Report No. 22534-ME

Mexico
Low Income Housing: Issues and Options

(In Two Volumes) Volume I: Main Report

September 16, 2002

Mexico Country Management Unit
Finance, Private Sector and Infrastructure Management Unit
Latin America and the Caribbean Region

Document of the World Bank

CURRENCY AND EQUIVALENTS

Currency Unit: Mexican Peso
8.10 = US$1 1997
9.90 = US$1 1998
9.35 = US$1 1999
9.35 = US$1 2000
9.33 = US$1 2001

WEIGHTS AND MEASURES: Metric System

FISCAL YEAR: January 1 - December 31

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ABBREVIATIONS

AFORES	Adminstradoras de Fondos para Retiro
BANOBRAS	Banco Nacional de Obras y Servicios Públicos, S.A.
CNBV	Comisión Bancaria y de Valores
CETES	Certificados de la Tesorería de la Federación
CONAPO	Consejo Nacional de Población
CONAFOVI	Comisión Nacional de Fomento a la Vivienda
CORETT	Comisión para la Regularización de la Tenencia de la Tierra
CP	Commercial paper
CPP	Deposit Rate (Cost of bank deposits measured over time deposits)
FIFONAFE	Fideicomiso del Fondo Nacional de Fomento Ejidal
FONHAPO	Fideicomiso Fondo Nacional de Habitaciones Populares
FOVI	Fondo de Operación y Financiamiento Bancario a la Vivienda
FOVISSSTE	Fondo de la Vivienda del Instituto del Seguro Social al Servicio de los Trabajadores del Estado
GoM	Government of México
Ha	Hectare
IDB	InterAmerican Development Bank
IFI	International Finance Institutions
INFONAVIT	Instituto del Fondo Nacional de la Vivienda para los Trabajadores
ISSTE	Instituto de Seguridad y Servicios Sociales de los Trabajadores
MAP	Plan de Ayuda Mutua
MBS	Mortgage based securities
MFI	Micro finance Institutions
MW	Minimum Wage
NPL	Non Performing Loan
OREVI	Organismo Estatal de Vivienda
PISO	Programa de Incorporación de Suelo Social al Desarrollo Urbano
PROCEDE	Programa de Certificación de derechos Ejidales y Titulación de Solares Urbanos
PROSAVI	Programa Especial de Crédito y Subsidios a la Vivienda
SEDESOL	Secretaria de Desarrollo Urbano y Vivienda
SHCP	Secretaria de Hacienda y Crédito Público
SHF	Sociedad Hipotecaria Federal
SOFOLES	Sociedad Financiera de Objecto Limitado
TIIP	Tasa de Interés Interbancaria
VIVAH	Programa de Ahorro y Subsidios para la Vivienda Progresiva

PREFACE AND ACKNOWLEDGEMENTS

The study is based on work prepared by a team of Mexican, World Bank and InterAmerican Development Bank researchers during 2000 – 2001, along with a review of key secondary sources. The study counterpart, CONAFOVI and the Subsecretariate for Urban Development and Housing, SEDESOL, also provided important analytical contributions. The complete inputs of the researchers form volume two accompanying this study. The study refers to the state of the housing sector prior to 2001, and several reforms in line with the recommendations of this study have been undertaken since that time. An earlier draft of the study was reviewed with the Government in May of 2002, and the comments received have been incorporated into this version.

The report was prepared by Mila Freire and Anna Wellenstein. The principal authors had the good fortune of support from a wide range of colleagues in Washington and Mexico. Alberto Mulás Alonso, National Housing Commissioner, provided valuable guidance and feedback throughout the process. Important written contributions were received from Miguel Hernández (housing demand, SEDESOL), Carlos Noriega (implicit and explicit subsidies and housing institutions, consultant), Steve Weisbrod (housing finance, consultant), Mike Goldberg and Marialisa Motta (micro credit, World Bank), Alfonso Iracheta (urban regulation, Colegio Mexiquense), Antonio Azuela (land tenure, UAM), and Jaime Sancho y Cervera and Carlos Váldez (basic infrastructure, SEDESOL), and Bruce Ferguson (subsidy instruments and low income housing programs, IDB). The report was prepared under the general supervision of Olivier Lafourcade, Country Director for Mexico, Colombia and Venezuela. Peer reviewers were Robert Buckley (ECSIE, World Bank), Jack Stein (LCSFP, World Bank), and Marja Hoek Smit (the Wharton School). Editorial and document production support was provided by Lourdes Herrell and Alice Gibbons.

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EXECUTIVE SUMMARY

A. INTRODUCTION

1. *Mexico is facing a pressing challenge* to increase access of the poor to affordable quality housing and developing housing markets in general. As part of a coherent poverty reduction strategy, the Government of Mexico has made the provision of low-income housing a major priority of its 5-year development plan, promising the creation of 750,000 units per year by 2006. Institutional reforms and a major mobilization of resources would be needed to make the announced plan a reality within a framework of fiscal discipline. This report evaluates the shortcomings of current housing policies and provides a framework for analysis of alternative policies. The main audience of the report includes federal, state, and municipal government officials, financial institutions, and NGOs dealing with housing finance and provision of shelter for the poorest.

2. The *message* of the report is threefold. First, there is job for government in the housing market. Housing has a significant role in terms of basic social support, and the housing unit is a source of capital accumulation and therefore key to expanding Mexico's middle class from a minority to a majority. In Mexico, the private housing finance system is underdeveloped and the range of housing products limited. Market failures and poverty call for coordinated intervention by the public sector to improve efficiency in housing markets and access of the poor. Second, the country is facing a two tiered housing market, those that can afford formal housing (often with federal support) and the near majority that are not served by the current federal programs and require specific interventions to enhance their access to quality housing. Improving access to housing for the poorest may require support for short-term credit for progressive housing and should be combined with a strategy to boost demand through resource mobilization and residential savings. Improving the housing situation will also require the easing of supply constraints through investment in land supply, tenure regularization and municipal services and planning. Third, the housing finance system in Mexico has grown into a patchwork of multiple institutions with overlapping responsibilities, unclear accountability, and divergent criteria for subsidized credit. The housing finance system will benefit from decreasing barriers to more active private sector participation, while simultaneously phasing-out public sector institutions from loan origination and limiting the influence and control of developers in determining access to credit.

B. HOUSING DEMAND, SUPPLY AND GOVERNMENT INTERVENTION

3. *The Challenges are significant.* Estimates by SEDESOL indicate that about 4.3 million Mexican families are under-housed. This includes about 1.8 million new housing units needed to serve families that are doubling-up in homes (crowding) and to replace houses in very poor condition. It also includes 2.5 million existing units in need of repair and improvement. The problem is compounded as population growth during the 1960s is currently resulting in the formation of 730,000 households annually on average over the next ten years. Many of the households that make up this annual demand have

insufficient incomes to qualify for mortgage lending, including with up-front or other subsidy schemes. Of the 730,000 new households formed annually, 185,000 earn less than 2 minimum wages (MW), and 114,000 between 2 and 3 MW, and both of these groups are unable to access mortgage finance. Slightly fewer than 164,000 earn between 3 and 5 minimum wages and 268,000 households earn more than 5 minimum wages, may have access to mortgage financing, mostly subsidized.

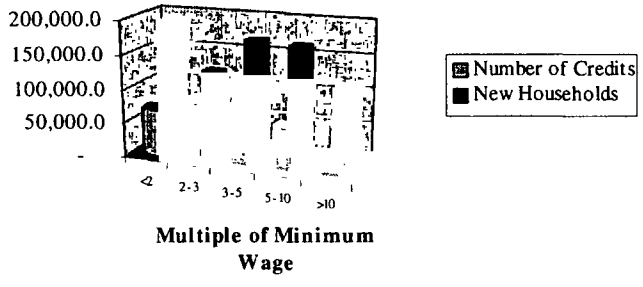
2000 Housing Demand by Income Segment

Time Minimum Salaries	Total Households	Demand			Available Products
		New Units	Improvements	Total	
<2	5,629,628	184,946	100,656	285,602	VIVAH
2-3	3,483,650	114,446	62,287	176,733	VIVAH
3-5	5,000,580	164,280	89,409	253,689	PROSAVI
5-8	4,936,361	162,171	88,261	250,432	Fovi B1
8-10					Fovi B2
10-15	3,218,697	105,741	57,549	163,290	Fovi B3
15-50					Media Resid.
>50					Residential Plus
Total	22,268,916	731,584	398,162	1,129,746	

Source: SEDESOL (2001).

4. Over the last twenty years, growth in the formal housing stock (81%) has outpaced population growth (45.2%). Annual housing production in Mexico financed with a mortgage has been around 200,000-250,000 units.[1] These units are purchased primarily by households with earnings greater than 3 minimum wages. Thus, formal housing supply is accessible for 60% of new house demand at best. In contrast to demand, which is mainly for lower-cost solutions, this supply consists almost entirely of new developer built units for the middle class financed by the public housing institutions - INFONAVIT, FOVI and FOVISSTE.

Graph 1.4: Net New Households and Number of Loans by Income Segment



Source: Own elaboration, data from SEDESOL (2001).

5. *The Housing Sector* has performed relatively well over the last two decades given the macroeconomic shocks that have limited the development of housing finance and income growth. With public support, housing stock has outpaced population growth and expanded during a period of rapid urbanization. This support came mostly in the form of subsidized loans (through below market interest rate and more lenient recuperation practices)[2] for the middle class through mandated pension funds (see Box below), was largely off the books of the government, and effectively increased housing stock during

[1] The total increase in housing units over the last 20 years has been 490,00 units annually. This includes formal production, auto-production and auto-construction. The quality of the latter two forms of building ranges from good to very poor.

[2] The subsidy referred to is delivered through below market rate loans and lenient collection practices. The subsidies imbedded in INFONAVIT and FOVISSSTE credits are paid for by worker contributions rather than outlays from the government budget.

Mexican Housing Finance Entities and Programs

The housing market in Mexico is dominated by public sector institutions. These institutions directly and indirectly provide assistance to households and developers through financing acquisition and construction, direct subsidies to buyers, and/or relaxed legal and regulatory guidelines. The evolution and structure of the sector has not followed an integrated strategy, nor has it been consistent over time. The end result is a complex, relatively small and segmented system.

INFONAVIT (Instituto del Fondo Nacional de la Vivienda para los Trabajadores) dominates the Mexican housing finance sector. In 2000, INFONAVIT represented 82% of the value and 71% of the loans of the mortgage market in Mexico. Funding comes from compulsory savings (5% of payroll) from private sector employees and loan repayment. Credit rates are significantly below market rates, severely impacting the overall development of housing finance at market pricing. The Institute has problems of poorly performing loan portfolios, a deadlocked governance structure (board composed equally of representatives of labor unions, the private sector including developers, and the public sector), and conflicting roles as pension fund manager and provider of subsidized loans. Taking into account its poor portfolio performance and negative real interest rates, INFONAVIT may represent a significant contingent liability to the Federal Government. INFONAVIT has recently undertaken a program to clean up its portfolio and servicing, and early indicators show positive results.

FOVISSSTE (Fondo de la Vivienda) is a comparable institution to INFONAVIT, catering to the two million federal public employees. Funding is similar to INFONAVIT (5% of compulsory savings and loan repayment). FOVISSTE operates under the social security institution for public sector workers (ISSSTE) and suffers from similar problems of administration, risk management, loan distribution and governance as INFONAVIT.

FOVI (Fondo de Operacion de la Vivienda) is a trust fund of the central bank, which provides second tier financing to low-cost private sector lenders (SOFOLES) and to commercial banks for housing. FOVI is presently the second largest source of housing finance (13% of the number of loans, 9% of the total value). FOVI has a good reputation in terms of fostering high quality mortgages. Funding is made available through an auction system, and since 2000 at rates closer to that of treasury securities, but still less than the expected price on the capital markets. As a result of the subsidized rates and its government guarantee, FOVI represents a contingent liability to GoM, though considerably smaller than that of INFONAVIT. Recent legislation has transferred FOVI to the new federal housing bank (Sociedad Hipotecaria Federal, SHF).

SOFOL hipotecarias are non-deposit taking private finance companies that are largely funded by FOVI and originate loans through real estate developers for new housing. Since the withdrawal of the banks in 1995, SOFOLES have been the sole mortgage market providers to middle and lower income groups. The industry has grown and delinquency rates are low (2% on average); however, there is great dispersion in the loan performance and further consolidation is expected. SOFOLES are seen by the market as higher risk lenders than commercial banks. In cases where SOFOLES accessed funds on the private capital markets, the funding has been used for mortgages to higher income households.

FONHAPO (Fondo Nacional de Habitaciones Populares) was created in 1981 to attend to the needs of the informal and poorest households. It operates as a trust fund of BANOBRAS under the technical oversight of the Ministry of Social Development (SEDESOL). Funding comes directly from the federal budget and loan repayments. In 2000 FONHAPO originated 6,700 credits (2% of the potential need) for US$60 million. FONHAPO played an important role in the housing reconstruction after the 1985 earthquake. It introduced a range of housing solutions – reduced standards and progressive housing – and worked closely with communities. Governance problems and susceptibility to political influence have undermined its effectiveness and reputation.

PROSAVI (Programa Especial de Crédito y Subsidios a la Vivienda) was created in 1999 as the first Mexico social housing program to be based on direct up-front subsidies, equivalent to a down payment write down for households earning less than five minimum wages. In 2000, PROSAVI financed MX$386 million (US$41 million) in subsidies linked to 11,789 new mortgages. The program is financed by the federal budget and administered by the central bank and FOVI. Questions have been raised about the affordability of the housing solutions for the poor.

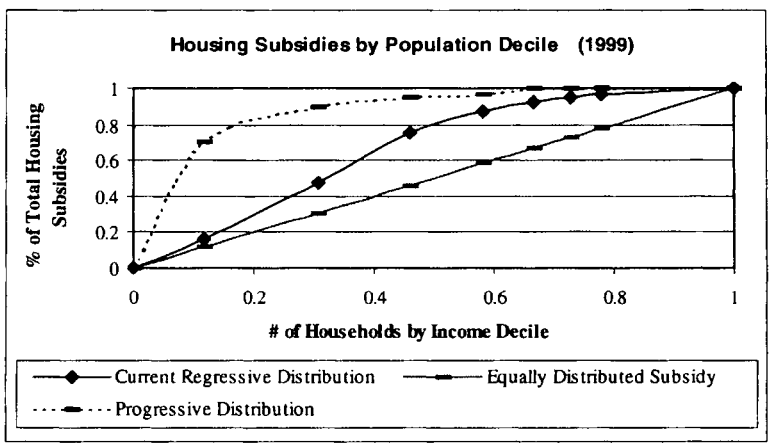
Vivah (Programa de Ahorro y Subsidios para la Vivienda Progresiva) was initiated in 1998 by SEDESOL to provide direct subsidies matching household savings, and state/local government support in the form of land and site infrastructure, with the aim of increasing the supply of progressive housing for families earning up to 3 minimum wages. In 2000, the program provided grants of about US$3,500 to 26,000 families. In some states, the scarcity of urban land has made the cost of state land and municipal infrastructure contributions prohibitive.

Commercial Banks. After the crisis in 1995, private banks withdrew from mortgage lending and only now are cautiously returning. Initial lending activity by commercial banks has been targeted to high-income households. In 2000, commercial banks represent less than 1% of the total flow of mortgage financing in Mexico.

times of income stagnation. It also served to crowd out the private sector and reduce liquidity in the housing market, and provided few housing options for the poor.

6. While immediate purchase of a new home is often not an option for lower income families, even in the most developed countries, families usually have other housing alternatives, such as affordable rental housing. The Mexican housing finance system's weak institutional and legal framework for secured collateral and bias toward new housing limit financing available for used housing, and therefore the filtering of housing supply to lower income households. Rental housing is also limited due to an unfavorable tax treatment and the legacy of years of rent controls. The end result is that in the absence of viable alternatives, many Mexican households are under-housed and suffer from insecure tenure, crowding and poor quality of housing.

7. *Financial Flows and Subsidies.* One of the striking characteristics of the Mexican housing finance system is the high level of subsidy implicit in the financing provided. It is estimated (own calculations by the study team) that housing subsidies in 2000 represented between 54% and 59% of the total US$5.7 billion in funds provided by the housing finance system in Mexico. Only 3% of these were explicit subsidies, while the remaining 97% were implicit subsidies delivered in the form of below market interest rates. On a per credit basis INFONAVIT and FOVISSSTE generate the highest subsidies, about US$9,700. The implicit interest rate subsidies of INFONAVIT and FOVISSSTE, mostly to the higher income earning workers, totaled about MX$25 billion in 2000, or 250% of the PROGRESA poverty program budget. The regressivity of the subsidies is explained by the prevalence of subsidized mortgages as the primary support instrument. Very low-income households cannot afford finished housing even with subsidized mortgages. Federal programs targeting the poor (PROSAVI, VIVAH, and FONAHPO) reach only 2% of households earning less than 3MW.



Source: Own elaboration, data from Noriega (2001) and INEGI (1998)

8. *Economic and Social Impacts.* The weakness of the housing system exacerbates poverty by limiting capital formation and the role of shelter in improving the asset base of the poor and adversely impacts the national economy. In the US, 43% of the wealth of the middle class is in home equity. Limited access to housing finance reduces the ability of the poor to leverage equity invested in their property. The housing resale market (used housing) limits owners' ability to make liquid housing investments, reducing the value of capital invested in housing. Entry in the market is further restricted by the fact that an estimated 60% of homeowners lack full legal tenure. Moreover, the construction

industry in Mexico employs 2.2 million people – a member of one in every nine households – and contributes 15% to GDP.

9. Housing also has a significant impact on poverty in terms of basic social support. Housing plays a unique role in protection, as a center of family and community life, health and social well being. Housing provides the shelter necessary to work, study and form communities. In 1998 focus group assessments along Mexico's northern border, low-income families ranked adequate shelter – housing, housing finance, basic infrastructure and community services – as their number one priority.

C. Basic Building Blocks for Increasing Access to Housing

10. Limited access to housing is due to the high cost of housing supply and the limited purchasing capacity of the population. Government can play a role in reducing the supply constraints that drive up housing costs – namely (i) the cost of finance due to macroeconomic instability, to government crowding out of private lending, to administratively fixed house prices and to regulatory and property rights regimes; (ii) the cost of land due to tenure and regulatory constraints; and (iii) the cost of infrastructure due to service norms and standards and weak urban management However, to some degree housing problems will persist as long as there are poor Mexicans. A large share of households will not have sufficient income to purchase a finished house, even after the supply constraints are relieved and a fiscally prudent level of subsidies are provided. For these income segments, the Government may be able to reduce barriers to the acquisition of shelter by fostering the supply of a range of housing solutions, beyond finished housing, that provide a better income-housing match at all levels. Government demand-side support through subsidies for low-income families is also well justified given the role of housing as a basic element of social support for the lowest income groups and as a building block for wealth creation.

11. The following sections review the supply side constraints present in housing, beginning with a discussion of those directly tied to low income housing – popular finance, land tenure and regulation, and infrastructure – followed by demand side support through direct up-front subsidies. The section concludes with a review of mortgage finance. While not directly aimed the poor, current poorly targeted and distortionary public involvement in mortgage finance limits housing supply and absorbs scarce economic and fiscal resources. As long as housing supply for middle and upper income families is limited, attempts to increase housing for low-income groups will result in a large degree of leakage of subsidies to the wealthier groups.

Housing the Poor

12. Without direct government support, most households earning less than three minimum wages do not have access to mortgages primarily because their cash flows are too low and unstable to cover living costs and service a long term mortgage. Demand side subsidies, such as PROSAVI, coupled with efforts to reduce the cost of housing supply may extend this mortgage market to households earning approximately 3

minimum wages. The remaining households (approximately 40% of the population) will resort to progressive, informal housing in which housing is gradually constructed and regularized over a period of 5 to 15 years. Supporting progressive housing requires adjustments to traditional government interventions in regulation of land, urban development, infrastructure and private finance mechanisms which are based on finished housing processes.

13. In the formal housing sector, the development process follows a sequence of parcel (site) acquisition and planning, infrastructure and services installation, house construction, and then sale and occupation. Each stage has its own documentation procedures and recording of permits and agreements. The reverse is true for the informal sector, where the sequence involves three stages: (i) the act of taking physical possession to claim usufruct rights on the parcel; (ii) the gradual filling of unoccupied parcels with other families, the construction of permanent structures, and the formation of local governments; and (iii) obtaining all basic infrastructure and urban services and receiving titles to the land.

14. Low income families more often opt for informal housing due to three principal reasons. First, the formal sector usually offers housing as a complete product, whereas the informal sector offers the opportunity for progressive or self-built houses. Second, obtaining housing in the formal sector normally requires a mortgage that carries with it installment payments over a long period of time. The informal sector is based on the pay-as-you-go system, which allows the resident to make adjustments according to the family's economic situation at any given time. Third, with a mortgage and a highly fluctuating inflation rate, the buyer in the formal sector faces an uncertain equity situation. In the informal sector, the progressive house is all equity. It can be lived in, sold, rented, or passed on as family patrimony, however modest and incomplete.

15. ***Popular Finance for Housing.*** Helping provide the poor with access to adequate housing begins by supporting (i) the generation of residential savings to enhance capacity to make an initial investment in shelter and build a credit history, and (ii) credit to allow the poor to leverage their resources. Surveys in Mexico have shown that half of the poor save, mostly in the form of cash kept at home. Less than 15% of the urban population in Mexico saves in banks and 31% save through informal institutions. In terms of credit services, micro finance allows for small loans of short duration, more closely matched to the incremental investment patterns and income instability of the poor.

16. Current conservative estimates based on official national data sources indicate that 2.5 million homes in Mexico need upgrading. A 1990 survey based on a small sample of households shows that in reality the demand for improvement may be greater: the study estimates that 76% of the 1990 housing stock was in need of improvement. Between 1990 and 1994, about 800,000 formal home improvement loans were made, meeting only 7% of the total estimated potential demand. The majority of the units requiring moderate or minor repair - for which small loans are most appropriate – are in the fast growing medium sized cities and metropolitan areas.

17. To boost residential savings, the example of mutual assistance schemes – Plan de Ayuda Mutua – provide interesting elements that could be expanded. The system is a self-financing method for residents of informal settlements to regularly contribute their very small savings towards a fund that can be used for land, housing and other improvements. Because housing improvement and expansion loans are more similar to micro enterprise loans than to mortgage loans, micro finance institutions (MFIs) and other private sector institutions that offer consumer loans (e.g., land developers and housing material providers) could play an important role in the expansion of a reliable, affordable supply of housing micro finance services. MFIs can successfully provide housing micro finance loans due to their cost structures, the financial discipline they impose on their clients, and the systems they have in place to manage the risks of working with low income clients. A crucial element to the success of housing micro credit will be the development of efficient models of construction technical assistance to complement privately provided and financially sustainable credit.

18. Unfortunately, Mexican MFIs have not grown to the scale of those of other Latin American countries, nor have they entered the housing micro finance field. MFIs enjoy unlimited demand and little pressure to become more efficient or offer new products - the only competition MFIs face in many markets are the traditional *prestamistas* (often charging annual effective rates of +100%). As a result, expansion has been horizontal rather than toward deepening financial markets by providing a range of products, such as home improvement loans. In addition, the 2-3 year maturity of housing loans requires longer-term sources of funds than those required for the quick turnover capital portfolios that are typical of the Mexican MFI. It is unclear whether the financial markets will provide adequate funding to address this opportunity, at least until there is stronger proof of commercial viability of MFIs and their housing products.

19. Without public support, the Mexican housing micro finance sector is likely to remain underdeveloped, even though there are large-scale commercially viable opportunities in housing micro finance and savings instruments in Mexico. While pilot initiatives have been successful, the potential social benefit and barriers to entry justify a catalytic effort by the Government. Recommended actions include:

- Evaluate and develop models for efficient, though likely subsidised, construction technical assistance to complement privately provided micro credit and savings for progressive housing.
- Assess opportunities for supporting micro finance for progressive housing as part of the broader savings mobilization program, with particular emphasis on guarantees, training, and market promotion rather than public sector banking.
- Provide up-front time bound subsidies for market research in large markets and disseminate the results to possible service providers. This would form part of a technical assistance facility to support pilots and to better understand the risks and dynamics of these clients and the possible synergies with other financial services.
- Set geographic priorities for short-term support of housing micro credit so as to be able provide a sufficient level of support for institutions to rapidly reach a profitable scale.

- Support the availability of medium to long term commercially priced credit lines for MFIs, so that they have reliable, affordable sources of funds for expansion.

20. ***Land Markets and Urban Regulation.*** Estimates indicate that the construction of 730,000 units/year will require approximately 21,000 hectares of urban land annually. According to SEDESOL about 32,000 hectares of land are currently available for urban use (sufficient to cover construction for approximately one and a half years). Of the land available for urban use, only 9% has basic services and another 20% is in the process of being urbanized. Problems of informal land development complicate the supply picture: 66% of the land surrounding medium and large cities is in *ejidos*. The rest is in the hands of large developers in reserve for future middle and high-income residential projects. Even in cases in which ejido lands are transformed to individual ownership, Government management of the former ejido lands and the non-competitive market dynamics of their conversion provide oligopoly rents to developers and increased land prices to buyers.

21. In addition to land titling problems, three major regulatory obstacles inhibit the supply of urban lands. First, the duplication of review and licensing procedures increase costs and prolong project preparation times. Second, the legal uncertainty surrounding state and municipal jurisdictions and the discretionality enjoyed by administrative bodies in the authorization and revision of development is undesirable from the developer's point of view - once he or she sells units in a new housing development, any delays in construction result in reduced profit margins. Third, regulations support one standard of urban land. Municipalities are unable to finance the investments and poor families are unable to purchase lands which meet that standard. In essence, the system limits the supply of the kind of urban land that the poor demand (e.g. reduced minimum plot size, increased floor/area ratios, and lower service levels).

22. These problems require public sector intervention focused on improving land markets by reducing the cost of urban land development, and fostering and regulating private developers. Specifically, this may entail clarifying the institutional and regulatory environment for land and urban development to assure consistency and impact, reducing norms and standards to allow for legal lower cost land options, and supplying trunk infrastructure. Government should also allow households to use their up-front housing subsidies for land purchases. These reforms fall largely on state and local governments; however, the effectiveness of local regulatory reviews will be limited in the absence of greater decentralization and control by state and local authorities over the transformation of rural to urban lands and should be coupled with expedited efforts by the federal government to address tenure issues in peri-urban and urban ejidos. Government as landowner and developer should be avoided as it has been shown to be consistently complex and cumbersome.

23. ***Urban Services and Infrastructure.*** Urban infrastructure and services are key determinants of the quality of shelter. In general, infrastructure and service levels are quite high in Mexico. The percentage of urban households with access to running water (in house or within the property) is close to 92%, for storm and sanitary drainage 88%. As in other countries, access to electricity is quasi universal in urban areas (98%). These

numbers compare reasonably well with Latin American peers. Access to water and sewer is 90% and 60% respectively for Brazil and 99% and 89% for Chile.

24. These figures mask large differences in coverage and quality in Mexico. While downtown areas enjoy high coverage, data indicate coverage and quality lag in the periphery, particularly in poor neighborhoods surrounding urban areas. Deficiencies result from local government institutional and financial capacity constraints. In addition, the ambiguous regulatory framework discourages private investment. The priority issue for increasing services is to expand access, for which the rationale for public investment is clear given the positive externalities associated with basic infrastructure and services. In addition to increased public funding, improved access may be achieved through the revision of regulations to permit reduced levels of service and infrastructure in line with progressive housing. To sustain affordability over the long run, infrastructure finance and management must be strengthened, which will ultimately entail bringing greater accountability for funds transferred from the federal level, in particular Ramo 33, and greater accountability to the electorate through increased transparency and electoral reform.

Service Coverage Difference in Center and Surrounding Areas of Municipalities

Coverage of Municipal Public Services, 1995		
	Municipal Capital (%)	Rest of the Municipality (%)
Potable Water	85.33	63.3
Drainage and Sewerage	63.51	25.0
Public Lighting	83.79	61.3
Transit and Roads	51.36	23.4
Garbage Collection	80.64	37.21

Source: CEDEMUN, Los Municipios de México, Secretaría de Gobernación, 1998, quoted in CIDE (2001).

25. ***Direct Demand Subsidies.*** In addition to reducing bottlenecks in housing supply, government demand side support is justified on basic social support and wealth accumulation grounds. Over the medium to long-run, better targeted and explicit demand side subsidies should replace the current implicit subsidies inherent in the Mexican housing markets, although in the short-term the fiscal consequences of this policy need to be considered. On efficiency grounds, explicit demand-side subsidies are preferable as they promote greater allocative efficiency, allowing households to optimize their spending according to their own preferences. The report discusses a unified direct up-front subsidy system to support two different low-income housing options: (i) to expand access to mortgage finance for finished housing, and (ii) to complement household savings and micro credit to be used for home improvement.

26. Two key preconditions for effective demand side subsidies are supply elasticity and institutional capacity. First, to improve supply elasticity, the link between financing and housing developers must be cut. In Mexico, producers react to financing packages and price parameters established by the major housing finance institutes rather than to the demands of the individual buyer. Prior to large-scale expansion of the subsidy program, steps should also be taken to streamline planning and infrastructure provision in order to increase the supply of urban land. Second, local governments must develop the

administrative capacity to manage the program. At present the management of the Vivah and Prosavi programs reside at the central level. Improved targeting and adaptation to local conditions require greater decentralization.

27. In addition to these key preconditions, over 25 years of international experience point to additional steps for improving the use of direct demand subsidies in Mexico. These include:

- *Efficiency and Portability.* The direct demand subsidy programs in Chile and Costa Rica empower the households (i.e. demand) - rather than financial institutions or developers (supply) - to choose among different types of units in different locations in using the subsidy. When developers and/or financial institutions control the use of the subsidy - as they largely do under VIVAH, PROSAVI, and INFONAVIT - they have a captive audience. In effect, households have limited or no choice and must accept the product offered in order to receive the subsidy. In such cases, developers and financial institutions take advantage of this market power by absorbing a substantial part of the subsidy. In the case of housing subsidy programs in Mexico, it is estimated that supply agents absorb about half of the total subsidy.

- *Least Cost Housing Solutions and Incentives for Good Financial Practice.* The PROSAVI program has relied on increasing subsidy amounts in order to expand the reach of the program. The Vivah program provides a lower cost progressive housing solution, but still may out-price state and local fiscal resources as it requires fully regularized and serviced land. Mexico's deep subsidy programs create two problems. First, subsidies should reward good financial practices, by complementing savings and credit, not replacing them. Second the deep subsidies indicate that public money is being poorly leveraged. Given limited fiscal resources, increasing the proportion of the subsidy reduces the number of beneficiaries.

- *Private Sector Development and Finance.* The private sector finances and develops housing under the best direct demand subsidy programs, not government. The subsidy bridges the gap between supply and demand to galvanize a private-sector response and increase the amount of funds leveraged with limited public resources. In addition, involving private lenders is important because the public sector in general is not good at lending. In an attempt to serve low/moderate-income groups, government agencies have originated loans - notably state housing institutes and FONHAPO. These public agencies do a poor job at origination and servicing and lack the governance structure that makes credit discipline possible. The recipients of direct OREVI loans, as those of direct public credit worldwide, do not take them seriously, and arrears rates are astronomical. Simply making small up-front grants to households avoids generating widespread non-payment that undermines commercial credit from moving down market and contaminating the practice of credit in general.

- *Duration and Accompanying Policy Recommendations.* Many direct demand subsidy programs were designed as permanent large subsidy infusions without tackling the reforms necessary for a transition to more market-based mechanisms (in particular, to

credit) and gradual reduction in the subsidy levels. The Mexican Government suffers from limited fiscal resources, and its current programs are highly dependent on international funding - SHCP and IDB currently finance PROSAVI. Hence, the framework of a housing program must include a transition from subsidies to market mechanisms suitable for funding low/moderate-income homeownership.

Mortgage Finance

28. *Small Size Market.* Mexico's housing finance sector is relatively small: the ratio of outstanding mortgage loans to GDP was 5.2% in 2000, compared with 35-40% in OECD countries. It is also weak in terms of diversity of consumers and products. The sector is characterized by: (a) a strong bias towards middle-income households and virtual neglect of households earning 3 minimum wages or less; (b) a focus on new housing units with almost no financing for rental or improvement; and, (c) limited spatial coverage. This situation is explained by several factors, notably recent macroeconomic instability, high credit risk, poor collateral quality (foreclosures are cumbersome and costly), public sector crowding out of private lenders, market segmentation, administrative house price setting, and unclear property and regulatory regimes.

29. *Opportunity for Reform.* The macroeconomic policies put in place to solve the financial crisis of the mid-90s impacted the housing market in Mexico: they resulted in relatively high interest rates and a lack of liquidity to fund mortgage lending at affordable rates. Over the medium term, however, these policies have contributed to the current favorable economic environment. The Mexican GDP has experienced 20 quarters of consecutive positive growth and inflation is about 6.5%. The financial sector has been restructured and strengthened. Mexico aims to fully meet international financial regulatory standards by the end of 2003. The private pension system has been successfully restructured and a significant base of domestic institutional investors and savings is emerging. Long-term savings is now above 1% of GDP. The banking sector has also undergone important reforms. While this environment is favorable, housing finance reform requires a clear strategy and buy-in from the highest levels of the government.

30. *Long- term sector reform* should aim to deepen mortgage markets, shifting the government role to support liquidity and reduce transaction costs and systemic risk in order to attract private originators and investment to the sector. In addition, there is a need to clarify the role of the public sector in enabling access for low-income households to housing services. Expanding access of low-income households to housing should be done within the overall market framework and does not include direct government intervention in mortgage origination. The long-term vision for the mortgage market includes:

(a) strong primary and secondary markets with public institutions competing or complementing private sector mortgage agents;
(b) the private sector (e.g. private banks, SOFOLES) dominating mortgage origination;

(c) public institutions – INFONAVIT and FOVISSSTE - focusing on the management of pension savings and securing the most profitable returns for pension funds;
(d) *Sociedad Hipotecaria Federal* (SHF) focusing on liquidity and insurance instruments to develop primary and secondary markets and maintain liquidity;
(e) mortgage origination shifting from developers to home purchasers; and;
(f) financing of home purchase de-linked from housing construction finance.

31. To reach the above *longer-term goals*, continuation of the current stable macroeconomic structure is a key precondition. In addition, reform will require lasting government subsidization of low-income families and transitory assistance to middle income segments to jump-start the mortgage market. Current market interest rates make mortgages too expensive. Without subsidies, the majority of the middle class would be excluded from access to housing finance. The GoM should focus on improving mortgage market efficiency to reduce interest rates, allowing a gradual withdrawal of government and pension fund support, and on targeting public funds toward the lowest income segments. Increasing market efficiency requires the development of a broad funding base for mortgages and the diversification of mortgage originators. The latter would require breaking the stranglehold that developers have over the mortgage origination process,[3] and both goals necessitate the return of commercial banks to the mortgage market.

32. *Increasing Liquidity.* SHF may provide subsidies through a range of additional liquidity support instruments to stimulate the primary and secondary mortgage markets.[4] SHF should provide second tier lending to retail lenders against the collateral of mortgage loans as a means to maintain retail mortgage market stability during the transition away from the current public sector dominated housing finance system, and as a vehicle for dealing with counterparty and credit risk from lenders. It may also provide partial primary mortgage default insurance as a self-standing product sold separately from refinancing products. This credit enhancement could encourage the issuance of mortgage-backed securities and the development of secondary mortgage markets. Where the level of risk is considered significant, SHF should operate as a catalyst by offering guarantee products to private lenders. But to limit risk exposure in the immature market, during its initial stages of development the SHF should not offer to purchase loans from other lenders without full recourse. SHF may consider experimenting with pilot mortgage backed security issuances, though market conditions and the pricing of such MBS transactions could prove too expensive for the funding of the low income segments of the market. With support from the other housing finance institutions, SHF should take steps to strengthen mortgage standards and conformability.

33. *Increasing competition in the primary market.* In addition to increasing the flow of funding to primary and secondary mortgage markets, the GoM should take steps to improve the competitive structure of the primary market through increasing portability of

[3] This control has reduced housing affordability by pushing housing prices above competitive levels partially offsetting the impact of lower interest rates on mortgage payments and reducing liquidity in the market

[4] SHF is the recently created national housing bank. FOVI's activities will be managed by SHF. All or part of the initial paid-up capital for SHF would come from the transfer of FOVI capital.

INFONAVIT funds, breaking the links between finance and development, and separating subsidies from finance.

- The sheer size of INFONAVIT can indirectly threaten the policy goal of broadening the distribution points for mortgage origination. This threat can be mitigated to some extent through increasing portability. The 43B program permits INFONAVIT investors to use a portion of their investment as down payment collateral on a mortgage supplied by another institution and to accelerate amortization of the private loan.
- It is important to recognize that the current FOVI operations establish a close relationship between housing developers and financiers, which has tended to distort FOVI's role as a trust fund. The participation in FOVI credit auctions should be restricted only to financial intermediaries, excluding housing developers. This will help focus subsides toward beneficiaries and obligate housing suppliers to more aggressively compete based on the price of their housing product.
- Market pricing and separating subsidies from finance in INFONAVIT, FOVISSTE and FOVI loans is necessary to move toward loan pricing that reflects market rates, which in turn will make possible the mobilization of private savings by paying a fair return. Also, valuation should replace current practice of administrative house price setting. Market pricing will allow coordination by the market to replace the limited coordination power of the public and quasi-public agencies.
- Pricing risk. Under current FOVI practices, all SOFOLES pay the same price for funds as determined by the auction, regardless of risk. SOFOLES are the only buyers of FOVI funds even though the auction is theorectically open to any financial institution willing to meet regulations. This implies the cost of funds is too high for players with a lower risk profile. SHF second tier lending should reward less risky lending by differentiated funding prices or requiring matching funding from other sources in which the SOFOL risk profile will impact funding prices.

34. *Strengthen Regulatory framework.* As guarantee and insurance instruments are introduced, a clear and common regulatory and supervision framework should be established. INFONAVIT, FOVI, and FOVISSTE have traditionally operated outside the purview of the financial sector regulatory body, the CNBV (Comision Nacional Bancaria y de Valores). In 1997, however, the INFONAVIT Board and CNBV signed an agreement giving CNBV regulatory and supervisory authority. Since then, its regulation has been only marginally effective. CNBV and FOVI regulatory responsibilities vis-à-vis SOFOLES should also be clarified.

35. *Housing Policy and Coordination.* The range of institutions and actions discussed above points to the need for the GoM to develop a clear and coherent housing policy and to oversee implementation across institutions. Housing policy is viewed from the perspectives of poverty, construction, urban development and the financial sector and the majority of support is channeled through pension funds. The result has been a partial and disjointed situation in which several housing institutes pursue different agendas: INFONAVIT is an autonomous body; FOVISSSTE is a decentralized entity of ISSSTE/Ministry of Health; FOVI is administered as a trust fund of the Banco de México; and FONHAPO is a parastatal entity of SEDESOL. The lack of direction

manifests itself on several fronts, including the lack of an integrated and coherent framework for subsidies, diverse prices for similar housing products, and regulatory arbitrage. The role of planning and oversight has been passed to the recently formed Housing Commission. The Government must now move through the recently created National Housing Commission to enforce the announced policy and press for implementation across the institutes.

36. *Specific Institutional Reform Packages.* In addition to these actions, steps should be taken to improve the performance of INFONAVIT and FOVISSSTE. These organizations hold a large market share of the outstanding portfolio and new loan origination, and the reentry of the commercial banks will occur only gradually. In order to avoid an abrupt interruption in financial flows to the sector, INFONAVIT and FOVISSSTE must continue to originate loans over the medium run.

37. The return of *commercial banks* will also require specific actions. Mortgage default risk from household borrowers remains a significant barrier, for which the proper design and pricing of mortgage default insurance by SHF should have a material impact on the speed and scale of bank reentry. While the mortgage departments of banks can fund their present small activities from internal funds, restarting mortgage finance as a line of business will likely require access to the capital markets through mortgage securitization and/or debt issuance. Here again, the ability of SHF to offer refinancing facilities and/or housing guarantees will be key. Finally, the expansion of the 43B program will help further disintermediate INFONAVIT in higher income mortgage markets, providing greater opportunity for re-entry of commercial banks in this segment.

D. Housing the Poor - Strategy and Design Options for Mexico

38. As mentioned before, 40% of the demand for 730,000 new homes originates from households without access to the mortgage finance system. The scarcity of public resources and historical low returns on public sector investments in housing argue against further direct public sector investment in a supply driven program. Rather, a multi-faceted approach to benefit the poor requires a specific and targeted program to provide limited support to low income households and to expand the supply of lower cost housing options. This program will include: (a) direct demand based subsidies to increase access to mortgages for finished housing and to be matched by savings and micro credit for progressive housing; (b) promotion of popular finance instruments, specifically savings instruments to build equity and counterpart funds and micro credit to support leveraging of resources for progressive housing; (c) reduction of land and regulatory barriers that drive up housing prices; and (d) increased access to basic infrastructure through changes in regulations and standards and increased integrated public investment. To fill the gap between supply and demand of housing units further up market, transitory government support is necessary to develop a broad funding base for mortgages and diversification of originators. In addition, land registries, titling, and rental markets are important areas for policy reform and institutional strengthening: these issues have not been covered in depth in this study and do warrant further analysis and action.

39. The main instruments and characteristics of a new low-income program are the following:

Instruments for a Low Income Housing Program

- *Up front demand side subsidies.* Up front subsidies can be used to match residential savings for the lowest income groups (less than 2 MW), where credit is inappropriate due to low and unstable household cash flows. These subsidies may be matched with private micro finance for slightly higher income groups which can begin to safely leverage their assets (households earning 2-4MW). Subsidies can be matched to private mortgages to increase the range of mortgage accessibility for finished housing for households earning 3-4 MW. Up-front subsidies may be a less expensive and a more effective route to support the poor due to simpler program administration. Combining the Prosavi and Vivah programs would provide a strong base for such an initiative, and allow for one institution to be charged with providing a total per household subsidy amount with which households could choose their preferred housing option. Subsidies should be capped to provide a greater percentage of unit cost contribution for households choosing lower cost housing solutions. In order to support good financial practices, match funding should be required rather than subsidizing the total down payment or investment cost. Prior to large-scale expansion of the subsidy program, steps should also be taken to streamline planning and infrastructure provision in order to increase the supply of urban land. Second, local governments must develop the administrative capacity to manage the program in order to improved targeting and adaptation to local conditions.

- *Micro-finance institutions* could expand their support to progressive housing for families earning 2-4 MW. The combination of upfront-subsidies and micro-finance would bring advantages as it reduces the loan-to-value ratio of the credit and reduces the risk of the loan. To coach and supervise the development of the sector, the micro credit facility, under design with the Ministry of the Economy, may be the most logical option. Regulation and supervision of micro-credit institutions may need to be examined and updated, as well as the development of construction technical assistance models.

- *Saving programs* with the help of community organizations and NGOs should not be neglected. Savings are the key counterpart to subsidies for the lowest income groups (<2 MW), but are also important as housing down payments and in building a financial history to reduce risk associated with future borrowing. Local authorities and community groups should encourage households to channel existing savings towards the purchase and titling of land, and improvement of existing housing units.

- *Land development for low/moderate-income households.* To make land accessible to the poor there is a clear need to (a) reduce subdivision standards and streamline the process to stimulate a low-income land development industry, and (b) to strengthen the capacity of state and municipal governments to convert rural to urban land for sale to the private sector and NGOs for subdivision development.

- *State and municipal legal and regulatory frameworks.* State governments have influence over a wide range of factors affecting housing and land markets and can play a role in improving their functioning. The most critical include *subdivision standards, property taxes, building permits and procedures* and other factors that determine the carrying cost of land and - hence - influence land concentration. Benchmarks for reform should be established to qualify states for federal housing programs.

- *Upgrading neighborhoods.* The provision of infrastructure in slums and squatter settlement has been an effective method for assisting the poor and triggering further private investment. The supply of public goods such as streets, drainage, public lighting, sidewalks, parks, public spaces, and even toll goods such as secondary water and energy distribution, sewerage, and trash collection should be provided, with some cost recovery, through financing from the public sector.

Prioritize low-cost housing solutions

- Low cost housing solutions in Mexico vary from $5,000 pesos for a minor home improvement to $300,000 pesos for a small finished unit in Metropolitan Mexico City (see table below). A critical step in the financial sustainability of a low/moderate-income housing strategy is the housing solution mix. Naturally the mix will vary by region and location and should be decentralized to the level closest to the beneficiary. Current federal government programs favor high cost solutions because of their dependency on finished housing. Expansion of the housing supply through the current system and mix of instruments would likely miss the lowest income families and be extremely costly to the economy as a whole. Increasing the supporting to PROSAVI and VIVAH will reduced the subsidy burden by one half, but also imply a larger fiscal burden.[5] Even Vivah and PROSAVI have a per household subsidy of about US$3,000 in 2000 (not including possible subsidies from state and municipal governments), and the PROSAVI subsidy in particular has increased in recent years, in some cases reaching US$10,000. Government subsidies on the order of US$2,000 are generally more adapted to the conditions of the poor (as in Chile).

Unit Costs of Low Income Housing Solutions

Housing Solution	Cost (Mx pesos)
Minor improvement (adding a roof or floor, replacing makeshift materials with durable ones)	$5,000 - $15,000
Replacement of a deteriorated unit with a new core unit on a lot owned by the family	$40,000 - $60,000
Purchase of new commercially built core expandable unit in non-metro. Mexico	$100,000 - $180,000
Purchase of a small unfinished unit in a commercially built multi-story building in metropolitan Mexico (central areas of Mexico, Guadalajara, Monterrey)	$200,000 - $300,000

Source: Ferguson (2001).

[5] These subsidies are explicit transfers from government to beneficiaries, rather than the current prevalent implicit subsidy in the form of below market loans paid out of workers' pension contributions to INFONAVIT and FOVISSSTE.

Institutionally, all three levels of government have a role to play

- The federal government should fund the bulk of the direct demand subsidy, with matching support from subnational governments. State and municipal governments need to be the local "orchestrator" of demand, determine the needs of the poor and identify the best schemes that would fit the characteristics of the local economy and community organization. Sub-national governments also control land, development regulations, and execution of foreclosure laws. Depending on the decentralization apparatus, sub-national governments should be held increasingly responsible for providing infrastructure and urban services.

- An integrated institutional structure at the federal level is needed. Subsidy policy should be set by the policy making body, the Housing Commission, distributed through a separate federal entity, and programming and impact monitored by SEDESOL. It would be more efficient to have a single large program of targeted subsidies focused on the poor rather than a multiplicity of separate initiatives responding to different ministries. Vivah and PROSAVI should be reviewed and consolidated along these lines.

- Principles and parameters should be discussed at the higher policy level but state governments and their housing institutes need to have the flexibility to adapt the subsidy program to local conditions. Subsidy program regulations should include: (i) the ability of the beneficiary family to choose among types of units and locations; (ii) private-sector development and finance; (iii) minimum down payment requirements; (iv) matched savings and/or financing requirement, including support from state and municipal government and beneficiaries; and (v) eligibility of a wide range of low-cost solutions. A data bank for housing programs and costs should be developed and made available throughout the system to provide key information to all players.

Competition among private-sector entities

- The best low-income housing programs harness the private sector and promote competition among private firms as well as with public-sector providers. Vivah serves as an example. State and local governments act as developers by securing land, contracting the builder of the subdivision, selecting households, and selling the resulting units. Development by local government may be the only option in some cases - such as distant rural municipalities. In most areas, however, private developers should be encouraged to bid for this role in a low-income housing program on an even playing field.

Program Cost

- The annual cost of the expansion in housing units in terms of upfront subsidies would be around US$815 million, plus an additional cost of approximately US$3.2 billion in infrastructure and urbanization (about 2.4 times recent levels of federal budgetary commitment – some of proposed cost may be passed to subnational governments.).

Annual Investment Cost for Housing Support+

Action	Target Households	Public Role- Up-front Subsidies for	Estimated Public Cost
Demand Side Subsidy with Mortgage Finance	3 – 4 MW	80,000 hh	US$176 million
Demand Side Subsidy with Micro Finance	2-4 MW	221,000 hh	US$332 million*
Demand Side Subsidy to Match Hh Savings	<2 MW	286,000 hh	US$305 million**
Trunk Infrastructure	All new housing	Finance all cost	US$580 million
Urbanization/Upgrading	All new housing	Finance all cost	US$2,600 million

Source: Own elaboration. +This table does not include non-investment/subsidy program cost, e.g. regulatory reform or advisory services for micro finance. Assumes max up-front subsidy of $2,000/hh for matching mortgage, micro-credit or savings. Land costs not included. *NPV of subsidy for 1 yr., assuming max subsidy spread over 10 years. **NPV of subsidy for 1 yr., assuming max subsidy spread over 20 years.

- Stepped up government effort will be required to address the growing demand for housing. While this effort may be reduced in the future, a significant budgetary increase is clearly warranted during a period of intense housing sector reform and middle class expansion. In the future, lower level sustained support will likely be justified on poverty grounds. The sheer size of the current low-income housing needs may require the government to make strategic budgetary decisions regarding Mexico's housing policy and assess trade-offs between different types of support. The cost of such policies may be reduced by: limiting subsidy support accompanying mortgage finance; reducing allotment for direct demand subsidies in general; increasing the density of urban development; and, reducing infrastructure service levels. Each of these steps results in trade-offs between fiscal outlays and short term housing goals.

E. CONCLUSIONS

40. Mexico requires a substantial program of support for low-income housing over the next two decades. The country is facing *two housing markets* – those that can afford formal housing finance and the near majority of the population that require targeted housing support. In the formal market, reform is necessary to increase the effectiveness of current programs with the objective of opening the market to a wider range of private mortgage originators and investors, while at the same time supporting sound lending practices. Given limited fiscal capacity, trade-offs between the scope and depth of support to different segments of the market must be made. *Public financial support to the middle market should be incrementally withdrawn and focused more directly toward the poor.* Continued public intervention in the middle-income market makes sound economic sense only if designed to result in a system which can operate without public support in the not - so distant future. This will require coordinated strategy among the public and quasi-public housing agencies to strengthen the market, and a major role for the new Housing Commission in overseeing the implementation of that strategy.

41. In terms of supporting the poor, *demand side subsidies are necessary, but they alone are not enough.* Government should support housing supply that that meets the preferences and financial capacity of the poor. Specifically, *norms and practices should be adjusted to foster rather than punish progressive housing.* In the Mexican context, tenure of urban and peri-urban ejido lands should be clarified. A low-income housing program should place priority on sustainable methods for low/moderate-income land development and build the practice of low/moderate-income home lending, including commercially viable housing micro-credit. Such reforms will strengthen the role of homeownership in building household wealth and enlarging the middle class, as well as reducing poverty. *Framing the relationship between federal government and state/local government in housing is essential to these goals.* International best practice suggests that *central government should provide the bulk of subsidy funds*, set flexible parameters for state and local-government execution of the program, and hold them accountable for results.

MEXICO LOW INCOME HOUSING: ISSUES AND OPTIONS

INTRODUCTION

1. Housing options are limited for the majority of Mexicans. A family with a household income of 5 minimum salaries will not have access to private financing for home purchase and has a 1 in 7 chance of receiving a loan from INFONAVIT. A household with an income of less than 2 minimum wages has no access to formal housing finance. This worker will purchase materials on credit from the local supplier for home construction. He will spend from 5 to 15 years upgrading his home from the purchase of land in an informal/illegal settlement to full title and services. Mexican households seek shelter through the lottery of publicly supported mortgage lending with a success rate of 14%. Federal support – including lending from public pension funds - reaches only 6% of the households earning less than 3 minimum wages (MW, approximately 40% of the total population). With few options for lower cost or affordable rental housing in the formal market, over half the population turns to informal housing development. The breakdown of housing markets hinders poverty reduction, limits economic growth, and threatens macroeconomic stability.

2. To some degree housing problems will persist as long as there are poor Mexicans. Even the highest income countries continue to dedicate resources to housing their poor based on social and economic grounds. In Mexico, however, public intervention through housing finance and the physical building blocks of neighborhoods - land, building regulations and basic services - appears to exacerbate the problems rather than alleviate them. The market failures in housing result partly from publicly induced supply limitations, such as over specified and thus restrictive building standards, that price formal housing options beyond the income capacity of the poor. Publicly supported housing institutions do support housing finance for the middle income, but are of limited scale due to operational and financial inefficiencies. They create market distortions that crowd out the private capital necessary to meet demand at the middle and upper income levels. This crowding out is in addition to increased cost of capital due to underlying macroeconomic risk of the Mexican economy.

3. Housing prices are elevated by over-dimensioned and inefficient urban and land tenure regulations. These include government management of former *ejido* lands and the non-competitive market dynamics of their conversion, which under the guise of public policy, provide oligopoly rents to developers and increased land prices to buyers. Weak local technical and financial capacity to plan and provide basic services further constrains the supply of formal land and provides incentives for informal development.

4. The key barriers to efficient shelter markets vary across income segments and type of shelter. In contrast to past policy prescriptions, this analysis is based on the concept of increasing shelter access, rather than aiming for a certain level of shelter (e.g. finished, with infrastructure, made out of durable materials, etc.). Table 1 shows shelter options by income segment, the major obstacles to increased shelter access and possible government

and private sector responses. In lower income segments, progressive housing and rental units present economically appropriate shelter options. Above three minimum wages finished housing becomes financially feasible given household income and public support. Appropriate government intervention is based on targeting scarce public funds toward increasing access of low-income populations and using public policy and regulatory instruments to improve housing markets and increase financing to middle and upper income segments.

Table 1: Market Segments and Obstacles

HH Income	0-2 mw	2-3 mw	3-5 mw	>5 mw
Demand	• Basic shelter • Progressive • Rental	• Progressive • Rental •	• Progressive • Finished • Rental	• Finished • Rental
Obstacles	• Income • Serviced land • Regulations limit products	• Income • Serviced land • Regulations limit products	• Housing finance	• Housing finance
Public Role	• Direct financial support • Matching grants for neighborhood investment • Regulatory reform • Matching subsidies to Hh	• Matching grants for neighborhood investment • Regulatory reform • Matching subsidies to Hh	• Mortgage Insurance • Regulation • Liquidity support • Matching subsidies to Hh	• Mortgage Insurance • Regulation • Liquidity support
Private Role	• House construction • Microfin. & savings services	• House construction • Microfin. & savings services	• Microfin. & savings services • House construction • First tier lenders • Long term investment	• House construction • First tier lenders • Long term investment • Secondary mkt activities

5. This study will further detail the key issues behind the Mexican low-income housing crisis and identify policy actions to reduce the short term needs and set the sector on a path toward improving the access and affordability of poor households to housing services in a sustainable fashion.

6. *Structure of the Report.* The report is organized in into three main sections: background and description of the low income housing crisis in Mexico (chapters 1-2); housing market inefficiencies (chapters 3-6); and elements of a sustainable approach to low income housing (chapter 7). The *first chapter* provides basic information on the demand for housing in general and for low-income housing in particular for the next decade. It emphasizes the impact of low-income housing policies on poverty alleviation and highlights the importance of housing and construction in macroeconomic stability. The *second chapter* reviews current government housing, economic and financial policies, and housing institutions. This chapter concludes with a review of the level and incidence of subsidies embedded in the publicly supported programs.

7. The second section of the paper focuses on the principal inputs that increase the price and decrease the quantity of housing available – housing finance, land and urban

regulations, and basic infrastructure and services. The section analyzes the distortionary effects of current government intervention and examines the funding schemes, institutions and regulations in place in order to identify bottlenecks and appropriate remedies. *Chapter three* analyzes the state of mortgage finance and lays a path for improvement. The chapter includes mortgage finance and demand side subsidies. *Chapter four* addresses popular finance instruments – micro credit and savings –to support access to housing for the large share of the population that cannot afford a mortgage. *Chapter five* reviews government intervention in land markets, principally through tenure and urban regulations. *Chapter six* describes the current state of infrastructure and basic service provision, which form part of the overall quality of shelter.

8. The last section of the paper presents an outline for a more sustainable strategy. *Chapter seven* discusses the major components of a comprehensive policy reform to reverse current distortionary public interventions and to launch a proactive agenda for low-income housing. Key principals are outlined and the findings of the previous sections are drawn upon to lay out actions in housing finance, land tenure, urban regulations and infrastructure. The paper concludes with program recommendations and cost estimates.

9. The study is based on work prepared by a team of World Bank, Mexican and InterAmerican Development Bank researchers during 2000 – 2001, along with a review of key secondary sources. Important contributions were also made from the study counterpart, the National Housing Commission (*Comisión Nacional de Fomento de la Vivienda*, CONAFOVI) and the Subsecretariate for Urban Development and Housing, SEDESOL. The complete inputs of the researchers form volume two accompanying this study.

PART I: BACKGROUND AND DESCRIPTION OF THE PROBLEM

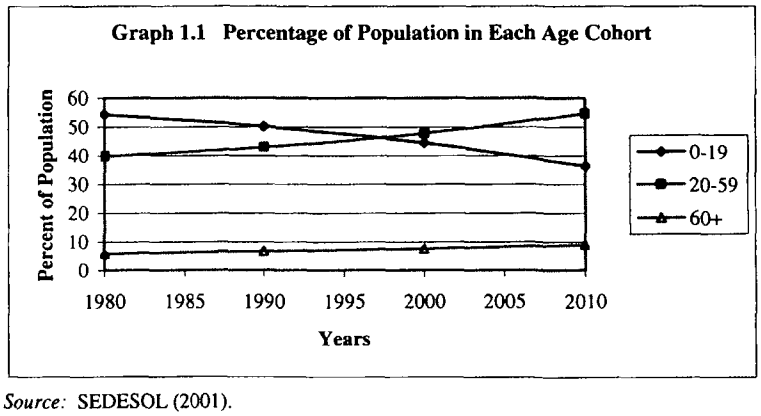
CHAPTER 1: CHARACTERISTICS AND SEVERITY OF HOUSING PROBLEMS

INTRODUCTION

1.1 This chapter presents the characteristics and dimensions of the housing sector in Mexico. The descriptive chapter is meant to provide context for the subsequent assessments and proposals. The basic demographic and income trends lighting the housing challenge are outlined. The importance of housing in terms of poverty, economic growth and fiscal stability is discussed in order to demonstrate the potential impact if the looming housing problems are not adequately addressed.

DEMOGRAPHIC TRENDS[6]

1.2 The demographic boom of the 1960s is giving rise to a sharp increase in the growth of new households. Over the last four decades, Mexico's urban population has grown from 11 million to 72 million. Though population growth in Mexico has now slowed, the large cohort of people born during the 1960s and 1970s is giving rise to rapid increases in the population in their twenties and thirties entering the housing market. The population between ages 20 and 59 that would demand housing finance has grown from 39.8% in 1980 to 47.9% in 2000. In line with this baby boom, the number of households increased from 13.4 million in 1980 to 22.3 million in 2000. It is expected that the number of households will increase to 26 million by 2010.



Source: SEDESOL (2001).

1.3 In recent years the average household size has also decreased and correspondingly occupants per house have decreased from 5.5 in 1980 to 4.4 in 2000.

HOUSING STOCK

1.4 The Mexican housing stock has grown faster than population. Between 1980 and 2000, the housing stock has increased 81%, while household growth has been only 45.2% over the same period. Because of the strong construction boom, the housing stock is

[6] The demographic trends presented are based on a background study prepared for this report by SEDESOL. The work draws on the population and household projections of the Consejo Nacional de Población (CONAPO) and the data released by mid May 2001 from the 2000 Census. The full background report can be found in Volume II of this study.

relatively young. Two out of three units have been constructed within the last 20 years, and on average 16 years ago. In general, the majority of demand for home improvement comes from the 27.5% of housing over 21 years old.

TABLE 1.1: HOUSING STOCK BY TENURE ('000 OF UNITS)

	1970	1980	1990	2000	Annual Growth (%)
Total Housing Units	8,286	12,075	16,035	21,513	3.2%
Owned	5,471	8,214	12,487	16,836	3.8%
Not owned	2,815	3,861	3,548	4,569	1.6%
Rented	NA	2,527	2,347	2,818	0.5%
Other	NA	923	1,099	1,714	3.1%
Not Specified	NA	410	102	37	-11.3%
Ownership Rate (%)	66.0	68.0	77.9	78.3	22.3%*

Sources: Herbert (1997); INEGI, 12 General Census of Population and Housing 2000; and SEDESOL estimates.

*Total percentage change between 1970 and 2000.

1.5 The quality of the housing stock has been improving over recent decades. The average sized house increased from a single room in 1970 to four rooms in 1995 (though in 1995 there were still 9% of houses with one room). The increasing house size combined with decreasing household size has led to a decline in persons per room from 2.57 in 1970 to 1.64 in 1995. Urban services are now available in the majority of homes. The increase in quality is also reflected in the growing use of more permanent construction materials. In 1970, 41% of homes had dirt floors. This number fell to 15% by 1995. Similarly, the use of solid materials for roofs increased from 34% to 60% over the same period (Hebert, 1997).

HOUSING DEMAND

1.6 Estimates by SEDESOL indicate that about 4.3 million Mexican households are under-housed. New units are needed to serve approximately 800,000 families which are without a house (living with other families) and to replace the 1 million houses which are old and in bad conditions and need to be replaced. Another 2.1 million homes require expansion as the number of occupants exceeds the average and 400,000 require household improvements to avoid deterioration to an unusable level. This totals to a current need for 1.8 million new units and 2.5 million household improvements.

1.7 *Projected Demand.* The projected demand refers to the housing needs based on demographic growth - the formation of new households – and the natural deterioration of the housing stock. It is estimated that by 2010, there will be 26 million households,[7] requiring that the housing stock expand by 730,00 units per year on average to satisfy this demand.[8]

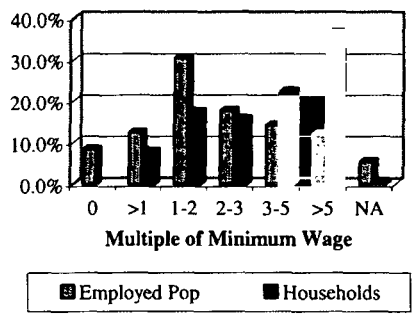
[7] These are new households net of deaths. The analysis assumes that each household should have a house; therefore housing demand is based on the projection of new households.

[8] The demand data was calculated based on population, and household number and size projections from CONAPO. The difference in net households each year is taken as the growth in households.

Segmented Housing Demand

1.8 This demand for housing must be considered with regard to the financial capacity of the households to purchase housing services. Official statistics indicate that a large share of Mexican households earn less than three minimum salaries.[9] As graph 1.2 shows, approximately 8% of households earn less than one minimum salaries, 17% earn between one and two, 16% earn between two and three, 22% earn between three and five, and 37% earn more than five. While overall income levels have increased over the last decade (see graph 1.3), the tendency appears toward growth in the 2 to3 and 3 to 5 MW segments, which expanded from 16% in 1980 to 32% in 2000.

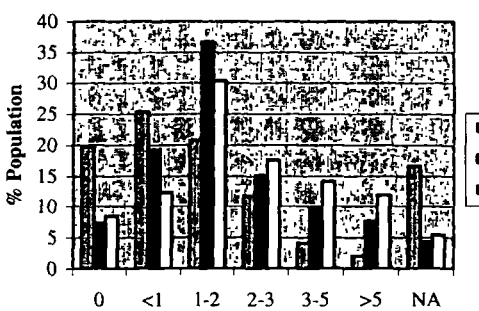
Graph 1.2: Fraction of Employed Population and Households by Earnings Quintiles



Source: SEDESOL (2001).

1.9 This income breakdown has clear implications for the housing market and the Government's role in increasing access. Many households have insufficient income to qualify for mortgage lending, even with a reasonable amount of government support through up-front or other subsidy schemes. Table 1.2 shows housing demand broken down by income segment. The table shows that more than 40% of new housing and home improvement demand is for households earning less than three minimum salaries. Currently, the only product serving this market is the publicly supported VIVAH program, along with smaller scale state, local and non-profits programs. VIVAH makes up only about 2% of all federal public and quasi-public housing programs (programs and incidence will be further elaborated upon in Chapter 2 of this report).

Graph 1.3: %Population by Income Segment



Source: Adapted from SEDESOL (2001).

1.10 These affordability estimates are based on the conservative assumption that on average households of all income levels spend up to 30% of their income on housing and basic services. In fact, recent income and expenditure survey's show low-income earners spend far less on housing (about 10% per INEGI, 1998). Considering underreporting of income and the difficulty of measuring household income among the poor, the following

[9] As of April 2001, the average national minimum wage is worth MX$37.57 pesos per day (37.57 x 30.4 days = MX$1,142.13 pesos) or about US $120 per month.

analysis will assume the conservative 30% allocation. However, the financial analysis for policy and programs should include tests for a possibly lower allocation of household income to shelter.

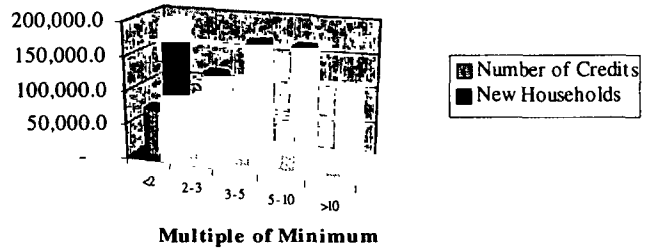
Table 1.2: 2000 Housing Demand by Income Segment

Time Minimum Salaries	Total Households	Demand			Available Products
		New Units	Improvements	Total	
<2	5,628,628	184,946	100,656	285,602	VIVAH
2-3	3,483,650	114,446	62,287	176,733	VIVAH
3-5	5,000,580	164,280	89,409	253,689	PROSAVI
5-8	4,936,361	162,171	88,261	250,432	Fovi B1
8-10					Fovi B2
10-15	3,218,697	105,741	57,549	163,290	Fovi B3
15-25					Media Residential
25-50					
>50					Residential Plus
Total	22,268,916	731,584	398,162	1,129,746	

Source: SEDESOL (2001).

1.11 Even considering this generous portion of household budgets to housing, there is still a serious mismatch of demand versus new constructions in the formal housing market. Formal-sector finance and production ran at about 400,000 units for 2000 - an exceptionally good year - and is projected to shrink to a more normal rate of 325,000 in 2001. Thus, formal supply is accessible to 60% of new house demand, at best, and the majority in the 3MW+ market. In contrast to demand, which is mainly for lower-cost solutions, this supply consists almost entirely of new developer-built units (relatively high-cost solutions) financed by the public housing institutes, INFONAVIT, FOVI, and FOVISSSTE.

Graph 1.4: Net New Households and Number of Loans by Income Segment



Source: Own elaboration, data from SEDESOL (2001).

1.12 The narrow array of types of housing is a central issue. Even in well developed housing markets, such as in the U.S., low-income households must save and wait a considerable time period before purchasing a home. While homeownership may not be an immediate option in countries with developed housing markets, these households have other housing alternatives such as affordable rental housing. In these well functioning markets, filtering and a type of housing ladder combine to increase the options available to the poor.[10] In Mexico, these alternatives are limited. The housing finance system's

[10] Filter refers to the process by which housing supply becomes available through resale to populations of a lower income level than the units' original owners. This is due to expansion in the total housing supply and/or income growth of original occupants. The housing ladder refers to the pattern of housing preferences that reflect income and family characteristics over a person's lifetime. In the U.S., this may be

weak institutional and legal framework for secured collateral and bias toward new housing limit financing available for used housing, and therefore the filtering of housing supply to lower income households. Land use and fiscal instruments do not encourage liquidity in real estate markets. Rental housing is also limited due to an unfavorable tax treatment and the legacy of years of rent controls. The end result is that in the absence of viable alternatives, many households are under-housed and suffer from insecure tenure, crowding and poor quality of housing.

Geography of Demand

1.13 Over the last thirty years Mexico has changed from a rural society to one in which two thirds of the population live in urban areas. The peak of this transition has passed. The rate of growth of the urban population has slowed to about 2% and is projected to fall further as urbanization converges to 80%. While the largest wave of urbanization has passed, shifts in the urban population continue. The extreme concentration of urban population in Mexico City has changed since the political and economic openness beginning in the 1980s. While major metropolitan centers are still home to 25% of Mexico's population (Mexico City, Guadalajara and Monterrey), the strongest growth is occurring in medium size cities - around the metropolitan areas and in the central region, on the northern border and in the tourism areas. Metropolitan areas with between 500,000 and 4 million people now account for 37% of the urban population (World Bank 2001).

1.14 As Mexico City has urbanized, so has its poverty. The majority of Mexico's poor, 64% or 35 million individuals, live in urban areas. Estimates suggest that most of them, 31%, live in medium to large cities but a full 25% are concentrated in the countries' three metropolitan areas. Applying urbanization rates to state level poverty estimates suggest that while the majority of the country's urban poor are in the central region, more than a fifth are concentrated in the greater Mexico City area (World Bank 2001).

THE HOUSING SECTOR IN PERSPECTIVE

International Comparisons

1.15 Mexico's housing sector appears adequate by international standards, though with an understandably weak housing finance system. New construction is on par with that of comparable countries (see Table 1.3). Given the flatness of real income growth over the last decade, the housing investment increases appear stimulated by government support to the sector. While Mexico may have done a good job in increasing housing during a period of rapid urbanization and demographic increase, its housing finance system yet lags behind the region's front runners and the vast majority of publicly supported formal housing production has benefited the middle class. The weak finance system appears a reasonable reaction given the severe macroeconomic shocks and the macroeconomic

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characterized by apartment living in a person's 20's, followed by a small home, then a larger home as the family expands and then possibly again a smaller home or retirement facility as children leave to form their own households.

policy of using interest rate flexibility to stabilize exchanges rates (to be further discussed in chapter 2). In particular, the lack of access of poor households to housing finance and a financial system which limits filtering of housing supply, has been a shortcoming of the Mexican system for the last three decades and led to a high percentage of population living in informal settlements (see Table 1.4). The thin housing sector has drastic impacts on poverty, economic stability, growth and fiscal balance.

Table 1.3: Comparative Housing Indicators

Indicator	Mexico	Costa Rica	Chile	Brazil	Latin American & the Caribbean	US
Population (millions), 2000+	98	4	15	170	516	280
Ave. Urban Household Size++	4.4 1996	3.9 1997	3.9 1998	3.6 1998	4.3 1999	2.61** 1998
GNP per Capita (constant 1995 US$), 1998+	3,819	4,071	5,354	4,632	3,857	32,053
Income Distribution Gini Index+	51.9 1996	45.9 1996	57.5 1996	59.1 1997	n/a	40.8 1997
Access to Sanitation (% of urban pop)+	87%	98%	98%	85%	87	100
Value Added by Construction as a % of GDP, 1998+	4.3	3.8	5.2	n/a	n/a	n/a
Mortgage Portfolio/GDP*	3.6%	6.0%	15.2%	4.0%	n/a	66%

Sources: +WDI 2001 on-line, ++CEPAL (2001), *Alberdi (1999), **US Census Bureau

Housing Impacts on Poverty

1.16 Housing has a significant impact on poverty in terms of basic social support. Housing plays a unique role in protection, as a center of family and community life, health and social well being. Housing provides the shelter necessary to work, study and form communities. Its importance was reflected in the 1999 Voices of the Poor Study, which surveyed over 1,500 poor households from the region, and in which infrastructure and housing were consistently identified as top priorities (World Bank, 1999). In 1998 focus group assessments along Mexico's northern border, low-income families ranked adequate shelter – housing, housing finance, basic infrastructure and community services – as their number one priority.

TABLE 1.4: PERCENTAGE OF THE POPULATION LIVING IN INFORMAL SETTLEMENTS, BY CITY

City	% of the Population Living in Informal Settlements
Bogotá	59
Recife	46
Mexico City	**40**
Lima	40
Sao Paulo	22 (only in favelas)
Rio de Janeiro	20 (only in favelas)
Belo Horizonte	20 (only in favelas)
Buenos Aires	10

Source: CEPAL (2000)

1.17 The importance of housing also reflects not only its social safety net role, but also its economic role. Many low-income homes are a place of economic activity, as well as a shelter and the housing unit can be a key source of capital accumulation and therefore

critical to building a strong middle class.[11] In Mexico however, market and regulatory restrictions limit the ability of the poor to build wealth through property. The limited resale market in Mexico blocks owners' ability to make liquid housing investments, reducing the value of capital invested in housing. A household's ability to enter even the thin housing market is further limited by the fact that an estimated 60% of homeowners lack full legal tenure (though most of these have para-legal rights that secure their occupancy), and government tax regulations limit the profitability of renting. And finally, limited access to housing finance reduces the poor's ability to leverage equity invested in their property to smooth consumption over the family life cycle. As a result, in Mexico, as in many other developing countries, home equity is not optimally used to create wealth.[12]

Box 1.1: The Role of Housing in Building the US Middle Class

The United States adopted middle-class-oriented development strategies including wholesale housing reform during the 1930s,[13] when per capita incomes were $4,800 in 2000 U.S. dollar, comparable to that of Mexico today. The U.S. housing reforms of the 1930s laid the base for greatly strengthening the economic and asset value of housing, which largely lacked this function prior to these measures. These housing reforms proved remarkably successful, and played a critical role in the striking expansion of the U.S. middle-class and emergence of a developed society over the next thirty years. Despite the U.S. stock market boom in the 1990s, the largest source of U.S. household wealth is home equity, which continues to be the "nest egg" on which average people depend on when they retire. Most U.S. small entrepreneurs still gain their initial capital from taking equity out of homes through refinancing. Home construction employs substantial numbers of semi-skilled workers and has a high multiplier effect (usually estimated at about 3), roles it has begun to play in Mexico.[14] The housing industry has also served as a locomotive to help mitigate and bring the U.S. economy out of recessions.

Source: Ferguson (2001).

1.18 Even with these restrictions on home ownership and wealth creation, poor households spend a larger proportion of their income on shelter than any other single expenditure category except for food. Housing accounts for approximately 10% of expenditure in low-income households, and this relationship decreases with income level.

Financial and Macroeconomic implications of the weak housing system

1.19 Real property forms the basis of a healthy financial system, both internationally and within countries. Banking systems resting on numerous loans to individual homeowners backed effectively by liens on property are inherently more stable than systems resting on a handful of loans to large borrowers. Despite its sophistication and scale, mortgages

[11] Asset- poverty has both human capital and housing dimensions. See Attanasio an Szekely, 1999.

[12] For further discussion of home equity as dead capital, see De Soto 2000.

[13] These housing reforms included establishing the Federal Housing Administration (whose mortgage insurance created the high loan-to-value, 30 year amortizing loans that replace the low loan-to-value ratio bullet loans of 3-5 years with balloon payments that had previously dominated home finance), the Federal Home Loan Bank Board and System to purchase loans of first-tier institutions, Fannie Mae, and the Home Owners' Loan Corporation (which refinanced loans in default from lenders for 20% of all U.S. real estate, sold them, and closed in the 1940s with a profit).

[14] The construction industry in Mexico employs 2.2 million people - a member of one in every nine households - and transmits multiplier effects through 21industrial categories (Federal Government of Mexico, Plan Nacional de Desarrollo, 2001).

remain the cornerstone of the U.S. capital market. Mortgage lending accounted for about 30% of all borrowing in the United States in 1999—by far the largest single component of the credit market (U.S. Federal Reserve, 2000). About 26% of all debt in the United States, (excluding open-market paper and Treasury securities) is mortgage debt. The existence of this large, stable pool of finance - with a diversified risk basis and much of it insured - was critical to the development of U.S. capital markets (U.S. Federal Reserve, 2000). Mass property ownership is also crucial to good governance. The creation of a homeowner class is one of the surest methods to help a society achieve long-term political stability.

1.20 The current housing system's reliance on inefficient public housing finance poses substantial risk to the federal government in terms of potential bailouts and heightened demand for government support. Mexico, however, has a low fiscal base to fund housing subsidies on budget. By international and Latin American standards, Mexico has a very small (non-oil) fiscal base of the order of 11% of GDP. This leaves three options to augment the limited ability to provide direct subsidies from fiscal resources: (i) quasi-fiscal subsidies hidden in the balance-sheets of development banks; (ii) United Mexican States' guarantees on housing finance funding instruments (not accounted in the budget until this year, but have raised the contingent liability of the federal government)[15]; or, (iii) reliance on International Finance Institution (IFI) foreign borrowings.[16]

CONCLUSIONS

1.21 The current demographic boom during the 1960s and 70s is resulting in a large increase in new house formation and housing demand. It is estimated that 730,000 new units and 400,000 house improvements per year on average will be needed over the next decade. In addition, there is a backlog of 1.8 million new units and 2.5 million home improvements. Over 40% of the demand for new homes and improvements is from households earning less than three minimum wages, a segment that for the most part does not qualify for mortgage lending. The most rapid population growth is now occurring in medium sized cities 500,000 to 4 million people. These cities, along with the major metropolitan centers, are home to the vast majority of Mexicans and the poor. Housing demand and financing challenges will likely focus in these areas.

1.22 Mexico's housing sector has performed relatively well over the last two decades given the macroeconomic shocks that have limited the development of housing finance and income growth. With public support, growth in housing stock has outpaced population growth. As will be discussed later, this support came in the form of subsidized loans through mandated pension funds for the middle class. This support was largely off the books of the government and effectively increased housing stock during times of urban growth and income stagnation, but also served to crowd out the private

[15] The pre-election run-up of the quasi-fiscal liabilities of the federal government channeled through the development banks played a very significant role in triggering the financial crisis of 1995.

[16] World Bank loans to the Mexican housing sector have been as follows: FONHAPO-I, 1985, USD150 million; FONHAPO-II, 1989, USD350 million; FOVI-I, 1988, USD300 million; FOVI-II, 1992, USD450 million. FOVI Restructuring, 1999, USD505 million. Other IFI loans to housing were made by the IADB.

sector and reduce liquidity in the housing market. Evidence of weakness of the housing market is shown in the large and growing population in informal housing and the shallowness of formal housing finance. The weakness of the sector may have serious poverty and economic consequences: housing is a key element of social support and alleviation of asset based poverty prevalent among the urban poor. A strong housing system supports macroeconomic growth and stability through multiplier effects, and by reducing government's contingent risk and demands for fiscal outlays. A strong housing finance system also forms the backbone for deep and resilient financial markets.

PART I: BACKGROUND AND DESCRIPTION OF THE PROBLEM

CHAPTER 2: GOVERNMENT POLICY AND PROGRAMS

INTRODUCTION

2.1 This chapter briefly introduces the policy and institutional context for the housing sector. The chapter discusses the goals of the government and constraints of the economic and fiscal environment, and provides a first look at the effectiveness of the housing institutions and programs. The aim is to highlight the major issues the government must confront in order to realize its housing goals. The chapter begins with the major sector policy goals set out by the Fox Administration, followed by the impacts of recent macroeconomic and fiscal trends and policies. The institutional environment, namely principal public and quasi public housing entities, is described. Finally, as a very simple indicator of the impact of the current system, the level and incidence of funds and subsidies channeled through the housing entities and programs, is assessed.

PUBLIC POLICY ENVIRONMENT

Housing Policy

2.2 The Government of President Fox has made provision of housing a central policy of the administration, and in particular improving the situation for lower income segments. The administration has set a target of increasing annual house creation to 750,000 units per year by 2006 - a doubling of current production. To attain their objective, the strategy of the new administration aims to improve how the housing market functions, and increasingly focus the public sector on the roles of regulator and policy maker. In particular, the objectives in the short-and-medium run are to:

- Focus government's role on regulation, medium and long term planning, and facilitating private investment.
- Increase the flow of private financial resources to the housing sector through the development of secondary mortgage markets and the return of commercial banks.
- Reduce the role of the public sector in the private mortgage markets, reducing the crowding out of private finance.
- Move from implicit subsidies (present in the below-market rates offered by the public housing finance institutions) towards up-front subsidies and properly priced insurance, within the financial capacity of the public sector.
- Support/diversify the type of housing products oriented to the low-income segments. These products would range from sites and services to finished units, rental housing, formal progressive construction and home improvement.
- Integrate the mortgage market to reduce segmentation and increase efficiency.

2.3 To advance on this policy, the administration has enacted several institutional changes. The *Consejo Nacional de Vivienda*, a presidential council, was created in August 2001 from representatives of the public, private and community sectors. It is to act as an informal forum for policy discussion. The Government also launched the *Comisión Nacional de Fomento de la Vivienda* in June of 2001. The Comisión's

mandate is to define and coordinate housing policy across the sector. Recently, the congress approved the creation of a National Housing Bank (*Sociedad Hipotecaria Federal*, SHF, for further detail, see Chapter 3), which will take over the assets of FOVI, and possibly facilitate a larger mobilization of private domestic savings into residential mortgage markets. In the approved law, the policy mandate and operations of SHF are broad and range from insurance and guarantees to second tier lending. The Government is also taking steps to consolidate housing subsidies under one entity, likely to be FONAHPO.

Economic and Fiscal Policy

2.4 In the early 1990s Mexico experienced a severe financial crisis. In the post-crisis period, Mexican authorities have used monetary and fiscal policy to stabilize the financial environment. These policies have, at least in the short-run, left some important credit demands unmet, including demand for housing finance. In the long run, however, these policies promise financial stability, which should lead to an expansion of the supply of housing credit.

2.5 Monetary policy has been the major tool to cope with the financial and exchange rate crisis. The central bank, which had targeted the peso/US dollar exchange rate prior to the crisis, moved to inflation targeting. Under the pre-crisis policy, the central bank played an active role in maintaining liquidity in the market for short-term government securities, known as *cetes*.

Table 2.1: Nominal Short-term Interest Rates (in %, average of monthly data)[17]

	1993	*1999*	*2000*	*2001*
CETES	14.85	21.29	15.27	14.98
CPP	18.56	19.73	13.69	13.70
TIIP	18.00	23.93	16.81	16.41
CP	19.84	23.79	17.02	16.71

Source: Banco de Mexico web site.

2.6 A shift to inflation targeting changed the whole relative rate scheme, increasing the cost of liquidity for banks, as indicated by the relative increase in the inter bank rate (TIIP) compared to the deposit rate (CPP) and the commercial paper rate (CP) (see Table 2.1). The relative increase in TIIP has made it more expensive for banks to hold assets with uncertain cash flows (including mortgages given historically high default rates), shifting bank portfolios to cash assets (see Table 2.2).

Table 2.2: Cash Assets and Securities at Commercial Banks (in % of total assets)[18]

Year	*Cash Assets*	*Securities*	*Total*
1993	2.2	12.7	14.9
2000	14.6	13.4	28.0

Source: Banco de Mexico web-site.

[17] All data are from Bank of Mexico web site. Cetes are 28-day T-bills. CPP is the cost of bank deposits measured over time deposits (de plazo and pagarés), bankers acceptances, and bank-issued commercial paper. TIIP is the average inter bank rate determined by the Bank of Mexico. CP is commercial paper. The data for 2001 are averaged over 5 months through May.

[18] Reported by CNBV in consolidated balance sheet for Banca Multiple. Securities exclude gross positions in repurchase agreements.

2.7 In addition, net capital inflows into Mexico, excluding direct investment, have declined significantly in US dollar terms since the last crisis. Large declines in international capital inflows coupled with the evidence that bank portfolios have shifted toward cash assets suggest that the demand for risky financial assets, including mortgages, has suffered relative to the demand for safe assets. This is reinforced by the fact that the recently established pension funds invest most of their portfolios in government securities.

2.8 The post-crisis policy, by increasing risk and liquidity premiums, has negatively affected the flow of funds to the mortgage market. There are two routes to a sustainable private sector market for mortgages. The first is to improve the legal and regulatory climate governing house transfers to reduce the risk of mortgages. The second is for liquidity and risk premiums to decline.

2.9 The post-crisis policy had positive consequences on the development of Mexican financial markets. It encourages prudent credit decisions, which should build investor confidence in the quality of Mexican financial assets. This should encourage the growth of domestic savings. There is evidence that the policy is beginning to achieve its objectives, though there is still some uncertainty regarding long run economic stability, which is key to risk premiums on long-term assets. The implication is that with a period of stable and low inflation, risk premiums should decline. Also, it should be noted that liquidity spreads are narrowing as indicated by the spread between money market rates and the deposit rate in Table 2.1.

2.10 Bringing down the size of government debt and the uncertainty of government financial guarantees are key to reducing ex post real interest rates and concerns about economic instability. A housing policy that attempts to increase the flow of funds to the housing sector beyond what current market conditions will supply inevitably involves risks to fiscal policy. This implies that subsidies should be targeted to the most deserving sectors of the housing market and that policies be designed for maximum fiscal efficiency. These tests will be applied to the evaluation of current housing policies in the next sections of this report.

MAJOR PUBLIC AND HOUSING FINANCE ENTITIES

2.11 Over the last four decades, the federal governments of Mexico created a collection of government sponsored and/or government mandated programs and institutions to help poor families with access to housing and in general support the housing sector. The evolution and structure of the sector has not followed an integrated strategy nor has it been consistent over time. In general, decisions have followed political and economic circumstances rather than the broader aim of overcoming housing market deficiencies.
The end result has been a set of institutions and programs targeted to specific populations based on income, work and geographic barriers to adequate housing and a highly segmented housing finance system. The institutions and programs provide assistance through financing acquisition and construction, direct subsidies to the buyer, and/or relaxed legal and regulatory guidelines for subdividing, construction and urbanization.

All federal programs require monthly payments over a period of up to 30 years, mortgage guarantees and underwriting, including full legal property titles. Table 2.3 below presents the major characteristics of national housing entities.

Table 2.3: Federal Government Housing Programs in Mexico

Program	Target Instrument	Terms	Funding	Vol. Of Operation	Market Share
INFONAVIT	Workers 1.5-14 MW Actual: households (hh) 3MW and up Pension/First Tier Lender	Mortgage Indexed to MW 100% of price (pension as down payment) 4-8%, up to 9% with >5MW 30 yrs Income to payment 25% (20% with 1 MW) borrower income + 5% employer contribution	25% worker wage; 5% employer	250,100 mortgages (2000)	71% of loans 82% $$
FOVISSSTE	Public workers: 2-6 MW Pension/ First Tier Lender	Similar to INFONAVIT 10% down payment FOVISSSTE pays 50% of land title and deed cost Max income to payment 30%		23,600 mortgages (2000)	7% of loans 8% $$
FOVI	Hh 3-15 MW Second tier - low cost resource to SOFOLES* Partial default guarantees	DIM, Increasing payment mortgage 80-93% of price (70% on rental units and PROSAVI programs) UDI + 5-12.5 pts (depends on program), Payment to income 25%, 30 yrs. New Product in 1999 – increases rate for higher end, intermediaries set spread, and explicit insur. Charge	World Bank, Banco de México	46,717 mortgages (thru SOFOLES, 2000)	13% of loans 9% $$
FONHAPO	Hh <2.5 MW Loans to cooperatives, state and municipal governments Progressive housing, sites and services, home improvement, finished housing, materials distribution Developer credit	Payments to not exceed 25% of head of household income Fixed payments with real interest of 3% of MW per annum for credits of 2,000 MW and 4% for credits of 2,001-2,500 MW. Subsidy for good payment	SHCP	6730 mortgages (2000)	2% of loans 1% $$
PROSAVI	Less than 5 MW Upfront subsidy for down payment	Up to 20% of unit value Unit values 30,000-40,000 UDIs Family provides complementary resources Mortgages provide through FOVI/SOFOLES	SHCP/ IDB	MX$381 million subsidy on 11,800 credits (2000)	
VIVAH	Less than 2 MW Not home owners. Direct Subsidy for progressive housing	Subsidy of MX$18,000 to 23,000 Family pays MX$6,000 to 7,000 State/City give serviced land 90mt2 lots (can be recovered as pymts of 15% of 2.5 MW over 6 yrs).	SHCP	26,000 credits (2000)	

Sources: Noriega (2001), World Bank (2001b).

2.12 In addition, state institutes are active with instruments that address the lower end of the market not eligible for mortgage finance. The experience of the state institutes for low-income housing is important, but varied. As such, outlining the states' activities requires a near case by case approach and could not be addressed in depth given the

scope of this study. Non-governmental organizations have also played a role in certain areas, though their scale has been small compared to the larger national entities assessed below.

INFONAVIT

2.13 *Instituto del Fondo Nacional de la Vivienda para los Trabajadores* (INFONAVIT) towers over the entire Mexican housing finance system. It represented 71% of total annual housing loans in 2000.[19] INFONAVIT's yearly production of subsidized[20] mortgage loans averaged 200,000 in 1998 and 1999, and plateaued at 250,000 loans in 2000. Funding comes through a scheme of compulsory savings, i.e., a 5% payroll tax paid by employers in the formal sector, workers' pension contributions, as well as loan repayments. INFONAVIT funding is protected from market oscillations as the forced savings provide enough capital for INFONAVIT to originate and services its own loans. INFONAVIT loan interest rates and payments are indexed to the minimum wage, which corresponds to a negative real interest rate for the credit when the minimum wage does not follow the inflation rate. A down payment is not required, although in some cases, the saved amount is used as such. The subsidized rates severely impact the overall development of housing finance at market pricing, which requires further mobilization of private savings through capital markets and deposits.

2.14 INFONAVIT performance has been poor for quite some time. In theory, INFONAVIT could be financially viable since it funds itself at below market rates and lends at a considerable spread (4% to 8%). The negative results obtained by the institution are mostly due to poor management, combined with conflicting mandates as a social housing provider, a mortgage credit lending institution, and a pension fund. A board of directors comprised equally of representatives of organized labor, the private sector (including developers), and the executive branch of government govern the institute. In practice, INFONAVIT has operated under the influence of organized labor and developers, who have in the past blocked reform attempts. INFONAVIT has recently undertaken a program to strengthen its portfolio and improve servicing. Early indicators show positive results.

2.15 By making loans to its members with deep embedded subsidies, INFONAVIT is forfeiting its ability to generate an adequate return on its loan portfolio as a pension fund. As the federal government guarantees a minimum pension to all private employees, INFONAVIT's low return on its mortgage portfolio generates significant contingent pension liabilities for the federal government.[21] Workers have little reason to push

[19] INFONAVIT represents 40% of an individual's total pension contribution, along with contributions to private funds. The worker's pension payable at retirement is represented by the sum of the accumulated value in his or her pension and INFONAVIT accounts.

[20] The term subsidy here refers to the fact that INFONAVIT provides mortgages at below market costs. This 'subsidy' is paid for by worker contributions. It is not financed through general outlays of the Government.

[21] INFONAVIT represents 5/12th of the employer contributions to private pensions. The associated contingent liabilities are thought to be large in absolute terms and in comparison to the size of the federal budget.

INFONAVIT for higher return on lending because they are guaranteed a minimum pension regardless of fund performance. As a result, workers have come to view the fund as solely a source of subsidized mortgage lending rather than the guarantor of a feasible and profitable pension. INFONAVIT has a loan default rate of about 20%, although recently there has been significant progress in payment collection as well as risk management.

FOVI and Sociedad Hipotecaria Federal

2.16 *Fondo de Operación y Financiamiento Bancario a la Vivienda* (FOVI) is a trust fund of Banco de México. It acts as a second-tier bank that channels resources to low-cost housing through funding the new mortgage lenders, SOFOLES.[22] It is presently the second largest source of housing financing funds after INFONAVIT. Funds are accessed through auctions in which financial intermediaries and developers participate. The auctions include capital for mortgage origination and bridge financing for construction. FOVI funding is mostly from the Central Bank, with additional resources from the World Bank.

2.17 Among the three largest public institutions (INFONAVIT, FOVI and FOVISSSTE) funding the housing finance system, FOVI has gained a better reputation in terms of developing market based mortgage products. The SOFOL lenders fostered by FOVI have developed state of the art origination and servicing systems and achieved a very low delinquency rate (2% on average applying US GAAP standards). However, the FOVI funding price of approximately UDIs (Unidad de Inversion, an inflation index) plus 7% is still below the return offered on government securities. FOVI has fostered increased lending by SOFOLES, but these lenders are yet small compared to the major public funds and are unable to support middle and low income lending with non-FOVI funding.

2.18 The Mexican Government is currently carrying out a plan to move FOVI out of the central bank, which should allow FOVI to act as a financially autonomous entity.[23] The transition of FOVI operations into *Sociedad Hipotecaria Federal* (SHF) carries both potential and risks for the rapid development of a market-based housing finance system (see chapter 3 for more details).[24] In the law approved by the Congress in October of 2001, the new SFH is limited to operating as a second tier institution that will not make retail mortgage loans.

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[22] *A Sociedad Financiera de Objeto Limitado* (SOFOL) is a limited service financial institution licensed by SHCP and that can provide a small range of financial services, and often specializes in financing mortgages, micro business, or consumer credit (credit cards). The SOFOL institutional format was approved in June 1992 as part of the *Ley de Instituciones de Crédito*, and requirements and operating guidelines were published in the Official Gazette on June 14, 1993. The *SOFOL Hipotecarios* have become the main financial housing intermediaries in Mexico since 1995.

[23] While in the Central Bank, FOVI paper would carry a Federal Government guarantee.

[24] The organic law for a development bank named *Sociedad Hipotecaria Federal (SHF)*, was approved by Congress on October 11, 2001. FOVI's existing activities will be managed by SHF. All or part of the initial paid-up capital for SHF would come from the transfer of existing FOVI capital.

FOVISSSTE

2.19 Comparable in mandate and funding to INFONAVIT, the *Fondo de la Vivienda* (FOVISSSTE) is a wage-based housing fund for federal employees. FOVISSSTE cash flows come from the 5% of employee wages periodically contributed by the federal agencies and from loan repayments on its existing portfolio. Under the umbrella of the public pension fund *Instituto de Seguridad y Servicios Socials de los Trabajadores* (ISSSTE), FOVISSSTE is the institution charged with providing housing financing to two million federal government employees. It is the third largest housing finance lender in Mexico, with a mortgage market share ranging from 5 to 10 % in recent years. FOVISSSTE offers a wide range of housing loan options: construction loans for owner builders, purchases of new units, expansion and/or renovation of existing units, and purchases of existing units from a third party. Its loans, like those of INFONAVIT, are highly subsidized.[25] Demand for FOVISSSTE credits may be declining due to the relatively stable work force of the public sector and the high level of lending to potential beneficiaries (up to 25% of workers receive loans). The large number of beneficiaries reached may be a result of the fact that under previous administrations, credit norms were applied subjectively to maximize lending.

2.20 FOVISSSTE suffers from the same fiduciary conflicts towards its members as INFONAVIT. Because of weak accounting and administrative practices, FOVISSSTE does not have reliable and detailed knowledge of the actual condition of its mortgage portfolio. Part of the portfolio has been directly originated and serviced by FOVISSSTE, another part through commercial banks. In contrast to INFONAVIT, FOVISSSTE deposits are returned with accumulated interest to the worker at retirement rather than paid out as a pension. This should provide incentives for workers to demand adequate fund management and returns, though in reality this has not been the case. Due to its institutional structure as a decentralized entity of ISSSTE, Congress must authorize annual FOVISSSTE lending levels as part of the yearly budgeting process. As a result, origination has been limited to below the internally generated resources (inflow of pension savings, loan payments and returns on liquid assets), generating a high level of liquidity (MX$35,000 million at close of 2000). In addition, the sectorialization of FOVISSSTE in ISSTE - which pertains to the Ministry of Health and is distant from the practice of housing finance - has resulted in weak administrative and financial management.

SOFOLES

2.21 The *SOFOLES hipotecarias* are non-deposit-taking finance companies licensed by the Mexican Treasury (SHCP). They have become the main private housing finance intermediaries in Mexico since 1995 and are largely funded by FOVI. The SOFOLES'

[25] As in the case of INFONAVIT, the subsidies entailed in FOVISSSTE loans refer to the offering of below market mortgages paid for by contributions from public sector workers, rather than general outlays of the Government.

risk management has focused on mortgage default risk, loan origination and servicing. The growth rate of the industry has been high, partly because the industry is still small. The default situation among these specialized lenders has been good relative to international standards, though varied across SOFOLES.

2.22 Despite the good lending practices, SOFOLES still lack easy access to market funding and risk capital, and their businesses lack diversification. They are largely dependent on FOVI funding, partly due to the scarcity of funds and partly due to the fact that the market sees SOFOLES as higher risk lenders than commercial banks. In cases where market funding has been accessed (at a higher cost than FOVI funds), it is used to support higher income markets. Moreover, most SOFOLES originate loans through real estate developers because they lack other points of customer contact. Given that developers focus on new housing, SOFOL mortgages are not available for the purchase of existing housing stock.

FONHAPO

2.23 *Fideicomiso Fondo Nacional de Habitaciones Populares* (FONHAPO) was created in 1981 with the aim of attending the housing needs of the informal sector and households living in precarious conditions. It is a trust fund within the Banco Nacional de Obras y Servicios Públicos, S.A. (BANOBRAS), though its technical guidance and oversight is from the Ministry of Social Development (SEDESOL). FONHAPO is financed both under the federal budget and by loan repayments. Lending has been on the decline in recent years: FONHAPO provided 6,730 credits in 2000 (MX$565 million).

2.24 FONHAPO played an important role in house reconstruction following the 1985 earthquake. It was also a step forward in social housing policy as it targeted populations outside of the finished housing mortgage market, supported a range of housing solutions – including reduced standards and progressive housing – and worked closely with communities, municipalities and states (see Box 2.2). While these were important advances, FONHAPO's financial practices and governance structure have undermined its effectiveness and reputation. Subsidies are imbedded in finance and loan recovery is lax. Partly due to changes in its governance structure, FONHAPO under previous administrations came to be used as a political favor rather than an effective housing program and shifted toward support for finished housing rather than progressive housing and sites and services.

Box 2.2: Innovation in and Evaluation of the Original FONHAPO Program

FONHAPO was created as part of a government strategy for jump-starting an economic recovery using the construction industry as the engine. There was an explicit goal of doubling the number of housing units supplied in the 1983-1988 six year period from the previous six year period. FONHAPO was to focus on increasing access to housing by low-income families, specifically those earning below 2.5 times the minimum wages , a group previously unattended to on a large scale and the largest segment of the population.

With support of a World Bank loan, FONHAPO was to finance projects for the construction of serviced lots, and progressive housing units (starter homes) in rapidly growing, medium-sized cities. It was to achieve this by on-lending to sub-borrowers who would implement projects, participate in their financing, provide collateral guarantees and allocate construction facilities to eligible beneficiaries. This approach included several important innovations for its time.

First, typical beneficiaries were meant to be non-wage workers earning less than 2.5 minimum wages . This differed from other government schemes where recipients of housing traditionally contributed a portion of their wages to government housing funds (INFONAVIT, FOVISSSTE) in order to be eligible for housing. The effect of such programs is the exclusion of non-wage earners from accessing formal housing. Second, instead of financing specific projects, the loan was used as an equity investment in FONAHPO, which then used this as a line of credit to finance sub-projects through decentralized intermediaries (including cooperatives, NGOs, states and municipalities). Third, the program explicitly tried to measure subsidies and improve cost recovery of loans.

FONHAPO financed 142,000 housing solutions under the Bank financed project, attaining 99% of the projected number set-forth at the start of the WB funded loan. This was accomplished in a period from 1985-1990, two years less than the estimated period at start of the project. Additionally, the loans were widely disbursed, thus fulfilling the decentralization goals of the project. The *poverty impact* of the FONHAPO program was also considered successful, with units being affordable to families earning between 0.8 and 2.5 times the minimum wage. This was attained by allowing funds to be used for the financing of serviced sites, progressive housing and housing improvement, and apparently was done in the face of opposition from the construction industry and others which favored fully finished, larger units. *Cost recovery* goals appear more questionable. Subsidies were still high (about 40%), although some attempt was made to provide lump-sum subsidies, tied to loan repayment. There was still an apparent subsidy embedded in the financing. Despite efforts to index loan payments to the minimum wage, interest rates were probably not positive since there were no provisions to allow the capitalization of interest in the event payments were insufficient to cover interest due. Lastly, FONHAPO's governance structure proved vulnerable to political forces and the project increasingly moved to politically driven beneficiary selection and the finished housing preferences of the construction industry.

Source: Cira (2001).

Programa Especial de Crédito y Subsidios a la Vivienda (PROSAVI)

2.25 The PROSAVI program was initiated in 1999 to provide direct housing subsidies, equivalent to an equity contribution, to heads of families earning less than five minimum wages. In 2000, PROSAVI provided MX$386 million in subsidies, linked to 11,789 new mortgages. The Banco de Mexico and FOVI are responsible for the program's implementation and SHCP is responsible for its financing. Mortgage finance is provided by FOVI through SOFOLES. The program was a step forward in social housing policy as it was the first explicit demand side subsidy. Issues raised about the program include its failure to value associated costs of home purchase/development into the unit value, resulting in initial payments (down payment plus associated charges/fees) beyond the affordability range of the target population. Questions have also been raised about the

lack of a sustainable funding source for the direct subsidy. The program is currently supported by a loan from the InterAmerican Development Bank. The certification of beneficiary income has been complicated. In some instances, local governments have extended credit to beneficiaries to cover the down payment, undermining the program's incentives for fostering savings and increasing the credit risk of the beneficiary due to increased leverage. Finally, collection costs amount to a large percentage of the credit, putting into question the cost effectiveness of mortgage credits for this income segment.

VIVAH

2.26 *Programa de Ahorro y Subsidios para la Vivienda Progresiva* (VIVAH) is a direct subsidy and savings program aimed at increasing the supply of progressive housing for families earning up to two minimum salaries. This pilot program was initiated in 1998. The scheme entails beneficiaries providing MX$7,000 in up-front savings, and the federal government providing a grant of MX$23,000. Local and state governments must match the federal contribution with a serviced site, which typically approaches in cost the amount of the federal grant. In 2000, the program provided grants of about US$3,500 to 26,000 beneficiary families. The housing institute (OREVI) - in the case of states - contracts the building of the units. No cash credits are involved. The local or state government can collect monthly payments over six years to recover the cost of the serviced lot. [26] In practice, few local or state governments seriously attempt to recoup these "credits", and those that do end up with very high arrears rates. Moreover, in many metropolitan areas, scarce urban land has made the cost of matching state land and municipal service requirements prohibitive. Even with the high demand for progressive housing, this bottleneck will likely mean that some of the Federal funds for this program will remain undisbursed this year.

Commercial Banks

2.27 In the first half of the 1990s, following their re-privatization commercial banks expanded very rapidly into mortgage lending to the middle and upper-income groups at commercial rates from their own resources. The banking sector withdrew completely from new mortgage lending in 1995 in order to focus on their existing problematic corporate and consumer loans. The Banks now have high liquidity and low cost deposit funding and in the first half of 2000 resumed mortgage lending on an experimental basis in high-income markets. Though they aim to reestablish their presence in the consumer markets in anticipation of greater competition, their main focus remains on credit cards and car loans where risks are more easily managed in comparison to mortgage loans.[27] New mortgage lending by Bital and Scotiabank-Inverlat targets middle-income markets (MX$60,000 to MX$272,000 valued units), while Serfin targets households further up market (MX$700,000 priced units and above). These market entrants have significant infrastructure for credit management, but still lack risk capital and struggle with potential

[26] Local governments can charge up to 15% of 2.5 minimum salaries per month for a term of no more than six year.

[27] Prior to the 1995 crisis, commercial banks had weak underwriting, originating and servicing systems for mortgage lending. They experienced severe losses on portfolios that had grown too fast. (Lea ,1996).

long-run funding constraints, possibly limiting the development of very large private mortgage markets. Market share of the commercial banks is estimated at only 1%.

FINANCIAL FLOWS AND SUBSIDIES

2.28 One way to measure the impact of these programs is to examine the financial support provided to beneficiaries. Importantly, support is not only provided in the form of explicit subsidies, but also through financing and operating practices resulting in large implicit subsidies, as in the provision of financing at below market rates. In the same fashion, regulatory and legal guidelines that distinguish between public and private agents may generate distortions that become implicit subsidies. The financial burden of these implicit subsidies falls upon: i) pension savers receiving lower returns; ii) the federal government in case of future bailouts of the funds or payments of minimum pensions; iii) the federal government in terms of higher costs of debt due to high contingent liabilities associated with the poorly functioning funds; and, iv) the overall economy due to the financial market distortions. While the implicit subsidies do not require scarce fiscal resources, they generate substantial costs and their effectiveness should be considered.

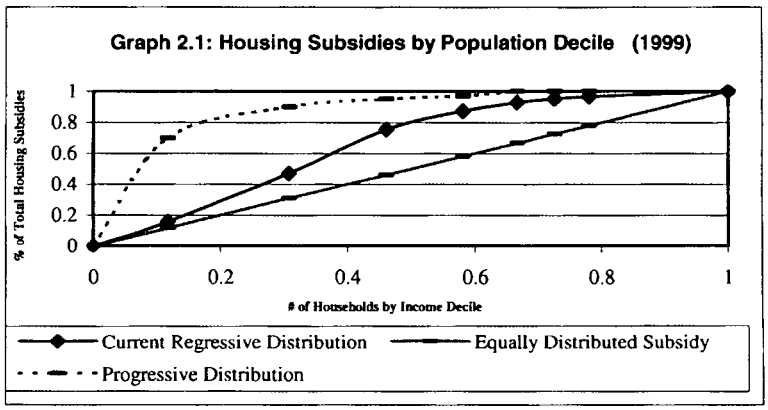
Table 2.4: Explicit and Implicit Subsidies from Major Public Housing Entities ($ figures in millions of pesos)

Institution	Total $ Amount of Credits	Explicit Subsidy	Implicit Subsidy	Total Subsidy
1999				
INFONAVIT	32,015		16,904	16,904
FOVI	4,774	348	910	1,258
FOVISSSTE	2,543		1,306	1,306
FONHAPO	337		145	145
VIVAH		261		261
Total	*39,669*	*609*	*19,265*	*19,874*
% of Credit	*100%*	*2%*	*49%*	*50%*
2000				
INFONAVIT	43,466		22,796	22,796
FOVI	5,048	262	432	694
FOVISSSTE	4,196		2,145	2,145
FONHAPO	565		2,423	2,423
VIVAH		578		578
Total	*53,274*	*840*	*27,796*	*28,636*
% of Credit	*100%*	*2%*	*52%*	*54%*

Source: Noriega (2001).

Notes: Explicit subsidies are those identified as subsidies and paid to either the home purchaser or supplier. Implicit subsidies refer to subsidy provided through offering credit at below market rates. The *implicit subsidies* here refer to subsidies imbedded in below market rate loans, and the cases of INFONAVIT and FOVISSSTE are paid for by worker contributions to the funds rather than outlays from the government budget. Implicit subsidies were estimated as the difference between the rate offered on the mortgage and the conservative estimate of a 7.1% real interest rate for government funds.

2.29 The following subsidy estimates attempt to measure both explicit and implicit subsidies from INFONAVIT, FOVI, FOVISSSTE, FONHAPO, VIVAH and PROSAVI.[28] The results are based on comparing the cost of housing that program beneficiaries' face with those offered in a competitive market without distortions.[29] Specifically, the exercise measures the explicit direct subsidies and the implicit subsidies provided through below market interest rates. This evaluation shows that in general, housing finance subsidies delivered by the major government organizations represent a high share of the total funding. These subsidies amounted to 54% to 59% of the total MX$53,274 million in funding extended by these organizations in 2000.[30] The bulk of these subsidies are delivered in the form of below-market interest rates, with only about 3% delivery as explicit subsidies (see Table 2.4). On a per credit basis, INFONAVIT and FOVISSSTE generate the highest subsidies, near MX$90,000, while VIVAH, FONHAPO and PROSAVI generally represent about one third of this subsidy level.



Source: Own Elaboration, data from Noriega (2001) and INEGI (1998).

2.30 The finance subsidies shown in the table above are only part of a larger subsidy picture. In addition to the subsidies imbedded in the level of interest rate, major subsidies are also delivered through coverage of fluctuations in real wages, non-payment (through default, and life and liability insurance),[31] insurance for remaining loan balances, and land discounts for developers of social housing programs. Rough measure indicate that the above numbers probably underestimate total subsidization by 30% to 40%, indicating a possible level of subsidy under the current structure reaching from 84% to 99% of the cost of the housing solution produced.

2.31 Not only is the subsidy level high, but also the structure of the benefits is somewhat regressive. The middle 60% of income earners receive 50% of the total implicit and

[28] During the last two years important reforms were introduced to FOVI and INFONAVIT financing instruments. In the former, interest rates were raised to almost market levels at the same time that the upfront, explicit subsidy (PROSAVI) was introduced. Thus, the sum of the implicit subsidies was reduced considerably. The impact of this change was accounted for in the estimates presented, nevertheless, the tendency to declining total subsidy amounts will become more prominent in the future. INFONAVIT reforms effectively reduce the credit amount and change indexation from the workers wage to the minimum wage. These reforms are also expected to reduce total future subsidies, though the reforms have yet to be put into operation.

[29] Detailed study methodologies and results can be found in the report "Explicit and Implicit Subsidy Measures in the Housing Sector" Carlos Noriega Curtis, June 2001, in Volume II of this study.

[30] The range results from the assumed risk free cost of capital of 7.1% to 9%. Table 2.4 assumed 7.1%.

[31] For example, INFONAVIT's arrears are still over 20%.

explicit subsidies. The implicit subsidies in INFONAVIT and FOVISSSTE loans alone total 250% the budget allocated to the PROGRESA poverty program. Given the social objectives of subsidies, one would expect a much larger share of subsidies going to the bottom income earning deciles of the population. Graph 2.1 shows the current regressive subsidy structure, and how a more progressive distribution would assign subsidies per income decile.

2.32 The regressive structure is partly due to the fact that the institutions grant fewer *loans* to the lowest income group, and increase the number of loans for workers earning 2 to 4 MW. Those with the lower income levels (1 to 2 MW) also receive a lower *amount of the total subsidies* (16%).[32] On a *per household, the subsidies* tend to benefit higher income households that require more funding, and hence subsidies, than lower income households. Table 2.5 below shows per household subsidies increase from the lowest income group up through those earning 5 MW.

2.33 The regressivity of the current structure is a logical result of the use of subsidized mortgages as the prevalent delivery mechanism. Pushing subsidized mortgages to households of less than 2 minimum salaries would likely create large risks for lenders and borrowers. Emphasizing instruments appropriate to the bottom deciles, such as grants for progressive housing would be preferable (for further discussion of proposed instruments, see chapters 4 and 7).

Table 2.5: Credit and Subsidy Incidence by Income Segment for 2000
(*$ figure in millions of pesos, except per hh subsidy)

Number of MW	1-2	2.01-3	3.01-4	4.01-5	5.01-7	7.01 – 10	>10	Total
# Credits	70,395	88,577	87,196	34,190	28,206	35,579	9,199	353,347
Credits in MX$*	5,482	14,492	13,551	6,513	6,696	4,745	1,794	53,273
Total Subsidies in MX$*	4,270	7,881	7,091	3,204	2,365	926	718	26,745
Per Hh Subsidy	60,658	88,973	81,323	93,712	83,847	26,027	77,998	75,690
% of Subsidies	16%	29%	27%	12%	9%	4%	3%	100%

*Estimates are calculated under the conservative estimate of a 7.1% risk free interest rate. *Source*: Noriega (2001).

2.34 A substantial proportion of these subsidies does not reach beneficiary families, but instead are passed to intermediaries. INFONAVIT and FOVISSSTE financed homes were compared to FOVI financed homes,[33] assuming the FOVI product is at market price (though not market, it is likely the closest estimate). This rough estimate indicates that about half of these subsidies go to supply agents in the housing process - developers,

[32] The reader will note a significant amount of INFONAVIT loans registered to very low income households (e.g. 1-3 MW). INFONAVIT registers the credit according to the income of the contributor to the fund. As a result, a credit to a worker earning 1 MW may in fact support a household with a higher total income. INFONAVIT also supplies loans at very low loan to value ratios.

[33] The price used by FOVI in it housing programs is used as the reference point, given that a liquid housing market which would allow us to know the value of the housing "market" does not exist. This value supposes that the housing supply financed by FOVI is competitive. This price is compared with the one obtained, at the same income level, by the workers affiliated with INFONAVIT and FOVISSSTE. The difference in price is considered as pure income for the builder.

landowners, and financial institutions.[34] This is not surprising because the program structure of the largest housing finance organizations - INFONAVIT and FOVI - gives substantial control over the use of these subsidies to developers and financial institutions. Households have relatively little choice among types of housing solutions (home improvements as opposed to a new unit, for example) and among the products offered by different developers and financial institutions.

2.35 Taken as a whole, then, the current housing production and home finance system operates overwhelmingly through implicit subsidies, and has very little cost recovery. Assuming no default, lenders only recover about 46% of the money being provided through lending (54% is an implicit subsidy). From this overall perspective, home credit is largely an illusion in Mexico because households pay back so little of the cost of their unit when the subsidies from below-market interest-rates, land, program administration, non-payment on loans, and other sources are added up.

2.36 Under the current structure of public housing support, increasing housing production is extremely costly. As the institutes have been pressed to increase their financing goals they raise the number of loans that carry a higher level of subsidy.[35] The increase in INFONAVIT lending between 1999 and 2000 was a result of 23% more dollars lent to households earning 1-2 MW, approximately a 34% increase to households earning 3 to 5 MW and a 56% increase to household earning more than 5 MW. Assuming no supply constraints, if the current production mix were extended to cover the estimated need for 732,000 new housing units per year (somewhat less than the 750,000 goal of the current administration), the total amount of loans would reach approximately MX$110,400 million with total implicit and explicit subsidies increasing from MX$29,000 million to MX$60,000 million by the year 2010. This would be largely financed by budgetary funds in the case of PROSAVI, VIVAH, FONHAPO and to some degree FOVI, and by transfers from pension savers to loan beneficiaries in the case of INFONAVIT and FOVISSSTE.

2.37 Shifting the mix of housing strategies according to beneficiary affordability substantially reduces subsidy costs. Chapter 1 shows that about 40% of demand pertains to the VIVAH type program, 23% to PROSAVI, and the remaining 37% to the more common credit programs. Adhering to this distribution of demand, the required subsidy levels – both implicit and explicit – drop to about MX$38,000 million by 2010, or about 60% of the cost under current programming. Under this scheme, the federal budget would bare a greater weight of the costs through funding for the direct subsidy programs of PROSAVI, VIVAH and FONHAPO.

[34] This is a conservative estimate as it does not include the below market bridge financing provided by FOVI to developers.

[35] This refers to the credits to hh of 3MW and higher and may be the result of the fact that the institutes can more easily guide additional credit in relatively higher income groups where the lack of credit is more acute.

STRATEGIC ISSUES FACING THE GOVERNMENT

2.38 The GoM has recognized the importance of housing in the alleviation of poverty, expansion of the middle class, and fiscal and economic stability. The government is also faced with the daunting challenge of addressing the growing housing supply and affordability problems in the face of a housing demand boom, thin financial markets, decreasing fiscal resources, and poorly administered and targeted federal programs. The next chapters examine policy options for GoM, and specifically address the following key issues:

- First, what are the financial and fiscal reforms needed for the sustained development of a deep market-based housing finance system and the reduction in the cost of housing?
- Second, what are the land and regulatory reforms that will reduce the cost of housing?
- Third, what are the infrastructure and service demands accompanying housing demand and what is the best role for the public sector to play in service provision?
- Fourth, what are the institutional measures key to supporting a more efficient and effective reform package?

PART II: ANALYSIS OF HOUSING MARKET INEFFICIENCIES

CHAPTER 3: MORTGAGE FINANCE

INTRODUCTION

3.1 Housing finance is a key policy element for improving access to housing, both for those who can afford mortgage finance and for lower-income groups, as greater access to housing at higher income levels increases housing supply and 'filtering' to lower income groups. Mortgage finance in Mexico faces three major problems. First, the market is small and "shallow" – about one tenth of equivalent markets in Europe and North America. Second, current market interest rates are so high that much of the middle class would be excluded from the market without government assistance. Third, there are a large number of potential borrowers with incomes that are too low to afford mortgages on their own, even under optimistic scenarios for a decline in market interest rates.

3.2 This chapter focuses on the overall mortgage finance system and suggests reforms for the various components of the existing system. The chapter is divided into four sections. The first describes the system, its relative size, and constraints for further development, notably how the current subsidy program discourages broad institutional participation in mortgage markets. The second presents a structure for housing finance that reforms should aim to achieve over the long run. The third develops the actions necessary to arrive at that reformed structure. The fourth section discusses the use of up-front subsidies accompanying mortgages – as well as micro finance and savings - as a tool to expand housing access further down market.

LIMITED ACCESS TO HOUSING FINANCE

3.3 As noted earlier, the 1995 Mexican financial crisis had a major impact on the country's housing finance system. The Mexican housing finance sector is small by international standards. In 1999 and 2000, the ratio of outstanding mortgage loans to GDP was 4.4% and 5.2% respectively.[36] For 15 OECD countries of the European Union, the same ratio was 33% in 2000; in Canada, the average ratio during 1986-1996 was 41% ; in the US the value was even higher at 44% (Chiuri, 2000). In other words, Mexico's housing finance sector appears to be about one-tenth the size of developed countries.

3.4 The Mexican system also appears weak compared to developing country counterparts that have better managed the key variables of macroeconomic stability,

[36] The significant gain in the financial depth ratio from 4.4 % to 5.2% between 1999 and 2000 is driven entirely by a one-off acceleration in INFONAVIT lending in electoral year 2000. During that year, INFONAVIT drew on existing reserves to expand its number of loans by 25% from 200,000 in 1999 to 250,000 loans in 2000. The value of new loans rose from MX$30,692 million to $38,025 million. The number of INFONAVIT new loans is expected to fall back to 200,000 credits in 2001 (del Rio and Gurría, [2001], p.9).

financial infrastructure, property rights and regulatory frameworks. Thailand is a country with a per capita income of US$2,400, about half that of Mexico. The Thai level of urbanization is still at a low level of 35% compared to 75% in Mexico. Yet because Thailand has successfully managed these three key variables, the housing finance system is very deep. The comparison of Mexico and Thailand in Figures 3.1 and 3.2 show that the Thai financial system and the private real estate industry successfully serve almost the entire population. The two lowest income deciles of the urban population are seldom served by housing finance given their limited purchasing power.

FIGURE 3.1
MEXICO: LIMITED ACCESS TO FINANCE

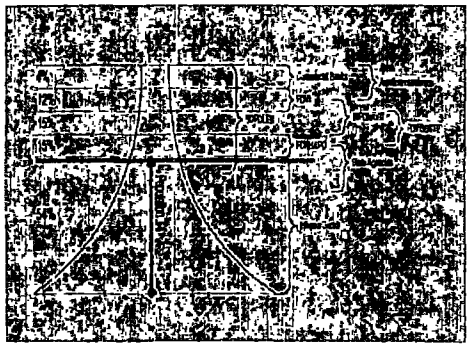
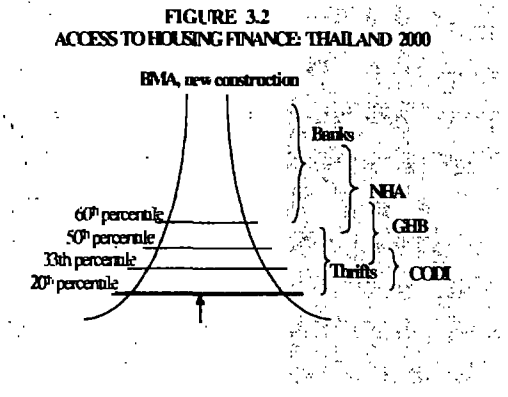


FIGURE 3.2
ACCESS TO HOUSING FINANCE: THAILAND 2000



Source: Renaud (2001).

3.5 The housing finance system is not only relatively undeveloped but has also some marked impacts on the characteristics of the sector in terms of access to housing by income level, types of products, tenure, and geography.

- *Household Income.* The bulk of housing loans is concentrated on Mexican households earning between 3 and 6 minimum wages.[37] Most households above 6 MW face difficulties accessing housing finance. Households earning 3 MW or less are largely not served by the finance system, as they are not able to service the debt of the mortgage market. This income level is served by targeted public programs and more often by the informal market.

- *New Housing.* The small housing finance system is focused exclusively on the production/financing of new housing units. Even the top 30% of the income distribution - households earning more than 6MW - can for the most part only obtain financing for new units. This lack of financing for the resale market (used housing) accelerates the depreciation of the existing housing stock, stimulates urban sprawl by directing investment away from existing stock, and negatively impacts the filtering of housing stock important to dynamic housing markets.

[37] These loans come from INFONAVIT with a national market share of over 71% and FOVI with a market share of 13%.

- *Tenure Choice.* There is little finance for rental housing development. Financial institutions do not lend for multifamily housing units except for a small number of high-income condominiums. In addition, unfavorable tax treatment and the legacy of years of rent controls have made investment in rental housing unprofitable.[38] Rental units as a percentage of housing stock have been declining for the last 30 years, and are now at 13% of the national housing stock of 21.9 million units. The decline, coupled with lack of finance for used housing, is an additional impairment to addressing the housing problems of the very poor.

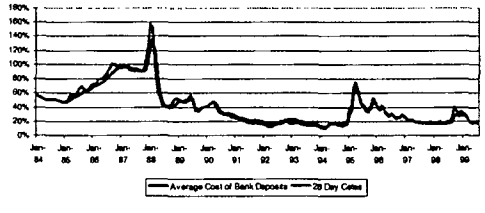
- *Limited Spatial Coverage.* Mexico's retail banking networks do not reach the majority of the population both in terms of income level and also spatially across states and municipalities. In 1993, prior to the crisis, SHCP estimated that 30% of the Mexican population (those living in 1,667 out of 2,732 municipalities) did not have access to banking services (Mansells-Carstens, 1995). During 1995-99, very few retail branches were opened. In fact, the banking network shrunk.

WHY IS MEXICAN HOUSING FINANCE SO SMALL?

3.6 Three main factors explain the small size of the Mexican housing finance system: macroeconomic instability, an unsupportive financial environment, and insecure property rights and regulatory framework.

3.7 ***Macroeconomic instability.*** A necessary but not sufficient condition to the development of a market-based housing finance system is macroeconomic stability with moderate and stable real interest rates. Among major sectors of the economy, the real estate sector and housing in particular is the most interest rate sensitive. As shown by Graph 3.1, the variation in the level of short-term interest rates in Mexico has been extremely severe. Any 15-year mortgage loan made in Mexico since 1985 has been stressed by at least one violent spike in interest rates.

Graph 3.1
Mexico: Interest Rates, 1984-1999



Source: Renaud (2001).

3.8 Real interest rates are important factors in the demand for housing loans. Families will be willing to finance their housing units only if the expected growth of their income (which determines their capacity to honor the debt service) and the appreciation of the housing unit are higher than the real interest rate. At real interest rates of 8% to 9%, demand for housing finance is rather depressed, as has been the case in most Mexican

[38] The rent controls have been lifted after decades of being in effect. However much of the older rental stock is in dire condition and since it is hard to evict long standing tenants, landlords do not find it profitable to renovate.

cities. In the aftermath of the 1995 crisis, Mexico has greatly improved its macro-stability and its resistance to external shocks, as shown by the behavior of the Mexico premium in the international markets during the Brazil crisis and the current Argentina problems (Carstens, 1999).

3.9 ***Unsupportive financial infrastructure.*** As mentioned in several World Bank reports, legal and institutional issues need to be addressed to strengthen the housing finance system (World Bank, 2000-a, 2000-b, 2001, World Bank and IMF, 2001). Three factors need to be highlighted: secured lending; crowding out the private sector; and, market segregation.

a) *Secured lending and collateral quality.* A major obstacle in the development of the mortgage market is the poor quality of the collateral used by the banks.[39] Mortgage foreclosures are cumbersome and costly – they require about five years for resolution – and in several states, the enforceability of a mortgage pledge is not certain. As an alternative, legal reforms introduced in 1999 have created a trust collateral different from the traditional mortgage pledge. However, the banks report that this trust structure is not proving easy to commercialize to prospective home owners: the reason being that under a leasing contract, the household does not immediately become the legal owner.

b) *Crowding out of private lenders by the subsidized loans of public lenders.* Due to several factors, the housing finance system in Mexico is dominated by Government housing institutions, which aim to provide inexpensive and sufficient financing for the purchase of new housing. Non-government housing finance represents only 1% of the total market. However, the mandates of the public and quasi-public institutions focus on the consequences of limited access to credit, rather than the causes. The public institutions have intervened throughout the sector with non-market instruments and heavy implicit subsidies. The end result is the perpetuation of credit scarcity.

c) *Market Segmentation.* The market is segmented by regulations with little benefit to the final consumer. The three largest institutions, INFONAVIT, FOVI and FOVISSSTE, provide housing finance mostly to households earning between 2.5 and 6 minimum wages. The products they offer differ, notably in terms of interest rates, down payment requirements, loan periods and guarantees. These differences in credit terms lead to market distortions that limit the ability of participants to respond to price signals. For example, developers secure FOVI construction finance for building of homes that are destined for INFONAVIT and FOVISSSTE beneficiaries, who benefit from mortgage finance with higher implicit subsidies. The lack of articulation and regulatory arbitrage results in a higher cost for the government, cross subsidies between households, and the lack of attention to certain segments of the population.

[39] Important weaknesses in this legal cornerstone of mortgage lending are behind the shallow Italian housing finance system of 8 % of GDP, compared to the OECD of 33%. See Ciuri and Jappelli, 2000.

d) *Administrative Housing Price Setting*. INFONAVIT, FOVISSSTE and FOVI do not carryout valuations, but rather set house prices administratively based on prior survey work and city size. While related to local conditions, the pricing approach is highly inaccurate; for example, it does not differentiate house price based on location within the same city. The result is often artificial price increases by developers not forced to compete based on price. Recently INFONAVIT has recognized this issue and is beginning to do valuations.

3.10 ***Unclear property and regulatory framework***. Clear and tradable property rights are necessary conditions for the development of housing finance services. In Mexico, clarity of ownership and enforceable property rights are often areas of conflict, especially regarding the communal lands, called *ejidos,*[40] which constitute a large share of total urban land supply. Approximately 60% of households lack full legal tenure, which prevents the easy transaction of assets and limits liquidity. The combination of real interest rates and unpredictable land and real estate development codes and practices at the state level significantly raise the cost of housing units. Developers adapt to the higher costs by lowering lot sizes to make houses more affordable. This is another deadweight loss to the sector and to the national economy (for further details, see Chapter 5).[41]

STRATEGIC DIRECTIONS FOR HOUSING FINANCE POLICIES

Economic Environment – Opportunity for Reform

3.11 Some of the constraints that have limited the development of the Mexican housing finance system in the past are easing, and housing finance in Mexico could expand rapidly in the short and medium-run. Economic developments have been favorable. The national economy has recovered from the 1995 crisis and its resilience to macroeconomic shocks has substantially increased. The Mexican GDP has now experienced 20 quarters (5 years) of consecutive positive growth. Inflation is about 6.5%. Public sector fiscal accounts have improved (consolidated public sector deficit as –1.4% of GDP), and moderate public debt is no longer a factor pushing up interest rates.

3.12 The financial sector has also undergone major structural changes. The regulatory and supervisory framework has been strengthened. Mexico aims to fully meet international financial regulatory standards by the end of 2003. The successful reform of the private pension system in 1997 has led to the emergence of a significant base of domestic institutional investors and substantial funding invested in longer-term assets. This is a great potential source of funding for housing finance. The annual flow to long-term savings is now above 1% of GDP.

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[40] Ejidos are a form of communal land tenure created by Article 27 of the Mexican constitution of 1917, which established that certain peasants have rights to land for agrarian purposes in perpetuity, which could not be sold, rented, or mortgaged. Further discussion of ejidos can be found in Chapter 5 of this paper.

[41] The coherence and stability of national and local taxation of housing and real estate was not investigated for this housing finance chapter, as it did not appear to be one of the top priorities for the housing finance system at the moment.

3.13 The banking sector has undergone major restructuring which culminated in the purchase of the largest bank, Banamex, by Citigroup. In particular, the combination of fresh capital and international skills is expected to have a major positive impact on Mexican consumer finance. New instruments have been developed to attract popular savings at near market rates of return. The Congress has also approved the regulatory framework for popular savings aimed at fostering new options for savings for the low income and informal sector populations.

3.14 In the housing finance system proper, FOVI's role as a central bank *fideicomiso* is winding down. The organic law of the new *Sociedad Hipotecaria Federal* has been approved.[42] In the private sector, the first sale of a mortgage-backed bond by a SOFOL has been completed successfully.[43] Yet, in comparison with the rapid transformation of the commercial banking sector, housing finance reforms are just beginning and the task ahead remains very large.

Long Term Reform Objectives

3.15 There are two main aims of housing finance reform. First, reform should strengthen primary and secondary mortgage markets (and rates), so that housing attracts private originators and long term investment funds. The increased funding can then be channeled to investment in housing units in line with the purchasing power of the households at market conditions. Second, reform should explicitly define a role for the public sector in enabling access of low-income households to housing services. This is based on the principle that housing is a benefit good that has an important role in reducing poverty, in enhancing the capital base of the poor, and in social inclusion. The recommended reforms aim to bring long term structural change to the sector. Crucial to their success will be the continuation of macroeconomic and fiscal stability. A second determining factor will be the final role of public institutions in housing finance, pensions, and housing policy.

3.16 *Liquid mortgage markets.* Strengthening primary and secondary mortgage markets would foster a deep and liquid mortgage market. Public institutions such as INFONAVIT should be able to participate in a manner complementary to and on equal footing with the private sector. The private sector is likely to dominate mortgage origination, while both the public and the private sector may play a role in the secondary market. Public institutions will then be able to more adequately protect the pension rights of workers by securing more profitable returns from housing through investments in the

[42] Under its current structure, FOVI could never operate as an autonomous financial entity as it could not raise funds without the guarantee of the Government. Transformed into a development bank, the new SHF will be able to raise funds without a government guarantee, though the current legislation provides options for government guarantees for the first 12 years of SHF operation.

[43] On May 23rd Hipotecaria *Su Casita*, one of the largest specialist SOFOLES successfully completed the first sale of a mortgage-backed bond with an initial issue of MX$70 million. Su Casita plans to use the bond proceeds to finance homes with prices starting at MX$450,000 (about US$45,000). This "vivienda media" segment of the housing market consist of units of about 100m2.

secondary market. The mortgage focus should shift from developers to home purchasers and financing should be decoupled from housing construction.

3.17 The rational for the role played by the public pension funds in housing is based on the interpretation of the constitutional provision - that a worker's right to housing be provided for by his or her employer - and the 1972 revision creating INFONAVIT, in which employers meet their obligation through contributions to the fund.[44] Assuming a functioning mortgage market exists, the constitutional mandate does not necessarily imply mortgage origination or granting of subsidies. Given this interpretation and the objectives of improving the housing finance system, administration of the worker pension funds could be separated from mortgage origination, be it through transfer of pension funds to the AFORES or through INFONAVIT and FOVISSSTE support to the secondary mortgage market. The pension funds would invest the funds prudently in line with maximizing pension returns. Given the long-term nature of the funds, it is expected that a substantial amount would go toward support of mortgage lending through secondary market activities. This scenario assumes a wide range of mortgage originators that can take the place of INFONAVIT and FOVISSSTE and expand the supply of housing credits at market rates. This does not exclude the possibility of the federal government providing an explicit subsidy to complement credit.[45]

3.18 The gradual elimination of FOVI is expected given the framework of the new *Ley de la Sociedad Hipotecaria Federal.* Over the long run, SHF should focus on granting guarantees to originators or to special purpose vehicles to inject liquidity in the market. It should provide stand-alone insurance products, such as mortgage payment guarantees, based on risk sharing and market prices. The insurance products would also reduce banks' capital cost of holding mortgages and increase competition for origination sources and products.

3.19 *Support to Low Income Households.* Support for expanding access of low income households to housing should be done within the overall market framework. Direct intervention in mortgage origination for the poor should be avoided. Policy instruments should focus on transforming the need for housing into actual demand and on easing supply constraints on land and housing. Subsidies can play a key role in this segment of the market.

3.20 Up-front demand side subsidies could cover the divergence between market costs and consumer affordability for households within the mortgage affordability range (at a cost of approximately US$176 million per year for the 3-4 mw segment). These subsidies should be applicable to any certified lender. Policy and criteria for subsidy levels and targeting as well as program certification should be the responsibility of the central housing authority, and likely the Housing Commission. Subsidy distribution may

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[44] *Ley de Instituto del Fondo Nacional de la Vivienda para los Trabajadores*, published in the *Diario Oficial de la Federación* on April 24, 1972.

[45] It will be important to resolve the inequity in the pension system which arises in cases in which a worker that has obtained a credit has already diminished the pension guarantee, possibly by increasing the subsidy to the worker who did not obtained a mortgage during his work years.

be a responsibility of a central government body, such as SEDESOL, although this would be just a cash transfer from the central government to identified households.

3.21 The government should encourage progressive housing programs, such as sites and services, residents saving programs, and micro-credit, and subsidies may also be considered to support progressive housing. In these cases, a household that cannot afford a finished house even with the up-front subsidy can gradually invest in improving their dwelling. Financing of subsidies should be mainly the responsibility of the federal government, as it represents a considerable re-distributive policy (support for progressive housing is further discussed chapter 4).

3.22 Given the increasing trend to decentralization and the advantage of local management and program design, subsidy and program administration should be shared among federal, state and local governments and community and non-governmental organizations (when they meet established norms). In addition to being more transparent, local control will provide incentives for states and municipalities to leverage federal subsidies. This will also allow for greater flexibility of solutions in accordance with varying local conditions. As part of this shift, VIVAH would cease to operate directly within SEDESOL, the responsibilities being decentralized to local authorities and private and non governmental groups. Though implementation would be decentralized, federal authorities should maintain supervision and evaluation responsibilities, including the ability to hold executing agencies accountable to the use and impact of expenditures. This role may be carried out by a specialized institution, possibly the new Housing Commission, or FONHAPO, which has the advantage of having a culture of distinct non-traditional housing actions.

THE PATH TO LONG TERM REFORM

3.23 As mentioned above, long term reform will first require a macroeconomic structure supportive to housing finance. Second, the reform will require lasting government subsidization of low income families and transitory assistance to the middle income segment to jump start mortgage finance. Up front subsidies, rather than finance subsidies, are preferable as they provide greater transparency, improve targeting, and reduce market distortions and crowding out of the private sector. Up-front demand side subsidies are recommended to expand the mortgage market to lower income families, and will be discussed in greater detail further below. However, in support to the middle income mortgage market, it is not clear that the government has the fiscal capacity to provide up front subsidies. Rather, it may be forced to opt for the second best option of finance subsidies, which allow the government to spread the cost of the subsidy over time.

3.24 Current Government programs have aimed to improve the macroeconomic situation and regulatory framework while trying to create an efficient financial market for housing finance, albeit at subsidized interest rates. The assumption underlying the programs directed toward the middle class is that an efficient mortgage market will

reduce mortgage rates relative to other interest rates. As interest rates in general decline, an efficient mortgage market will permit the government to withdraw subsidies for middle income segments. This, in turn, will permit the government to focus its resources on the low-income segment of the market. A necessary condition for this to be successful would be that the subsidy program would encourage a variety of distribution systems for mortgage origination (opening of the mortgage market), breaking the stranglehold that developers have over mortgage origination. This stranglehold has reduced housing affordability by pushing housing prices above competitive levels, partially offsetting the impact of lower interest rates on mortgage payments.[46] The above goal can only be achieved if banks are encouraged to enter the mortgage market. As a result, the question becomes how the government can subsidize the market on a transitory basis so as to induce new entrants and efficient lending, and assure a market structure that stimulates competition.

Increasing Liquidity

3.25. SHF may provide subsidies through a range of additional liquidity support instruments to stimulate the primary and secondary mortgage markets. The instruments may include:

- Second-tier lending against the collateral of mortgage loans of retail lenders. Such low-risk collateralized refinancing to "qualified financial intermediaries" like SOFOLES and banks, will be the easiest way to maintain retail mortgage market stability during the transition away from the current public sector dominated housing finance system and towards a healthy private mortgage finance market. The Mexican mortgage markets are still at a low level of development regarding risk management. International experience shows that collateralized lending is a very good first step in dealing with counter-party and credit risks from lenders.

- Improve design for the partial primary mortgage default insurance, in comparison to the current *pari passu* FOVI default insurance. This insurance product should be offered as a self-standing product sold separately from the refinancing products offered by SHF, in contrast with the current tied-sales of FOVI products. This credit enhancement could also be useful to encourage the issuance of mortgage backed securities (MBS) and the development of secondary mortgage markets.

- To encourage private mortgage market development when the level of risk is considered significant, the SHF should operate as a catalyst by offering guarantee products to private lenders, but during its initial stages of development the SHF should not offer to purchase loans from other lenders without full recourse with the aim of issuing bonds or MBS guaranteed by the government to fund such purchases. If the SHF were to do so, it would be assuming most of the risks in an immature market in which risks remain difficult to manage.

[46] Originating mortgages through developers also reduces liquidity in the market for existing housing.

- A cautious initial approach regarding risk sharing should not prevent the SHF from experimenting with pilot mortgage backed security issuances, though market conditions and the pricing of such MBS transactions could prove too expensive for the funding of the social segments of the market that the SHF aims to support.

3.26 A key issue to increasing liquidity will be strengthening *mortgage standards and conformability.* Improving mortgage quality and conformability reduces lending risk (by increasing ability to adequately price mortgage risk) and the ability to package mortgages into conformable bundles for securitization or use as collateral.

3.27 In the short run, norms and standards for credit origination – now managed by FOVI – should be strengthened. FOVI and in later stages SHF with the support of the other institutions, should homogenize and standardize the credit origination process. Even medium term expectations of securitization of loan portfolios cannot be started with sophisticated instruments. As a result, it will be important that institutions expecting to securitize begin to standardize their mortgages. Among other criteria, the mortgages should meet market rates of return and all associated services should be transparent and provided on a cost recovery basis. Theses criteria could be consolidated into a certification scheme or the creation of an Official Mexican Standard. Along with certification, SHF should take steps to assure transparency and promotion of the standards and certification process.

Increase Competition in the Primary Market

3.28 In addition to increasing the flow of funds to primary and secondary mortgage markets, the GoM should take steps to improve the competitive structure of the primary market.

3.29 *Portability.* The sheer size of INFONAVIT's portfolio and share of new loans ensures that it has a major impact on the mortgage market. As INFONAVIT expands its middle income market share relative to SOFOLES and commercial banks, it reduces the potential market for new entrants. However, this threat can be mitigated to some extent through the 43B program. Under this benefit option, the periodic wage-tax payments collected from a member's employer can co-finance and accelerate the amortization of a non-INFONAVIT mortgage loan, and collect through INFONAVIT's payroll registry.[47] Such co-financing would reduce the duration of third-party private mortgage loans. For example, if banks originate mortgages independent of developers, an INFONAVIT investor that wants to buy an existing house would have a strong incentives to use INFONAVIT deposits to service an affordable interest rate bank loan. Because about one third of the private labor force is affiliated with INFONAVIT, this measure could help

[47] Other "portable" options are occasionally mentioned as possible INFONAVIT activities but they are not operative. One option could consist in the use of accumulated pension benefits to increase equity down payment, but it is not permitted under the present law. The other is to provide mortgage default insurance, which is possible under the present law, but not operational.

leverage more housing loans and could improve the overall flow of funds throughout the mortgage market.[48]

3.30 Following a pilot test with 200 loans originated by a *SOFOL hipotecaria*, INFONAVIT management has declared itself ready to generalize this benefit option and allocate up to 10% of its yearly funding resources in 2001 for that purpose. This initial scale of operation looks like a reasonable objective given the limited annual production of private mortgage loans in the market and the capital constraints faced by the SOFOLES.[49] This portability option may have broader impacts that need to be evaluated. The possible negative impacts of portability due to larger state contingent liabilities – portability will reduce cash flows to INFONAVIT from mortgage payments – at retirement age must be explored legally and possibly quantitatively. In other words, employers' contributions may be used up for mortgage co-financing purposes, yet the state will still be obligated to provide a minimum level of pension.[50]

3.31 *Break developer-financier link.* It is important to recognize that the current FOVI operations establish a close relationship between housing suppliers and financiers and that this has tended to distort FOVI's role as a trust fund. This is seen, for example, in that the percentage of down payment required in diverse programs has been declining to insignificant levels. As a result, it is proposed that from now until FOVI ceases to discount loan portfolios, the participation in credit auctions be restricted only to financial intermediaries and exclude housing developers. This will contribute to focusing subsidies toward beneficiaries and obligate housing suppliers to more aggressively compete based on the price of their housing product.

3.32 *Market pricing and separating subsidies from finance* are both necessary if the Mexican housing finance system is ever to grow adequately. The expansion of the very small Mexican housing finance system has two main dimensions. It requires moving all lenders whether they are public or private toward market level lending rates. This goal in turn implies the separation of financial subsidies from mortgage finance. When all public lenders - including INFONAVIT, FOVISSTE and FOVI - move toward loan pricing that reflects the true cost of capital, it will be possible to mobilize private savings by paying them a fair return. Similarly, lenders should move toward house valuation, replacing the current practice of administratively setting prices. Coordination by the market will

[48] For the year 2000, it is estimated that 33% of the entire Mexican labor force are INFONAVIT members (private sector workers); 12 % are FOVISSSTE members (federal workers); 15% are state local workers; and 40% are independent or informal workers.

[49] The problem of Mexico today is that there is so little private finance available to leverage public resources. In 2000, 10% of new INFONAVIT loans would have been equal to MX$4.3 billion against total SOFOLES industry lending of MX$5 billion.

[50] Two types of government pension guarantees should be carefully reviewed and the scale of contingent liabilities explored. One is the minimum pension guaranteed to every worker. The other is the government guarantee to cover the shortfall between (i) the total combined pension that could be expected from accumulated funds in the *Afores* and INFONAVIT and (ii) the pension that would have been available under the old pension system.

replace the limited coordination power and skilled staff of the administration who will then be able focus more effectively on developing the mortgage market infrastructure.[51]

3.33 *Fund pricing that reflects risk.* Under FOVI, all SOFOLES pay the same price for funds as determined by auction, regardless of risk: effectively the price of funding is set by the riskiest lender who offers the highest bid. SOFOLES are the only buyers of FOVI funds even though the auction is theoretically open to any financial institution willing to meet regulations. This implies that the cost of FOVI funds is too high for players with lower risk profiles. SHF second tier lending should reward less risky lending by differentiated funding prices and/or require matching funding from other sources in which the risk profile will be considered in the funding price.

Strengthen Regulatory Framework

3.34 As guarantee and insurance instruments are introduced, a clear and common regulatory and supervision framework should be established. The system should support the development of a regulatory and supervisory framework that provides appropriate incentives to market participants and assures prudent financial practices with workers' savings and in operations in general.

3.35 INFONAVIT, FOVI, and FOVISSTE have traditionally operated outside the purview of the financial sector regulatory body, the CNBV *(Comision Nacional Bancaria y de Valores)*. In 1997, however, the INFONAVIT Board and CNBV signed an agreement giving CNBV regulatory and supervisory authority. Since then, its regulation has been only marginally effective. For example, the recent audit of INFONAVIT led only to an increased provisioning requirement. In principle, FOVI is also subject to CNBV regulation, but in practice it has been regulated and supervised by Banco de Mexico. In practice FOVISSTE is supervised by SHCP (World Bank, 2000). FOVI has been acting as a de facto regulator of the SOFOLES, for which the regulatory responsibilities of FOVI and CNBV vis-à-vis the SOFOLES should be clarified (Noriega, 2001).

Housing Policy and Coordination

3.36 The range of institutions and actions discussed above points to the need for the GoM to develop a clear and coherent housing policy and to oversee the implementation of that policy across institutions.

3.37 Housing policy is viewed from the perspectives of poverty, construction, urban development and the financial sector and the majority of support is channeled through pension funds. The result has been a partial and disjointed situation in which several housing institutes pursue different agendas: INFONAVIT is an autonomous body with a

[51] Only FOVI has moved its loan pricing toward market level in July 1999 for loan types B1 (9.6%, loan 64,350 UDI), B2 (10.1%, 79,200 UDI), and B3 (10.2%, 88,825 UDI) serving households with income between 6.5MW and 15MW. Source: FOVI, Nuevo Producto Hipotecario, March 2000. For an overview of the loan products available from all lenders see Softec (1999).

tripartite governance structure; FOVISSSTE is a decentralized entity of ISSTE/Ministry of Health; FOVI is administered as a trust fund of the Banco de México; and FONHAPO is a parastatal entity of SEDESOL. The Undersecretary of Housing has little resources (and no mandate) to coordinate the different institutes and policies. The lack of direction manifests itself on several fronts, including the lack of an integrated and coherent framework for subsidies, diverse prices for similar housing products, and regulatory arbitrage. The role of planning and oversight has been given to the recently formed Housing Commission. The challenge will now be for the Government to enforce the announced policy and press for implementation across the institutions. Crucial to success will be the Government's capacity to articulate the benefits of reform to the public and negotiate with vested interests.

Specific Institutional Reform Packages

3.38 In addition to these actions, steps should be taken to improve the performance of INFONAVIT and FOVISSSTE. These organizations hold a large market share of the outstanding portfolio and new loan origination, and the reentry of the commercial banks will likely occur only gradually. As a result, in order to avoid an abrupt interruption in financial flows to the sector, INFONAVIT and FOVISSSTE must continue to originate loans over the short run. In addition, the return of commercial banks will require specific actions as outlined below.

3.39 ***INFONAVIT.*** In the case of INFONAVIT, the actions to be adopted in the short term should focus on improving the quality of its credits, creating the operating infrastructure to adequately administer its portfolio, and support increasing disintermediation in mortgage lending through portability options, as described above. Portfolio improvement may require legal reform to the INFONAVIT enabling legislation and Congressional approval. This is particularly the case for its mortgage instrument (using the minimum wage as the price index), and certain important servicing standards described in legislation (e.g. maximum percentage of income that can be collected, deferral of payment in the case of loss of employment, and loan forgiveness).

3.40 Though it will be necessary to reform its legal structure, there are activities that can be initiated within the current structure.

- *Portfolio servicing and non performing loan (NPL) recovery.* Following the first limited supervision agreement with CNBV in 1998, it was estimated that Infonavit's NPL portfolio was a dismal 46% of total portfolio.[52] Since that time, INFONAVIT NPL performance is reported to have improved, though still high at 21% in 2000, corresponding to $46 billion pesos. Two main factors appear to be behind this improvement: collection efforts that rely on outsourcing and the positive performance of the economy with the rise in the minimum wage index.[53] The new Infonavit

[52] This estimate is based on Mexican rather than international GAAP loan classification standards.

[53] In spite of the V-shaped recovery of the Mexican economy after the 1995 crisis, the overall real wage level has not fully recovered and still remains 12% below what it was in 1994. There are also important regional differences in wage performance between the North and the South.

management has publicly announced an NPL target ratio of 5% by the end of the six-year presidential period and has introduced corresponding reforms.[54]

- *Move to "Risk-based lending".* INFONAVIT needs to move away from the bureaucratic rules of "formula lending" based on *a-priori* administrative criteria to "risk based lending" tailored to individual borrower characteristics and reflecting INFONAVIT actual loan servicing experience. INFONAVIT should introduce risk-based loan priority criteria such as minimum down payment, differentiated pricing, and prior savings by individual members. Major recent changes in information technologies make this necessary shift possible.
- *Market Reorientation and Move to Market Pricing.* Moving to market pricing, not taxing employers further, is the way for INFONAVIT to expand payment re-flows and to serve a higher percentage of its members.
- *Improved Product Differentiation Across Members.* INFONAVIT is now considering the differentiation of its credit policies across members with higher rates for riskier borrowers.
- *Increase transparency in allocation of mortgages.* INFONAVIT should stop directing finance to regions or certain sectors, and instead establish a uniform minimum scoring system for the whole country. Along these lines, financing should be auctioned on specific predetermined dates and for previously announced amounts. Both actions will contribute to reducing uncertainty with respect to the availability of financing.

3.41 ***FOVISSSTE.*** The legal and regulatory framework of FOVISSSTE aims, in principle, to standardize the financing conditions, though application has been lax. As a result, reforms similar to those proposed for INFONAVIT are even more urgent in the case of FOVISSSTE.

3.42 The short term reforms of the institute can be framed into the eventual reform of the pension system. They should take advantage of the opportunity to modernize its legal structure, giving the institute more flexibility in the granting of credit and putting it on a level congruent with the long term reform vision. In particular, it will be important to provide greater independence with relation to ISSSTE and sectorialize it in SHCP or in the Undersecretariat for Housing and Urban Development in SEDESOL.

3.43 The changes to its legal structure should include the separation of the good bank from the bad bank, separating immediately the expired or not registered mortgages and reflecting these defaults in the balance sheets. The administrative infrastructure is deficient and future operations should not be contaminated by problems of the past. Above all, if they establish a responsibility to generate market level savings returns to the workers, it will be important that the accounting be transparent and not contaminated by past deficiencies.

3.44 ***Commercial Banks.*** To meet the government's housing sector targets and from the viewpoint of the sector and macroeconomic stability, the reentry of the banks is critical.

[54] Interview with Victor Borras Setien, Director, *Reforma*, 8 March 2001.

Mortgage default risk from household borrowers remains a significant barrier to the re-entry of the banks into the middle-income and social segments of the housing market. The proper design and pricing of mortgage default insurance by SHF should have a material impact on the speed and scale of reentry of the banks. While the mortgage departments of banks can fund their present small activities from internal funds, restarting mortgage finance as a line of business will likely require access to the capital markets through mortgage securitization and/or debt issuance. Here again, the ability of SHF to offer refinancing facilities and/or housing guarantees to the banks will be key.

3.45 The return of commercial banks will also be influenced by two additional factors:

- *Resolutions of legacy NPLs.* The 1995 crisis left the commercial banks with substantial portfolios of non-performing loans. There are two unresolved issues with these portfolios. One is the use of the end of term guarantee on FOVI loans for the restructuring of bank-held FOVI NPLs. The other is the sale of IPAB mortgage loans acquired from the 10 intervened banks and how the remaining banks may or may not choose to buy these loans.
- A second factor is *the regulatory treatment of residential mortgage lending and the impact that it has on the cost of bank capital,* whether such regulations will be revised in light of the new Basel capital accord, and whether there will be a regulatory level playing field across all types of lenders.

DIRECT DEMAND SUBSIDIES TO EXPAND ACCESS TO MORTGAGE FINANCE

3.46 Chapter 2 of this study demonstrated the high level of subsidies allocated to the Mexican housing sector. Unfortunately these subsidies are poorly targeted and crowd out private lending. On average 56% of all lending from the major public institutions is effectively a subsidy. Less than 3% of all subsidies are explicit. There is ample literature demonstrating the inefficiency of these supply side subsidies (Angle 2000, World Bank 1992). Explicit demand based subsidies are recommended as they in general promote greater allocative efficiency. Demand side subsidies allow households to optimize their spending according to their own preferences (Malpezzi, 1998).

3.47 The proposed sector reform includes gradual reduction of implicit subsidies to the middle-income market and an increase in explicit demand side subsidies for low-income families. One unified subsidy system is recommended to support access to mortgage finance as in the case of PROSAVI, and to support progressive housing where mortgage lending is inappropriate, as in the case of VIVAH. The demand side subsidy to the beneficiary would allow the household to opt for the most appropriate housing solution.

3.48 ***International Experience with Demand Side Subsidies.*** Direct demand subsidy programs started in Chile in 1976 in response to the many problems created by below-market interest rate subsidies funded by wage taxes cum social security programs - i.e. a program similar to that of INFONAVIT. In the Chilean direct demand subsidy program, households complement this subsidy with their own equity contribution and a market-rate

mortgage to finance their housing solution. Chile has produced housing at a rate greater than household formation and has largely eliminated new informal settlements.

3.49 Direct demand subsidies have spread from Chile to many countries in Latin America, including Costa Rica, Venezuela, Paraguay, Uruguay, Colombia, El Salvador, Ecuador, Guatemala, and Panama. Independently, other developing countries including South Africa and Indonesia have adopted similar mechanisms. Costa Rica has best reached low-income households because of the involvement of a network of sophisticated housing NGOs and lenders (*entidades autorizadas*) that joined delivery of the subsidy with extension of credit.

3.50 ***Preconditions for Demand Based Subsidies***. In order for demand side subsidies to be an effective way to delivery housing support, two prerequisites must exist: (i) there must be price-sensitive housing suppliers that can respond to the subsidized demand; and (ii) local governments must have the administrative capacity to manage these programs.

3.51 In Mexico, housing suppliers are price sensitive to the financing packages and price parameters established by the major housing institutes. INFONAVIT, for example, provides loan packages with a range of housing prices and a range of geographic areas. Developers bid for the packages, constructing basically the same unit, and adjusting the lot size according to local land costs so that the final price falls within the INFONAVIT set price range. Qualified borrowers then purchase the unit with INFONAVIT financing.

3.52. Developers have shown sensitivity to the demand of the major housing institutes. In 2000, INFONAVIT increased lending by 25% over the previous year. Over the same period, construction increased approximately 18%, which is as anticipated given INFONAVIT's dominant 70% share of all mortgage lending.[55] This demonstrates the capacity of the Mexican construction industry, but also underlies the importance of breaking the builder-financier link. As long as INFONAVIT and FOVI continue to provide mortgage finance in the current fashion, the allocative efficiency of demand based subsidies will be seriously undermined by the absence of a range of available housing options and prices from which buyers can select the option that best suits their needs.

3.53 The link between developers and housing finance also includes FOVI bridge financing to suppliers. While bridge financing should be reduce from the perspective of efficiency of the financial system, effects on the construction industry should be more carefully analyzed. The contraction of bridge financing coupled with increased demand side subsidies may lead to increases in house prices and stagnation of new construction. Careful analysis of the continuation of bridge financing during a transitional period to lower cost commercial credit may be necessary. And finally, the scarcity of urban land – discussed in greater depth in chapter 5 - may also create a supply bottleneck, in which demand-side subsidies simply translate into higher prices for the same housing supply.

[55] The construction figures are for the whole sector, including residential. As a result, the 18% increase is not purely due to residential construction increases, though it does indicate considerable capacity to increase building.

Demand side subsidies should be coupled with efforts to streamline planning and infrastructure provision in order to increase the supply of urban land.

3.54 In terms of institutional capacity, FOVI has shown ability to distribute the PROSAVI subsidies and associated loans on a small scale, as has SEDESOL on a pilot basis with VIVAH. However, subsidy policy and targeting is tightly linked to larger poverty reduction objectives. As such the policy, targeting and evaluation of both types of demand-side subsidies should lie in the policy making body – the Housing Commission - and be developed in close concert with SEDESOL. During a transition phase, the FOVI capacity for subsidy distribution should be capitalized upon, and may be the departure point for building a unified subsidy program (combining PROSAVI and VIVAH – for further discussion of program proposals, see chapter 7).

3.55 ***Criteria for Successful Demand Subsidies.*** In addition to the critical preconditions, international experience offers lessons for successful subsidy programs. Malpezzi (1998) draws on these lessons and proposes useful criteria, which were here adapted to assess the current programs and future proposals for Mexico.

3.56 *Efficiency and Portability.* The direct demand subsidy programs in Chile and Costa Rica empower the households (i.e. demand[56]) - rather than financial institutions or developers (supply) - to choose among different types of units in different locations in using the subsidy. When developers and/or financial institutions control the use of the subsidy - as they largely do under VIVAH, PROSAVI, and INFONAVIT - these providers of units or finance have a captive audience. In effect, households have limited or no choice and must accept the product offered or choose among a limited selection in order to receive the subsidy.[57] In such cases, developers and financial institutions take advantage of this market power by absorbing a substantial part of the subsidy, rather than passing the entire subsidy on to households. In the case of housing subsidy programs in Mexico - which are virtually all supply side even when labeled as "up-front subsidies" – it is estimated that supply agents absorb about half of the total subsidy. Hence, the ability of households to shop among many different housing solutions with the subsidy is key to many of the benefits of direct demand programs.

3.57 *Least Cost Housing Solutions and Incentives for Good Financial Practice.* A challenge of the PROSAVI program has been the push to expand the reach of the

[56] The preference for demand-side subsidies in developing country housing programs parallels the move away from supply side subsidies (the old section 8 programs tied to the building of a particular project by a particular developer) to demand subsidies (rent vouchers) in U.S. programs and policies. A critical difference is that virtually all housing programs in developing countries stimulate homeownership, whereas the great bulk of social/affordable housing programs in the U.S. and Western Europe have gone to support rental housing. The key difficulty with rental housing in developing countries has been to locate a competent owner. While non-profits, for-profits, and government have - at different times and places - proved effective builders, owners, and managers of low/moderate-income rental housing in the U.S. and Western Europe, no set of organizations has emerged in developing countries capable of performing these functions adequately.

[57] For example, in PROSAVI, developers can purchase rights to *subastas* - packages of debt finance - that come accompanied by subsidies. Hence, if households want to purchase a subsidized unit, they must purchase a unit of the developer who has this credit/subsidy package, giving the developer market power.

program by increasing subsidy amounts. Since the program's origination in 1996, subsidy levels have been increased to cover a larger portion of the house price and down payment requirements have been reduced (from 7% to only 2.5%). According to new regulations published in March of 2001, for example, subsidies are granted at up to 25,000 UDI's for mortgages for families with incomes up to 3 MW for the purchase of a house with a maximum value of 40,000 UDI's. This scheme implies a 62.5% subsidy to home value ratio. These deep subsidy programs create two problems. First, as mentioned above, one of the messages of subsidies should be to reward good financial practices, in other words, subsidies are meant to complement savings and credit, not replace them. Second the deep subsidies indicate the public money is being poorly leveraged, which is of particular concern given the scale of need for housing support and limited fiscal resources. Assuming that one has a given amount of money to finance subsidies, in general from the federal government budget, increasing the proportion of the subsidy reduces the number of beneficiaries. For the lowest income groups where mortgages are inappropriate means of funding,[58] subsidies should still be used to complement household investment through micro credit and savings.

3.58 Social housing programs (such as direct demand subsidy programs) typically set a minimum down payment in an amount that a family can affordably save (15% to 25% of income) in a six to 18-month period of time. Many studies of low-income families in Latin America show that these households are willing to save and invest, but that they need clear messages, incentives, and a period of time to make saving a significant down payment realistic. In this regard, good housing programs publicize the savings requirement to prepare families, and build-in a savings period so that households can realistically make this effort. Moreover, the beneficiary selection system can reward not only need but also effort, mainly in the form of greater down payments.

3.59 *Private Sector Development and Finance.* The private sector finances and develops housing under the best direct demand subsidy programs, not government. The subsidy, in effect, bridges the gap between supply and demand to galvanize a private-sector response. As such, the basic idea is that the subsidy will leverage greater amounts in the form of a market-rate loan and household savings.

3.60 In addition to leveraging private funds, involving private lenders is important because the public sector in general is not good at lending. The public role has been particularly problematic in the lowest income groups where few formal-sector lenders in Mexico make home loans of an appropriate size. In an attempt to serve low/moderate-income groups, government agencies have stepped into the gap - notably state housing institutes currently and FONHAPO in the past. These public agencies do a poor job at origination and servicing and lack the governance structure that makes credit discipline possible. The recipients of direct OREVI loans, as those of direct public credit worldwide, do not take them seriously, and arrears rates are astronomical.

[58] The threshold for cut-off of commercial micro credit - that is, the definition of "lowest income" and "least expensive" depends on the financial institution that is making the loans. It will be higher for home lending institutions that for micro-finance institutions as detailed in the next section.

3.61 In such cases, simply making small up-front grants to households has many advantages relative to extending a loan. Most fundamental, this method avoids generating widespread non-payment that undermines commercial credit from moving down-market and contaminating the practice of credit in general. It also simplifies program administration. Programs avoid entering into the charade of credit with all the record keeping, costs in personnel, and political problems that uncollectable public loans create. The VIVAH program follows this approach and includes valuable elements important to reproduce - a relatively low-cost solution, significant down payment of households, and a match of federal subsidies by state government. As is to be expected with a pilot project, local experience with this program in Mexico has revealed some operational drawbacks to VIVAH.[59]

3.62 *Duration and Accompanying Policy Recommendations.* Finally, an important overall lesson emerges from direct demand subsidy programs and other housing subvention programs. Many of these programs were designed as permanent large subsidy infusions without tackling the reforms necessary for a transition to more market-based mechanisms (in particular, to credit) and gradual reduction in subsidy levels. Chile has been able to maintain relatively high subsidy levels (in total amount and per unit) for twenty-five years because of this country's rapid economic growth over a long period of time (averaging around 7% per annum from 1976 to 2000). Countries that have grown at reasonable but less rapid rates - such as Costa Rica - have experienced increasing difficulty in funding their direct-demand housing programs. Typically, central governments simply stop transferring this as well as other forms of subsidy when the national treasury runs into fiscal problems, disrupting the program's pipeline and continuity.

3.63 The Mexican Government suffers from particularly limited fiscal resources, and its current programs are highly dependent on international funding. [60] SHCP and IDB currently finance PROSAVI. VIVAH is financed as a line item for SEDESOL. Hence, the framework of a housing program must include a transition from subsidies to market mechanisms suitable for funding low/moderate-income homeownership - particularly sustainable land development and home credit mechanisms.

CONCLUSIONS

3.64 The Mexican housing finance system has been hindered by macroeconomic instability, high credit risk, poor collateral quality, public sector market segmentation and crowding out of private lenders, and unclear property and regulatory environments.

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[59] Three state OREVI directors interviewed for this study suggested that: (a) the local/state government match and the down payment amount are too high for the VIVAH program to work fluidly; (b) the restriction of the housing solution to a new complete unit rather than lower cost solutions compromises its flexibility and sustainability; (c) the private sector rather than just government can perform the development role; and, (d) a single subsidy amount hinders implementation in regions that vary substantially from the norm in cost (particularly in land price).

[60] The 11% of GDP collected by Mexican Federal Government is less than half of that of other major Latin American countries.

The large majority of the population has suffered as the failed system has limited housing options, increased costs and stimulated urban sprawl. Current economic, fiscal, and banking reform trends offer an environment primed for reform of housing finance, yet reform will require a clear strategy and buy-in from the highest levels of the government.

3.65 Long-term sector reform should aim to deepen primary and secondary mortgage markets by shifting the government's role to support liquidity and reduce transaction and information costs and systemic risk in order to attract private originators and capital to the sector. To do so, GoM through SHF should offer a range of insurance, guarantee and liquidity instruments. This financial support should be coupled with opening the sector to competition through increasing portability of INFONAVIT funds, decoupling FOVI financing from housing developers, separating subsidies from financing and moving to market prices. Strengthening the regulatory framework will further even the playing field and support long term financial stability for lenders and investors. Finally, the GoM needs to develop a comprehensive policy to be implement across the sector institutions.

3.66 In addition to deepening primary and secondary mortgage markets, the government should play a key role in expanding housing access for the poor. Reforms should aim to increase explicit and targeted support to low-income populations. Direct demand based subsidies, under a reformed PROSAVI-Vivah system, should be provided to extend the range of mortgage affordability. Additional measures to support low-income housing are discussed in the following chapters.

PART II: ANALYSIS OF HOUSING MARKET INEFFICIENCIES

CHAPTER 4: POPULAR FINANCE FOR HOUSING

INTRODUCTION

4.1 Expansion of mortgage finance at accessible terms will improve the access and affordability for Mexican households to purchase or improve housing units and in turn increase housing supply. One would expect that the first impact would be felt in the middle and higher income markets; eventually more satisfied demand at higher income brackets will result in the trickle down of housing to the poor. Increasing housing access for the poor, however, also requires expanding options for short-term credit and savings. Low-income populations lack a wide range of formal financial services, beyond mortgage finance which is likely inappropriate for households earning less than 3 minimum salaries.

4.2 This chapter will present the importance, opportunities and risks associated with popular finance instruments - savings and micro finance. The chapter begins with an introduction to the role of popular finance in housing for the poor and broadly estimates the potential demand for popular finance services. Potential service providers are analyzed, including the track record of micro finance institutions. Finally, the chapter presents major opportunities and risks associated with the scaling up of micro finance and popular savings instruments.

ROLE OF MICRO CREDIT AND SAVINGS IN LOW INCOME HOUSING

4.3 Due to high costs and limited financial capacity, the poor engage in progressive housing, consolidating their dwelling both structurally and legally over time (see Box 4.1). To finance improvements and expansions, the homeowner relies on own funds, borrows money from acquaintances,[61] or tries to get a loan from a financial institution. Often the owner relies on multiple sources of funds (e.g. savings, loans from extended family, and possibly a loan from a financial institution). High debt service and underwriting requirements, and monthly mortgage payments over a long-time period make mortgage lending inappropriate for families with low and unstable incomes. In contrast, the short-term successive loans offered by microfinance institutions respond well to the priorities and shelter habits of low-income populations.

4.4 Improving the quality of shelter for the poor is not only a matter of leveraging existing resources through credit, but also amassing resources. Savings form an important counterpart to government grant programs, to building a financial history and

[61] Credit from friends and relatives mainly take the form of unpaid labor, assuming that the borrower will also be available to lend a hand in the house building or house improvement efforts of the people who have helped him. Apart from the provision of labor, it is also common for monetary support to be given to a relative or a friend who is improving or extending a house. Whether, and to what extent, interest is charged on these loans, depends on the closeness of the family ties in each case. For a more complete list of households' possible informal financial sources see Ferguson (1999).

to marshalling funds for down payments. Low-income housing programs often focus only on subsidies and credit, and pay little attention to household savings. Historically, savings for homeownership have played a critical role in home finance as well as national economic development. The Building and Loan and Mutual Savings Systems of Western European countries built their housing finance systems on requiring households to save regularly for substantial periods in order to qualify for loans and extended these credits as multiples (often about three times) of the amounts saved. This mechanism not only raises critical funds for housing, but also increases national saving rates - a major goal of Mexico's National Development Plan.

Box 4.1: Progressive Housing Patterns

In the formal housing sector, the development process follows a sequence of parcel (site) acquisition and planning, infrastructure and services installation, house construction, and then sale and occupation. Each stage has its own documentation procedures and recording of permits and agreements. The reverse is true for the informal sector, where the sequence involves three stages: occupation, transition, and consolidation. Occupation is the act of taking physical possession to claim usufruct rights on the parcel. When occupation is not forcefully opposed by the authorities or the landowners, the transition stage begins. It consists of the occupants' filling in the unoccupied parcel with other families, beginning to construct houses themselves, and form local governments. Consolidation, the last stage, includes obtaining all basic infrastructure and urban services and receiving titles to the land (regularization).

This reversal of the formal sector process is based on three realities. First, the formal sector usually offers housing as a complete product, whereas the informal sector offers the opportunity for progressive or self-built houses. Second, obtaining housing in the formal sector normally requires a mortgage that carries with it installment payments over a long period of time. The informal sector is based on the pay-as-you-go system, which allows the resident to make adjustments according to the family's economic situation at any given time. Third, with a mortgage and a highly fluctuating inflation rate, the buyer in the formal sector faces an uncertain equity situation. In the informal sector, the progressive house is all equity. It can be lived in, sold, rented, or passed on as family patrimony, however modest and incomplete.

Source: Siembieda and Moreno, 1997

4.5 Unfortunately, commercial banks are out of reach for the majority of the Mexican population, not only in terms of credits for home purchases, but also in terms of savings and other banking services. Commercial banks require prohibitively high minimum deposits, do not market their services to low-income populations, and do not have branches in poor neighborhoods.[62] The poor largely resort to informal savings in the home or through cooperative savings groups.

ESTIMATED DEMAND

4.6 The scale of demand for housing improvement in Mexico has been estimated in a number of studies.[63] Chapter 1 of this study presents estimates for housing improvement needs in México in the year 2000, based on census data and conservative assumptions

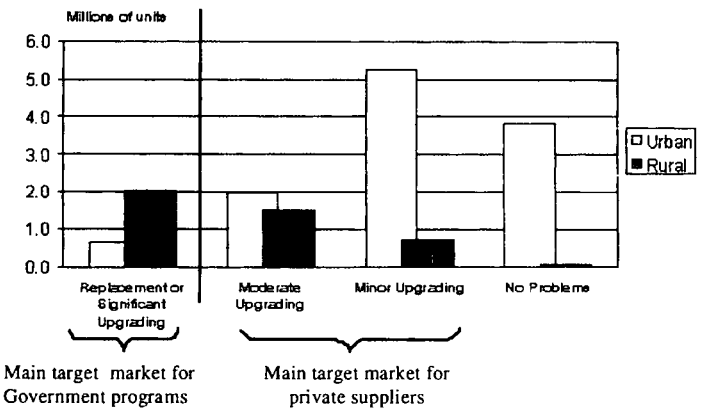
[62] In Capital Advisors, Ltd (1998) and provides reference to other studies confirming this finding, including Goméz, Rafael and Pilar Campos, "El Ahorro 'Escondido", Reforma, 27 de Febrero, 1997, and Carstens, Catherine Mansell, Las Finanzas Populares en México, ITAM, México, 1995.

[63] Inconsistencies among the figures of different studies are due to the differing definitions of "housing improvement" adopted by the various authors.

linking need for upgrading and house age. According to this analysis, 2.5 million Mexican houses (equal to 12% of the 2000 housing stock) are in need of improvements. A 1990 survey based on a small sample of households shows that in reality the demand for improvement may be greater, particularly considering the irregularity of home construction (Hebert, 1997). According to the study, approximately 12.2 million of the

Graph 4.1

Estimate of Housing Replacement and Upgrading Needs (1990)



Source: Adapted from Joint Center for Housing Studies, Harvard University (1997).

total 16.1 million houses in México (equivalent to 76% of the 1990 housing stock) were in need of some improvement.[64] Between 1990 and 1994, about 800,000 improvement loans were made, meeting only 7% of the estimated total market.

4.7 While private organizations rarely provide loans for house building, replacement or significant upgrading to low-income communities, they are active in the field of moderate and minor upgrading. Because low-income households are highly concentrated in urban areas and need mainly moderate and minor improvements, there is significant potential for private institutions interested in entering the housing improvement market in urban areas of Mexico. The majority of the units requiring moderate or minor repair, for which small loans are most appropriate, are in the fast growing medium sized cities and large metropolitan areas.

4.8 There appears to be a similar dearth of savings instruments. Most saving among the poor in Mexico is informal or through a combination of informal and formal mechanisms. Surveys of urban residents in three cities found that only 15% of the

[64] This includes 2.7 million homes (22% of housing stock) in need of replacement or significant improvement, 3.5 million homes (29% of stock) in need of moderate improvements, and 6 million homes (49% of the stock) in need of minor repairs.

population saves in formal banking institutions while 30% save through informal institutions (54% said they do not save – Capital Advisors, 1998). Table 4.1 shows the breakdown of informal savings mechanisms from a 1997 study.

Table 4.1: Survey of Informal Savings Mechanisms

Informal Savings Mechanism	Percent of Respondents
Participate in Tandas	41%
Save Money in the Home	31%
Have Lent to a Friend or Relative	17%
Have Stored Money with a Friend or Relative	11%
Have Purchased Valuable Articles	8%
Invest in Animals	5%
Keep Dollars	5%
Precious Metals or Jewelry	4%

Source: Capital Advisors (1998).

POSSIBLE FINANCIAL INSTITUTIONS FOR HOME IMPROVEMENT

4.9 ***Credit Services.*** A number of credit and savings institutions exist in Mexico, which in theory would be interested in the large-scale market for home improvement. However, the terms for these types of financial services, in particular for credit, diverge from traditional mortgage lending. Table 4.2 provides a comparison of the characteristics of mortgage finance, microenterprise and housing microfinance loans. The main findings of this comparison are the following:

- Mortgage finance loans are directed to middle and upper income households, while micro enterprise and housing micro finance loans are directed to moderate and low income households;[65]
- The amounts and maturity of housing microfinance loans are usually significantly lower than mortgage loans' and slightly higher than micro enterprise loans;
- While no standard exists on interest rates on housing micro finance loans, the rates of these loans are usually closer to micro business loans than to those of mortgage loans; and,
- Housing micro finance loans and micro business loans require more flexible, smaller collateral than mortgage loans.

[65] Multicredit Bank (Panama) and Mutual La Primera (Bolivia) are among the few examples of Latin American Banks that offer micro finance housing loans. The Hatton National Bank is an interesting case of a Sri Lanka commercial bank that has decided to "go downscale" and offer microfinance services – Gallardo, Randhawa, Sacay (1997). For a complete list of commercial banks that are providing microfinance productive loans to micro and small businesses and that could potentially enter the housing microfinance sector, see Wenner, M.d. and Campos, S. (1998). Credit unions may also offer housing improvement loans. They have legal and capital requirements that are more flexible than are those of banks and they can accept deposits and originate various types of loans. However, they have little experience in the housing field and, like commercial banks, are likely to have little interest in adding this line of credit to their portfolio.

Table 4.2: Comparison on Mortgage, Micro enterprise in Housing Micro finance

	Mortgage Finance	*Microenterprise Finance*	*Housing Micro finance*
Borrowers	Middle and upper-income households	Low and moderate-income households	Low and moderate-income households
Originator	Savings and loans, housing cooperatives, banks	Credit Unions and NGOs traditionally; regulated financial institutions increasingly. Also equipment suppliers.	Credit Unions and NGOs traditionally. Some regulated financial institutions. Also building suppliers and developers.
Use of loan funds	Purchase of a new, commercially developed single-family unit.	The household economy, with sums allocated by the borrower largely for the micro-enterprise, but also for emergency expenditures and housing.	Mostly self-help home improvement of existing homeowners that takes place incrementally over 5 to 15 years. Some new construction of core units. Lender's procedures and technical assistance direct loan fund to this purpose, so not fungible.
Amount	One-time loan of $5,000 and above. The amount necessary to finance the purchase of a new house when joined with the borrower's down payment.	Many loans of $50 to $1,000 for working capital, equipment purchase, etc.	Between $250 to $5,000.
Term	15 to 30 years.	Under 1 year.	Usually under 3 years.
Interest rate	Prime rate plus a thin margin; comparable to the rate extended to corporate clients. Key problem is the rate and affordability of households.	Prime rate plus a large margin sufficient to cover the fixed costs of lending very small sums to many borrowers. Key problem is access to credit not the rate.	No standard. No consensus exists on charging rates substantially above prime to cover costs of small loans. Both access to credit and the rate are key.
Collateral	Lien on property.	Available goods may be taken in addition to personal guarantees as an additional incentive to repay.	Paralegal liens on property that cost less than a lien, or a full lien on property.
Savings requirements and importance	From none to contract savings, for example, loan as a multiple of required savings over a period of 6 months to 5 years.	Savings if often as important a product as loans for MFI resource mobilization. NGOs generally cannot accept deposits; small deposits are costly and undesirable to commercial banks.	No standard.
Underwriting	Evaluation of individual household income and credit worthiness, and of property title and value. Payment amounts based on applying standard rations to current income of household; mortgage payment must not exceed 25% of household income.	Building of relationship with individual borrower or solidarity group, which commits to guarantee repayment of loans to its individual members. Payment amounts are based on net household income.	Evaluation of current income, borrower household income and building loans and cost estimates. Payment amounts based on applying standard ratios to current income of household; mortgage payments must not exceed 25% of household income. Co-signers are often required and solidarity groups are rare.
Technical Assistance to borrower	None.	Trend is to minimize technical assistance	Technical assistance including review and evaluation of home improvement plans and costs, title verification, supervised construction, and progress payments are often required.

Source: Goldberg (2001).

4.10 *Credit Providers.* The attractiveness of the credit services to financial institutions is limited due to the institutions' high fixed cost of business, organizational structures not adapted to servicing small loans, inability to liquidate guarantees, and lack of knowledge of low income clients. A number of housing SOFOLES have expressed interest in going down-market to serve lower-income groups with smaller loans. Underwriting such loans, however, takes traditional home lenders substantially more work and creativity than extending credits for purchase of units in subdivisions for the middle-class. According to one major SOFOL, collecting one mortgage payment costs about $150 Mexican pesos. Yet the typical payment that low-income households can afford to pay usually ranges from $400 to $1,200 Mexican pesos per month. As a result, the cost structure of SOFOLES makes collecting on such small loans difficult, unless quite high interest rates and origination fees are charged to compensate. Moreover, not all housing SOFOLES are likely to want to learn and adapt their systems to this new business.

4.11 In contrast, the services are profitable to the Micro finance Institutions (MFIs). While traditional mortgage lenders find these potential clients unattractive, many MFIs already deal with businesses owned and operated by low-income households. These MFIs have observed that their clients get loans for income-generation purposes but channel some of the funds into home improvements. Because 30% to 60% of housing microfinance clients are engaged in some type of home-based micro-enterprise, home improvement loans often allow low-income households to improve the operating time and productivity of their microbusinesses.[66] For MFIs, the main advantages of entering the housing microfinance field would be increasing their scale of operations and profits, diversifying their lending portfolio, - thus reducing the co-variance risk in the overall portfolio and the risk of delinquency (housing loans tend to outperform other loans) - providing additional repayment incentives and resources to proven clients, and gaining access to governmental or donor funds earmarked for housing improvement purposes. Since most MFIs face excess demand and have a very constrained capital base, these represent a powerful set of incentives.

4.12 Although many state housing institutes engage in micro credit, they not only do a poor job technically (poor origination and servicing), but also have governance problems that strongly limit their incentives to function as lenders. OREVIs have sometimes been used by state governments as patronage vehicles to distribute giveaways. For these and other reasons, direct government lending for housing has worked poorly in Mexico at all levels (the case of FONHAPO comes to mind), as it has in most countries. Arrears rates of most state OREVIs are very high - a minimum of 30% and often much greater - while the total subsidy they deliver combining the finance subsidy (below-market interest rate) with arrears, land, and administrative subsidies adds up customarily to above 70% of the development cost of a unit. Hence, using OREVIs as a vehicle for micro lending would be highly problematic. In the short term, it would recover, at best, only a modest share (30%) of low-income housing program credits. In the medium term, such a strategy

[66] A survey conducted by the Self-Employed Women's Association (SEWA, a formal sector bank serving the poor in Ahmedabad, Gujarat State, India) found that housing improvement contribute a 35% average increase to the weekly earnings of small enterprises. See Havard, 2000.

would undermine market efforts to build a sustainable practice of low/moderate-income housing.

Table 4.3: Pros and Cons of Commercial Institutions as First Tier Lenders for Progressive Housing

Institution	*Pros*	*Cons*
SOFOL Hipotecaria	• Specializes in housing • Developed strong systems for collection • Have shown innovative management	• Not experienced with home rehab • Typically does not lend to under 4 mw population • Collection systems are subdivision housing centered • Legally barred from capturing savings • Short on capital for expansion • High fixed lending costs
Credit Union	• More flexible legal and capital requirements than banks • Can accept deposits • Can originate various types of loans	• Little experience in housing • Borrower have to be members • Little existing management capacity in credit unions in Mexico • Board must be members, limiting commercial nature of the enterprise • Many not be able to accept outside capital • Poorly perceived by public - many went bankrupt during financial crisis of '95
Savings and Loan	• Lower legal and capital requirements than a bank • Can accept deposits • Can originate various types of loans	• Can make only certain types of loans • Little experience in housing
Commercial Bank	• Can leverage funding more easily • Less expensive funding • Part of central banking system • Existing account administration systems	• Little experience with low-income population – culture may intimidate some potential clients • Doesn't offer small denomination loans • Requires high minimum deposits • Out of large scale mortgage finance business since 1995 • Competing product lines may distract from home rehab and micro-enterprise market • $10 million minimum capital requirement • High fixed cost of lending
Micro finance Institutions	• Some experience in home rehab • Experienced with low income clients • Offer small denomination loans • Low fixed lending costs	• Limited capital base • Limited organizational capacity • Unclear regulatory and supervisory structure • Not accredited – credit history may not be recognized by formal sector lenders. • Cannot accept savings deposits
Mutual Savings Associations	• Some experience in home rehab • Experienced with low income clients • Offer small denomination loans • Low fixed lending costs	• Very limited capital base • Very limited organizational capacity • Unclear regulatory and supervisory structure • Not accredited – credit history may not be recognized by formal sector lenders.

Source: Own elaboration based on Goldberg (2001), Ferguson (2001), Capital Advisors (1998), and Ctr for Housing Studies (2000)

4.13 ***Savings.*** Similar obstacles limit the reach of formal financial intermediaries in terms of savings services. Fixed costs, scale of accounts, and knowledge of clients limits services to low-income families. Moreover, formal institutions that may be accessible to the poor, such as the Caja Popular Mexicana (CPM), are tainted by their history of collapse during the last financial crisis. Low-income families are reluctant to again place

hard earned savings with the once failed institutions. Certain MFIs, due to their legal structure, cannot collect savings.

4.14 Instead, low-income families have turned to a mix of informal and formal savings associations and government sponsored programs. A common form is the flexible model of mutual assistance, in which a group deposits savings which is then lent to members for short periods of time or used to invest in common projects. In the best of examples, the model effectively reduces transaction costs, extends terms/time frame and manages risk. A more formalized model of the savings associations are the *Cajas de Ahorro* and the *Cooperativas de Ahorro*. '*Banca Popular*' and '*Entidades de Ahorro y Crédito Popular*' (EACP) are the loosely defined terms commonly used for formal non bank financial services. Approximately 2.5 million small depositors are saving in 650 of these EACP (World Bank-IMF, 2001).

4.15 An example of the mutual assistance scheme is the Mexican credit association called MAP (*Plan de Ayuda Mutua*), a self-financing system for residents of informal settlements. It is a system of dedicated savings to be used for land, housing, and infrastructure, and is assisted by an NGO or a public agency. Participants contribute a set amount weekly over a savings cycle, which is generally less than 52 weeks to maintain the interest of the participants. Funds are allotted every month (or every week) based on a lottery, in which one participant receives benefits—in the form of construction materials, labor, or down payments on land—equivalent to the sum of savings during the cycle. No cash payments are made to the winners.

4.16 The Federal Government has also sponsored several programs to support savings in low income populations, though they tend to be limited in scope. The federal government retirement savings program started in 1992 (SAR) is only available for formal sector workers. SHCP and the National Banking Commission's PAHNAL program does have national windows and over 200,000 accounts worth US$74 million, though it is still small compared to demand (Capital Advisors, 1998).[67]

PERFORMANCE OF POPULAR FINANCE INSTITUTIONS

4.17 ***Operational Results.*** MFIs in Latin America have been successful in achieving: (i) large scale of operations (reaching relatively low income clients), and (ii) low operational costs (low cost per dollar lent), resulting in high returns on equity and high profitability (after adjustments for subsidies). A study by Microbanking Bulletin of 124 MFIs in 45 countries showed that 64 MFIs had reached financial sustainability (after making adjustments for subsidies), after an average of 8 years of operations. Other key findings that demonstrate the soundness, outreach, scale and profitability of the industry include the following:

- Average capital to assets balance of 49.5%, demonstrating strong capital accumulation;

[67] PAHNAL provides small depositors an economic vehicle to invest their savings – all savings mobilized by PAHNAL is invested in risk-free government instruments (World Bank-IMF, 2001).

- Loan loss provision of 2.1% of outstanding loan portfolio, showing prudent provisioning;
- Average portfolio at risk at 90 days of 1.9%, illustrating high on-time loan repayment;
- Average loan balance of US$490, impressive outreach, compared to other financial institutions;
- Average loan portfolio of $5.5 million, illustrating a large scale of operations;
- Loan balance as percentage of GNP per capita of 44.5%, demonstrating good outreach to the poor;
- Average administrative costs/average outstanding loan portfolio of 28.3% and average portfolio yield of 39.2%, giving a healthy margin of 10.9%;
- Average borrowers per loan officer of 257, showing efficient leveraging of loan officers;
- Average financial sustainability after subsidies of 90%, showing high profitability.

Box 4.2: Institutional Formats of MFIs

There are two kinds of financial institutions that have become highly successful. The first kind, often *non-governmental organizations*, begin as experiments and specialize in serving microbusinesses. As they grow and require a reliable source of funds, they transform into more commercially oriented institutions. The second type includes successful *commercial banks or finance companies* which have made a strategic decision to target microbusinesses as a new market niche.

Successful examples of MFIs that have taken the transformation path known as NGO "upgrading", include: BancoSol (Bolivia), Financiera Calpia (El Salvador), Genesis Empresarial (Guatemala), and Banco ADEMI (Dominican Republic). The vast majority of this kind of MFI serve only a local market, do not attract investors, have high operating costs per dollar lent, and are not able to invest in the integrated loan tracking and accounting systems required to manage growth. However, in México, there is one notable example of successful MFI "upgrading". In 2000, Compartamos transformed from a non-governmental organization into a regulated, supervised SOFOL, the first Mexican micro finance institution to make this transformation. By making this fundamental legal and organizational change, Compartamos is able to mobilize large pools of savings, attract investors, and obtain the benefits of formal supervision by the relevant government authorities.

The second kind of microfinance institution is commercial bank "downscaling". Examples of successful Latin American commercial banks with a specific microbusiness product include: Multicredit Bank (Panama), Caja Social, Banco del Desarrollo and Banco del Estado (Colombia), Banco Popular (Chile) and Bank of Nova Scotia (Guyana). Most commercial banks, however, are not interested in microbusinesses and low income households as potential clients due to the lack of credit history, little physical collateral, irregular cash flows, and the high transaction costs involved in serving small clients.

Source: Adapted from Goldberg (2001).

4.18 A key issue of MFI lending has been the role of technical assistance (TA). Borrowers have been unwilling to pay for TA bundled with credit for business lending. Early forays into micro credit for housing show a similar unwillingness of borrowers to pay for assistance. In the absence of professional assistance to support gradual home construction, the physical works have been of low quality or poorly planned so as to preclude future investment (or have substantially increased the cost of future investment).

Critical to the successful expansion of housing micro credit will be the development of efficient models for TA to complement financially sustainable lending.

SCALE OF POPULAR FINANCE

4.19 The Mexican market is characterized by small, regionally focused MFIs. In this country of 100 million people, there is only one large scale MFI (Compartamos), with a client base of 64,150 as of December 2000 - this is comparable to a medium sized MFI in Bolivia, a country with a population of only 8 million. Coverage by the leading MFIs in México is estimated to be 3% to 4% of the overall demand for financial services by microbusinesses and low-income households.

4.20 The dominant model in Mexico is that of village banking, in which groups of 20 to 30 clients provide a joint liability moral guarantee to back individual four to six month working capital loans. The second model provides loans to individual urban microbusiness operators, with a less stringent collateral requirement than that of commercial banks. Recent data from the leading micro finance institutions on the number of active clients and portfolio outstanding, as well as performance in terms of cost coverage and portfolio quality, is provided in Table 4.4 below.[68]

Table 4.4: Leading Mexican micro finance institutions (December, 1999)

MFI	Avg. Loan size Disbursed ($US)	No. of Active Clients	PAR'> 30 days	Operating Sustainability	Financial Sustainability
Fincomun*	800	10,500	3.0	>100%	>95%
Compartamos**	240	64,100	0.56	>100%	>100%
CAME	200	8,975	<1	88%	N/A
Dignidad	500	400	18	>N/A	<N/A
UCME***	400	124	0	>100%	<100%
FOCOMI +	1443	2600	33	N/A	N/A
Emprendedores	880	551	4.1	N/A	N/A
FUNHAVI++	1550	1100	N/A	N/A	N/A
CPM+++	>1200	472,560	11.4	>100%	>100%
Total		559,810			

Sources: Report for World Bank by consultant Lorna Grace, March 2000; interviews with Mexican MFIs with operational activities in Mexico City. ' PAR is the Portfolio at Risk measurement of portfolio quality. It classifies all outstanding installments as doubtful when a single installment is overdue. The industry standard is a period 30 days. * PAR is for microfinance portfolio only. This is the average first time loan rather than average loan. ** December, 2000 data for Compartamos. *** Includes mainstream operations as well as microfinance operations. + PAR 90 days. ++ FUNHAVI data from April 2001. +++ CPM figures include a large number of savers who do not have an outstanding loan. Data from late 2000. While average loan size is high, 40% of the active borrowers have annual income less than US$2975. PAR is 90 days for CPM.

4.21 While many of these institutions are filling important niches in financial intermediation, the scale is yet small – the MFIs serve only about 8% of the total need for moderate home improvement in urban areas. Only Caja Popular Mexicana and FUNHAVI have experience in housing.

4.22 FUNHAVI and CPM represent very different approaches to housing microfinance. FUNHAVI is a small scale specialized lender with strong private sector linkages to suppliers and even to a supermarket chain, while CPM has a diversified loan portfolio (30% of the loans are for housing). FUNHAVI integrates technical assistance into the

[68] There are other programs of this scale, such as the Programa Santa Fé in Guanajuato, but reliable statistics on financial performance are not readily available.

lending methodology and only supports progressive housing. On the other hand, CPM provides both new home construction and home improvement loans, and leaves the planning and construction of works largely up to the borrower. While FUNHAVI has no savings requirements and a streamlined review process, CPM bases the loan size on savings (a 4:1 ratio) and can take significantly longer to review a loan application. FUNHAVI's loan portfolio is performing well, but remains small. CPM has a much larger scale operation, but loan portfolio performance is not strong (8% PAR over 30 days on housing portfolio, 17% on total portfolio). Both share the problem of lack of access to adequate sources of capital for their lending activities, given the large unmet demand for their products.

4.23 ***Risks.*** While MFIs and savings cooperatives appear to have the organizational and financial profile appropriate to the housing needs of low-income families, the capacity to scale up according to the sizable demand is uncertain. While there are a growing number of success stories, there are also important risks that the industry faces, due to the nature of the clients, the source of funds, the choice of clients, governance issues, and rapid growth and decentralization of operations.

4.24 One microfinance institution in El Salvador had "ghost banks" and "ghost clients", as internal controls failed to keep pace with rapid growth and decentralization of loan approval. In Colombia, a large institution with multiple services made too many commitments of its limited liquidity, leading to default of some of its financial obligations. In both cases, international organizations with a great deal of operational experience were providing technical assistance to the private MFIs. Government-supported MFIs and programs also have their share of problems, including the use of subsidized interest rates for social objectives, (which leads to credit diversion to wealthier clients), lack of enforcement, and promotion of a non-repayment culture.

4.25 Beyond anecdotal evidence, there are structural features that may raise the risks of microfinance institutions. The Microfinance Network classifies these risks into four categories: (i) adequacy of management oversight due to a lack of internal controls in many cases, and an inexperienced board of directors; (ii) management risks caused by decentralized operations, rapid growth and a lack of adequate management information systems; (iii) portfolio risk caused by unsecured lending, sectoral or geographic concentration, and the challenges of delinquency management; and (iv) new industry risk due to the nature of the products, clients, and the relative lack of experience of MFIs (Churchill, 1998).

4.26 To this list, issues of regulation and supervision should be added, particularly given the scale of demand and the Mexican history of Bank and Savings and Loan failures. Notably, with the exception of Caja Popular Mexicana, most of the MFIs are not regulated, although recent changes in financial sector laws, specifically the new *Ley de Ahorro Popular*, will require supervision in the near future. Of the EACPs, only the *Sociedad de Ahorro y Préstamo* and the *Uniones de Crédito* are under the regulation of financial authorities. Among the unregulated are the *cajas populares, cooperatives de ahorro y crédito* and *cajas solidarias*, all established under legislation but not subject to

financial regulation. Under this system, the financial stability of the institutions and borrowers has been vulnerable to the limited supervisory capacity of CNBV and opportunities for regulatory arbitrage (many of the unregulated entities perform the same services as the regulated entities).

4.27 The new regulatory structure proposed under the recently passed *Ley de Ahorro Popular* should offer further protection. Yet its adequacy in terms of fostering balanced safe financial practices and its effects on the home improvement market should be further analyzed, as well as its implementing regulations to be issued during the two-year transition period. Finally, interim measures should be taken for adequate oversight during the period in which the new law takes effective and delegated regulation is rolled out.

4.28 ***Diversification.*** Despite impressive success in several Latin American countries, many MFIs have clear limitations. Most credit delivery systems are designed for simple working capital loans with equal weekly installments, ideal for traders but not as useful for individual producers. Since the only competition Mexican MFIs face in many urban and rural markets are traditional *prestamistas* (often charging an annual effective rate of interest of more than 100%), MFIs enjoy almost unlimited demand for their products and little pressure to become more efficient or offer new products. This means the tendency is toward horizontal expansion (the same product in new markets) rather than deepening financial markets by providing a range of products, such as home improvement loans.

4.29 On their own, these institutions are unlikely to reach scale and many successful MFIs will not diversify into this important field. The key question becomes one of how the government and donors such as the World Bank can help to jumpstart product diversification by leading MFIs into new products such as housing microfinance – without endangering the strong performance they have demonstrated in short term, small, productive loans. The documentation and dissemination of best practices in the design of housing micro finance programs and products, funding for exchange visits, and other non-financial inputs could play a helpful role in expanding coverage by making it easier and more attractive for MFIs to enter the market.

4.30 *Sources of Funds for Housing Micro finance Expansion.* Without reliable and streamlined access to commercially priced funds, MFIs are unable to expand into housing micro finance in a significant way. In fact, since the maturity of a housing loan is often two to three years, the maturity of the sources of funds have to be longer than those provided for quick turnover working capital portfolios that are typical of the Mexican MFIs. Based on several years of experience, however, it is clear that the financial markets will not provide adequate funding to address this opportunity – at least until there is stronger proof of commercial viability of MFIs and their housing portfolios.

4.31 GoM may consider market friendly instruments to support the MFIs, such as using adequately priced guarantees and tools to promote the market to private capital, and complemented by time bound incentives for housing micro finance experimentation and

MFI institutional strengthening. Such support should be considered as part of a broader plan for popular savings mobilization and credit.

4.32 ***Institutions Specific Barriers.*** For small MFIs with an existing, effective product (such as FUNHAVI), access to affordable lines of credit are the main constraints to expansion. These MFIs do not mobilize savings and can only attract limited grants and investors, so they must turn to other financial institutions as a source of funds. FUNHAVI should also be encouraged to franchise its model and products to other institutions, since there are large markets, such as México City, that they do not plan to enter.

4.33 For large financial institutions that have pilots in housing microfinance, such as Caja Popular Mexicana, technical assistance is required to help management assess this potential product line. Since CPM's portfolio is not performing well, additional technical assistance in delinquency management would be useful. Since CPM and other large financial institutions have ready access to large pools of savings, they do not require access to credit lines.

CONCLUSIONS

4.34 In summary, micro finance and savings instruments are key to increasing access of the poor to housing as they support the building and leveraging of household equity. Given the scale of demand for progressive housing, and the current dearth of financial instruments, there are large-scale commercially viable opportunities in housing micro finance and savings instruments in Mexico. On their own, MFIs and other financial institutions are unlikely to diversify into this field given the lack of information and high demand for current lines of credit. While the pilots have been successful, the potential social benefit and barriers to entry justify a catalytic effort by the Government. Recommended actions include:

- Evaluate and develop models for efficient, though likely subsidized, construction TA that can complement sustainable, privately provided micro credit for progressive housing.
- Assess opportunities for supporting microfinance for progressive housing as part of the broader savings mobilization program, with particular emphasis on expanding financiers' access to affordable funding through guarantees and credit. The Global Microcredit Facility (GMF), that is now in design with the Ministry of the Economy, may be the most logical option to provide credit support to financiers. The GMF will operate through a trust supervised by the Ministry of the Economy and a specialised second-tier microfinance institution, which in turn will rediscount micro loans of a wide range of qualified first tier financial institutions.
- Provide up-front time bound subsidies for market research in large markets and disseminate the results to possible service providers (e.g. Finacomun and Compartamos). This would form part of a technical assistance facility to support pilots and to better understand the risks and dynamics of these clients and the

possible synergies of housing micro finance and popular savings instruments and other financial services.

- Set geographic priorities for short-term support of housing microfinance so as to allow institutions to rapidly reach profitable scale. According to preliminary studies, demand for popular banking services and housing pressures in México City and in the cities along the Mexico-US border would support rapid scaling-up of housing microfinance.
- Continue to strengthen supervision of the popular financial sector, to increase the public's confidence in financial institutions. Specifically, attention should be paid to how the new Ley de Ahorro Popular and its yet to be prepared regulations impact the safety of clients and the attractiveness for financiers of microfinance and popular savings programs. Special attention should also be placed on supervision measures during the transition between the effectiveness of the new law and the roll of new regulations.

PART II: ANALYSIS OF HOUSING MARKET INEFFICIENCIES

CHAPTER 5: LAND MARKETS AND URBAN REGULATIONS

INTRODUCTION

5.1 This chapter examines the supply of urban land in Mexico and the factors which affect the availability and price of land for housing development, specifically regulations governing tenure and urban development. In Mexico, as in many developing countries, land rights are at times unclear and multifaceted, conflicts exist between the formal and informal markets and formal registration can be a long, complex and costly process. The purpose of this chapter is to understand land ownership and regulation in efforts to identify possible bottlenecks that distort the land and housing markets, decrease urban land supply and increase the price of shelter.

5.2 The chapter begins with a diagnosis of urban land supply and highlights the importance of land costs in driving housing prices. The chapter continues with a discussion of the process of urban land creation, recent legal and institutional changes and the implications for low-income housing. A brief review of urban regulations is presented. The analysis takes the approach of the political economy of land management. This is particularly appropriate given the long-standing link between party politics and land in Mexico. This work should be followed by market analysis to calibrate policy and program interventions. At this time, detail market data is not available, and may be difficult to obtain as much of land transactions occur outside of the formal market. Moreover, the analysis focuses on national land and regulatory issues. State and local regulations and practices also have great impact in this area, and should be the focus of specific studies. The aim here is to provide the federal framework for action, and indicate directions for future work.

SUPPLY OF HOUSING AND LAND

5.3 Formal housing supply ran at about 400,000 units in 2000 – an exceptionally good year due to increased INFONAVIT financing – and is projected to decline to 350,000 units in 2001, a level closer to the average of the past years. Though the range of products offered are limited by the market dominant public and quasi public housing entities, housing prices and in particular housing characteristics show some variation. Land prices, credit costs and construction costs determine housing price, as well as regulations, fiscal charges, titling and transaction costs governing these inputs.[69] By far, the largest and most varying of inputs appear to be urban land and the characteristics of the specific land market. Data from private companies in six states and/or cities are highlighted in table 5.1. Constructed areas show little variation, and construction prices appear to hold across different geographic areas of the country. Units of similar prices have widely different lot sizes. In effect, given the limitations on price set by the major

[69] Transaction costs include information about property titles, information on structural and neighborhood characteristics and region.

financing institutions, the variation in land costs are absorbed by reduction in lot size. The figures also demonstrate the factors that drive land prices - location, regulation, allocation of services, and density. Note that the land scarce DF consistently has the smallest lot sizes. Importantly, these are variables largely influenced by public policy on land and urban regulation.

TABLE 5.1: HOUSING PRICES AND REQUIRED MINIMUM INCOMES*

House Price in times MW in MW	In $US	Min. Income for Mortg, in MW	Life of Loan	Lot Size In mt2	Construction Area in mt2
88	10,472	1.92	30	60 (Pueb) to 91 (Yuc)	30 (Pueb) to 33 (Yuc)
100.41	11,949	2.29	30	35 (mex) to 160 (Yuc)	40 (Mex) to 53 (Yuc)
179.49	21,359	5.08	20	68 (DF) to 90 (Gto)	57 (Gto) to 60 (DF)
138.07	16,430	5.86	30	37 (Mex) to 68 (Pueb)	40 (Mx) to 53 (Pueb)
262.33	31,217	7.01	10	20 (DF)	57 (DF)
262.33	31,217	10.51	30	20 (DF)	57 (DF)

Source: Iracheta 2001. *Daily minimum wage considered 37.7 pesos (2001) and US$1 = MXP 9.50.

5.4 The creation of urban lands falls far short of the demand for shelter, much less the needs of the poor.[70] Assuming that new urban lands must cover the new housing demand of 732,000 units per year, at an average density of 35 units per hectare and the dedication of 35% of land for public uses, results in a rough demand estimate of 21,000 hectares per year.[71] According to SEDESOL/ *Programa de Incorporación de Suelo Social al Desarrollo Urbano* (PISO) estimates, approximately 32,000 hectares are apt for urban use according to current urban development plans of each city. However, only 9% have adequate basic services and another 20% are in the process of urbanization. A full 70% completely lack the appropriate services and infrastructure for urban land uses.

TABLE 5.2: DEMAND-SUPPLY GAP IN URBAN LANDS, 2001

Land available for Urbanization	
Fully urbanized (w. infra & services)	3,020 ha
In process of urbanization	6,590 ha
Total land available in short/medium term	9,610 ha
Demand for Urban Land	
Demand for New Housing Units/ yr	732,000 units
Density	35 units/ha
Land for public use	35% of land
Total demand for urban land/ yr	21,000 ha
Shortfall of urban land	11,400 ha
Additional urban land with investment for urbanization	22,666 ha
Years coverage of urban land demand	1.6 yrs

Source: Own elaboration with data from Sancho (2001) and www.sedesol.gob.mx/desuryvi/vivienda/diag.htm

[70] Urbanized land is defined as the land which falls within the urban development boundaries of local urban plans, meets all infrastructure and services requirements, and is zoned for urban land uses (e.g. residential, commercial, industrial).

[71] Density parameters per Sancho (2001). Increasing urban density to 60 units/ha and reducing public and infrastructure space to 30% would reduce urban land need to 14,000 ha/yr.

5.5 Problems in formal development of land for low/moderate-income households complicate the supply picture. Sixty-six percent of the developable land surrounding medium and large Mexican cities are in *ejidos* - a form of communal land tenure created by Article 27 of the Mexican constitution of 1917, which established that certain peasants have rights to land for agrarian purposes in perpetuity, not to be sold, rented, or mortgaged. The remainder is in private hands. Much of the private land surrounding Mexican cities is now held by large developers in reserve for future middle and high-income residential projects, and other uses.[72]

THE CREATION OF URBAN LANDS

5.6 *Public role in land markets.* There is long standing tension between policy objectives driving public intervention in land markets and the forces of the market. In general, the economic rationale for government involvement in urban land markets is based on market failures; first, in the form of public goods (e.g. street lights and fire protection), natural monopolies, and large transaction costs; and second, positive and negative externalities (supply of green space, air quality, benefits associated with home ownership, etc.). Government planning tools comprise regulations governing land tenure and use, infrastructure investments, and fiscal policies. While few studies have measured the cost of housing market regulation, the prevalent incentives are consistent with the view that the land market brings negative incentives. The intervening regulations tend to increase price and reduce the quality of land supply, in absence of thorough monitoring and evaluation of their impact (Ortiz, 2001).

Land Tenure and Use

5.7 The long standing government involvement began with the creation of communal and ejido lands and persists in the transformation of these lands and attempts to increase access of the growing urban poor to land. Government involvement has contributed to one of the largest titling efforts in the region, but has suffered from: i) a fissure between urban management and the process of converting lands from rural to urban use; ii) cumbersome public interventions that were overtaken by the market, leading to the need to focus public support on corrective rather than prevent interventions; and, iii) policy conflicts related to the allocation of rents associated with land titling and urbanization. Intervention has resulting in two distinct markets, that for formal land serving the middle and upper classes and that for informal land serving the poor. Inconsistent land and urban policies have exacerbated the negative externalities associated with urbanization, including environmental degradation, sprawl and under-served neighborhoods. More recently, improved titling in the absence of other policy tools to stimulate investment in productive uses of land has lead to increased speculation and further limited urban land supply.

[72] One developer interviewed for this study holds land sufficient to build 106,000 units - a land reserve sufficient for a very high rate of building (10,000 units would put a builder in the top five in the United States) for the next decade - and is actively in the market to purchase more, principally ejido land.

5.8 Given the historically prominent role of ejidos in supporting urban growth and land supply for the poor and their dominance in the current peri-urban land market, the discussion below will focus on ejido land tenure.

5.9 *Background on the Ejido System.* Ejido lands were created as part of agricultural reform. Over six decades more than half of the nation's territory was redistributed to agricultural nuclei - that is land ownership in two forms, the ejidos and the communities.[73] Land ownership in the 'social sector' is now made up of about 28,000 ejidos in the hands of a little more than 2 million ejidatarios, along with a little more than 2 thousand communities. On average, an ejido possess slightly more than 2,200 ha and is formed by 78 ejidatarios.[74] While the large majority of ejidos are located in areas eminently rural, it is estimated that a thousand of the almost 30,000 agricultural nuclei are in periurban areas (Robles, 1999).

5.10 Until the 1992 legal reforms, the agricultural nuclei could not easily dispose of their lands. The rights of property were defined by law as non-transferable.[75] As a consequence, any activity which resulted in passing of land to a third party, even with consent of the owners, was considered illegal. The aim was to protect the peasant from market forces, assuming that the ability to sell the land would lead to the formation of *latifundos* in Mexico.

5.11 Naturally, the agrarian law gave scarce attention to the incorporation of ejido and communal lands to the expanding urban centers; nonetheless agrarian norms had profound effects on the incorporation of ejido lands into urban growth. Almost all urban centers are surrounded by a combination of lands of private ownership and lands under ownership of agricultural nuclei. Over the last decades they have formed two clearly differentiated markets. For urban uses destined for the middle and upper sectors, the formal sector real estate developers have used private lands, that by definition can be commercialized freely and whose incorporation into urban development is subject to a regimen of licenses and authorizations.

5.12 Unable to legally enter the market, ejido and communal lands have formed an illegal land market for low-income families. This does not mean that there are no irregular settlements in private property, nor that the informal market for ejido lands sufficiently covers the land needs of the urban poor, but simply that an informal market for ejido and communal lands has developed. The ejido lands were almost never directly occupied by invasions, but rather the urban poor purchased ejido land from the property owners or intermediaries.[76]

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[73] The ejido as a form of rural property was a creation of the post revolutionary period; meanwhile the communal regimen is a form of tenancy inherited from the colonial era.

[74] Regarding the 'ejido tipo' see the Number 13 of the journal *Estudios Agrarios*.

[75] The right of property title could not be transmitted to another person. No creditor could place a lien against the land to secure/collect the debt of the landowner. Regardless of how much time, a person could not take possession through occupation of ejido land.

[76] Even though on many occasions the majority of earnings have gone to people outside the agricultural nucleus, it has always been necessary to obtain the consent of at least some of the owners to put the lands on the market. See Legorreta, 1994.

5.13 Though sale of ejido lands was illegal according to agrarian legislation, expropriation of land from the ejidatarios by the highest agrarian authority, the President of the Republic, could legalize the tenure of the new occupants. Massive actions of expropriation and regularization and an environment tolerant of the incorporation of rural lands into urban expansion areas had the effect of securing de facto the illegal sale of ejidos. The end result was an institutionalized market for ejido land functioning outside of the law, often with the tacit okay of government. In contrast with what occurred in many other developing countries, the urbanization of ejido and communal lands in Mexico represented a peaceful process due to the perception of ejidatarios as weak social actors and the administrative processes which assured eventual regularization of illegally sold land.[77]

5.14 While ejido land sales have provided land for the urban poor, the social cost of this illegal market has been high. The illegal market created numerous urban spaces in sites of high risk, such as in riverbeds and unstable lands. In addition, the occupants that appear to benefit from regularization, in reality pay twice for the same land; once for possession of the land (in the illegal sale) and again to the Federal Government, who charges for the indemnification of the ejido through expropriation.

5.15 *Evolution of Policies on Urbanization of Ejidos.* Faced with mass illegal conversion of ejido to urban lands, the government authorized an additional method of land conversion in the late 1970s. This approach, termed the 'urban way', provided for expropriation by federal authorities (the *Comisión para la Regularización de la Tenencia de la Tierra,* CORETT), and transfer of lands to state authorities for the construction of land reserves (banks). State authorities then provided infrastructure and used the land for low-income housing and other public uses.[78] While marginally successful, the creation of land reserves to expand the legal supply of urban land for the poor has been disadvantaged by: (i) an illegal system of access to land that relied on the assurance of subsequent regularization and the fluidity of the illegal land market in comparison to the time consuming and bureaucratic market activities of the state agencies; (ii) the absolute failure to enforce the law against owners that promoted or permitted the illegal sale of their lands; and, (iii) the relative weakness of the incipient urban institutions and policies. Naturally, this system of illegal access multiplied indefinitely alongside slow progress in the creation of land banks. In the best of times the creation of reserves managed to reach only one third of the level of land transformed through the regularization process (Seydé,

[77] Only a cultural perception of this type can explain the fact that there were no social protests. Those that sold the lands to the poor did not assume any commitment to urbanize the land for urban use, a responsibility that was required of private property owners that were not members of the agricultural nuclei and that subdivided land in operations identical to those realized by ejidatarios and communities.

[78] The most important attempts took place starting in 1983, with the creation of the *Sistema Nacional de Suelo y Reservas Territoriales*, that operated in the *Secretaría de Desarrollo Urbano y Ecología.* This program consisted in the processing of expropriations of ejido lands that were not urbanized and that were transmitted to state government. The state governments incorporated the lands into urban development according to their poorly elaborated urban plans.

1996). By 1996, there were still a million urban lots to regularize: that is more than a third of what had been regularized in two decades (SEDESOL, 1996).[79]

5.16 *Las Reformas de 1992.* Between 1991 and 1992, the agricultural regimen was fundamentally reformed to allow ejidos to sell their lands or use them for other non-agricultural purposes. The Agrarian Law approved in 1992 established two mechanisms by which the ejidatarios could incorporate their lands into urban development: i) passing common lands to a for profit corporation; and, ii) the adoption of free hold tenure of ejido parcels. In the first case, communal use lands (that is, lands that had not been parceled and were therefore property of the nuclei together) were contributed to real estate projects and were developed collectively. The second case applied to parcels that belonged to individual ejidatarios, in which they could, upon notification of the ejido assembly, obtain freehold title. With this title, the land ceased to be part of the ejido and its owners were free to sell as they wished.

5.17 *Programa de Certificación de Derechos Ejidales y Titulación de Solares Urbanos* (Procede). In addition to strictly legal changes, the government initiated PROCEDE, a program to register and certify ejido property. PROCEDE documents were a necessary but not sufficient condition to carryout either of the two legal mechanisms of incorporation of land into the urban market. PROCEDE, in which the agricultural nuclei voluntarily inscribed, had important advances in its early years. By 1998, it had already certified almost 70% of the ejidos (Villalobos, 1999), and according to agrarian authorities, almost 100% of the ejido lands in periurban areas.

5.18 *Program de Incorporación de Suelo Social (PISO).* In parallel to Procede, the PISO program was developed in 1996. The program was designed by both the agrarian and social development authorities to satisfy the demand for urban land. One of the biggest consequences of PISO was that in February 1999 the agency charged with managing land tenure, Corett, ceased to be part of the Agrarian Reform Ministry and became part of the Social Development Ministry (SEDESOL). This appeared to terminate more than two decades of rivalry between agricultural and urban authorities in this area of work.

5.19 PISO's original objectives included balancing the interests of the ejidatarios with those of the urban populations - guaranteeing the best conditions for the agricultural nuclei in the incorporation of land and generating a land supply at accessible prices to low income populations.[80] In spite of the above, in recent years, the agrarian authorities rolled out a new initiative in parallel intended to delivery the value added of social lands to ejidatarios and communities. For the first time in the history of agrarian policy, obtaining high rents for the nuclei that decide to incorporate their land into urban development was an explicit goal. The agricultural authorities used isolated examples of real estate development in high value tourism to induce agricultural nuclei to form real

[79] In the State of Mexico in 1997 alone there were almost 5,000 ha awaiting regularization.
[80] For a more detailed analysis of the objectives, see González, Ligia 2000, and Seydé. 2000.

estate groups as a new path for rural development.[81] Many of these examples may be difficult to repeat at the national level.[82] The statements appeared to stimulate, along with the new legal conditions, an important reduction in the land available for urban popular sectors.

5.20 *Current land market conditions.* A careful analysis of reported results of PISO in 2000 show the current conditions of the ejidal land market for urban development. The results seem to indicate that the program has achieved the goal of incorporating 105,000 ha of ejido land into urban development.

TABLE 5.3: RESULTS OF THE PISO PROGRAM 1995-2000

Changes in the legal status of 100,000 hectares of ejidos			
Freehold Title	Ejido Real Estate Co.	Territorial Reserves	Regularization
51,332 ha	6,392 ha.	17,056 ha.	25,453 ha.
(51%)	(6.3%)	(17%)	(25.4%)

Source: Programa de Incorporación de Suelo Social (PISO), Informe 1995-2000.

5.21 The operations through the different mechanisms add up to more than 100,000 hectares, however a brief reflection over what each line signifies allows a better understanding of the reported results. In the case of freehold title, the land simply changes legal status. It is disincorporated from the ejidal regimen, but does not automatically enter the urban land market. The titles include the right, but not the obligation to sell land. As a result, the 50,000 ha should only be counted as lands that can legally be incorporated. In addition, the act of expropriating 25,000 ha for regularization does not result in their incorporation into urban development. In effect, these lands already were illegally incorporated into the urban land market.

5.22 The 25% remaining, that is the lands provided by agricultural nuclei for real estate and those expropriated for reserves, can be considered lands that are in the process of being incorporated into urban development. There is no guarantee, in terms of the Program, that they will satisfy the needs of the popular urban sectors. The interviews that were undertaken as part of this report indicate a large number of additional legal and illegal sales not included in the 50,000 ha. reported by PISO. These lands recently received PROCEDE certificates, which appear to provide sufficient security for private investors to take on the risk of purchasing ejido land in exchange for the promise of future formalization.[83] Interviews with functionaries of the agricultural sector

[81] In 2000, the *Fidiecomiso Fondo Nacional de Fomento Ejidal* published a folleto on organization and training titled *Las sociedades inmobiliarias sociales, una nueva vía para el desarrollo social. La plusvalía dela tierra social para ejidatarios y comuneros.*

[82] As is the case of Los Cabos in Baja California Sur, where the ejido lands were sold at very high prices for the increase demand in the luxury tourism area.

[83] It is possible to hide the sale of ejido land with only a PROCEDE certificate to private investors by making the investors '*avecindados*' (residents) of the agricultural nucleus. According to agrarian legislation, an ejidatario can transfer the rights of their parcel to another ejidatario or a resident. To become a resident it is sufficient to be inscribed in the books of the ejido. It does not even require the notification of the ejido assembly. There are known cases in which this has occurred, such as in the ejido Bonfil, en Cancún.

organizations confirm this trend.[84] For now, it is impossible to have a credible quantification of this phenomenon, though there are indications that it is significant.[85]

5.23 The incorporation of 50,000 ha via the adoption of freehold title can be interpreted as both good and bad. On the positive side, it signifies the possibility of legally incorporating a significant amount of land into urban development. This is reinforced by the fact that some private real estate companies have begun to show interest in acquiring ejidal lands to promote housing development, and in some cases with funding for popular housing. On the negative side, the land is not necessarily being sold at terms accessible to the poor. The campaign of the agrarian authorities to induce ejidatarios to capitalize on the urban value added of their land has generated expectations of high profits. As a result, at least a part of the 50,000 million ha will be retained, while buyers wait for offers in line with expectations. Therefore an important portion of the land that could be sold to the poor today is been marketed to the most high-income sectors. Additionally, ejido lands of doubtful legality are being sold before they have passed to freehold ownership. Even conservative estimates indicate that between 50,000 ha and 100,000 ha have been withheld from the illegal market, and which was one of the few options for the poor. Certainly, it is necessary to gather more evidence of these trends to understand the mechanisms better, to know the regional variations and to quantify the problem.

5.24 The second aspect that should be emphasized is the use of expropriation as a mechanism for the construction of territorial reserves. The boom of new mechanisms of disincorporation of lands from the ejidal regimen appears to have diminished the importance of the expropriation mechanism. The failure to meet the goals of the federal expropriation programs in the 1980s has left many with the conclusion that expropriation was not efficient. In reality, the illegal market (with tacit government consent) proved more efficient and agile in meeting the land needs of the poor. Strikingly, though the construction of reserves through expropriation was not a priority of urban policy of recent years, these mechanisms led to the transfer of a little more than 17,000 ha. of land apt for urbanization to the state governments. This was based on the protagonist role of states and indicates that the leadership in fostering land markets should be decentralized. To assess the impact of these reserves, further detailed analysis will be necessary to see how social sectors have benefited from reserves and at what cost (fiscal and household).

5.25 Finally, it is worth noting the decline in expropriations destined for regularization of tenure since 1999, when the organism in charge of this transferred from the agricultural sector to the social sector. While the average during 1994 to 1998 was 5,000 ha. expropriated for regularization, in the two following years this average was cut in half without any clear reason. This change appears to confirm the suspicion of urban sector specialist that the agricultural authorities prioritized land transfer over concerns about the urban impacts of growing cities.[86]

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[84] Funcionaries of *Fifonafe,* the *Procurarurría Agraria*, the *Registro Agrario Nacional* and CORETT.

[85] An additional indicator is the increase of the disputes before the *tributarios agrario* for the division of ejido parcels. See Abaunza, 2000.

[86] Analysis of diverse academics, distant from the interest of both bureaucracies, tend to confirm this perception. See, among others, Melé, 1993.

URBAN REGULATIONS AND FISCAL POLICIES

5.26 Government intervention through urban regulations has hindered land and housing markets by: i) an unclear division of responsibilities between the levels of government; ii) excessive and at times unnecessary regulation; iii) a large margin for discretion in the design and application of regulations; and iv) the lack of a supporting system for conflict resolution. As mentioned earlier, there is little evidence that more market friendly approaches would be detrimental to land and housing access to the poor. In fact, private developers are beginning to experiment in products for low-income markets, and more importantly, the poor have always accessed land on the market, though primarily the illegal market.

5.27 *Background.* By the 1970s, Mexican states had on average over 30 laws and regulations related to urban development, but it was not until 1976 with the National General Law on Human Settlements that planning was recognized as a guiding tool for urban growth. With this law began the first push to increase institutional capacity for urban planning. Though integrated planning was named as a key objective, the new law does not supersede preexisting ordinances. As a result, new developments were subject to the urban plans sanctioned under the new General Law and the preexisting regulations. In many cases, local and state administrations resisted elimination of regulations that generated public revenues through associated fees and charges.

5.28 During the administration of President de la Madrid (1982-1988), the government undertook municipal reform and strengthening of local governments, and specifically the control and production of urban lands. Key attributes in urban management were transferred to local governments, while the federal government maintained responsibility for ejidal and communal lands. In the constitutional reform of 1983, article 115 granted municipalities the capacity to determine land use through zoning and urban development plans, and to control urban expansion through construction licenses and enforcement of land use. The implementation of the reform required changes to federal and state laws, the former occurred with the 1984 revision of the Law on Human Settlements. Many states have yet to enact reform of state laws to empower municipal governments as envisioned by the 1983 constitutional reform. The result has been that in many cases new developments require intervention by both state and municipal governments.

5.29 *Institutional Framework.* According to the constitution and various laws, municipalities are to:

- formulate, approve and administer zoning and urban development plans;
- control land use;
- intervene in the regularization of urban land; and
- grant building permits and licenses.

However, states have powers to establish urban plans, promulgate laws that regulate human settlement (including zoning and land use laws) and participate in the governing

of metropolitan areas. Table 5.4 below shows the implication this has had on individual municipalities' powers and responsibilities across different states.

5.30 While the Law on Human Settlements aimed to establish urban planning as an integral guiding force for development, sectoral planning in water, transport and other areas persisted. As a result, developers not only have to work through institutional overlaps at the state and local level, but also with each sectoral authority. In recognition, some states have created a type of one-stop clearing window for regulation (*ventanilla única*), though with varying results.[87]

TABLE 5.4: MUNICIPAL RESPONSIBILITIES FOR URBAN DEVELOPMENT IN SIX STATES

	Tlaxcala	San Luis Potosí	Guana-juato	Oaxaca	Nuevo León	Estado de México
Zoning	P	P	M	P	P	P
Planning	M	M*	M	M	M	M
Land reserves	P	P	P	P	P	P
Ecological zones	P	P	P	P	P	P
Land use	P	P	P	P	P	P
Metropolitan administration	P	P	P	P	P	P
Protected natural areas	P	P	P	None	None	None
Ecology	P		P	P	P	P
Land tenure regularization	P	P	P	P	P	P
Licences (construction, subdivisions)	M	M	M	M	M	M
Expropriation	S	S	S	F	S	S
Sanctions and infractions	P	P	P	P	P	P
Regulation of private sector in urban development	M	M	M	M	M	M

Source: Adapted from CIDE, 2001.

M: Indicates an exclusive responsibility of the municipality (M*: requires state congress approval)

P: Indicates a partial responsibility of the municipality (who is consulted, participates in the regulation or definition of the action, or administers on behalf of the state)

S: State level responsibility.

F: Federal level responsibility.

5.31 In 1988, the General Law on Ecological Equilibrium and Environmental Protection was passed in a first attempted to address environmental problems on a broad scale. Without a doubt, this law has improved environmental management in Mexico, but it has also added an additional level of complexity to land regulation. Under this law, works with environmental impacts would be regulated by federal environmental authorities.

[87] In some instances the approach has been counterproductive. In the State of Tabasco, at the end of the 1980s, the one window system resulted in a breakdown in communication between developers and each of the governmental agencies which processed requests according to their own analysis and procedures. The developer had only one contact, who was unable to discuss delays in processes emanating from other parts of the government.

5.32 The urban and environmental legislation did introduce new elements to public management, including the foundations of urban planning, community participation and the public's right to information.[88] They have not, however, contributed to a simple and clear legal framework. Each proposed an integral approach, but failed to supersede previous legislation. The separate frameworks have been justified based on the claim that human settlements and the environment are very different, but this differentiation appears artificial as each separate administrative structure considers the same factors in their rulings.

5.33 *Excessive Regulation.* One measure of regulatory impact on shelter is fees, taxes and indirect costs. Notably, there is no direct link between the taxes and fees and a low-income housing program or with urban development. The following is an illustration of indirect charges for housing in the State of Mexico (Iracheta 2001):

- House cost: US$17,000.
- Developer purchase of land: 0.71% of house cost for certificate of free debt, right to public registry of property, report of no debt, cadastre certificate.
- Urbanization: 1.7% of house price for diverse permits and licenses (costs vary by state and municipality).
- Construction: 3.72% of house cost for IVA on materials and studies, construction and land use license, services connection fees.
- Registry and Titling: 0.34% of house costs.
- Total indirect costs: 6.47% of total house cost.

5.34 In addition to the charges considered above, additional fiscal charges are levied that amount to negotiations with particular developers. This occurs under the guise that a large project may produce impacts (road, services, environmental), and that the public body is seeking remedy to redress those impacts. Governments also claim that given scarce resources, additional contributions to needed works - not associated with the development - are accepted to facilitate the permitting process. These practices occur outside of the law, though legal provisions exist for charging for site improvements. While impact fees are effectively applied in many developed countries, including the US, it is particularly the irregularity and the complexities of the Mexican regulatory processes that creates bottlenecks in housing and land supply.

5.35 In recent years the states have undertaken Regulatory Improvement Programs in which they attempt to revise norms surrounding economic activity with the aim of stimulating growth. Though no formal review of these programs exists, actors involved do see some impact. Official figures show that the charges dropped from 12.39% of the total cost of a modest house to 3.45% by 1998. While it is possible to simplify procedures, achieving long-term impact will require addressing the problems of conflicting laws and institutional responsibilities. In fact, figures for 1999 and 2000 show regulatory costs again on the way up.

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[88] For example, the Federal Government has allowed public access to information regarding environmental impact of projects since 1988, and the obligation to have public consultations with effected communities since 1996.

Box 5.1: Land Taxes and Fees

Mexico has various land taxes and development fees, all based on the cadastre. About 80% of states have cadastres with land values below the market value, seriously impacting tax collection and revenues. In 1995, it was estimated that under-valuation of property was at 50.5%.

Collection is equally poor. A rough estimate of the great difference in collection for registered land in 1993 showed that the top performing state's collection reached 16 times that of the worst performing state.

Land tax revenues represent only 0.34% of state GDP in the best case and 0.04% of state GDP in the worst case, indicating that revenue generation is not related to the quality of urban services. While Mexico may perform better than some of its southern neighbors, there is much room for improvement. Land tax as a percentage of local government revenues (state, province and municipality) is only about 12% in Brazil and Argentina, about 55% in Mexico and as high as 75% in the US and 81% in Canada. Most importantly, Mexico does not have a direct link between urban productivity and quality of life and taxation. In particular, fiscal policy has not been used to stimulate greater liquidity in the land market through higher taxing of speculation and holding of unused real estate assets.

The government has undertaken a great effort since the 1980s to increase land tax collection through a national cadastre modernization project. The project has been linked with a general trend toward modest revenue increases.

Source: Iracheta (2001).

5.36 Simplified procedures, in the absence of a clear legal framework, introduce a margin of discretionality to efforts to improve review processes and allow for processes to be revised as is politically expedient. The discretionality of the system is particularly problematic given the lack of municipal accountability - largely due to the three-year mayoral term without option for re-election and weak local government capacity – and low local revenue generation. It is true that those adversely affected can resort to legal remedies, but the costs and the time of these procedures makes them ineffective mechanisms to resolve conflicts. The Coordinating Business Council (*el Consejo Coordinador Empresarial*) has begun to evaluate the regulatory climate for business in each state. While the methodology and scope of the work is limited, it appears that states are taking the results into account, particularly given their vulnerability to public criticisms due to the publication of benchmarking indicators (Consejo Coordinador Empresarial, 2001).

REORIENTING LAND AND URBAN REGULATION TOWARD THE POOR

5.37 Government efforts to directly supply urban lands to the poor through reserves were ineffective in comparison to the output of the illegal market. The efforts resulted in reducing the supply of urban lands for the poor and increasing illegal developments with associated negative externalities (e.g. located in steep slopes and flood prone areas). This is largely due to the fact that public housing authorities (and land reserves) addressed the symptoms of the poorly functioning land market, rather than the causes. A shift in the focus of government activities toward improving land markets by reducing the cost of urban land development and fostering and/or partnering with private developers is recommended. Specifically, this may entail clarifying the institutional and regulatory environment for land and urban development, reducing norms and standards to allow for legal lower cost land options, and supplying trunk infrastructure. With adequate policies

in place to address these supply bottlenecks, it is recommended that the government allow for the application of direct demand housing subsidies for land purchase.

5.38 ***Decentralization and Urbanization of Land Management.*** The centralization of the agrarian procedures in the Federal Government continues to be important to urbanization. With the reforms initiated in 1992 the agrarian nuclei were granted the right to put their land in the urban land market and withdraw from the agrarian regimen that benefited neither the campesino nor the urban population. The reform in principle could result in an amplification of the legal supply of urban land; however, government intervention in the incorporation of ejidos into the market persists and public functions remain in the hands of federal agrarian authorities

5.39 The type of government intervention varies according to the mode of breaking off from the ejido. In the case of adoption of freehold title, the participation of the agrarian authority has a testimonial character, which in principle should not be an obstacle. However, the responsibility for expropriation procedures - for the creation of new territorial reserves as well as for the regularization of illegal settlements – also remains in the hands of the federal government. Though urban planning has been defined as a local responsibility since the 1970s, the expropriation of *ejidos* for urban lands continues to be a centralized activity, mostly for political reasons. This centralization in fact has no constitutional base. Given the recent break in the political ties that were the base of agrarian centralization, the door has now opened for decentralization of government management of land conveyance.

5.40 If the state is to achieve the aim of intervening to provide public goods, to increase positive externalities and to reduce negative externalities, increased integration of land and urban management will be required. For this to occur, control of the land transfer process should be passed to state and local urban authorities. The Federal Government should set broad standards for titling and registration, but state and municipal government should control decisions regarding land development, siting of major facilities and land use regulation. With the creation of the *Procuraduria Agraria* as the entity to defend the rights of the agrarians, the participation of the *Secretaria de la Reforma Agraria* in land conveyance procedures is redundant. The land needs experienced by cities are not a priority for the Secretaría de la Reforma Agraria and agrarian authorities have no incentive to respond to urban needs.[89] It is the local urban authorities which tend to respond to these necessities and have the incentives to do so.

5.41 ***Land Management Instruments.*** While reducing land market failures and pursuing urban development objectives may necessitate public sector involvement, the instruments used by the public sector are often more restrictive than enabling, leading to shortages of land supply and the use of informal market transactions by the poor. This is clearly seen as public efforts to expropriate land and for land reserves have been consistently overtaken by a market-based approach of illegal sale and subsequent conversion.

[89] This point has been recognized in diverse academic works. See, for example, Melé, Partice, 1993.

5.42 While less agile as a land developer, Governments can effectively influence urban development through several planning, regulatory and fiscal mechanisms – notably land use/zoning regulations, land use restrictions on the conversion of rural to urban land, road widths, set backs and floor/area ratios, impact fees and other fiscal instruments, and property land titling and registration systems – however, these mechanisms are seldom coordinated or assessed jointly. In Mexico, a number of new public management tools have been introduced, such as community participation, environmental impact assessments, and public information rules. Yet these tools are not part of a clear and integrated framework. The problems are made worse by the fact that the institutional capacity for various mechanisms is spread across the three levels of government.

5.43 GoM should take steps to inventory and assess the impact of current instruments. In particular, discussion of the poverty and urban land markets impacts of expropriation and land reserve tools lacks data on formal and informal land prices, characteristics of beneficiaries, and fiscal impacts through purchases and subsequent taxation. In absence of this information, decisions on policy and program options tend to be politically based. Moreover, the GoM should push for clarification between states and municipalities as to the institutional responsibilities for key regulatory tools and to strengthen state legal frameworks for urban development with the aim of reducing duplication and discretionality in the application of urban and land management instruments.

5.44 ***Low income friendly urban standards and norms.*** To foster private development of land for low-income populations, local governments should adjust standards for urbanization, construction to adapt to the urban, cultural and economic necessities of low-income populations. A systematic assessment of local norms was not carried out as part of this study, and requires city by city analysis; however, illustrative cases such as the DF have shown tendencies to limit zoning densities to maintain quality of life in poor neighborhoods. Such practices limit land and housing supply and in fact increase prices – benefiting the few current residences at the cost of the majority of poorly housed Mexicans. Reducing minimum plot size and increasing maximum floor/area ratios in poor neighborhoods may allow development of low income housing profitable to the private sector, yet affordable to low income families. Varying, low-income friendly standards can also be considered for street design, basic services, community facilities and pedestrian/bike streets (infrastructure and service standards are discussed further in chapter 6). By lowering standards, the formal sector should be able to shift some of its housing production down market. By introducing less costly standards, informal developers will also be able to legally produce subdivisions (Dowall 1991).

5.45 ***Provision of Trunk Infrastructure.*** Due to their public goods nature, it is often unprofitable for private developers to provide basic trunk infrastructure. By providing basic trunk infrastructure, Government can increase the supply of urban land – reducing price and increasing affordability – and influence the direction of urban growth. Infrastructure provision should form part of a sustainable program that includes a basic spatial structure for the city, estimated capital cost and a sustainable financial policy. As basic standards are reduced to allow for progressive urbanization/housing, government

can also play an important role in helping to organize communities to assist in the planning and construction of local infrastructure.

CONCLUSIONS

5.46 Two major regulatory obstacles inhibit the supply of urban lands. First, the duplication of review and licensing procedures increase costs and prolong project preparation times. Second are the legal uncertainties surrounding state and municipal responsibilities and the discretion enjoyed by the public administration in the authorization and revision of development. These issues require state and local action. The effectiveness of these local regulatory reviews will be limited in the absence of greater decentralization and greater control of urban authorities in the transformation of rural to urban lands. Finally, the public sector at all levels should refocus interventions toward policy making, regulation, demand side support and monitoring and evaluation. Government as landowner and developer has been shown to be consistently complex and cumbersome. Government action should include evaluation of regulatory and fiscal instruments to assure consistency and impact, as well as suitability for supporting low-income housing.

PART II: ANALYSIS OF HOUSING MARKET INEFFICIENCIES

CHAPTER 6: URBAN SERVICES

INTRODUCTION

6.1 Adequate shelter encompasses not only the housing unit, but also the location and supporting infrastructure and services. In finished formal housing, the housing unit is transferred with all the supporting shelter amenities. In contrast, low-income housing, consolidated through a gradual construction process, is transferred with varying bundles of amenities. As discussed in Chapter 4, low income housing usually occurs by a process of land occupation, gradual construction of the housing unit, and finally, by obtaining titles and services. As a result, while housing units may be increasing, for low income groups the quality of shelter lags due to inability to obtain the accompanying public services and infrastructure.

6.2 This chapter will provide a general overview of the coverage and quality of urban infrastructure and services. Key issues in provision will be discussed and policy and program responses proposed. The aim is to provide an understanding of the amenities that contribute to shelter, the current barriers in Mexico and how a low-income compatible approach can be forged.

COVERAGE AND QUALITY OF SERVICES[90]

6.3 Access to services in urban areas in Mexico is relatively high, especially when the definition of urban is restricted to include only localities (*localidades*) of more than 15,000 people. The percentage of households with access to running water (in the house or within the property) is close to 92%, and for access to storm and sanitary drainage is 88% (Table 6.1). As in other countries, access to electricity is quasi universal in urban areas (98%). These numbers compare reasonably well with Latin American peers.[91]

Table 6.1: Access to services in localities of more than 15,000 people -- 1997

	Urban households with access (%)	Urban population without access
Water	92.14	5,659,200
Storm and sanitary drainage	87.93	8,692,400
Electricity	98.18	1,310,400

Sources: INEGI 2001 in World Bank (2001). Water includes connection within the house or on the property . Drainage and sanitary sewerage includes connections to sewer and septic tanks – sewers alone is 78.8%,

[90] This section was largely taken from World Bank (2001).

[91] The percentage of urban population in Mexico with access to water and sewer is 92% for water and 88% while comparable figures for Brazil are 90% and 60%, and for Chile 99% and 89% respectively.

6.4 However, these numbers are no reason for complacency. First, they still imply that many people are not serviced: 5.7 million city dwellers have no access to running water, 8.7 million do not have storm and sanitary drainage.

6.5 Second, quality can be very poor and service partial. Less than half (41%) of the used waters generated by large cities is treated. Once smaller cities are included, this percentage falls to 14% by some estimates. Less than 30% of piped water undergoes potabilization through a water treatment plant - although 95% is disinfected. Frequency and reliability of service can be an issue -- according to the latest census, less than half the households with piped water are serviced everyday, 24 hours a day.

6.6 Third, these numbers hide wide differences within cities. Low income and irregular settlements typically obtain service gradually, and servicing depends in part on their ability to organize and make their demands known (Rowland and Gordon, 1993). Thus, Mexico City has high service coverage, but this varies between the DF and the conurbated municipalities in the State of Mexico. In the DF, 72% of households have piped water and drainage, while in the State of Mexico this number decreases to 55%. On the border, 88% of the population has reliable access to clean water and nearly two thirds is connected to a sewage system, but in many of the irregular settlements that percentage falls to zero as entire colonias are serviced by water trucks and have no formal service of any kind.

6.7 The issue of wide differences in coverage between the center of a city and its periphery is also true for other services. Table 6.2 below illustrates the point (though it includes rural municipalities).

Table 6.2: Service Coverage Difference in Center and Surrounding Areas of Municipalities

Coverage of Municipal Public Services, 1995
2,395 Municipalities Nationally

	Municipal Capital (%)	Rest of the Municipality (%)
Potable Water	85.33	63.3
Drainage and Sewerage	63.51	25.0
Public Lighting	83.79	61.3
Public Security	79.6	53.55
Transit and Roads	51.36	23.4
Street Cleaning	67.23	3.66
Garbage Collection	80.64	37.21
Paving	51.31	21.97
Markets	40.89	9.94
Wetlands and Cemeteries	89.72	65.6
Foot paths/sidewalks	51.26	13.4
Parks	62.7	29.81
Gardens	62.95	30.17
Public Transport	64.41	45.3

Source: CEDEMUN, Los Municipios de México, Secretaría de Gobernación, 1998, quoted in CIDE (2001).

6.8 Solid waste is a case in point, where service coverage is twice as high in the central neighborhoods as in the periphery. In highly urbanized and fast growing states such as Mexico and Baja California, municipalities are not keeping up with waste collection – 5 to 7% of households do not get any kind of regular waste collection. Waste disposal capacity is a particularly acute problem along the border, which is reported to offer the fewest waste treatment and disposal options of any of the industrially active regions in Mexico (Mignella and Silveira 1997, quoted in Wasserman 2001).

INFRASTRUCTURE AND SERVICE PLANNING AND FINANCING

6.9 Lack of infrastructure is particularly problematic in the peri-urban areas, in areas settled and developed illegally. Subsequent regularization obligates municipalities to provide infrastructure and services, a task in which municipalities appear to be lagging. In areas of ejido conversion observed around Mexico City,[92] homeowners have shown significant capacity for rapid home improvement based on household savings. In contrast, investment in local and secondary infrastructure has not been undertaken with the same rapidity. The deficit results from the confluence of the rapid conversion of ejido lands and weak local government capacity to provide associated infrastructure. The infrastructure challenge is exacerbated by the fact that land supply for this market segment is at low densities with a pattern of territorial extension which permanently increases infrastructure deficits (an example of the negative impact of the rural land conversion and urban planning fissure).

6.10 This settlement pattern not only complicates infrastructure planning, but financing as well. Ex-post provision is often at a higher cost due to irregular neighborhood layouts, precarious soils, and lack of cohesion with larger grid infrastructure (and therefore difficulties connecting neighborhood infrastructure to larger grid infrastructure). Estimates for ex-post provision of services run as high as 3 to 7 times that of planned urban areas.

6.11 Over the last two decades municipalities have been provided increasing political, administrative and financial autonomy. However, this autonomy has not been matched with increased capacity, partly due to the partiality of decentralization reforms. With the reform of constitutional article 115 in 1983, construction and operation of infrastructure and urban services was decentralized to states and municipalities. The subsequent reforms of article 115 in 2000 gave greater autonomy to municipalities, with respect to states, in the provision of infrastructure and urban services. However, local governments are still elected to three year cycles without option for reelection. This gives rise to 100% turnover in municipal staff and a great loss of technical and administrative capacity. It also prompts short sightedness in the municipal administrations' policy and program choices.

[92] Site visits and interviews with municipal and state officials and local residences were carried out in Feb. of 2001. Based on discussion with academics and federal authorities, it appears the case can be generalized to other major urban areas.

6.12 Though local autonomy has increased, the majority of local infrastructure investment is still financed with federal funds transferred to the localities through *Ramo 33*. Private sector investment has been limited, by, among other reasons, unclear and contradictory regulatory structure, and political and public sector resistance to greater privatization (De la Torre, 2001). Water and sanitations services, a municipal responsibility usually assigned to a separate operator, are provided with operational and commercial deficiencies. Most have tariff levels below cost recovery, and rely on regular federal bailouts. Similar federal support is provided for energy services.

6.13 The lack of adequate financial management of infrastructure and services limits municipal capacity. The irony is that communities without formal services often pay more for water, energy and transport.[93] On the other hand, in cases in which lands are fully serviced prior to construction, the land price increases beyond the financial capacity of the poor. In other words, the poor pay more on a daily basis to live in unserviced areas, but cannot afford the price of serviced land. Consequently, any approach to expand infrastructure and services to low income areas should be metered against pricing the poor out in the short run.

POLICY AND PROGRAM RESPONSES

6.14 Estache, Foster and Wodon (2000) propose a helpful paradigm for analyzing issues of basic infrastructure and services to low-income populations. The barriers to improved services are broken down into *access* and *affordability* issues. The former refers to the cost of infrastructure investment and household connections. The later refers to the cost of regular service delivery. In the case of Mexico, as in many other parts of the regions, the largest barrier to improved service is access. As discussed above, households usually pay more for regular informal services, than they would pay for formal services. Moreover, given the low level of effective tariffs in Mexico – cost recovery is notoriously poor – the main challenge appears to be in expanding access in peri-urban areas.

6.15 *Increasing Access.* There appear to be barriers to access on the supply side (lagging municipal investment) and on the demand side (potential to price out the poor due to rising serviced land prices). In response, adjusting the formal urbanization process - in other words, varying levels of infrastructure and services within a process of gradual improvement – may be an effective approach. A gradual strategy of urbanization may reduce many of the externalities of irregular development (unstructured neighborhood layout, construction in precarious areas, etc), and therefore reduce ex-post cost of infrastructure provision. Progressive infrastructure should also reduce the cost to households in the form of increasing land and shelter prices. This process will entail redefining formal service standards and various levels of access. Table 6.3 proposes alternative possible levels of formal services.

[93] This situation has been documented in numerous cases throughout the region. In Mexico, estimates by De la Torre (2001) show that the average family with piped water services pays 115 pesos every trimester, where those with pipas privadas pay 208 pesos per trimester. Similar results were found by Landa (2000).

6.16 Access should also be improved through increasing fiscal resources for basic infrastructure investment. Increasing funding for these public goods, which in many cases have high externalities and low excludability, may be the most efficient use of fiscal support for shelter. Focusing government support toward infrastructure improves living conditions, while providing incentives for greater household investment in the private housing unit.[94] Cost recovery on basic infrastructure and services is possible in many cases, and some cost recovery is recommended.

Table 6.3: Proposed Levels of Infrastructure and Services for Progressive Urbanization

Level of Urbanization	Description of Urbanization	Type of House	Description of Beneficiary
Lots with urban layout	Provision of lots and urban layout for progressive urbanization	Autoconstruction with lots of 72 mt2	From the informal economy with income below 2 MW
Minimum Urbanization	Lots with water, energy, and access routes	Autocontruction with lot of 72-96 mt2	From the informal and formal economy with income of less than 2.5 MW.
Medium Urbanization	Lots with water, energy, drainage services and gutters and access routes	Autoconstruction with lots of Lots of 96-120 mt2. or housing <40mt2	From the informal and formal economy with income of less than 2.5 to 3.0 MW
Complete Urbanization.	Lots with water, energy, drainage services and gutters, paved access routes and urban equipment	Lots of 120-200mt2 Housing >60m2	From the formal economy with incomes greater than 3 MW

Source: Adapted from Sancho (2001).

6.17 *Affordability and Sustainability.* Even with a gradual urbanization program, increasing municipal financial and technical capacity will be key. Once households have access to services, it will be important to assure sustainability of these services. Currently, service provision is unsustainable as municipalities are reliant on ad hoc federal government support and under investment in maintenance and rehabilitation. Greater emphasis should be placed on increasing the coordination between entities responsible for planning, construction, operation and maintenance. As in the case of land issues outlined in the previous chapter, steps should be taken to update cadastres and tax structures and collection, as well as options to increase cost recovery on infrastructure and service provision. Depending on the level of tariff increases, policy makers may consider support to the poorest households in the form of targeted consumption subsidies. Undertaken each of these additional measures will ultimately rely on improving the incentive framework to municipalities in terms of investment and maintenance of assets. These efforts will entail bringing greater accountability for funds transferred from the federal level, in particular Ramo 33, and greater accountability to the electorate through increased transparency and electoral reform.

[94] For further discussion on targeting advantages of subsidizing access in comparison to affordability, see Estache et al. (2000).

CONCLUSIONS

6.18 Urban infrastructure and services are key amenities to the quality of shelter. In general, infrastructure and services levels are quite high in Mexico compared to other countries in the region. However, these figures mask large difference in coverage and quality. While downtown areas enjoy high coverage, data indicate that coverage and quality lag in the periphery, particularly in poor neighborhoods surrounding urban areas. Deficiencies result from local government institutional and financial capacity for investment and increased regulatory risk discouraging private investment. The priority issue for increasing services is to expand access, for which the rational for public investment is clear given the externalities associated with basic infrastructure and services. The second lever for expanding access will be to revise norms and regulations to allow varying levels of service and infrastructure in line with progressive housing. To sustain affordability over the long run, infrastructure finance and management must be strengthened and to do so the incentive framework for municipalities must be revised to bring greater accountability to the general electorate and for the expenditure of funds transferred from the federal government.

PART III: ELEMENTS OF A SUSTAINABLE APPROACH TO LOW INCOME HOUSING

CHAPTER 7: STRATEGY AND DESIGN OPTIONS FOR MEXICO

INTRODUCTION

7.1 Previous chapters of this study have focused on characterizing the extent of the housing crisis in Mexico and evaluating the current housing system, including government programs. A series of policy and program recommendations were proposed for housing finance, land development, urban regulations and basic infrastructure and services provision. This chapter will aim to pull together those proposals into a coherent strategy for low-income housing. The reform includes housing finance for the middle market to increase overall housing supply and filtering and to free up resources and reallocate public expenditure toward support of lower income households. In terms of support directly to the poor, four key components are recommended:

a. provide direct demand based subsidies to increase access to mortgages for finished housing, and for progressive housing, to be matched by savings and micro loans;
b. foster popular finance instruments, specifically savings instruments to build equity and counterpart funds and micro finance to provide leverage for progressive housing;
c. reduce land and regulatory barriers that drive up housing prices and support land development for low and moderate income households; and,
d. increase access to basic infrastructure through changes in regulations and standards and increase integrated public investment.

In addition, land registries, titling and rental markets are important areas for policy reform and institutional strengthening. These issues have not been covered in depth in this study and do warrant further analysis and action.

7.2 The chapter begins by recapping the current situation and the need for a shift in low income housing actions. Basic characteristics of a new program are presented. Finally, the chapter provides general beneficiary and cost estimates for the four key components as well as institutional responsibilities. The ideas presented below are meant to be directional and suggestive rather than definitive. Strategy implementation requires further analysis of each component.

CONTEXT AND NEED FOR A NEW LOW INCOME HOUSING STRATEGY

7.3 New household formation is running at 730,000 per year on average over the next ten years, reflecting the maturation of the Mexican baby boom of the 1970s and 1980s. The flow presents a critical challenge: simply put, how to house the bulk of Mexico's

baby boom as they come of marrying age. This is matched with the longer-term goal of how to lay the groundwork for a more efficient and effective housing system.

7.4 An important factor in meeting this challenge is the nature of this demand. The 40% of families earning 3 minimum salaries or less can afford only a lower-cost housing solution such as home improvement or, at best, a VIVAH core unit if subsidized. The next 23% of households can afford the very basic PROSAVI unit (again, if subsidized). A share of INFONAVIT loans also goes to this group. However, together, these efforts fall short of reaching a significant share of these households.

- *The current system of housing finance limits the overall supply of housing and the ability to reallocate public expenditures for low-income families.* The programs of FOVI receive fiscal resources originally through Banco de Mexico and World Bank and IDB lending. INFONAVI, FOVISSSTE and FOVI generate fiscal costs in the form of increased contingent liabilities.

- *The amount of the subsidy per unit also varies greatly among government programs.* INFONAVIT and FOVISSSTE deliver an interest-rate subsidy of about $91,000 Mexican pesos to households earning three minimum wages for purchase of a new commercially built house. In contrast, the average subsidy delivered by state OREVIs runs at roughly $30,000 Mexican pesos per unit - less than half of that delivered by INFONAVIT and FOVISSSTE. This lower subsidy results largely from OREVIs' focus on lower cost housing solutions including serviced sites, home improvement and addition, and replacement units.

- *The allocation of subsidies is regressive and distorts the market.* The traditional support method used by INFONAVIT, FOVISSSTE, and the state and local OREVIs is to deliver subsidies mainly through below-market interest rates on construction loans to developers and on longer-term purchase loans to households.[95] This traditional method has produced poor results throughout Latin America and in many other developing countries, fundamentally because it: (a) undermines market-rate finance; (b) allows the amount of the subsidy to vary with market interest-rates[96]; and, (c) is regressive - i.e. delivers much more in subsidies to higher-income households that borrow more than to lower-income households that borrow less.

- *Government support for housing displays a wide range of conflicting approaches.* In response to the poorly structure support of the traditional programs, two recent programs - PROSAVI and VIVAH - have followed best practice in other Latin American countries by introducing an up-front grant to households - called a "direct

[95] In addition to below-market interest rates, OREVIs also provide land at low prices to developers of low-income housing under FOVI, INFONAVIT, and VIVAH, and often deliver a bewildering variety of other, smaller subsidies such as discounts for on-time loan repayment.

[96] The subsidy is the difference between the discounted present value of payments on the INFONAVIT, FOVISSSTE, or OREVI loan and the discounted present value of a market rate loan for the same tenor. Hence, as the market rate changes, so does this difference.

demand subsidy", though there is ample room for improving these programs (as discussed in Chapter 3).

- *Clarification of the ejido land conversion process has reduced the supply of urban land available to the poor.* Large private developers have learned the ejido conversion process and are buying (both legally and illegally) ejido lands for their land reserves and speculation. Low-income families need lots to start the progressive housing process, resulting in potential social conflict.

- *Municipalities lack the planning, management and financial capacity to provide basic infrastructure and services in step with the development of low-income neighborhoods.* The result is increasing pockets of informal, underserved areas and high ex-post cost of provision.

7.5 In summary, the overall picture that emerges is of large per-unit subsidy expenditure mainly for higher-cost housing solutions (new, commercially built units) that low-income households cannot afford. Low and moderate-income land development is increasingly difficult. As a result, formal-sector production covers only 60% of new household formation.

7.6 One possible overall strategy is to put more money into the current system in order to increase its coverage from 60% to most of the flow (not including home improvement). Not surprisingly, analysis shows that keeping the current structure of supply - that is, relatively high-cost and high-subsidy new units for purchase - and increasing production to cover the bulk of new household formation would be cost prohibitive.[97] Mexico would have to double its level of subsidies in order to cover new household formation with the current housing program structure. Total subsidy expenditures (explicit and implicit) would rise from their current level of $29,000 million Mexican pesos per annum to about $60,000 million Mexican pesos. Since over three-quarters of current subsidies come off budget (*senso estricto*) from INFONAVIT and FOVISSTE, this increase would mean increasing the financial burden on pension fund payers or alternatively increasing the Federal Government's budgeted expenditures on housing subsidies by a factor of 12.[98]

7.7 Increasing the fiscal allocation of subsidies in order to expand the current housing program and finance structure, is clearly beyond present political discourse or fiscal possibility. The availability of developable land for such a strategy is also highly problematic. If support were concentrated in programs appropriate to the income levels of beneficiaries, the total subsidy amount for 730,000 units annual would drop to about MX$35,000 million, with about another MX$3,000 million from States. These estimates are based on heavy reliance on the PROSAVI and Vivah programs.

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[97] This assumes the same structure as in 2000, in terms of institutions, programs, income levels of beneficiaries and credit amounts. The production was doubled (increased by 107%).

[98] This assumes the federal government budgets the additional MX$30,000 million in subsidies, an 12 fold increase over the 2000 MX$2,600 million budget for FOVI (recent average), PROSAVI, FONHAPO, and Vivah.

PRIORITIES FOR A NEW APPROACH

7.8 The estimated costs of expanding the current programs and finance structure reflect the common-sense conclusion that a substantial increase in formal-sector production and finance requires a different housing program from the current one. There is no choice in this matter if Mexico is to make substantial progress in filling the gap between formal supply and demand. The main characteristics of a new program structure that can reach 730,000 housing solutions at a reasonable cost are described below, as well as the basic features of the design of a low-income housing program for Mexico. It is based not only on Mexican experience but also project design experience in Latin America and other regions of the world.

Private finance for the middle market

7.9 The government currently supports the middle-income market through direct and indirect subsidies. As highlighted in chapter 3, the underlying macroeconomic situation is increasingly more favorable to private housing finance, but there is a lingering need for government support to jump start private mortgage finance. Subsidization should be designed so as to foster an opening of the market to a wider range of private mortgage originators and investors, while at the same time supporting sound lending practices. SHF should focus on granting guarantees to originators or to special purpose vehicles to inject liquidity into the market and provide stand-alone insurance products based on risk sharing and market prices.

7.10 GoM should support increased competition in the market. A key step will be to reduce INFONAVIT dominance. Given its sheer size, INFONAVIT reduces the potential market for new entrants. Expanding the portability option, 43B, will have a major impact on market opening. The relationship between developers and financiers should be broken, subsidies should be separated from financing and loans moved toward market rates, and the institutions should move away from an administrative house price setting toward market based valuations. These should be considered a first step, toward phasing INFONAVIT, as well as FOVISSSTE out of mortgage origination.

7.11 Key to the interventions will be the transitory nature of the subsidies to the middle-income market. Continued public intervention in the middle-income market makes sound economic sense only if designed so as to result in a system which can operate without public support in the not so distant future. A well functioning housing finance system does warrant sustained public involvement in the offering of liquidity instruments, regulation and policy setting and coordination.

Prioritizing low-cost housing solutions

7.12 The cost difference between low-cost housing solutions and complete units is striking (see Table 7.1). Mainly because of these large cost differences, a critical step in the financial sustainability of a low/moderate-income housing strategy is the housing solution mix. The Vivah program has shown that requirements for state and municipally supplied regularized and serviced land may be beyond local fiscal capacity. Weighting

the mix towards lower-cost solutions has strong advantages as a strategy for most of Mexico. Most fundamental, lower cost means that available funding can stretch over many more solutions. For example, it is possible to replace two deteriorated homes for each new commercially built unit, or to fund ten major improvements for each purchase of a small unfinished multi-family unit in the center of a major metropolitan area.[99]

Table 7.1: Unit Costs of Low Income Housing Solutions

Housing Solution	Cost (Mx pesos)
Minor improvement (e.g. adding a roof or floor, replacing makeshift materials with durable ones)	$5,000 - $15,000
Major improvement (e.g. room addition)	$10,000 - $30,000
Replacement of a deteriorated unit with a new core unit on a lot owned by the family	$40,000 - $60,000
Purchase of new commercially built core expandable unit in non-metropolitan Mexico	$100,000 - $180,000
Purchase of a small unfinished unit in a commercially built multi-story building in metropolitan Mexico (central areas of Mexico, Guadalajara, Monterrey)	$200,000 - $300,000

Source: Ferguson (2001).

7.13 The best mix of types of housing solutions differs substantially by region. In poor, rural states such as Chiapas, the need is almost entirely for low-cost home improvement and rural housing. In contrast, the very high cost of land in the central areas of Mexico City, Guadalajara, and Monterrey requires multi-story building for most units. Multi-story construction is more costly, and eliminates the option of an expandable unit. Thus, families must receive a somewhat larger and more costly unit to begin with (usually in the 45 mt^2 to 55 mt^2 range). The cost savings necessary to make low-income housing financially feasible in central cities must come mainly from land development, density bonuses, and using government-assisted housing strategically to galvanize private-sector development rather than from prioritizing low-cost solutions. These great regional variations suggest that a federal housing program should set parameters that strongly encourage low-cost solutions, but then leave the definition of the mix to the states.

Modest per-unit subsidy matching household savings for the lowest-income families (<2 MW)

7.14 For the lowest income groups, credit may be inappropriate due to their low and unstable cash flows and high collection costs relative to the loan amount. Up front subsidies are particularly important for this group and may be the least expensive route to supporting access to housing. To the contrary and in an attempt to serve low/moderate-income groups, government agencies have attempted to lend to the lowest income groups – currently through the state housing institutes and in the past through FONHAPO. These public agencies do a poor job of originating and servicing loans because they lack the systems and governance structure necessary for credit discipline. The recipients of

[99] Surveys also consistently show those low-income households prefer to stay in their neighborhoods and fix up their existing unit rather than to move. Revitalizing existing neighborhoods with investment has environmental as well as cost benefits because it uses less land and less infrastructure capacity.

direct OREVI loans, as those of direct public credit worldwide, do not take them seriously, and arrears rates are astronomical.

7.15 In such cases, simply making a small up-front grant to households has many advantages relative to extending a loan that ends up becoming mainly a subsidy. Most fundamental, this method avoids generating widespread non-payment that undermines commercial credit from moving down market and contaminating the practice of credit. It also simplifies program administration. Programs avoid entering into the charade of credit with all the record keeping, costs in personnel, and political problems that uncollectable public loans create.

Modest subsidies matching loans and savings for higher income households (2-4 MW)

7.16 For households earning approximately 2 to 4 minimum wages, the subsidies could accompany micro credit and savings. For households earning approximately 3-4 minimum wages, the subsidies could accompany mortgage finance and savings.

7.17 A reasonable base of private MFIs active in business micro lending exists, on which to build a practice of housing micro-finance - a key part of the "banco social" called for in Mexico's National Development Plan (2000). Joining the subsidy with the loan can foster the development of the practice of housing micro-finance as it reduces the loan-to-value ratio of the credit and, hence, increases the security of the loan, because the subsidy represents a substantial share of the cost of the housing solution. It can also accelerate the benefits of the subsidy and housing by increasing investment capacity through leveraging of household resources.

7.18 The threshold for the level of household income and loan amount at which micro-finance becomes attractive to lenders will vary with the type of financial institution. These thresholds will be lower for micro-finance institutions (MFIs) than for housing SOFOLES, and must be analyzed as part of program preparation. Current practice gives an indication of these levels for MFIs. For example, FUNHAVI works with households earning as little as two minimum salaries and seeking loans of only $10,000 Mx pesos. Applicants to a low-income housing program above these thresholds (in income and funding amount) could be required to simultaneously apply for a loan (and take it if offered) as well as a subsidy with the same application form. This is the method that Costa Rica uses successfully in its direct demand subsidy program (see Box 7.1).

7.19 In order to reach a wide number and variety of originators, housing micro-credit is best funded through a second-tier institution. Various Central Government second-tier financial institutions could serve this purpose in the Mexican case and bear further examination. The credit facility that is now in design with the Ministry of the Economy may be the most logical option. This credit facility is to operate through a trust supervised by the Ministry of the Economy and a specialized second-tier micro-finance institution that, in turn, rediscounts micro loans of a wide range of qualified first-tier financial institutions.

7.20 Subsidies can also be matched to mortgages to expand the range of accessibility of finished housing. The PROSAVI program is a good starting point. Suggested reforms would include opening the program to mortgages from any qualified lender and shifting the focus from developer to homeowner. Most importantly, the subsidy program must be designed to provide progressive housing benefits. One such mechanism could be to cap the size of subsidy received with relation to the life of the loan. For example, the cap may be MX$1,000 in subsidy for each year of the matching loan, with a maximum of MX$10,000. In this way, the GoM subsidizes a higher proportion of the house cost for the lower income family, assuming that the lower income family opts for a cheaper unit.

Box 7.1 – The Costa Rican Direct Demand Subsidy Program

Costa Rica, with a population of 3,300,000, has 786,600 housing units. Approximately 100,000 of the housing units are informal. The Costa Rican direct demand subsidy program was started in 1987 and modeled after the Chilean program. The financial structure of the program consists of the following elements.

- *First,* a subsidy voucher is provided at amounts that decline as household income increases. Roughly eighty voucher amounts exist, geared to small variations in household income. The largest voucher – which goes to the lowest income households – has a value of about US $4,000. Products eligible to be bought with the voucher include: construction on lots already owned by the family (50.7%); purchase of lot and construction of a unit on this lot (30.7%); purchase of an existing new unit (17.2%); and improvement (1.2%).
- *Second,* a mortgage loan given by an "authorized entity", including government banks, NGOs, cooperative federations, and savings and loans. These entities have authority to choose beneficiaries, deliver the direct subsidy, and extend a loan to complement the direct subsidy and the household's down payment. Households go to the authorized entities and ask them how much they can afford to pay for a housing solution. The authorized entity informs the households of the maximum price of the solution, the loan amount, and the required down payment to the family. The household then looks for a housing solution with this maximum price. The government housing bank (BANHVI) then buys the Authorized Entities' social housing portfolio at below market rates.
- *Third,* beneficiaries provide a down payment. At its initiation, the program attempted to re-capture the subsidy from the household when the house was sold – similar to the concept of a soft second mortgage used in U.S. affordable housing practice. Efforts to recapture the subsidy were abandoned in the early 1990s when the 'soft second' was turned into a grant.

In contrast to Chile and most other countries that have adopted direct demand subsidies, the program of Costa Rica has succeeded in reaching low-income groups. The main reason is that a group of sophisticated NGOs experienced in housing development – a rarity for developing countries – have become the main developers under the program rather than for-profit developers. At first, many for-profit developers used the direct subsidy program as well. Since 1994, for-profit developers have largely stopped using the program, mainly because of increased political and economic risk. NGOs have stepped in to fill this gap. Some NGOs help households construct a unit on an existing lot by providing technical assistance. Other NGOs that are "authorized entities" that assemble groups of their members, extend the credit, and develop units through contracting for-profit construction firms.

The program has proved stable until recently, delivering a significant number of direct subsidies each year since its inception in 1987 through the mid 1990s. The total number delivered from 1988 through 1998 (93,049) represented 13% of households in the country. Government funding also proved regular, although below mandated amounts. A large share of beneficiaries come from the informal sector. Authorized entities have experienced few arrears on these loans. The direct demand subsidy system has also proved politically popular. Since the mid 1990s, however, Government fiscal stress has resulted in a decline in the real value of funding for the direct demand subsidy program. Various stop-gap measures - such as issuing of bonds for funding the direct demand subsidy – have proved problematic, and complicated the operations of the program.

Source: Ferguson (2001).

Federal government funds subsidies through an integrated program and channels funding through state government OREVIs

7.21 The federal government should fund the bulk of the direct demand subsidy, while state housing institutions are the organizations best poised to channel this subsidy because they have access to or leverage over other key elements of low-income housing - in particular, land, development regulations, and execution of foreclosure laws. Federal funding for direct up-front subsidies to support finished and progressive housing and to match mortgages, micro credit and savings could be unified into one integrated system. The total subsidy amount per household should be capped, providing greater incentives to opt for low cost housing solutions and increasing the equity of subsidy allocation. During a transition phase, the FOVI capacity for subsidy distribution should be capitalized upon, and may be the departure point for building a unified subsidy program, combining PROSAVI and VIVAH. To increase transparency and reduce the risk of corruption, the subsidy should be implemented with two independent bodies, one (FOVI) which delivers the subsidy, and another (the Housing Commission-FONHAPO) which approves and evaluates the programs for which the subsidies are applied.

7.22 In its role as policy maker and supplier of funds, the federal government should set the principles and parameters that allow state OREVIs considerable flexibility to adapt the subsidy program to local conditions. Desirable principles include the ability of the family to choose among types of units and locations, private-sector development and finance, a minimum down payment and incentives for greater down payments, the requirement that households above a threshold in income and funding amount apply for and take out loans as well as subsidies, and eligibility of a wide range of low-cost solutions. Ranges could be set for the subsidy amount, states' matching contribution in land or cash, minimum down payment amounts, and other characteristics to allow the states to tailor the program to local needs.[100] Rather than specify the type of housing solution (as is currently the case with VIVAH, which specifies a for-purchase new basic core unit, and PROSAVI, which specifies finished housing), states should be allowed to support a full range of low-cost housing solutions.

7.23 Such flexible federal support for local and state government execution is international best practice in low-income housing production programs. The main housing production program of the U.S. Department of Housing and Urban Development - called HOME - works in this fashion (see Appendix II for a summary of this Program's operation).[101]

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[100] Joining the subsidy with the loan can foster the development of the practice of housing micro-finance as it reduces the loan-to-value ratio of the credit and, hence, increases the security of the loan, because the subsidy represents a substantial share (possibly 30% to 60%) of the cost of the housing solution.

[101] In the United States, the HOME program funded by HUD and implemented by state and local governments works similarly. In essence, states and local governments receive a block grant that can be used for a wide variety of purposes within certain parameters - see Appendix II for a description. Another example is the U.S. rental assistance program - the housing voucher program - which pays a fixed amount towards rent - that selected low-income households can use to live in the location and building of their choice (providing the owner agrees).

Competition among private-sector entities (for-profits and NGOs) for housing development and finance

7.24 The best low-income housing programs harness the private sector and promote competition among private-sector firms - sometimes, with public-sector providers. VIVAH serves as an example. State and local governments act as developers by securing land, contracting the builder of the subdivision, selecting households, and selling the resulting units. Development by government may be the only option in some cases - such as distant rural municipalities. In most areas, however, private developers should be encouraged to bid for this function on an even playing field.[102]

Land development for low/moderate-income households

7.25 Land oligopolies and conversion problems on the urban fringe complicate housing development in many countries. Local and state governments in developing and advanced industrialized countries typically use two different approaches to promote low/moderate-income land development: (a) reduce subdivision standards and streamline the process to stimulate a low-income land development industry, and then regulate this industry; and (b) strengthen the capacity and resources of an entrepreneurial public agency to perform the first step in land development - conversion of agricultural to urban land - after which the agency sells parcels to private entities (for profits and NGOs) for subdivision development.

[102] In cases in which a government agency is a competitor in a bid competition with private sector firms, central characteristics of a level playing field include impartial judgment of the bid and access of the private sector to land (if owned by government) on the same terms as the government agency.

Box 7.2: Low Moderate-Income Land Development in El Salvador

Unique in Latin America, El Salvador has a thriving national industry of developers supplying legal low cost subdivisions. Minimized regulations make land acquisition affordable through a category of progressive subdivisions for low-income residents. These developments require the provision of demarcated lots of a minimum of 100 m^2, with green spaces and planned roads, without costly and time-consuming additional up-front infrastructure investment. This arrangement facilitates private sector financing, as well as diminishes the need for land invasions.

Housing developers account for between 50%-70% of the annual growth in housing for low-income households and 26% of all new housing in El Salvador. While 200 firms are reportedly active, 3 firms have been operating on a significant national scale for 20 years or more. These developers provide 8 to 12 year loans with affordable payments of US$15-US$25 per month for lot purchase. Many of these developers then offer additional financing for self-constructed housing or community infrastructure. At the beginning of the 1990s an estimated 50% of new urban housing and 70% of new rural housing was informally constructed by its inhabitants.

Argoz, the country's largest developer, has financed over 630 projects throughout El Salvador, earning over US$9 million last year. The company is currently financing 250,000 lots, supplying 10-year rent-to-own contracts for families with monthly incomes of approximately US$170. Families do not have to provide a down payment, and pay fixed fees of US$17 per month, which include insurance. The company offers additional financial services, including immediate loans of up to half of the amount paid on the lot at any time in the transaction. Families can access these funds for emergencies and home improvements or expansions. In addition, all of Argoz's developments have community-elected boards that can organize group financing for infrastructure projects, using their own property as collateral.

Source: Ferguson (2001).

7.26 The experience of El Salvador demonstrates the enormous positive impact of the first approach - reducing land-development standards and streamlining its regulation. The Government of El Salvador undertook wholesale reform of the legal and institutional structure of land development, cadastres, and the property register (see Box 7.2). Before these reforms, government required full basic infrastructure (electricity, individual water connection, individual sanitation, drainage, and paved roads) prior to sub-dividing. These requirements made the resulting development unaffordable to the majority.

7.27 Under the reformed process, developers provide the sub-division layout (pegging out individual lots, common facilities, and roads), basic water (standpipes) and sanitation (a latrine), and legal title. These changes greatly lowered upfront costs, allowed incremental upgrading of infrastructure, and stimulated a low-income development industry that now accounts for over one-half of all new lots and housing solutions in the country per year. Since 1996, two hundred low-income development firms have produced lots at a rate far above new household formation and rapidly expanded the developed areas of the country's medium and large cities. As a result, lot prices have gone down in real terms by 20% since the mid 1990s. Interestingly, these low-income land developers have also chosen to extend micro loans to families that purchase their lots for construction of a basic home (on a lease to purchase basis).

7.28 In step with reform of subdivision standards and processes and galvanizing widespread low/moderate-income development, state and local governments must increase regulation of the progressive industry to avoid abuses. Low-income subdivisions have occurred in some states in Mexico; however, Mexican states and local governments often lack a framework for regulating these subdivisions. El Salvador is

creating a certification system for land developers that sets standards for the terms on which they make financing available to families for buying lots and constructing basic units. In addition, government can play a role in guiding the progressive development of neighborhoods. In formal finished housing developments, all services and amenities are organized by the developer and are included in the house price. In progressive developments, these services are gradually added to a populated neighborhood over several years, which increases the transaction cost of planning and construction. Government can play a role by agreeing on basic subdivision layouts a priori, and subsequently working with communities to organize, plan and execute investment priorities.

7.29 Market-failure may preclude a strong role for the private sector in low/moderate-income land development even when the subdivision standards and processes are reformed. Such market failure characterizes Mexico low/moderate-income land development, because of a lack of construction finance for low-income subdivisions and the complexities of *ejido* land conversion. Hence, relying solely on the private sector for low/moderate-income land development may be problematic.

7.30 The second approach to the low/moderate-income urban land development problem consists of strengthening a public agency to conduct the first step in the process – the conversion of rural to urban land. This conversion involves assembling large tracts, titling, permitting, and provision of trunk infrastructure. Once converted, the public sector then sells the land to private sector entities - both NGOs and for-profit firms - for low/moderate-income subdivision development. Importantly, this second approach may not meet the needs of the poorest families, as titled-serviced land, even when publicly supported, cannot be sustainably placed on the market at prices accessible to the lowest income strata. More likely, this approach will serve the moderate poor.

7.31 The experience of Metrovivienda in Bogotá exemplifies this approach. Metrovivienda, assembles large tracts of land through condemnation and joint ventures with the landowners, provides trunk water and sewer infrastructure, and sells the resulting parcels to developers for sub-dividing and building out. These developers include non-profits that build starter, expandable units for moderate-income households (see Box 7.3).

Box 7.3: Massive residential land development on the urban fringe in Bogotá, Colombia

The mayor's office of Bogotá created Metrovivienda in 1998 as a public enterprise. Essentially, the institution buys large tracts wholesale (often getting a lower price), extends infrastructure, subdivides the land, and sells the resulting parcels also at low prices to builders. In turn, builders commit to construct a minimum number of units of a specified quality (size, appointments, etc.) and sell these units at or below a ceiling price. The process works as follows.

- Metrovivienda buys large tracts of land zoned as rural or semi-rural. The organization typically pays substantially less than if this land were urban. Payment can consist of cash or of an interest (joint venture) in the subsequent development. If the landowner is intransigent, Metrovivienda uses its condemnation powers to expropriate land and pays the owner a fair market price set by legal fiat.
- In conjunction with land acquisition, Metrovivienda applies for and obtains permits from other government entities for development.
- The organization then puts in place trunk infrastructure, and establishes parks and other common areas in conjunction with other authorities. Infrastructure provision starts with building trunk water and sewer lines, followed by electricity, telephone, and roads.
- Areas reserved for commercial establishments are sold.
- With infrastructure in place, Metrovivienda sells parcels to for-profit and non-profit builders, which commit to construct and sell housing up to a maximum price. The builders first construct sample units to market their future developments. The subsequent competition among these builders for clients helps control prices and ensures quality. Thus, builders pass on a substantial share of the great cost advantages created by Metrovivienda resulting from lower land purchase costs, larger scale, and quicker development times to homebuyers.
- Metrovivienda delivers no subsidies itself, although the organization sometimes organizes families to access direct demand subsidies funded by central government to reach lower-income households.

After its first two years of operation, Metrovivienda has bought 320 hectares, and has 1,800 units in construction in three projects under development. The build out of these parcels will result in 31,000 units (100 per hectare). With a staff of 38, the organization is lean relative to most government housing agencies.

Source: Ferguson (2001)

7.32 OREVIs can generate substantial sums in the land conversion process. In the state of Veracruz, for example, the OREVI generated a profit of 32% on its expenditures in land conversion of a parcel used for an INFONAVIT project.[103] Expansion or wholesale adoption of this approach would require institutional and legal changes. As was discussed in chapter 5 of this report, state governments lack a legal power critical to a more effective role in land development - that of expropriating *ejidos* - which is currently exclusive domain of the federal government.

7.33 Importantly, international experience points out that successful land development agencies have very specific and limited mandates and concentrate on what the private sector cannot do – assemble tracts of land for development and provide costly trunk infrastructure. Agencies should be: i) small and focused on specific geographic areas, specific target groups, or types of projects; ii) removed from the direct control of

[103] The Vera Cruz OREVI initiated the subdivision called Villa Rica by purchasing raw agricultural land without infrastructure for $30 Mx pesos per mt2. Servicing this land cost $350 Mx pesos per mt2, for a total cost of $380 Mx pesos per mt2. The OREVI then sold this land to a private-sector developer for an 800-unit INFONAVIT project at $500 Mx pesos per meter. This below-market price still netted a profit of $120 Mx pesos per acre - 32% on the OREVI's investment cost. Source: interview with José Salomon, director of the Veracruz OREVI.

government, making them non-profit enterprises; iii) their designs include opportunities to reward professional capacity and risk-taking; and, iv) with a narrow mandate, allowing flexible operating procedures (Dowall 1991).

7.34 A low-income housing program in Mexico requires a combination of these approaches, and must provide support and technical assistance to OREVIs to foster various modes of low/moderate-income land development. In addition, use of up-front subsidies for land purchase should be an option available to households, as well as their use for home improvement and finished housing purchase.

Federal funding contingent on state governments meeting benchmarks for policy and regulatory updating

7.35 Investment alone without resolving the supply bottlenecks in housing and land markets will raise costs and reduce the economic value of homeownership. State governments have influence on a wide range of factors affecting housing and land markets. The most critical include subdivision standards, building permits and procedures, and property taxes and other factors that determine the carrying cost of land and - hence - influence land concentration.[104] Incentives should be provided to state and local government to improve land titling, registry and information systems to reduce the cost of land transactions, along with updating norms and standards to allow for lower cost legal land and housing options. The program design should provide subsidies and other investment funds to state governments for low-income housing production to the extent that these governments meet reform benchmarks.

Fiscal resources toward upgrading neighborhoods

7.36 The provision of infrastructure in slums and squatter settlements has been an effective method for assisting the poor and for triggering further private investment as owners upgrade their individual units and business are drawn by the benefits of improved physical environments. The supply of public goods such as streets, drainage, public lighting, sidewalks and parks and public spaces and even toll goods such as secondary water and energy distribution, sewerage, and trash collection can all be difficult on a cost recovery basis due to the externalities and non-excludability of these goods. However, these goods can be crucial to increasing house quality and value to residents. In situations in which revenue generation by the fiscal authorities is difficult, a simple and efficient mechanism to support low-income neighborhoods may be the supply side approach of subsidized provision of the 'public' aspects of housing. <u>During the transition to improved local government planning and financial management, public investment in the public realm may be the most efficient and effective mechanism to stimulate and complement private investment by homeowners in their land and unit</u>.

[104] The property tax and other charges on land ownership are an important factor in controlling speculation. If these charges are reasonable, landowners have less incentive to hold property off the market for speculative ends. For this and other reasons, the noted nineteenth century U.S. scholar of land and housing, Henry George, advocated a tax on land as the economically optimum and most socially equitable means of funding local and state government.

7.37 Some large-scale programs have been very successful and efficient. Key to the success of programs have been community participation in design and management, appropriate levels of service and technology, and integration with other critical needs such as economic development. Investments should include at least some level of cost recovery to assure that investments are high priorities of the beneficiaries and will be maintained.

GENERAL ESTIMATES OF PROGRAM COST

7.38 The 2000 federal government investment in housing was approximately US$280 million.[105] This includes investments through PROSAVI, VIVAH, FONHAPO, and capital transfers to FOVI. The federal funds dedicated annually to local infrastructure through Ramo 33 total approximately US$1.4 billion.[106] To these amounts should be added the programs supported by states and municipalities in land, subsidized credit, and up-front subsidies. Though the federal government's total low income housing bill is substantial, it is only 0.3% of GDP, in comparison to 3.3% spent on education and 2.0% spent on health annually.

7.39 Stepped up government effort will be required to address the growing demand for housing. Chapter 1 of this study projected demand for housing and home improvement broken down by household income. Table 7.2 below shows the results of applying the proposed program to the demand estimates. While the cost estimates are rough approximations, the significant budgetary increase indicated highlights the pressing need of the government to make strategic spending decisions. Options for cost reduction include:

- Limit support accompanying mortgage finance,
- Reduce allotment for direct demand subsidies,
- Increase density of urban development,
- Reduce infrastructure service levels, and
- Use matching grant formulas for investments in public infrastructure and services.

[105] Estimated based on Vivah, PROSAVI, and FONHAPO 2000 budgets and average transfer to FOVI in previous years. This does not include recent transfer of capital to FOVI from the trust fund FIDEC.
[106] FAIS budget estimate from 1999.

Table 7.2: Annual Investment Cost for Housing Support+

Action	Target Households	Public Role	Estimated Public Cost	Funding Sources
Up-front Subsidy with Mortgage	3 – 4 MW (80,000 hh)	Up front demand side subsidy	US$176 million	Household savings and monthly payments Private lenders Federally funded subsidy
Up-front Subsidy with Micro Finance	2-4 MW (221,00 hh)	Up front demand side subsidy Land subsidy	US$332 million* for demand subsidy Land cost unknown/ not included	Household savings and monthly payments Private lender (MFIs) Federally funded subsidy State funded land
Up-front Subsidy Matching Hh Savings	<2 MW (286,000hh)	Up front demand side subsidy Land subsidy	US$305 million** for demand side subsidy Land cost unknown/ not included	Household savings Federally funded subsidy State funded land
Trunk Infrastructure	All new housing 730,000 units	Finance all cost	US$576 million	Some cost recovery possible through tariffs and fees
Urbanization	All new housing 730,000 units	Finance all cost	US$2,602 million	Some cost recovery possible through tariffs and fees

Source: Own elaboration. +This table does not include non-investment/subsidy program cost, e.g. regulatory reform or capital subsidies or advisory services for micro finance. The table assumes a maximum up-front subsidy of approximately US$2,000 per hh to match mortgage, micro-credit or savings. *NPV of subsidy for 1 yr. for all beneficiary hh. Assume max subsidy spread over 10 years. **NPV of subsidy for 1 yr for all beneficiary hh. Assume max subsidy spread over 20 years.

7.40 Efforts to reduce the cost of housing subsidization should be matched with efforts to reduce the cost of housing. The previous chapters emphasized the cost of housing finance and a strategy for expanding access to and reducing the cost of housing finance. In addition, fiscal and regulatory policy can be revised and used to maximize liquidity in the housing and land markets. Regulatory measures can be assessed and streamlined, and most importantly transparency and predictability can be improved. Fiscal policy can be used to increase cost recovery, but also to stimulate investment in low-income housing and tax land speculation, thereby increasing supply and reducing costs.

CONCLUSIONS

7.41 In conclusion, Mexico requires a substantial subsidy program for low-income housing over the next two decades to meet the immediate challenge of housing the baby boom of the 1960s and 1970s as it comes of age. However, subsidies by themselves are not enough. Essentially, a large subsidy program serves to buy time to develop market solutions. In the Mexican context, a low-income housing program should place priority on sustainable methods for low/moderate-income land development and building the practice of low/moderate-income home lending, including commercially viable housing micro-finance. Mexican state governments have direct influence on many of the bottlenecks in land and housing markets beyond the reach of the federal government, but

can be influenced by federal subsidies to take action. Only such reforms can strengthen the key economic role of homeownership in building household wealth and enlarging the middle class, as well as reducing poverty. Framing the relationship between federal government and state/local government with respect to housing is essential to these goals. International best practice suggests that the central government should provide the bulk of subsidy funds, set flexible parameters for state and local-government execution of the program, and hold them accountable for results.

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APPENDIX I: TIME HORIZON FOR POLICY RECOMMENDATIONS

Area of Intervention	Short Term	Medium Term	Long Term
1. HOUSING POLICY AND COORDINATION	• Housing Commission with sufficient funding and leverage to assure policy implementation.	• Housing Commission with sufficient funding and leverage to assure policy implementation.	• Housing Commission with sufficient funding and leverage to assure policy implementation.
2. DEMAND SIDE SUPPORT FOR LOW INCOME HOUSEHOLDS – UP FRONT SUBSIDY	• Unify PROSAVI and Vivah subsidies, for one subsidy to match mortgages, micro credit and savings for finished and/or progressive housing. • Increase down payment % requirements above current PROSAVI levels, make subsidies shallower than PROSAVI. • Housing Commission establishes subsidy levels, targeting and program certification (possibly FONHAPO works on program certification and evaluation) • OREVIs channel federal subsidies according to local conditions – maintaining ability of families to choose among housing solutions, private finance, min. down payment. • Supply bottlenecks to be address prior to large scaling-up of demand subsidy: shift house lending focus to buyers rather than suppliers, assess impact of eliminating bridge financing to builders, and policy/program to increase urban land supply. • Make federal funding contingent on state's regulatory updating (land titling, registry and information systems, update norms and standards to allow for lower cost legal land and housing options) and meeting benchmarks. • OREVIs stop originating loans and move toward grants	• Policy, targeting and evaluation by Housing Commission • Subsidy distribution independent agent (possibly SEDESOL), building on the FOVI experience. • OREVIs channel federal subsidies according to local conditions • Scaling up of subsidies matched by policy/program to increase urban land supply • Make federal funding contingent on state's regulatory updating and meeting benchmarks. • OREVIs provide grants for housing rather than loans.	• Policy, targeting and evaluation by Housing Commission. • Subsidy distribution independent agent. • OREVIs channel federal subsidies according to local conditions. • Reduce/phase-out subsidies which support access to mortgage mkt, focus public funds on lowest income segments (<3 MW) • Make federal funding contingent on state's regulatory updating and meeting benchmarks. • OREVIs provide grants for housing rather than loans.

3. Increasing Urban Land Supply	• Prepare institutional reform for decentralization of land transfer process (expropriation of ejidos for urban lands) to states and munis. and integration with urban management. • Federal government to set broad standards for titling and registration – states and muni. to control decisions regarding land development and land use regulatión. • Eliminate government role as land developer – pass to the private sector. State and muni. to focus on planning, regulatory and fiscal mechanisms. • GoM (fed, state, and muni) carry out inventory and assessment of current instruments – particularly expropriation poverty and urban land markets impact. • States and muni. establish low-income friendly standards for urbanization and construction. • State and muni. govt. to develop regulatory framework to manage progressive development. • Munis work with communities to prioritize, plan and execute progressive neighborhood development. • Increase public invest in basic trunk infrastructure.	• Decentralize process of ejido transformation to urban private property. • Federal government to set broad standards for titling and registration. • Align land management policies and instruments according to policy objectives and results of inventory and assessment. • State and muni. to increase regulation of progressive housing industry. • Munis work with communities to prioritize, plan and execute progressive neighborhood development. • Increase public invest in basic trunk infrastructure.	• States and munis manage transformation of ejido property. • Federal government to set broad standards for titling and registration. • Munis work with communities to prioritize, plan and execute progressive neighborhood development. • Maintain public investment in basic trunk infrastructure.
4. Provision of Basic Infrastructure and Services	• Increase municipal capacity to plan and manage infrastructure (e.g. option for reelection, professionalize municipal staff, training). • Clarify regulatory structure for PSP in infrastructure • Adjust regulations and norms/service standards to allow for progressive infrastructure. • Increase fiscal resources for basic infrastructure investment, especially during transition to improved muni. planning and financial management.	• Increase municipal financial and technical capacity. • Increase infrastructure/service cost recovery and develop targeted consumption subsidies. • Increase coordination between entities responsible for planning, construction and maintenance. • Up-date cadastres and tax structures and collection.	• Increase muni. financial and technical capacity. • Increase infrastructure/ service cost recovery and execute targeted consumption subsidies. • Maintain coordination between entities responsible for planning, construction and maintenance.

5. Popular Finance to Support Progressive Housing	• Increase commercial and community based savings instruments. • GoM support for dissemination of best practices in design of housing micro finance programs and products, and exchange visits to encourage MFIs to increase lending for home improvement. • GoM support MFI access to longer term funding by adequately priced guarantees and tools to attract private capital market, complement with time-bound incentives for housing micro finance experimentation and MFI institutional strengthening. • GoM grant based TA to help MFIs assess housing as potential line of business. • GoM development models for efficient (subsidized) construction TA to match private micro-credit for housing. ▪ For micro-credit, develop interim measures for oversight of MFIs during the transition to the new Ley de Ahorro Popular.	• Increase commercial and community based savings instruments. • GoM support to demonstrate best practices in design of housing micro finance programs and products, and exchange visits to encourage MFIs to increase lending for home improvement. • GoM support for MFI access to longer term funding by adequately priced guarantees and tools to attract private capital market, complement with time-bound incentives for housing micro finance experimentation and MFI institutional strengthening. • GoM provides efficient (subsidized) construction TA to match private micro-credit for housing. ▪ Assure that implementing regulations of Ley de Ahorro popular include proper measures to manage increased micro credit for housing by MFIs.	• Increase commercial and community based savings instruments. • GoM provides efficient (subsidized) construction TA to match private micro-credit for housing.
6. Mortgage Finance			
a.) Foster liquid mortgage markets	• SHF provision of insurance and guarantees. • SHF to strengthen norms and standards for credit origination. • Revise FOVI auction mechanisms to price credit reflective of risk.	• SHF provision of insurance and guarantees. • SHF to strengthen and homogenize norms and standards for credit origination	• SHF provision of insurance and guarantees. • SHF oversees norms and standards for credit origination.
b.) Decouple finance from construction	• INFONAVIT, FOVISSSTE, and FOVI/SHF move from administrative house price setting to valuations. • Remaining FOVI/SHF credit auctions restricted to financial intermediaries, exclude housing developers.	• INFONAVIT, FOVISSSTE, and SHF move from administrative house price setting to valuations.	
c.) Reduce private sector crowding out	• Increase mortgage rates for INFONAVIT and FOVISSSTE.	• Bring INFONAVIT and FOVISSSTE mortgage rates to market prices.	• INFONAVIT and FOVISSSTE no longer

	• Gradually increase portability of INFONAVIT funds. • Carry out analysis of potentially large public liabilities as repayment flows to INFONAVIT decline due to increased portability (43B) • Private sector (commercial banks and SOFOLES) increase mortgage origination and begin secondary market activities.	• Gradually increase portability of INFONAVIT funds. • Private sector (commercial banks and SOFOLES) increase mortgage origination and expand secondary market activities. • INFONAVIT and FONVISSSTE scale back mortgage origination.	originate mortgage loans. • Private sector dominates mortgage origination. • Private sector, INFONAVIT and FOVISSSTE in secondary market activities.
d.) Strengthen regulatory frameworks	• Clarify and unify regulatory requirements across INFONAVIT, FOVISSSTE, FOVI & SHF.		
e.) Strengthen INFONAVIT operations during phase-out of lending	• Prepare enabling legislation for altering mortgage instrument and servicing standards. • Continued improvement of NPL recovery. • Move to risk based lending and product differentiation across members. • Establish uniform scoring system for whole country to replace directing finance to regions or sector.	• Continued improvement of NPL recovery. • Use risk based lending and differentiated products across members. • Implement uniform scoring system. • Begin to phase out mortgage origination.	• End mortgage origination, move to secondary market activities. • Continued improvement of NPL recovery.
f.) Strengthen FOVISSSTE operations during phase out of lending	• Modernize legal structure for more flexibility in granting credit: greater independence from ISSTE, sectoralize; separate bad debt from good. • Move to risk based lending and product differentiation across members. • Improve NPL recovery.	• Use risk based lending and differentiate products across members. • Continued improvement of NPL recovery. • Begin to phase-out mortgage origination.	• End mortgage origination, move to secondary market activities. • Continued improvement of NPL recovery.
h.) Promote increased involvement of Commercial Banks/SOFOLES	• Increase mortgage origination and secondary market activities.	• Increase mortgage origination and secondary market activities.	• Increase mortgage origination and secondary market activities.

APPENDIX II

MECHANISMS FOR SUBSIDIZING AFFORDABLE HOMEOWNERSHIP IN THE UNITED STATES[107]

Almost every municipality and county in the United States has some type of homebuyer assistance program that provides conditional grants or loans. In the U.S. the monies available are usually federal funds, coming primarily from the department of Housing and Urban Development (under the H.O.M.E. Program) and managed by the state's housing finance agency. HUD sets the structure of assistance programs that are then developed by state agencies and other levels of government.

The funds are distributed annually to the local entity. The local entity has ample flexibility in how to use these funds, according to the needs of its community. The most common form of assistance is through soft second mortgages. Usually, if the funds are repaid to the local entity, it can "recycle" them, that is, it can lend them again to another low-income buyer.

This appendix will explain the HOME program and describe soft second mortgages along with some alternatives. Then, it will briefly describe the role of Fannie Mae in supporting soft seconds and it will conclude with a few success stories.

HOME Program

Established under the Home Investment Partnerships Act, this program is an effort of the federal government (through HUD) to provide decent, safe, and affordable housing to low-income families.

HOME allows the State and local governments (known as participating jurisdictions or PJs) to design and implement their own affordable housing strategies. It funds technical assistance activities and support to community-based nonprofit organizations. The program requires that the PJs match a portion (25%) of their HOME allocations from non-federal sources. This requirement can be met not only with cash, but also with the value of donated land, construction materials, volunteer labor, and forgone interests or taxes.

Allocation of funds

Every year HUD determines the amount of HOME funds that States and local governments are eligible to receive using a formula designed to reflect relative housing need. After money has been set aside for the US's insular areas and for nationwide HUD technical assistance, the remaining funds are divided between States (40%) and units of general local government (60%).

[107] From Ferguson (2001).

States are automatically eligible to receive their formula allocation, or a minimum of $3 million. Local jurisdictions eligible for at least $500,000 under the formula can also receive an allocation. Communities that do not qualify under the formula, can band together with one or more neighboring localities in a legally binding consortium whose members' aggregate allocations would meet the threshold for direct funding. Communities that do not qualify may still participate in the HOME program by applying for funding from their State's HOME allocation.

Application for funding

Shortly after HOME funds become available each year, HUD informs eligible jurisdictions of the amounts earmarked for them. A newly eligible jurisdiction must notify HUD of its intent to participate in the program. Then, like other PJs, it must prepare (and HUD must approve) a Consolidated Plan, which forms the blueprint for its affordable housing strategy. The Consolidated Plan process enables a jurisdiction to document its housing and community development needs and to formulate a strategic plan for addressing those needs. It also shows how the proposed use of HOME funds fits into this broader, coordinated strategy.

Uses of funds

Unlike traditional categorical grant programs, HOME funds give communities the flexibility to undertake a broad range of affordable housing activities. States and localities may use the funds to:

- Acquire property
- Construct new housing for rent or homeownership
- Rehabilitate rental or owner-occupied housing
- Improve sites for HOME-assisted development or demolish dilapidated housing on such sites
- Pay relocation costs for households displaced by HOME activities
- Provide financing assistance to low-income homeowners and new homebuyers for home purchase or rehabilitation
- Provide tenant-based rental assistance or help with security deposits to low-income renters
- Meet HOME program planning and administration expenses

Program Targets

Homeowners assisted with HOME funds must have incomes at or below 80% of the area median income. Assistance must be for the owner's principal residence and carries with it provisions intended to ensure that, in the event of resale or default, the home either remains affordable or the HOME subsidy is recaptured to be used again. The estimated value of the property after assistance must not exceed 95% of the median area purchase price.

At least 90% of HOME funds used for rental housing must be invested in units that are occupied by families earning no more that 60% of the area median income. The rents of the HOME-assisted units must be affordable to low-income families and remain affordable for a reasonable amount of time.

The program also helps foster the growth and capacity of local nonprofits by requiring that each PJ sets aside 10% of its allocation to fund housing that will be owned, developed, or sponsored by entities designated as community housing development organizations. These are private, nonprofit agencies organized under State or local law, accountable to the community they serve, and committed to and experienced in providing decent and affordable housing for low-income people.

Soft Second Mortgages

Soft Second Mortgages are used to reduce the conventional mortgage debt for low-income homebuyers. If a buyer finds a home, but he or she does not qualify for a loan for the entire price, the Secondary lender can go in and lend him/her the difference between what they qualify for and the purchase price of the property. The goal is to allow them to make their monthly payments, and avoid paying mortgage insurance (required when a loan is above 79% of the house's sale price).

The loan is for all of the remaining closing costs and/or down payment, other than what is covered by the first mortgage, up to 20% of the purchase price. It can be designed to require some funds from the borrower, or no funds at all.

Some regulated lenders cannot make these loans, so often a government agency, a City government or a nonprofit organization makes them. The second mortgage lender agrees not to foreclose so long as the first mortgage is in place.

Most loans are evidenced by a promissory note and a subordinate lien placed on the real estate. The terms of the loans are normally zero or very low rates of interest. Some soft second programs are designed to be grants and are only repayable if the borrower resells the house within some minimum period of time.

To avoid speculation, sale prior to 15 years requires full pay back. At other times it has been full pay back through 10 years and between 10 and 15 years reduction of the amount at 20% per year. In general, if the buyer remains in the home beyond the 15 years, the second mortgage disappears.

Some programs provide for a "shared appreciation formula" in the event of a resale by the recipient (see the "Fannie Mae" section for details).

Alternatives to Soft Seconds

Some cities have programs in which the City will build new homes or purchase older homes and rehabilitate them to sell to low-income homebuyers. The City can sell the

homes for less than it invested in the construction. The amount of subsidy in each of these programs varies, according to each individual situation.

Another similar type of "soft second" used heavily in urban centers is to subsidize the cost of construction of housing in markets where housing values are below the cost to construct them. Sale prices of these properties may be at market value or less, restricted to households with incomes at or below some level of the area median. Sometimes, there are only partial restrictions to promote economic diversity and not concentrate all lower income households in a neighborhood (which recognizes that a healthy community exists when there is economic diversity and enough purchasing power to support retail stores and other services)

Some cities also have a homebuyer assistance grant, which pays up to 1/2 of closing costs, and down payment, not to exceed $2,000.

Many cities in the U.S. provide for long-term property tax abatements to increase affordability. Some cities (particularly in Pennsylvania) have taken this a step further and are gradually reducing the tax rate on property improvements with the idea that housing would be largely exempt and the source of public revenue would be shifted to the value of land parcels. This shift has readily apparent advantages; it is very pro-housing, discourages holding of land vacant for speculative purposes and also stimulates job-creating investment in new construction and renovation.

Interest rate write-downs

There are two ways of accomplishing an interest-write down. The local entity can pay the lender up-front some of the interest that the lender would have charged. Another way is to get a lower interest rate is through blending two different sources of funds. Some non-profits have their own loan pools with capital investments from various sources at varying interest rates. This allows them to give a blended rate to the borrower. Maybe they can get half the money for 2% from a non-traditional source and half for 8% from a traditional lender - the blended rate would be 5% to the low-income borrower.

Fannie Mae

In general, this government-sponsored enterprise purchases first mortgages originated by a set of approved lenders. This provides a secondary market for the lenders giving them greater liquidity by not having to hold the loans in their portfolios.

Fannie Mae has a program called "Community Seconds". This program permits the purchase of first mortgage loans by Fannie Mae from its approved lenders on properties that have soft seconds (generally funded by Government). The program is a vehicle for structuring affordable housing partnerships among lenders, nonprofit organizations (other than credit unions), and government entities in a community in a way that enables them to use the limited public or nonprofit funds they have earmarked for homeownership programs for second mortgages. With it, they can make better use of the funds by spreading the subsidy as cost effectively as possible to aid the greatest number of

homebuyers. It can also provide a means by which employers can provide down payment or closing costs assistance to employees who are eligible for community lending mortgages.

A Community Seconds transaction has three components -- a low (or, in some case, no) down payment from the borrower, a conventional first mortgage that is originated and serviced by a Fannie Mae-approved lender, and a subsidized second mortgage.

Repayment of the subsidized second mortgage may be structured in any number of ways at the subsidy provider's choosing -- such as by requiring (i) fully amortizing, level monthly payments; (ii) deferred payments for some period before changing to fully amortizing, level monthly payments; (iii) deferred payments over the entire term, unless the mortgage is paid off or the property is sold before the maturity date of the mortgage; (iv) forgiving the debt over time; etc. -- as long as the terms are consistent with the types of terms Fannie Mae considers acceptable.

When the borrower's employer is the provider of the subsidized second mortgage, the financing terms may allow the employer to require full repayment of the debt should an employee voluntarily terminate his or her employment (for reasons other than those related to disability) before the maturity date of the subordinate financing.

The repayment terms of a subsidized second mortgage may allow the subsidy provider to share in any appreciation in the value of the security property in lieu of charging interest. The appreciation in value must be based on (1) the actual sales price of a property that is sold on the open market, (2) the appraised value of the property, or (3) the amount of a successful bid at a foreclosure sale. When the property is subsequently sold (or foreclosed), the borrower must be entitled to the difference between the sales price or value determination and the subsidy provider's share.

The subsidy provider's share of the equity generally may not exceed the percentage derived by dividing the original principal amount of the subsidized second mortgage by the original sales price of the property.

Sample Success Stories

- The *Housing Development Fund of Fairfield Connecticut*, uses grant funds to provide soft second mortgages on individual basis to homebuyers through a program called "Adopt a House". Qualification for these loans is income driven, usually requiring an annual income of less than 50% of median income for the area. The homebuyer needs to fill out a basic loan application and must have an approval for a first mortgage (often the first mortgage lender refers the homebuyer to the fund) The loan is secured by the property (second lien) and the funds are disbursed to the trustee in the purchasing transaction. The loan is not amortized, interest does not accrue, and it is payable only if the house is sold, transferred or when the first mortgage is paid off. The process takes three to four weeks. The fund generates about 40 loans per year, with an average loan amount of $5,000.

- *Homeownership in Scranton, Pennsylvania.* The Office of Economic and Community Development joined forces with four community housing development organizations and 32 private lending institutions and mortgage companies to develop and maintain an effective program for low-income residents. The program requires new homebuyers to complete a 14-step guidance program that takes each participant through the home buying process. These steps help to ensure that all applicants are eligible for assistance, which typically comes in the form of both down payment and closing costs support. The effort was financed by HOME, Community Development Block Grants, and State funds along with additional dollars from private lenders. To date, more than 300 families have become homeowners through the program, purchasing homes with an average cost of $52,000. Since the program's inception, there have been no defaults from any homebuyer.

- *Affordable Housing Priority of North Carolina Housing Finance Agency (NCHFA).* The program provides second mortgage funds (interest free and deferred) through 35 organizations including community development corporations, other nonprofit organizations, local units of government, and housing authorities. In addition, 58 private lenders are involved in providing down payment and closing cost assistance. NCHFA provides up to $3,500 in interest-free, deferred down payment and closing costs, and second mortgages of up to $20,000. Since 1992, NCHFA has made aggressive use of its annual HOME allocations to assist approximately 3,607 low- to moderate-income homebuyers.

- *Residential Second Mortgage Assistance Program, City of Columbus, Georgia.* The program works closely with participating local homebuilders and financial institutions in developing partnerships and opportunities for homeownership. The program makes special interest-free second mortgages up to $5,000 to eligible, qualified homebuyers for new single-family homes. The program has been modified to meet the existing market trends, income levels, and changes in the mortgage market and the housing stock. The program is open to any individual or family whose total income does not exceed $32,400 annually. The sale price of the home must not exceed $75,000, and the appraised value of the home and land must not exceed $78,750. Since its inception, the Residential Second Mortgage Assistance Program has assisted 665 Columbus families in becoming homeowners, with a very low foreclosure rate. Families have used this assistance to improve their quality of life; become involved with community activities (neighborhood watches and anti-drug activities); and develop pride and personal goals, such as improved education, employment, and personal financial management.