

# **The Framework for Housing Finance: Connecting the Public and Private Sectors**

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## **I Introduction**

This chapter develops a framework to clarify the roles of the private and public sectors in expanding formal housing finance markets. It examines the reasons for government intervention in housing and housing finance markets and the types of regulatory and subsidy interventions that may improve market outcomes for different market segments.

It is a propitious time to focus on the role of government in the housing finance sector in developing and transition countries. The past period of macroeconomic stability, sound economic growth, and lower interest rates in a growing number of developing countries offered opportunities for governments to begin to address legal and structural issues that hindered the expansion of the sector and that have proven to make it less vulnerable to upheavals in international credit markets.<sup>2</sup> Improved macroeconomic conditions increased private sector interest in expanding the scale and extent of mortgage and consumer lending for housing and in accessing domestic and foreign capital market funds for the housing sector in countries such as Mexico, Colombia, Chile, Malaysia and Korea. Much progress has been made by many governments in strengthening the legal infrastructure for housing finance. Improvements include better land titling and property

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<sup>1</sup>Douglas Diamond and I are finalizing a book about the theory and practice of housing finance subsidies to be published jointly by the Housing Finance Group of the World Bank and the Wharton International Housing Finance Program. We acknowledge the support of both institutions. This paper will use some of the diagnostic frameworks on subsidies developed in our draft.

<sup>2</sup> A 2006 IMF study showed the importance of structural reforms for the financial sector as a whole in terms of benefits for growth and stability, drawing on a large sample of countries (Kose et.al, 2006).

registration systems, transferability of titles, and stronger enforceability of contracts, including foreclosure procedures and reforms in judicial systems biased in favor of the underdog.<sup>3</sup>

But there is still a long way to go; mortgage loans and other types of housing finance products remain accessible only to a small proportion of the population in most developing and transition economies. Often not more than 10 or 20 percent of housing transactions involve credit (Angel 2001). High real interest rates or the lingering volatility of inflation continue to limit long-term lending in several countries (e.g., Brazil, Turkey, Indonesia), while recent increases in commodity prices add inflationary pressure on rates and house prices. Private lenders are reluctant to expand into underserved markets that are considered more risky, because mechanisms to deal with those risks are inadequate. Households below the 70<sup>th</sup> or 60<sup>th</sup> percentile of the income distribution or those employed in the informal sector rarely have access to mortgage finance.

Also, major structural problems remain in many countries, often due to the large role of government-owned housing finance institutions. Central banks and finance ministries are under pressure to commercialize or privatize the many state-supported or state-owned housing finance systems and to curb deep institutional and non-transparent subsidies. These have often led to unanticipated liabilities to the state while hindering private entry into the sector. Structural reforms have proved difficult, however, because subsidized housing finance institutions fear loss of their privileges.<sup>4</sup> This fear is reinforced by the lingering perception by governments and housing ministries in particular that the state is more efficient in allocating scarce housing credit to large segments of society. Indeed, the risk that governments will unexpectedly change the rules and regulations governing private lenders' compliance is often another reason why banks are reluctant to enter.

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<sup>3</sup> Comparative data for European countries compiled by MacLennan et al. (1999) indicate that asymmetries in market structure, institutions and tax policies affect the degree of competition in the housing finance system. These imperfections and their related extension of housing finance are more important than relative income levels and have far-reaching macroeconomic policy implications. Other studies show that micro-level housing finance policies have a greater impact on (formal) home ownership rates than the income level of countries in their sample (Chiuri and Japelli 2003).

<sup>4</sup> This phenomenon has been observed by Rajan and Zingales, 2003, for the financial sector in general.

Many governments in developing and transition economies therefore face a fourfold challenge in improving the housing finance system. They have to facilitate:

- improvements in institutions and regulatory environments to allow down-market expansion of real estate markets,
- reforms of subsidized state housing finance institutions as a prerequisite for creating a more competitive and efficient housing finance system,
- provision of institutional incentives (mostly regulatory but also through subsidies) to strengthen the private housing finance sector and stimulate efficient lending without exposing the state to excessive risk or moral hazard, and
- reform of household subsidies to improve their targeting to specific household groups and well-defined housing problems.

These transformations require that the consumer subsidies -- often implicit and poorly targeted -- that now flow through state-owned lending or land institutions should be rationalized. The complexity of this process makes it necessary to have high-level political and administrative commitment for a multi-year and multi-faceted reform program.

We focus here on the general reasons for widespread government interference in the housing finance sector, followed by an exposition of current thinking about the best ways for government to engage the private housing finance sector.

## **II Why Do Governments Intervene in Housing Finance Markets?**

### **Social and Political Reasons for Intervention**

Nearly all governments intervene in housing finance markets, primarily for social and political reasons. Housing finance is a critical component of a housing system. Housing is one of the largest investments in an economy, one of the biggest parts of household budgets, and a key barometer of social well-being. When societies urbanize and real incomes increase, housing expectations and standards also increase. But standard housing

is expensive relative to household incomes or investor resources, and the degree of access to long term financing to pay for a house over time is especially important unless the state takes on that responsibility. Lack of an efficient system of housing finance that includes existing houses impedes low- and moderate-income housing markets in particular. Without access to debt finance, whether long- or medium-term, households have to build their homes over long periods or settle for a lower quality structure, often extra-legal.

In addition, the absence of ready buyers means that households will not be able to sell their homes at prices that permit them to recover their investment. This impediment to sell hinders mobility and has a negative effect on the quality of urban neighborhoods and hence the fiscal situation of cities, which limits service provision in low-income areas. This creates a vicious cycle in many countries. It perpetuates informal settlements and overcrowding. There is therefore a private and political urgency to provide access to at least medium-term, fairly priced debt finance. For these reasons, housing finance is often more prone to government intervention than are other types of finance.

However, the political urgency to intervene in housing finance systems may also make lenders reluctant to expand mortgage lending. For example, if foreclosure in the event of loan defaults is not accepted and governments fail to protect creditor rights, banks cannot accurately price credit risk. They would also be exposed to reputational risk when they try to sell a foreclosed property. Or, when the government puts caps on interest rates for mortgage lending for similar reasons (as in Colombia), the effect may be a shrinking rather than an expanding mortgage market. Lenders will simply not enter “politically” risky markets.

### **Economic and Market-based Reasons for Intervention**

Intervention is also frequently inspired by efforts to rectify the imperfections and incompleteness of housing finance markets, both in mortgage lending and microfinance lending. Debt finance for housing, especially mortgage finance, emphasizes relatively large loans and long repayment periods because:

- housing usually retains value longer than industrial equipment or automobiles, for example,
- it can be collateralized more easily because it is an immobile asset, and
- spreading payment over a longer term permits the acquisition of more housing.

This makes lending for housing more complex and risky than lending for many other goods. It has caused governments to regulate mortgage lending and to put in place the basic institutions for mortgage lending. It has also caused governments to assume or share some of the risks that buyers of housing finance services or lenders may not be well positioned to deal with. (Annex 1 summarizes the risks involved in mortgage lending.) For example, macroeconomic conditions may cause interest rate shocks and make borrowers' monthly payments unaffordable because incomes do not adjust at the same pace. In this situation governments often assume some of the residual credit risk faced by borrowers and lenders, as in Brazil and Mexico. In fact, government involvement in the mortgage sector tends to be particularly strong during periods when macroeconomic or financial sector conditions inhibit the expansion of private mortgage credit.<sup>5</sup>

The social and political importance of housing and the reluctance of lenders to provide loans when risks are perceived to be too high has led governments in many countries to take over mortgage funding or the lending function altogether. Examples include special labor tax funds or other closed housing funds created in many Latin American and some African countries, and the government housing banks in Asia and Africa.

The situation is similar in housing microfinance. Consumer loans used for home improvement or incremental home construction are often larger and of a longer duration than other consumer or microfinance loan products. Unlike microfinance loans for entrepreneurial activities, housing microfinance loans are not "secured" by future income from the investment. The combination of the higher risk of this type of lending and the effort to expand it to a large scale in countries where the majority of households do not

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<sup>5</sup> The public cost of such interventions is often correlated with macroeconomic instability and may expand its amplitude.

qualify for mortgage loans creates pressure for government intervention. The establishment of special government or charitable lending institutions funded from non-market sources was and still is often chosen as the fastest way to provide microfinance at scale. These institutions or programs are not sustainable in most cases and fold when program funds dry up.

In the past, the impact on the private market of such politically and socially driven interventions was seldom questioned; long-term mortgage lending was not attractive for the private sector and was at best provided to upper-middle and high-income clients. Nor were these interventions questioned on the basis of their distributional effects, since they were often not perceived as subsidies. Currently, there is a much deeper appreciation of the dangers of addressing social goals through subsidies embedded in the financial system. These subsidies are often “through the back door,” while the stated goal of the government is to improve market efficiency.

The appropriate role of government interventions is now widely accepted to be the improvement of the functioning of the housing and housing finance markets, rather than to provide finance through government entities (Mayo 1993, Angel 2000, Renaud 1999) and to address directly the housing problems of households that are not yet served by private markets.

However, for government interventions to improve the efficiency and stability of housing finance markets, the reasons for market inefficiencies must be understood in considerable detail (Calomiris 1994, Mayo 1999). Designing new incentives and institutions with the objective of improving market functioning is complex: it is just as easy for such interventions to create negative effects on markets, particularly if subsidies are used.<sup>6</sup>

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<sup>6</sup> Some authors maintain that subsidies cannot improve market efficiency because of their unavoidable deadweight losses. Deadweight loss is the inefficiency that a subsidy creates as people allocate resources according to the subsidy incentives rather than the true costs and benefits of the goods and services they buy and sell. Others explicitly include subsidy measures to address market failures.

If subsidies are essential for the achievement of social goals, they are best designed as household subsidies that are transparent, efficient, and well targeted, even if they use the finance system for disbursement and collection. For example, the development of mortgage insurance may benefit from some risk sharing by government in a public/private mortgage insurance enterprise or, more transparently, government may pay the mortgage insurance premium for selected households through private mortgage insurance companies. Subsidies that address social goals should target households that are not served by the private sector because land or housing finance markets do not yet work at their level.

### **III Where to Start? Assessing Housing Problems and their Causes**

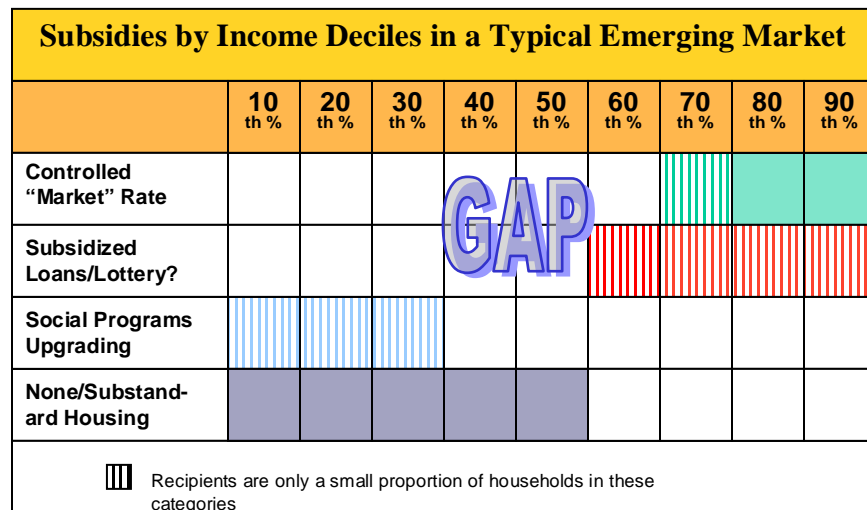
The housing systems and housing finance institutions of advanced economies have evolved gradually over an entire century. Policy issues usually involve only modest incremental changes in existing systems. In contrast, developing and transition economies have to deal with fundamental questions such as property rights, public regulations, and structural problems in the housing finance sector. At the same time, they face political pressure to do something about housing conditions that are perceived as unacceptable for a large proportion of urban households. The multitude and depth of these problems can overwhelm policy makers. All too often, the response consists of ill-advised attempts to adopt practices from other countries that may be inappropriate for the housing problems in the country concerned. Another frequent reaction is to request more subsidies for the housing sector. In reality, subsidies to the housing sector are already high in most emerging markets, but are hidden and are neither efficiently nor equitably allocated.

Many countries could benefit from an in-depth, broad-scale inquiry into the nature, breadth and causes of their housing problems. Similar wide-ranging reviews of private markets are necessary, covering their current and potential reach and constraints and their existing subsidy programs. Reviews should address the depth of subsidies and their beneficiary groups. Based on such analyses, governments can define long-term policy

goals and medium- and short-term programmatic actions -- a roadmap -- to achieve greater private sector participation. Strategic goals should address the housing problems of those not yet well served by market forces, even with government incentives. Latvia, Mexico and Morocco offer examples of countries that have recently implemented such exercises, followed by a medium-term strategic plan for the sector.

Such straightforward exercises would create, within a short period of time, the general basis for initial housing policy analysis. Pertinent housing issues are aired for discussion at various levels of government and among government and private sector agents in the housing market. Such an analysis and analytical framework would identify the gaps in access to formal housing and housing programs for different income groups. This approach can be especially useful for policy makers who are not aware of important issues because of the hidden nature of many subsidies.

**Figure 1. Gap Analysis**



The outcome of this initial analysis would ideally be the identification of specific market segments for different types of housing and for housing finance products and their frontiers, i.e., the margin beyond which specific demand and supply constraints limit expansion of and access to these markets. The following classifications incorporate the

usual broad market segments to which government interventions may most fruitfully be directed and the areas where expansion of opportunities are most likely.

1. The middle- and lower-middle-income market segment consists typically of the 40<sup>th</sup> or 50<sup>th</sup> percentile and above in the income distribution. Household incomes would be adequate to obtain formal moderate-income housing, but most people in this group live in unauthorized or substandard formal housing. The frontier for expanding the formal housing market downwards for this segment is not so much constrained by low-incomes, although that is certainly part of it, but by lack of access to finance. Limited access is related to a) informal employment, b) lack of wealth or savings, c) uncertain collateral because of poor land registration and cadastre systems, d) alternative types of property rights or neighborhood risk factors, e) inefficiencies and incompleteness of housing finance markets and, importantly, f) lack of appropriate housing products offered by the market. In some countries, housing finance-linked subsidy programs enable households at the top of this income bracket to obtain new formal sector housing. But real regulatory constraints and controls on rental markets often form barriers to expansion of formal housing for the unassisted part of this market segment. Upward mobility out of unauthorized or substandard formal housing is limited.
2. The low-income or perceived high-risk segments of the market consist of households below the 40<sup>th</sup> percentile of the income distribution and/or households that are not considered creditworthy. These include informally or self-employed households whose collateral is considered inappropriate for lien-based mortgage lending. These households live in sub-standard housing or sub-standard neighborhoods with limited access to services. Housing subsidies accessible by these groups are often limited to selected upgrading programs. Formal housing markets seldom deliver new housing for this segment, and the challenge is how to bring more households into the formal sector.

The frontier for the expansion of formal, healthful low-income housing is often two-dimensional:

- the frontier for improvement of existing housing is confined by lack of infrastructure, the absence of formally registered property rights, inadequate regulations and lack of access to consumer or microcredit for home improvement;
- the frontier for new low-income housing is constrained mostly by a combination of a) regulatory issues, b) non-functioning land markets, c) poor permitting procedures, d) low incomes and e) lack of access to appropriate financial instruments. Microfinance, even if it is available, is not the solution for large scale development of new housing for this market because of its rate structure. Expansion and strengthening of existing credit cooperatives or mutual credit unions is a more promising strategy.

The relative proportions of households in each category will differ in each country and so will the specific causes of housing problems.<sup>7</sup> It is, however, not uncommon in emerging market economies to find that approximately 60 to 70 percent of new households coming into the market each year cannot afford to pay for the lowest cost house produced in the formal sector, even if finance were available. When urban growth rates are high, upward filtering<sup>8</sup> will be insufficient to fulfill demand for housing when new housing can be produced only at this income level. An example will clarify this point.

Table 1 shows a stylized “affordability” distribution of a fairly typical emerging market country. It calculates the house price that households at each income decile can afford if they use either mortgage credit or consumer or microcredit at nominal market

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<sup>7</sup> For example, in transition economies the second market segment may not exist or it may take the form of substandard condominiums or rental units (or mixed rental/ownership buildings) for which it is difficult to attract improvement loans.

<sup>8</sup> Filtering is the process by which successively lower-income households move gradually into better quality existing housing when the supply of new housing allows those with relatively higher incomes to move into standard new housing.

rates. It shows a distribution similar to the stylized market figure in the chapter by David Porteous in this volume.

**Table 1: Example of Income and Finance Affordability**

Affordable Loans / House Price Scenarios for Household Expenditure Decentiles, Using Different Nominal Interest Rates and Loan Conditions									
Urban Households	10th%	20th%	30th%	40th%	50th%	60th%	70th%	80th%	90th%
Monthly income, based on expenditures	310	450	510	610	770	840	1,085	1,285	1,775
Borrowing capacity	10%	15%	20%	20%	20%	20%	20%	20%	20%
Monthly pmt.capacity	31	68	102	122	154	168	217	257	355
Term	2	5	7	15	15	15	15	15	15
Interest rate-nominal	30%	30%	20%	17%	17%	17%	17%	17%	17%
Affordable loan	554	2,086	4,593	7,927	10,006	10,916	14,100	16,699	23,067
Savings effort/down-payment	10%	10%	20%	20%	30%	30%	50%	50%	50%
Afford w/loan alone	554	2,086	4,593	7,927	10,006	10,916	14,100	16,699	23,067
Afford w/down-payment	616	2,318	5,742	9,909	14,295	15,594	28,200	33,398	46,134
* The lowest cost house in the formal market for new housing was \$25,000 at the time the survey was conducted									

At the time this calculation was made, the lowest priced house in the formal urban housing market in a city approximately 40 km outside one of the main metropolitan areas costs USD 5,000. It could be afforded only by the 75<sup>th</sup> percentile of the income distribution and only with a 50 percent down payment. The supply of this type of house at a national level was only a tiny fraction of the yearly increase in the number of households in the 70<sup>th</sup> percentile group alone! As a consequence, only a small part of the annual requirement for new housing could be fulfilled by constructing standard houses and the subsequent filtering up of lower-income households – possibly from the 50<sup>th</sup> percentile -- into vacated houses. This situation often translates into pressure on government to subsidize housing for middle-income families, often through finance. In this case, deep interest rate subsidies were available to select, formally employed, members of labor tax funds. But allocations were unstable from year to year, hindering the development of that segment of the real estate market.

The bottom half of the income distribution has no access to adequate new housing nor can it finance the purchase of existing housing. Many countries have small upgrading programs and deeply subsidized but often small government-funded new housing programs, but low-income households have no choice other than to build their own dwellings in unauthorized settlements. In the example above, the central government subsidized developers and lenders who would construct and finance a USD 10,000 house. This “market” was viable only when developers used serviced land donated by local governments with fairly high development standards. Households between the 30<sup>th</sup> and 40<sup>th</sup> percentile qualified for an upfront subsidy up to a maximum of USD 4,000. This is an extremely deep total subsidy (both land and upfront cash) for the lucky few – and one that does not expand the basic functioning of the lower-income housing market.

How can this vicious cycle be addressed? To begin, it helps to be clear about the three components of housing affordability:

- The level of income and its distribution. This is a matter of macroeconomic outcomes and a “given” from the housing policy perspective.
- Access to and cost of debt finance. Finance dramatically expands affordability as the example above shows, and can be improved by private and public initiatives. This is particularly the case for the lower-middle-income segment.
- The supply elasticity of housing, which is linked to both the operation of land markets and the organization and financing of the construction industry.

Lower-income housing markets in most emerging market countries cannot expand without drastic improvements in the land market and the regulatory system governing land use. When serviced land supply is inelastic and does not respond to price signals caused by increasing demand for housing, and when efforts are made to increase access to finance or the provision of subsidies, prices of formal housing will increase relative to incomes.

It is essential that all parts of the housing delivery system – finance, land and infrastructure, and construction – work well. Successful approaches to expand the current

frontiers of the two housing market segments distinguished above must deal with all critical supply bottlenecks in order to create the filtering of households into better quality formal housing appropriate for each income level. While normal market forces will gradually expand these frontiers, in most emerging market countries four types of government action are required to accelerate this process:

- improving the regulatory and institutional environment for the housing development and construction sector;
- improving regulations and institutions for the housing finance sector (improved regulations for the housing finance sector are discussed in the chapter by Dübel);
- using well-targeted subsidy incentives to improve the efficient supply of housing finance; and
- providing well-targeted subsidies to households.

Each of these imperatives is discussed below.

#### **IV Expanding Formal Housing Frontiers: Reforming Land and Real Estate Markets**

Without new land and new housing, improvements in housing finance merely generate price effects. In its 1993 programmatic shelter paper, “Enabling Housing Markets to Work,” the World Bank undertook a comprehensive review of land conversion and servicing multipliers globally (Mayo and Angel 1993). The analysis revealed inefficiencies of supply processes in much of the developing world. Negative market outcomes are now evident in countries experiencing housing finance system expansion arising from lower interest rates and macroeconomic stability, while serviced land supply and development finance are stagnant. South Africa is an example.

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**Box 1**

**South Africa:**

**Public Service Delays Jeopardize Private Sector Housing Finance Access Program**

South Africa's private sector lenders have committed to extend housing finance to households earning between SAR 1500 – R 7500 per month (USD 200-USD 1000). Yet, as reported by the South African Banking Association, there is an increasing dearth of properties to buy within the reach of households in that income range. The annual delivery of houses in 2005 costing less than SAR 200,000 (USD 27,000) was about 19,000 units, whereas the shortage was estimated at 661,000 units.

The report cites three main reasons for the failure to close this gap:

- the failure of public land management to mobilize reasonably located and priced public land for low-income housing purposes, and the high prices of private land;
- major and increasing delays in land conversion and land servicing – reportedly the process had lengthened from 12-18 months to between 30-59 months over the last few years;
- land title transfer and building permit processes have extended the housing delivery process from 5 months to 19 months. In addition, other input costs such as material and labor have risen substantially.

Source: "*Housing Supply and Functioning Markets*," SABA, December 2005

What principal constraints in land and real estate markets prevent optimal investment in land? Why are returns on such investments often lower than for other assets, even in markets where house prices in general are increasing rapidly? Much has been written about these issues and we will summarize the main areas of reform. There are at least four main sources of market failures in land and real estate markets:

- Government control over large tracts of land and residual government control over ownership of land may create an uncertain investment climate.
- Information asymmetries, lack of well defined property rights, and the high transaction costs of property registration and transfers create risks and reduce incentives to trade.
- Inefficiencies in input markets such as developer finance, infrastructure and construction markets limit investment options.
- Policy distortions in the regulatory system or tax system prevent market expansion.

### **Government control over land and land ownership**

Local and federal governments, often through land agencies, own large tracts of land or real estate assets, often in prime urban locations that face an uncertain future. When these lands are allocated at no cost or at below market prices for social housing, they distort land and housing markets and may impose high externality costs for surrounding developments. Moreover, the real cost of the land is usually not taken into consideration in the market assessment and subsidy calculation of these projects. These costs can be extremely high. For example, land subsidies in Iran amount to 5 percent of GDP (World Bank 2004/05), much higher than any subsidy provided through the financial system.

The purposes and operations of public land management agencies in many emerging markets have conflicting mandates among fiscal motives (sales price maximization), social motives (swapping land into housing for their own development programs) and political motives. For example, the Turkish Mass Housing Agency, which has large urban land holdings, prefers to develop its land for social housing purposes through land-to-housing swaps, rather than selling it into a market undergoing rapid land price increases. The result is distorted land and house prices and often extremely high but implicit subsidies to non-priority groups. Moreover, such systems are universally prone to corruption.

While it is critical to mobilize public land resources, particularly in high-growth urban areas, the efficiency of land allocations can be greatly improved by auctioning parcels of government land into the market, with or without development guidelines for their use. Government can then use well-targeted, transparent subsidies to reach housing goals for specific disadvantaged groups.

Another investment constraint is the residual control by central or local government over privately held land. For example, governments may expropriate land without compensation or put ceilings on land ownership; they may fail to enforce property rights in the case of illegal settlements; and once such settlements are established governments may or may not recognize settlers' de facto occupancy. While some government control over private land is necessary -- for example to acquire land for public uses and environmental protection -- government should exercise such powers within a well established legal system using transparent mechanisms to clarify and improve the credibility of its commitments and ensure the fair resolution of disputes (Galal and Razzaz 2001).

### **Property rights and information systems**

It is not uncommon to find that 30 to 50 percent of households in urban areas of developing countries lack secure ownership of their house and the land it is built on. Lack of property rights is associated with low investment in housing and fairly large equilibrium house price differentials when compared to housing in formal sector areas (Jimenez 1984). Also, investments in infrastructure and other public goods are generally lower in non-titled neighborhoods, which is, among other things, related to the lack of formal taxes or difficulties in their collection in informal areas (Hoy and Jimenez 1996).<sup>9</sup> An interesting case of property rights as a catalyst for infrastructure investment is provided by the national titling program in Peru. Residents of informal areas who received title can now connect to individual services at their own cost. Mibanco, a

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<sup>9</sup> Granting formal rights may not be feasible in all informal areas. For example, in urban India where plot sizes in informal areas are very small and densities are high, existing plots cannot meet formal standards. Similarly, formalization of rights is impossible in physically risky areas.

microfinance lender, has initiated a lending program for that purpose which has grown enormously.

Property rights that allow collateralization and transfer of the property are also considered important to expand access to mortgage credit. For example, De Soto's *The Mystery of Capital* (2000) focused on unlocking the "dead" assets of the poor through granting property rights and improving access to credit. The increase in mortgage lending after the implementation of titling programs has been limited, however, at least in the early years (see the experimental studies done in Argentina by Galiani and Schargrotsky, 2006 and in Peru by Field and Torero, 2006).<sup>10</sup> The likely reasons are that mortgage loans are not appropriate for low-income households with informal employment, and housing assets in recently formalized areas are not considered good collateral for a mortgage loan.

However, the growth of microfinance loans in countries with well-established microfinance institutions is often facilitated by secure but not necessarily freehold land titles since proof of ownership of the land and possibly the house is often necessary to obtain such loans or to obtain a better rate on such loans for housing or for business purposes. For example, BRI in Indonesia, MiBanco in Peru<sup>11</sup> and several microlenders in Bangladesh require proof of property ownership as part of the underwriting or residential verification process before issuing a micro loan.

Property rights are not synonymous with freehold title. They are best perceived as a bundle of different types of "rights" ranging from de facto claims (Razzaz 1993) to formal rights to exclude others from occupying the land, using it and building on it, and/or the right to collateralize or transfer it, which requires state guarantees. Investment in housing and in relative house prices may differ according to the bundles of rights and

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<sup>10</sup> An effect of property rights perceived in the 2002 study by Erica Field in Peru was that participation in the labor force increased among households that obtained a property title. Such an outcome increases the "affordability" of home improvements.

<sup>11</sup> COFOPRI, the commission to formalize informal settlements in Peru, had issued 1.5 million titles between 2000 and 2006 and has seen an increase in the use of credit. But it is inconclusive whether this was due to the titling program or the overall improvement in the economy (2006).

the perceived security of such rights.<sup>12</sup> The registration of rights -- any type of right -- is often more important to stimulate investment in housing and infrastructure than the issuing of freehold ownership titles *per se*.

The development of property rights and registration systems is, therefore, a critical area of reform. It includes a) the constitutional protection of property, b) laws and regulations defining rights and obligations to property, c) means of assignment of rights to property, and d) institutional arrangements which register and enforce such rights (Galla and Razzaz 2001, Butler 2006).

Several countries have implemented broadly based property right formalization projects (e.g. Indonesia, Thailand, Peru, Colombia) and many others have provided titles as part of specific upgrading projects. Experience in countries that have established a comprehensive title registration system has shown that these:

- are best integrated with the cadastre (which includes the value of the land and the improvements on the land for taxation purposes) within a single public corporation;
- should be considered a public good that may be based on the principle of cost recovery for its services, but not as a profit or tax center because high expenses of using the system can easily defeat its purpose;
- should give open access to all parties;
- are best designed not to eliminate all risks, but to provide some conditionality with the provision that the state will indemnify users for registration errors; and
- should be accompanied by an ongoing public education campaign focused on the benefits of title registration (Butler 2003, 2006).

### **Main infrastructure provision and servicing of residential land**

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<sup>12</sup> For example, Hoek-Smit and Hoek (1998) found that investment in urban housing in several African countries was higher in tribal areas than in areas with a limited bundle of formal rights, but highest in areas with freehold titles, all things being equal. However, the use of debt finance was limited to consumer finance on tribal land and on land with a user license only, while mortgage debt was common on freehold land.

The provision of trunk infrastructure for opening up land for development seriously lags behind demand in many developing and transition countries. The example of South Africa noted above is but one of many. The lack of funds at the local government level is often noted a major impediment to local infrastructure extension. But in reality it is often the lack of strategic planning and delivery capacity, and the weak political priority given to low-income developments that is the cause of these problems. For example, federal government transfers to local governments in Mexico include dedicated funds for infrastructure provision (Ramo 33). But because of the low priority accorded lower/middle-income residential development, limited planning capacity, and the short time horizons of the three-year local government political cycle, few of these resources are used to develop land for affordable housing.<sup>13</sup>

Equally, the provision of on-site residential infrastructure and services is often a long process and is difficult to coordinate among different entities. These include suppliers of electricity, water and sanitation, and roads, which are often independent agencies. The result is major delays and cost overruns. Detailed examples of countries as different as Zambia, Mexico and Indonesia show similar patterns.

Thailand offers a positive example. The government made a concerted effort in the late 1980s and 1990s to open up new land and to allow urban development at simplified and lower cost standards. Private developers and investors were attracted to this new market and built large scale, low-income housing apartment complexes with units as small as 20 square meters. Consumers were initially reluctant to purchase these houses because of lack of transportation infrastructure, this changed gradually along with ongoing efforts to clear slum areas. Moreover, because of improved access to finance, supply systems remained affordable for this segment even through the 1997 real estate and financial crisis which was linked to an overheated higher income housing market. The challenge now is to improve internal residential infrastructure in order to maintain the value of such developments (Hoek-Smit 2002).

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<sup>13</sup> Interviews by the author with experts in 2003-2006.

## **Regulatory Systems**

As demonstrated in Thailand, another major constraint in expanding new housing construction at the two market frontiers is inappropriate regulatory regimes related to land management, development and construction. Standards for subdivision of land, infrastructure requirements and building standards are often unnecessarily rigid and out of balance with household incomes. The second impediment to residential construction is the excessive time and cost often required to obtain permits for development and construction. In several countries where data were collected, it was not uncommon to find that 20 to 35 percent of the cost of a lower- middle-income house was the formal and informal payments required to obtain permits. The process would often take several years and be fraught with uncertainty. Lastly, lack of coordination among different institutions involved in land development and infrastructure provision adds to the uncertainty of the development process and therefore its costs.

Detailed studies, particularly in the US and the UK, have established the negative effects that regulation has on construction costs and house prices, both for ownership and rental housing, as well as on the standards of construction (Glaeser, Gyourko and Saks 2005; Quigley and Steven 2004; Glaeser and Gyourko 2003). Prices were found to be higher and construction standards lower in urban areas with a higher degree of regulatory stringency (controlling for other market fundamentals). It was also shown that within cities the non-responsiveness of supply as a result of stricter regulations was greater for the low-income housing sector.<sup>14</sup>

Similar results were found in studies of housing markets of developing countries, in Malaysia for example as detailed in Malpezzi and Mayo's 1997 study. Other evidence is provided by a 2003 survey of the Centre for Urban Studies in Dhaka, Bangladesh, that found land prices from \$27 to \$60 per square foot (as high as peripheral land in many US

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<sup>14</sup> In addition, a detailed comparative study of supply constraints in the UK relative to other European countries showed that supply inelasticity had a negative impact on the volatility in house-prices (Barker 2003).

urban areas) because of non-transparent land development regulations (Seraj and Afrin 2003). Buckley and Kalarickal (2005) quote the example of Mumbai, where building height restrictions limit the efficient use of reasonably located, serviced land for housing, leading to extremely high costs that crowd the poor out to peripheral locations. The many examples on Alain Bertaud's website tell a similar story (<http://alain.bertraud.com>).

Local regulators of urban land developments have to balance risks associated with building low-cost, higher density developments. One set of risks include perceived health and environmental impacts, higher long-term maintenance costs, and political backlash. Another set are negative market outcomes such as the growth of informal settlements without infrastructure, or higher house prices in general. The trade-offs are seldom clear cut and are often framed in a political rather than a technical perspective, leading to unsatisfactory regulatory solutions. The best outcomes in attracting the private sector to the lower/middle-income market have been achieved in urban areas where high level political support was provided for relaxed regulations, fast tracking of development approvals and local government facilitation of off-site infrastructure provision (e.g, in Thailand, as discussed above).

In poor developing countries the low-income frontier below the 30<sup>th</sup> or 40<sup>th</sup> percentile often requires a different approach. It is unlikely that private developers will enter the new housing market at this income level without comprehensive government support. New housing developments at this level will mostly be project based, and government often has to subsidize the serviced lot and/or a core house permitted by special regulations that allow small lot development and incremental construction. Similarly, government partnership arrangements are needed for high density, multifamily housing projects on infill land located closer to city centers.

The challenge for central government is that most such policies and regulations on the "real" side are in the political realm of local government, which is often under political pressure *not* to allow low-income developments. Local governments generally also have limited analytical capacities to assess the impact of deficient regulations and housing

development processes. Benefits from the reform of non-transparent systems are often limited or even negative for local regulators and private title registration notaries, which makes change difficult. Central government subsidy incentives or conditions are often required for local governments to undertake the necessary enabling policies before they gain access to central government housing subsidies (see also Mayo 1999).

Paradoxically, it often takes strong central government incentives to unblock local level housing markets for lower-income households, whether through sticks (conditional withholding of housing-related subsidies and transfers) or carrots (through capacity building, support to local land and property institutions or subsidies for the development of residential serviced plots or multi-family housing for low-income households). The challenge for both local and central government is to make sure that all parts of the supply chain work sequentially for different market segments, i.e., improving the supply process for each market segment before finance and subsidies are used to expand demand.

## **V Housing Finance Subsidies and the Expansion of Markets**

### **A Changing Universe**

In most developing and transition economies government intervention in housing finance systems is deep and based on a long tradition. Some countries inherited government-controlled housing finance systems from their colonizing country. Latin America inherited the French/Spanish government bank system. This was later adjusted to include a funding model based on taxation of labor rather than on voluntary savings (Mexico, Peru, Brazil, Colombia). Other traditions stem from the post-colonial period that espoused nationally-controlled financial systems that included the housing finance system as in most of Asia and Africa. Private mortgage lending through the commercial banking systems and mutual credit unions coexisted, but remained small in most countries. These government-controlled housing finance systems combined strict

regulatory oversight with deeply imbedded subsidies. The poor performance of these government systems challenges their validity. At the same time, positive changes in the macro economy and financial sector in many countries over the last two decades has attracted the private sector to housing finance.

This shift has brought a new approach to regulating and subsidizing the sector, focused on:

- incentivizing private mortgage institutions to build up their portfolios while maintaining their stability;
- improving basic lending infrastructure;
- transforming the often dominant government systems; and
- reforming the deep subsidies imbedded in these systems in ways that create more transparent subsidies targeted at specific underserved market segments.

### **Housing Finance Problems, Causes and Subsidies**

Constraints to the efficient growth of housing finance systems vary widely across countries and among mortgage finance and other types of housing finance.<sup>15</sup> There are at least four general categories of constraints:

- Constraints imposed by macroeconomic conditions or volatility (high and unstable inflation, volatile real wages) that encompass much more than the housing finance system *per se*.
- System imperfections due to market concentration problems or lack of a level playing field among financial institutions, and/or the existence of powerful gatekeepers that resist innovation and new entrants into the market.

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<sup>15</sup> Imperfections such as asymmetric information, incompleteness of markets and moral hazard are endemic in housing finance systems. This means that second best solutions to those assumed by theories of complete and competitive financial market models are all one can hope for. Allen and Gale 2001 discuss such trade offs for financial systems in general.

- Constraints in the ways funding markets can manage liquidity or interest rate risks, thereby truncating lending options and possibly leading to destabilization of the housing finance system.
- Lending market failures or incompleteness due to lack of credit and property market information, high risk of loss given default because of poor foreclosure systems, lack of mechanisms to deal effectively with credit risk, lack of consumer protection, and high transaction costs of lending that prevent suppliers of credit from profitably serving all or a large portion of the housing market.

How can government intervention -- specifically subsidies -- help overcome such constraints? We start from the premise that subsidies are incentives to change behavior, either of consumers or producers of housing, relative to specific goals and objectives (Box 2). We focus on subsidies as incentives to improve the effectiveness of housing finance systems rather than on subsidies to households. There are four general types of subsidies for housing finance systems:

- subsidies for research, information collection, or education programs targeting housing policy goals;
- provision of below-market funds for housing loans or insurance schemes;
- direct government risk sharing through financial intermediation at the retail or secondary market level; and
- regulatory controls on prices or credit allocations for housing finance.<sup>16</sup>

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<sup>16</sup> According to the definition used here, an intervention to improve the housing finance system is a subsidy even if government is compensated on the basis of some accepted measure of a suitable rate of return: the intervention lowers lenders' opportunity costs, whether private or state-sponsored. The all-in impact of the subsidies on financial intermediation will, of course, depend on the difference between the rate of compensation to government and the presumed "market" rate for delivering the service.

## **Box 2**

### ***Defining Subsidies***

*Subsidies are often perceived as giving or receiving something for free. That notion is misleading. From a broad perspective “a subsidy is an incentive provided by government to enable and persuade a certain class of producers or consumers to do something they would not otherwise do, by lowering the opportunity cost or otherwise increasing the potential benefit of doing so”*

Specific incentives will of course depend on the existing housing finance system and the quality of the infrastructure, as well as on the type of housing finance system the country is moving towards. Possibilities include a system based on capital market funding through securitization or mortgage bonds, or a predominantly deposit-based system where non-bank financial institutions do not play a major role. Since subsidies are prone to misuse, particularly in the hands of powerful interest groups that control their delivery, the choice of subsidies will also depend to a large degree on the relative ability of the structure of the subsidy to contain misallocation and moral hazard by government.

Table 2 summarizes the main constraints in the housing finance sector outlined above and the types of subsidies that have frequently been applied, or that may be considered, to overcome the causes or effects of such constraints. The texts underlined flag the subsidies that induce high costs and that therefore should be avoided if at all possible. The following sections briefly discuss these very different subsidies and their positive and negative impacts on housing finance systems.

**Table 2: Examples of System Subsidies**

<i>Housing Finance System Constraints</i>	<i>Possible Subsidy Measures</i>	<i>Issues</i>
<b>1. Macroeconomic Constraints/Volatility</b>		
<b>System risk /</b>	<b>• <u>Shift all or part of interest-rate risk to</u></b>	<b>• <u>Unpredictable and often</u></b>

<p><b>political risk</b></p>	<p><u>government, e.g., forgiving balances on inflation-adjusted loans, providing non-market sources of funds</u></p> <ul style="list-style-type: none"> <li>• <u>Subsidized lending at fixed rates or capped adjustable rates by a government sponsored/owned financial institution for rental or ownership housing</u></li> </ul>	<p><u>extremely high costs to government at times when it can least afford it</u></p> <ul style="list-style-type: none"> <li>• <u>Government lending is often not phased out after macroeconomic stability is achieved, thus hindering private sector re-entry</u></li> </ul>
<p><b>2. Market Structure and Vested Interests.</b></p>		
<p><b>State or incumbent lenders have excessive market power</b></p> <p><b>Incumbent lenders limit new entry, innovation and price competition</b></p>	<ul style="list-style-type: none"> <li>• Remove subsidy and other privileges from state lending institutions</li> <li>• Support short-term alternative types of lenders e.g., through liquidity funding</li> <li>• Increase competition by liberalizing the financial sector, especially encouraging access by foreign lenders (e.g., removal of hidden subsidies)</li> <li>• Remove price controls, e.g. caps on interest rates for micro loans or mortgage loans</li> </ul>	<ul style="list-style-type: none"> <li>• Vested interests resist removal of subsidies</li> <li>• Usually requires additional regulation of such lenders</li> <li>• Interest rate controls often decrease volume of lending to targeted groups</li> </ul>
<p><b>3. Funding Constraints and Risks*</b></p>		
<p><b>Limited / costly equity funding</b></p>	<ul style="list-style-type: none"> <li>• <u>Provide equity capital for partially or fully state-owned housing lenders, without dividend obligations</u></li> <li>• Provide equity for non-profit financial institutions that on-lend for social rental housing</li> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• <u>Partial or full state control can lead to operational inefficiencies, reduced competition and excessive risk-taking</u></li> </ul>
<p><b>Limited access to or high costs of funds for lending</b></p>	<ul style="list-style-type: none"> <li>• <u>Subsidize cost of funds through government credit lines, special tax funds or debt funds for social rental or ownership housing</u></li> <li>• <u>Tax subsidies for funds channeled to housing finance (e.g., bonds, savings)</u></li> <li>• Public guarantees for lenders to access funds (public/private partnership)</li> </ul>	<ul style="list-style-type: none"> <li>• <u>This class of subsidies is often provided through special government-sponsored institutions, adding to the cost of the subsidies and possible inefficiencies in the housing finance market</u></li> <li>• Subsidizing ways to assist private lenders to</li> </ul>

	<ul style="list-style-type: none"> <li>• Cash subsidies for funding for housing finance</li> <li>• Subsidized cash-flow guarantees for debt funds channeled to housing lenders</li> </ul>	<p>obtain access to debt or capital markets carries less risk (see also below)</p>
<b>Liquidity risk</b>	<ul style="list-style-type: none"> <li>• Access to a (partially) government-sponsored liquidity facility (or secondary mortgage market) for all or a certain class of mortgage/microfinance lenders</li> </ul>	<ul style="list-style-type: none"> <li>• May be structured as a joint public/private venture to limit government risk exposure or political misuse</li> </ul>
<b>Interest rate risk / prepayment risk</b>	<ul style="list-style-type: none"> <li>• <u>Shift (part of) funding risks to a government-sponsored agency</u></li> <li>• Provide cash flow insurance or tax benefits for private mortgage or micro-loan securitizations</li> </ul>	<ul style="list-style-type: none"> <li>• <u>Combines moral hazard with potentially large government risk exposure. Govt. risk can be decreased if limited to a cap on ARMs (adjustable rate mortgages) or other shared risk arrangement</u></li> <li>• Effective if insurance fee reflects real risk to govt Tax benefits are less transparent and should be phased out as soon as the market permits</li> </ul>
<b>4. Lending Risks and Costs in Underserved Markets)</b>		
<b>Credit risk / collateral risk for mortgage lending</b>	<ul style="list-style-type: none"> <li>• Subsidize information collection and research on property and credit markets</li> <li>• Pay private mortgage insurance premium (overlap with household subsidies)</li> <li>• Pay for borrower education</li> <li>• <u>Shift (part of the) credit risk to a (partially) state-sponsored entity</u></li> <li>• Provide (partial) guarantees for social rental housing loans</li> </ul>	<p>Additional government action needed:</p> <ul style="list-style-type: none"> <li>• Credit bureaus</li> <li>• Regulations allowing payroll deductions</li> <li>• Property information systems</li> <li>• Improved foreclosure methods</li> <li>• Community negotiations in case of default</li> <li>• Neighborhood investment plans to mitigate neighborhood risk (see below)</li> </ul> <p>Requires: private lenders to invest in user-friendly</p>

<b>Credit risk related to construction lending</b>	<ul style="list-style-type: none"> <li>• Link household subsidies to specific developments to support market for housing production</li> <li>• <u>Provide (partial) guarantees for construction loans</u></li> </ul>	servicing system <ul style="list-style-type: none"> <li>• <u>Developer may capture a portion of the subsidy</u></li> <li>• <u>Highly risky; requires safeguards on quality of construction, etc.</u></li> </ul>
<b>High transaction costs for loan origination and servicing</b>	<ul style="list-style-type: none"> <li>• Subsidize lenders' transaction costs for selected borrowers through cash payment or compensation for higher interest rate (can also be structured as part of a household subsidy)</li> </ul>	Prerequisite: <ul style="list-style-type: none"> <li>• Improved underwriting and servicing methods (see also under credit risk)</li> </ul>

\* Sovereign and exchange rate risk are not considered in this table.

### Housing finance subsidies and macroeconomic volatility

Correcting adverse macroeconomic conditions mostly requires structural reforms of fiscal and monetary policy. Many countries have undertaken such reforms or are in the process of doing so. Structural reform often includes reduction of subsidies that are implicit, including housing subsidies. Such programs can improve the ability of the market to provide credit and ultimately the ability of governments to provide more efficient on-budget housing subsidies.

Instead, the historic tendency has been to use housing subsidies to compensate for difficult macroeconomic conditions. In particular, many governments with national housing systems<sup>17</sup> have attempted to soften the negative impacts of macroeconomic volatility on the housing and housing finance markets by assuming interest rate and credit risks in order to protect lenders (and borrowers) from the adverse prospects of lending during periods of volatile economic conditions. Many such systems offer not only subsidized rates but also provide fixed rate loans when market rates are likely to be quite volatile and uncertain – conditions under which private lenders are not willing to offer

<sup>17</sup> Examples in Africa include Botswana, Egypt, Nigeria, Tanzania, Uganda and Zambia, Examples in Asia include Korea, Pakistan, and Thailand. Examples in Latin America include Argentina, Brazil and Mexico.

long-term fixed rate loans. Such interventions can be rationalized as promoting social goals or stabilizing the housing sector in the short term. However, these measures are often extremely costly and have a negative impact on the long-term efficiency of the housing finance sector. Yet, new government housing banks continue to be created to lend under conditions unattractive to the private sector, as in the Ivory Coast, Mali, Namibia and Senegal.

### **Housing finance subsidies, market structure and vested interests**

When one or a few large lenders with vested interests gain excessive power over housing finance they unduly influence the pricing of loans, the types of loan products available and the market segments served. They also prevent new entry and innovations, often raising the costs of lending and imposing inappropriate limitations on access to loans. These structural and political problems arise in both public and private sectors.

#### ***Public sector induced structural problems in housing finance***

Structural and anti-competitiveness problems frequently arise when specific institutions, often state-owned, are subsidized or when these institutions erect regulatory or political barriers to entry.

As mentioned above, many countries have housing finance systems dominated by state housing finance funds or banks, state conduits in the secondary market, state-owned mortgage insurance companies or state microlending institutions. These institutions usually have tax, funding or risk-bearing advantages and do not have the concerns about return-on-equity to their owners that guide private institutions. It is difficult for private lenders, insurers or guarantors to compete in the market segments dominated by such state institutions or programs. These state entities often hinder innovations, such as risk mitigation measures because of their profiles (Rajan et al. 2006). The first priority, and a prerequisite to the creation of a more competitive and effective housing finance system, is to eliminate the often hidden subsidies to state housing finance institutions, to provide

these subsidies to all qualified actors in the sector, or to reorient these subsidies to leverage private sector participation.

This is not an easy task, particularly when these institutions are the largest sources of funds for housing finance and are supported by powerful constituencies. The Government Housing Bank of Thailand is one of the few state housing banks that successfully calibrated its operations to stimulate, not prevent, greater private sector participation in housing finance. Many other emerging economies are analyzing or trying out alternative options to dissolve, break up or change the function of state housing finance institutions. Korea and Peru have dismantled their special funds. Indonesia, Mexico and to a limited extent Brazil and Nigeria are seeking reforms.

When new public institutions are proposed to provide financial intermediation functions that the private sector cannot yet profitably deliver, such as mortgage insurance and capital markets access, an exit or sunset provision should be included to prevent these institutions from turning into gatekeepers that will discourage private sector entry later.

### ***Private sector induced anti-competition problems in housing finance***

In some countries the private housing finance industry may engage in anti-competitive behavior such as price-setting, collusion not to enter certain sub-markets, or lobbying to exclude other types of financial institutions from entering housing finance. There is often a lack of clear rules guiding structure and market conduct such as disclosure standards and competition. Government's first priority should be to improve such regulatory measures. But even in the current climate of financial sector liberalization, regulators frequently use price controls and credit allocation requirements to reach social goals for housing finance. These include interest rate ceilings whether for mortgage or microloans, and quotas for lending to special groups or priority sectors.<sup>18</sup> This approach easily creates an undesirable system of hidden subsidies which may be more costly than the anti-competitive behavior the regulations are intended to address. Better results are generally

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<sup>18</sup> Malaysia has gone one step further, mandating below-market lending for lower-income households, which is partly cross-subsidized from lending to higher-income households. South Africa has also considered a similar plan.

achieved by repealing such controls and replacing them by positive subsidy incentives that reduce the cost of providing housing finance services to nascent markets.

***Housing finance subsidies to alleviate funding constraints***

Capital markets in developing and emerging market economies are often not well developed or are dominated by government debt. This commonly occurs because the level of contractual financial savings such as from insurance and pensions are low relative to the supply of long term credit. This situation is changing rapidly because of innovations in voluntary savings systems and other developments.

Governments may want to channel a larger share of these longer-term savings into housing to improve the efficiency of the housing finance system, the overall efficiency and stability of the financial system, or to serve social goals. Even if a country has vibrant primary lending institutions, they may be limited in scale by lack of stable funding. Or the funding risk may be high – the system may not have appropriate markets for managing liquidity, interest rate, and prepayment risks. If so, interest rates will be higher and more volatile, and loan maturities will be shorter than they would otherwise be.

Hypothetically, private investors might create institutional arrangements to best manage these risks. For example, Mexican non-bank financial institutions (SOFOLs) have increased their funding options by tapping capital markets. However, for a variety of reasons, this does not occur in many developing and transition countries. Investors often distrust investments in mortgages or mortgage-backed bonds. Yield curves on these investments may be less attractive than government or other paper, and cash flows are less predictable.

Under these circumstances government could support subsidies, even if they are usually not considered as such. These measures include efforts to improve access to capital markets, to increase funding options and to improve the management of risks related to long term lending. For example, government may establish a liquidity facility or a secondary market institution or provide cash flow guarantees or tax incentives for

mortgage securities.<sup>19</sup> Such measures are important for the expansion of mortgage lending. They may be particularly relevant for microfinance systems when funding through a deposit base is either limited or impossible because most such institutions are non-banks.

The state may also try to reduce funding constraints and risks, not just to improve markets, but to reach social goals. It may provide subsidized equity funding, lines of credit, or other funding advantages to (state-owned) primary market lenders. The objective of these funding vehicles is to provide below-market loans to specific categories of borrowers, or to investors in social or private moderate-income rental or ownership housing. These institutional subsidies are often accompanied by equity investments and tax write-offs on interest costs, indirectly reducing the cost of rental housing for lower-income groups. Such systems are often established with assistance from international development institutions. However, the costs and distortions imbedded in such special non-market funding systems have to be carefully assessed. Their long-term impact on the sector often does more harm than good.

Another issue arises when government's aim is to sell their often poorly performing subsidized, mortgages into the capital market to generate more funds for housing. The costs of over-collateralization and other investor incentives such as tax breaks may be extremely high relative to the benefits. Experiences in Colombia and Nigeria have demonstrated how costly such transactions can be. Also, these "deals" are not necessarily helpful in creating a secondary market because investors are either "forced" to buy such paper or because the incentives are unsustainable and difficult to phase out.

These different ways to subsidize funding for mortgage or microfinance loans have very different long term costs, market effects and potential to support low-income housing. While they can increase the flow of finance to the housing sector and can be beneficial and efficient, their advantages often diminish with each additional transaction (Van Horne 1982). At best serving to distribute goods and services more equitably, they often

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<sup>19</sup> See the section on government funding windows.

hinder market efficiency when not phased out.. Not originally designed for equity purposes, these subsidies are often inefficient in reaching distributional goals: their hidden costs to the financial systems and the economy are often high and they are poorly targeted. Policymakers should carefully examine alternative ways to reach distributional goals, e.g., through transparent household subsidies.

### ***Subsidies to address lending risks and high transaction costs***

An evolving subsidy objective for housing finance is based on lending risks and transaction costs. The strategy is to encourage agents in primary or secondary markets to expand into housing finance markets that are not well served due to political or practical difficulties, to price differentially for risks and uncertainties -- which often cannot be insured -- or high transaction costs.

The first priority for government, jointly with the private sector, is to improve the regulations, institutions and information infrastructure that affect the mortgage or consumer/micro lending sectors. This initiative takes the form of creating or upgrading a) appropriate standards, b) property registration systems and cadastres, c) information and research on the housing sector, d) a credit information system and credit bureaus, e) improved foreclosure methods, f) reforms of usury laws, and g) improved underwriting and servicing methods by the industry. Government may also share some of the lending risks or cover high origination and servicing costs. Ideally, as the risks in these markets are better understood and controlled and transaction costs are reduced, government can decrease or phase out such support.

Information and Research. Information collection and research is essential for an efficient housing market, but they are often not created because of the nature of a public good, i.e., a private entity cannot capture the benefits. Examples of such useful public good data and research topics include a) comprehensive property information, b) consolidated credit information across financial institutions for credit scoring or development of mortgage default insurance or securitization markets, c) research in standardization of mortgage procedures, d) new credit instruments, e) reasons for default, f) default trends and the

scale of and reasons for losses after default occurs, and g) trends in house prices. The rewards from developing expertise in housing and housing finance issues are extremely high, given the huge amount of resources that most governments and societies invest in housing.

Credit risks. The most basic lending risk is credit risk, which is often the main source of private sector reluctance to enter underserved markets. Interventions that share credit risks can improve the overall efficiency and stability of the system, and can be designed to fulfill social goals.

One proven intervention is subsidizing the establishment of a credit information system or a credit bureau. Government can go a step further and support the establishment of private credit insurance, or share some risk in a public-private insurance scheme, or even establish its own credit insurance system, although it creates moral hazard.

The type of credit insurance program will depend on the goals set by government. For example, insurance may be priced at or below market; it may be universal or applied to targeted households; or it may cover part of the risk or take on all of the risk; it may be designed for long-term mortgage credit or shorter-term microcredit. Government may also consider paying the mortgage insurance premium for selected households rather than sharing the credit risk directly. A combination of such measures was adopted by SHF in Mexico. SHF established a mortgage insurance scheme targeted to the lower middle income market which qualifies for an upfront subsidy. The insurance rate charged is somewhat concessionary and the premium is paid for as an additional subsidy for those households that receive their mortgage through private lenders. A major concern is that whenever the state assumes risk, moral hazard easily arises, i.e., participants will be prone to commit fraud or take excessive risks. The design of the administrative and control systems are therefore as important as the insurance system itself.

A proven way of decreasing credit risk is to educate borrowers before they receive loans, not just on the rights and duties of borrowing, but also on home maintenance.

Government can subsidize such education. The effectiveness of this method has been shown in the US (Hirad and Zorn 2001) and by South Africa's HLGCC and Mexico's SOFOLs, which have user-friendly servicing systems that pay immediate and personal attention when a borrower misses a payment. This is critical for reducing losses when a default occurs.

If the goal is to expand lending into marginal neighborhoods, partial mitigation of the credit risk is seldom sufficient. Much broader infrastructure and institutional support is often required to alleviate neighborhood risk effects on the value of the collateral.<sup>20</sup>

Development and construction lending creates a special type of credit risk. This type of short-term lending is relatively risky because of a) frequent construction delays, b) difficulty in enforcing quality controls, c) the uncertain collateral value of unfinished construction projects, and d) sensitivity to macroeconomic cycles or risks in the sale and transfer process to end users. Lenders are often reluctant to make such loans and will do so only with special guarantees. Government may develop measures to overcome this constraint to the construction of socially-important housing, perhaps by a) paying for guarantees offered through private guarantors, b) establishing institutions that guarantee quality controls, or c) taking on some or all of the risk by itself or jointly with private or international development institutions, with d) the necessary safeguards to control moral hazard.

Transaction costs. Aside from credit risk, the main reason that housing sub-markets are not served is related to lenders' costs. Household income verification may be cumbersome because of the large proportion of self-employed households; loans are small and therefore the origination fee is either inadequate for the lender or excessive for the borrower; and loan servicing costs are high relative to loan size. Government may

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<sup>20</sup> The single most important barrier to lending in low-income markets is the uncertainty of neighborhood factors that are critical in determining changes in house values. Lenders may require additional equity investments by third parties and agreements on an investment plan by local government before entering into low-income markets or neighborhood improvement ventures. In the US, the FHA insurance program was effective in stimulating investments in underserved neighborhoods, even without additional community support.

compensate lenders directly for these higher transaction costs in order to attract financial institutions into these markets, at least for an initial period. Colombia used this method successfully and phased it out as lenders gained experience in serving more risky markets.

Even with subsidies, mainstream mortgage finance institutions resist incurring set-up costs to reach lower-income, higher-risk customers. This reluctance has led many to conclude that it may be more cost effective to target this type of government support towards community-based or smaller mutual housing finance institutions. These lenders already have information systems in place to deal with less conventional clients because they operate at the community level.

### **Problems of Subsidies of the Housing Finance System**

This discussion shows in general terms that system subsidies can play an important role in overcoming the inefficiencies or instability of housing finance systems. However, it also notes that subsidies have frequently created new problems. These poor outcomes are often due to faulty subsidy design, especially because key details of guarantees or other schemes generate costs that are far higher than expected. Such excessively deep intrusions into the market can also create strong distortions elsewhere in the growth of the financial system. An essential element in avoiding this is to have political commitments to remove these interventions over time -- which may prove difficult -- or incentives to induce markets eventually to take over the functions provided by subsidy programs.

Probably a bigger source of problems derives from a lack of clarity in the purpose of a subsidy. Some housing finance system subsidies focus on improving the stability and efficiency of the housing finance system. Others are purposely introduced to seek redistributive goals. These include providing housing finance services at below-market prices to lower the cost of housing --, usually through either funding financial services or direct provision -- or risk sharing or regulation. Some aim to do both. Even when intended simply to increase efficiency, many system subsidies serve equity goals through

the “back-door.” This occurs when the original pricing of efficiency-oriented subsidies is not adjusted, or when the subsidy is not phased out when no longer required to improve the private market. (A good example is the implicit government guarantee of secondary market entities in the US.) The subsidy mechanism is often the same irrespective of the goal. The distinction between market efficiency and equity goals is important, mostly in the way system interventions are priced, adjusted and phased out when the market can take on the risks and costs covered by the subsidy.

But if social goals are the primary purpose for initiating subsidies through the housing finance system, the long term and hidden cost of these types of subsidies and their redistributive effects would have to be compared with alternative subsidies provided directly to households. It often turns out that both their cost efficiency and equity outcomes are second best. The superior alternative is to use transparent household subsidies such as upfront grants in the form of down payments, land grants or savings-linked grants, payment for upfront mortgage insurance premiums, and monthly payment buy-down subsidies.<sup>21</sup>

## **VI Conclusions**

The liberalization and development of financial systems has deeply touched the housing finance sector in many emerging market economies. It has created momentum for reform in many countries. A growing demand for urban middle- and lower-income housing has fueled the urgency to expand housing finance systems. One area of critical rethinking, and a frequent bottleneck in system expansion, is housing finance subsidies. These are by far the most prevalent housing subsidies in all countries, although they are not generally recognized as such. Many finance subsidies have had a negative impact on the development of housing finance markets, and the impact on social goals is mixed. Goals and specific objectives, often not well defined, lead to dysfunctional subsidy design.

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<sup>21</sup> For a discussion of household subsidies see Hoek-Smit and Diamond, 2003 and forthcoming.

The second major bottleneck is inefficient land markets for lower- and middle-income groups. Even when finance is available, the regulatory system often makes it unprofitable or unfeasible for private developers to operate in middle-income markets. Low-income markets certainly require subsidies for serviced land, preferably targeted to individual households.

The challenge for policymakers is to identify the housing problems of different types of households, the land and housing finance system constraints that prevent expansion in underserved markets, and how current regulations and subsidies alleviate or worsen such constraints. Based on this knowledge, clear policy goals could be established and multi-year strategies developed to implement regulatory and other support systems to address these limitations and problems.

This chapter has provided a framework to assist such analyses. Household subsidies can be efficiently applied only when systems work well for the majority of people. The overview of broad categories of subsidy interventions and delivery mechanisms noted here exclude the numerous variants found in practice. The aim here is two-fold. The first is to present the most prevalent “old generation” housing finance subsidies. The second is to explore the gradual reforms and alternatives that may be considered as a result of growing awareness of the importance of transparency in financial markets, sound risk management in financial institutions, and redress of growing housing inequities worldwide.

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## **Risks in the Housing Finance System<sup>22</sup>**

Financial intermediation involves a number of risks. Some are normal business risks, such as operational mistakes or embezzlement. But financial intermediation attracts other risks that are inherent in the use of funds by an unrelated party over a long period of time such as is required for mortgage lending. The main intermediation and external risks related to mortgage lending can be classified generally into six categories: [Tina – let’s use the author’s style in the six titles here in the Annex – in other words, no changes required. – J.D.]

***Liquidity risk:*** The risk that the money will be needed and used before the loans are repaid. Liquidity risk is a particular concern in housing finance, because mortgage loans or even microfinance loans for housing are relatively long-term obligations that in the absence of financial markets for such products cannot be liquidated on short notice.

***Interest rate risk and prepayment risk:*** The risk that changes in market conditions will alter the scheduled cash flows among the parties involved in intermediation. This includes inflation risk and exchange rate risk. Interest rate risk is a particular concern when housing loans are written at a fixed rate for relatively long periods. When interest rates increase and the existing portfolio of housing loans cannot be re-priced, the real value of the lender’s cash flow decreases. On the other hand, when interest rates decrease and borrowers are allowed to prepay, the portfolio duration can be seriously affected.

***Credit risk:*** The risk that the money lent will not be returned, with whatever interest or other charges are due, as scheduled. The expected rate of defaults and the loss given default are two components of credit risk. A third component is the degree of uncertainty about the size of the actual losses. This will depend to a large degree on uncertainties in the legal environment, particularly the enforceability of foreclosure provisions. Reliable

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<sup>22</sup> Adapted from Hoek-Smit and Diamond (2006)

credit information on the borrower and the future value of the collateral will assist the lender in understanding credit risk.

However, households' ability or willingness to pay can be seriously reduced by housing market and macroeconomic trends that lenders may have failed to anticipate. For example, credit risk is potentially most severe when housing markets (national, local or neighborhood) are on a downward trend in the real estate cycle, since equity in the property may erode or turn negative and risks of default will increase as a consequence. If a downward cycle is combined with or caused by increasing interest rates, pressure on borrowers' ability to pay will increase, particularly for those holding adjustable rate mortgages and if inflation erodes real incomes.<sup>23</sup>

Information systems and recovery procedures are somewhat inadequate in most emerging market economies, making credit risk a main constraint to expanding mortgage lending. But even more importantly, macroeconomic instability, especially volatile inflation and decreasing real incomes, have in the past severely damaged the borrower's ability to pay, creating widespread default losses. Fortunately, high economic growth coupled with stable inflation and rising real house prices has in recent years moderated that risk.<sup>24</sup>

**Agency risk:** The risk that a divergence of interests will cause an intermediary (the agent) to behave in a manner other than that desired (by the principal), causing moral hazard. Risks imbedded in mortgage lending are typically shared by several intermediaries. These include primary market lenders, mortgage insurers, and liquidity providers whose profit motives or performance objectives may not be aligned. For example, lenders may choose not to disclose information on loans they want to insure or sell, potentially exposing the insurer or investor to higher than anticipated risks. Disclosure of information and transparency in procedures can diminish such risks to a considerable degree, but never fully.

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<sup>23</sup> There is some evidence that house prices are less volatile in fixed rate mortgage environments (see Meen, 2002 for the UK [not found in the bibliography – please add], but other factors also contribute to price volatility.

<sup>24</sup> Indeed, the long upward trend in prices may have caused lenders in some emerging markets underestimate the chances that a downward trend will occur.

**System risk:** The risk that a crisis in one institution or in a part of the housing finance system will spread to the rest of the system, as when liquidity, interest rate or credit risks affect mortgage institutions or markets nationwide. Causes include macroeconomic instability, interest rate movements, misguided public policy, or contagious “herd behavior” among agents or the public. System risk may threaten the solvency of a large part of the industry. System risk cannot be controlled by individual institutions, nor can it be easily insured. System risk is often explicitly or implicitly carried by government.

**Political risk:** The risk that the legal and political framework in which lending takes place will change, resulting in decreasing profitability for financial agents.<sup>25</sup> When governments are expected to or do change the rules or policies related to housing finance, or intervene directly in the funding or lending market for political purposes, lenders may fear to enter the housing finance market.

**Conclusion:** All of these risks are associated with a potential loss in the form of money, anxiety and painful adjustments for lenders or borrowers or both. The extent of a future loss is uncertain, but experience usually provides a guide. Uncertainty about potential losses matters because people tend to dislike it and because losses that exceed a certain limit can have extreme consequences, such as collapse of the intermediary.

In reality, however, the detailed information required to evaluate credit and other risk is missing in most emerging market economies<sup>26</sup> or their portfolios are too new to permit detailed analysis. If aggregate figures on credit risk exist, they are seldom disaggregated for different risk groups. Uncertainty about the scale of the risks results in a general reluctance by lenders to move into market segments perceived as more risky, making it expensive to insure or sell such risks.

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<sup>25</sup> Other risks such as sovereign risk (the risk that the rating of a country will be downgraded, resulting in higher interest rates) and tax-rate risks (the risk that changes in taxation of mortgage institutions, products or borrower payments will result in losses or lower profitability) can be important in some countries.

<sup>26</sup> For example, missing information infrastructure may include the absence of credit bureaus or housing market information systems, standardized underwriting information and procedures, and long-term yield curves to support pricing of interest rate risk.