest segments of society can be powerful. A substantial decrease in the large and endemic housing deficit has taken place and expectations are that this will fade away toward the end of the decade. The main drawback of government involvement has been in its role as a direct lender to the poorest households, which has brought about serious market distortions in this housing segment, introduced damaging moral hazard by rewarding noncompliance, and discouraged the entry of private sector banks and other potential originators. The problems have been magnified by poor management of the loan portfolio, which has resulted in unanticipated and quite large additional subsidies to beneficiaries of the Basic Housing and related programs.

Another lesson from the heavy government involvement is that there is a crowding out of private sector initiative in the design and execution of housing solutions for the poor. The GOCH should make more decisive efforts in the future for a more active and spontaneous private sector involvement in the supply of LMI housing. MINVU too often has had to originate the bulk of the supply of new housing for the poorest households. Thus, there have been difficulties allowing for the expression of housing preferences by LMI families, who, in practice, have had to accept arbitrary government-driven solutions. Although some progress has been made lately, Chile is still struggling to make inroads—through organizations such as cooperatives and NGOs—in the private promotion, design and management of housing solutions for the poor.

On the positive side, the Chilean experience shows that long-term, private mortgage lending can be developed in emerging economies, but for this to happen, conditions for development of financial markets have to be present, including those required for efficient originators and long-term institutional financial investors to appear. Furthermore, a sound legal and regulatory financial framework is essential. The development of mortgage instruments that adequately deal with financial risks faced by investors—such as high inflation or weak issuers—is also a pre-condition that needs to be satisfied. Through advances in these areas, Chile certainly has been successful in providing private market solutions to the housing finance needs of about half of its new homeowners. The challenge now is to replicate this experience at the low end of the income distribution.

There are other specific lessons in transferability that can be highlighted from the Chilean experience. Some of them are directly related to the social aspects of housing, while others are related more directly to the transferability of Chilean financial practices to other economies.

First, contract savings schemes implemented through formal financial intermediaries, such as banks, cooperatives and others, have been successful in Chile as a vehicle to establish a financial track record for LMI families trying to become homeowners. Household savings are essential to complete the downpayment on a unit. Also, prior savings have become a very relevant tool in the selection of families eligible for scarce state housing subsidies. Moreover, they have reduced the government's contributions for housing the poor. To some degree, this also has increased financial savings and enhanced the reach of financial intermediation in the economy. The Chilean experience is likely to be easily transferable to other emerging markets, where deepening of financial intermediation and savings are economic priorities.

The voucher scheme, aimed at completing the downpayment under the Unified Subsidy program, also appears as highly transferable to other countries. In fact, several countries in the Americas and beyond already have adopted it. However, this practice requires the support of a sound procedure for targeting beneficiaries among LMI families, which in Chile is achieved through an extensive survey. The voucher system does not introduce distortions in financial markets, while allowing a larger private supply of housing for LMI households to materialize in the marketplace.

Inflation-indexed mortgages have been a successful financial innovation in Chile, a high-inflation prone country in the past. Institutional investors, who otherwise would have invested only in short-term peso instruments or in hard currency securities, have been much attracted to these long-term fixed-income instruments. Most workers in Chile receive peso earnings and inflation-indexed mortgages have proven less risky for lenders, providing a better hedge against arrears than dollar denominated loans, particularly during periods of macroeconomic instability. This is likely to be the case in many other countries around the world, so the Chilean experience with indexed securities is worth considering. Furthermore, inflation-indexed lending instruments make it possible to extend amortization periods, while enhancing capital market development and providing investors with an attractive new set of long-term securities. This is particularly useful in those emerging economies where private pension funds are becoming central players in capital markets as a result of social security reform.

The long-term, bank issued mortgage bonds developed in Chile have been an attractive and practical option as a source of funding. They are an alternative and complement to the funding available through endorsable mortgages, which can be pooled and securitized. The Chilean-type mortgage bond could be particularly attractive in countries where capital markets and structured financing are yet to be developed fully. Mortgage bonds representing bank liabilities normally are perceived to carry less credit risk and be attractively priced. Also, many emerging countries lack a credit rating industry, so bank issued mortgage bonds are better understood and their risk easier to assess by investors than other types of mortgage-backed securities. This is particularly true when the origination process still lacks adequate standardization. Moreover, bank issued mortgage bonds and mortgage-backed securities are not incompatible, as the Chilean experience has shown.

The legislation passed by Chile to introduce housing leases—with an option to buy at a price set from the outset—is a viable underwriting alternative to finance moderate-income family housing. Although there were other reasons for its introduction in Chile, keeping ownership in the hands of the originator could be an attractive alternative to mortgages when eviction laws are hard to implement or take a long time to do, as is the case in many countries. In Chile, eviction laws in connection with mortgages work efficiently, so this was not a main concern. Rather, leasing was seen as a safer option than a regular mortgage when the household had an adequate payment-to-income capacity, but low levels of accumulated savings for the downpayment. The contractual savings plan entered into by households getting a housing lease gives them the means to buy their unit in the future. Low levels of family savings are common in emerging economies, so this could be another reason to explore the transferability of lease contracts as a source of funding. Its applicability, however, is likely to be more fruitful in countries where the securitization of lease contracts is available, and which in Chile is just starting to happen.

Finally, while direct mortgage lending by the government is not recommended, the experience with partial government mortgage and lease guarantees to moderate- and middle-income families has been relatively successful in Chile. These partial guarantees have allowed many more of these households to access housing finance in the private sector. In fact, these state guarantees also have facilitated the securitization of leases and mortgages of subsidized families. Thus, the transferability of the concept is worth analyzing in the context of other markets.

NOTES

1 To this end, last year the Ministry of Housing (MINVU) offered 14 different programs for LMI families to acquire a subsidized dwelling. Each program is targeted to a specific group and focused on addressing a particular set of housing problems.

2 For all its LMI household programs MINVU uses values for subsidies, price of dwellings and other peso variables expressed in the "Unidad de Fomento (UF)," a unit of account that is adjusted daily to reflect domestic price inflation as measured by the CPI. For conversion purposes, dollar values in the text reflect an exchange rate of 29.94 dollars per UF.

3 The first stage costs $4,190, of which 94% is financed by a direct state subsidy and the rest by accumulated savings of the beneficiaries. The family gets a prepared site, with running water, a connection to the sewage system, electricity, access to a paved street, and some initial construction, including at least a bathroom and a kitchen. The dwelling is finished in the second stage, which is financed by an additional direct subsidy, family savings and an optional mortgage provided by the MINVU.

4 The price of this basic house can go up to as much as the equivalent of $9,900 in the isolated Patagonia region of southern Chile. In these cases, the direct subsidies go up commensurately.

5 Actually, loan recoveries and servicing revert to the general fiscal budget and basically are not available for further social housing support. The MINVU budget is discussed and approved every year as part of the Annual Fiscal Budget Law exercise.

6 Prior savings can be substituted, totally or partially, if the household already owns the construction site.

7 The impact of this legislation was felt immediately as sales of new units skyrocketed. For example, December 1999 sales of new DFL 2 properties in Santiago were 79% above levels a year earlier. By then, and after half a year of the income tax incentives, housing stocks were back to normal historical levels. Now construction companies once again are starting new housing projects.

8 For more factual information and a detailed discussion of issues raised by the mortgage portfolio of the SERVIU, see: Melo-Zañartu, Pedro, 1995, "Carteras Hipotecarias Estatales. Lecciones de su Generación y Gestión." *Políticas de Financiamiento Habitacional en Chile—Primer seminario sobre la experiencia chilena en financiamiento habitacional.* October 1993, Chapter VI: 123-153.

9 These same families have shown a completely different behavior when it comes to paying their monthly utility bills, for services provided in recent years by privatized utilities, and which do not have tolerance for delinquent customers.

10 Another figure shows that 76% of SERVIU debtors were in arrears in December 1989 and, of those, 66% had four or more payments overdue.

11 For a broader discussion of market-oriented housing finance in Chile, see: Pardo, Claudio, 1999, "Housing Finance in Chile: Primary and Secondary Mortgage Financing." *Housing Finance International.* Vol. XIV / No. 1, September 1999: 15-25.

12 In today's highly competitive financial environment, Chilean banks are offering 20-year mortgage loans financed with mortgage bonds priced at par and at rates of 6.5% per year. To this funding, banks apply commissions as low as 0.4% for mortgages equivalent to $120,000 or more. In the case of smaller mortgages suited for housing in the second tranche of the US program, private banks are offering commissions of around 1.5%. The competitive State Bank continues to be leader in the market for smaller mortgages, offering commissions below 1% per year.

13 Besides EMC originators, other beneficiaries of securitization are the housing leasing companies commented earlier on. In fact, securitization of future cash flows from lease payments associated with subsidized dwellings have already been completed and sold to institutional investors.

14 Banco del Desarrollo had in its books over 18,000 mortgage loans financed with mortgages bonds at the end of 1999. In addition, this bank has been quite active in the financing of housing for US program beneficiaries via EMC and housing leases. In fact, over 900 of its EMC and housing leases for subsidized families were successfully securitized in November of 1999. This was the first operation of its kind. Also, see Sally Merrill, et. al., 2000, for a description of Banco del Desarrollo.

15 In addition, because the State Bank is very active in supplying of mortgage bonds to the market, these are better known and more liquid. Also, the market assumes an implicit government guarantee. Thus, the State Bank normally places its bonds at the lower end of the interest rate spectrum for these securities.

[16] On average, ancillary costs for a $40,000 unit are estimated in the order of $1,100, a figure with an important fixed component, so that the relative burden rises for less expensive dwellings. These upfront costs constitute a major obstacle for the extension of private bank mortgages to families in the first two tranches of the US program.

[17] The option to allow households access to their pension funds for housing finance has been rejected in Chile so far. Many reasons have been advanced to defend this position, but in the end, the argument has been that once an exception is made others will certainly follow. Besides, private pension fund managers have been quite eager to buy mortgage bonds and securitized mortgages, making a substantial contribution to housing financing.