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BACKGROUND SERIES

# Separating Homeownership Subsidies from Finance:

## Traditional Mortgage Market Policies, Recent Reform Experiences and Lessons for Subsidy Reform

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# –
# Traditional Mortgage Market Policies, Recent Reform Experiences and Lessons for Subsidy Reform

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Final Draft

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# Separating Homeownership Subsidies from Finance –
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Abstract

The paper asks how subsidies and finance have been mixed in traditional mortgage market policies that were designed to give low-income households access to homeownership. It highlights the distortions generated by the creation of traditional special savings and tax circuits and public mortgage market programs. Empirical evidence on mortgage subsidy reform in nine countries is provided which have reformed their systems in the context of fiscal, financial sector and housing sector reform.

The main conclusion is that mortgage subsidy reform must be long-term and closely integrated with general financial sector, housing sector and fiscal reform to have success. With regard to the extent of mortgage market subsidies seen in emerging markets, reform programs should prioritize subsidy reduction before restructuring the subsidy portfolio. This argument is based on two insights: an optimal sequencing of mortgage market reforms requires the development of a financial and technological benchmark which is hampered by the presence of subsidies, and mortgage market subsidies are in general inappropriate instruments to attack the fundamental distribution inequalities exerted by lack of access to formal homeownership.

Under these conditions, is there a rationale for introducing subsidies for threshold mortgagors in developing countries? The paper argues that if appropriately targeted, linked to household savings downpayment, and sunsetted, subsidies can promote mortgage market efficiency and stability and facilitate housing finance reform. However, basic housing subsidies coupled with appropriate urban land and infrastructure policies should be a priority in markets with very unequal income distributions or high formal-informal housing market barriers.

## A. INTRODUCTION

Almost every country pursues policies that effectively favor owner-occupied housing over other tenure forms, often with the result of homeownership rates above sustainable levels. The vast majority of emerging mortgage markets in developing countries are no exception, although most subsidies reach only the small formal housing sector. To achieve the often implicitly pursued goal of expanding formal homeownership, governments have in the past established a tradition of intervention into the mortgage markets, often with substantial budgeted and non-budgeted commitments and risk exposures. Arguing with the existence of market failures and infant industries, government frequently directly became the provider of savings and retail mortgage finance/insurance services, or subsidy donor to the banking/insurance, construction or property industry. Since expanding the limits of homeownership has been a convenient mean to secure political support from the middle classes even in very different development contexts, mortgage market subsidies have been among the most pervasive and hardest to remove financial sector distortions.

The paper will first review which financial policies have traditionally led to the creation of mortgage market subsidies[1], what was the rationale for their introduction and which efficiency concerns have led to the widely accepted notion to prefer direct (personal) homeownership assistance over mortgage market subsidies. It will subsequently review experiences of the past decade with mortgage market subsidy reforms that were guided by this notion, observing that implementation was made within different overall reform contexts, fiscal, financial sector and housing sector reform, and reforms did not always succeed. Concluding from the successful and failed cases, it will attempt to draw the lessons for necessary conditions, timing and sequencing of mortgage market subsidy reform.

## B. THE MIXTURE OF SUBSIDIES AND FINANCE IN TRADITIONAL MORTGAGE MARKET POLICIES

It is convenient to explore the current scope of mixing subsidies and finance by the three main instrument classes of traditional mortgage market policies: special savings and tax funded circuits for housing; public service provision of or intervention into mortgage finance markets; and public service provision of or intervention into mortgage-related insurance and financial guaranty markets.

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1 Subsidies are here defined broadly as the full set of intervention mechanisms available to the government in order to reduce the price of capital available for mortgage finance below and expand the amount of capital above what would have been the case under a fully private allocation, given borrower, property, legal and macroeconomic risk characteristics.

### 1. Special Savings- and Tax-Funded Circuits

Formal housing finance is primarily funded by *voluntary household savings* in financial institutions. Specially regulated and institutionalized savings and loan circuits have stood at the beginning of housing finance. Many developing countries have copied the Anglo-Saxon concept of special purpose S&Ls or building societies, so most former British colonies, including the US and Australia, and Latin America. This contrasts with continental Europe which developed the mortgage markets based on special purpose mortgage banks with capital market access and at a later stage regional and universal banks. While regulatory reasons, such as the matching principle of asset and liability duration, dominated the setup of specialized institutions in both cases, this structure also invited specifically targeted financial subsidies. Special purpose S&L's have frequently operated under conditions combining financial repression elements (e.g., deposit ceilings, directed lending) on the one hand, and regulatory exemptions and tax subsidies for deposits on the other hand.[2] In the case of mortgage banks, directed credit elements were dominated by the effects of public ownership, or regulatory and tax privileges for the issued bonds.

Due to higher systemic financial sector risks, especially liquidity and credit risks, special savings and lending circuits through *funds sponsored by earmarked taxes or mandatory provident fund contributions*[3] continue to dominate low- and middle-income mortgage markets in many developing countries[4]. These funds often provide greater mortgage finance liquidity than specialized lenders or universal banks. This holds especially true for countries with low financial depth resulting from high inflation, financial repression or lack of development of the financial system.

While most housing finance systems have operated with earmarked funds at some stage, the most striking examples for tax and mandatory provident funds devoted to housing today are found in *Latin America*[5]: Ahorro Habitacional/Venezuela, FONAVI/Argentina[6], FODESAF/Costa Rica, Infonavit/Mexico, and FGTS/Brazil. Based on differing salary concepts, contribution rates currently vary between 3% (Venezuela) and 8% (Brazil). A specific characteristic of Latin American funds is that they are designed and perceived as a direct housing policy instrument. Also, they have usually have operated a wide program portfolio, including subsidized public housing and urban

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[2] A typical example appears is the Brazilian S&L system. S&L deposits enjoy capital gains tax incentives vis-à-vis other bank deposits; both mortgage asset and deposit rates are linked at below market spreads to a reference rate controlled by the Central Bank. Commercial banks have sufficient incentives to open S&L subsidiaries, since parts of the deposits may be invested freely, while the mortgage portfolio returns a fixed spread and targeting conditions are lenient.

[3] Contractual savings institutions include provident funds, life insurance companies, funded social security schemes, occupational and personal pension plans.

[4] In Western Europe and North America, taxation of mandatory contribution for housing purposes has been rare. A counterexample is France which still requires enterprises to invest 0.45% of the wage sum into housing, usually via public sector funding conduits.

[5] For a comparison of Latin American low-income housing policies, see Persaud (1992).

[6] FONAVI is a tax conduit for provincial housing program that used to be funded by a 5% wage tax. Since 1991, the fund receives 40% of Argentina's fuel consumption tax.

development programs, deepening their tax character despite the different initial specifications.

The dual strategy to maximize forced savings in order to promote economic growth and at the same time direct investment funds into housing has triggered the use primarily of mandatory provident funds for retirement and special purposes for housing in *Asia*. Examples are the Central Provident Funds in Malaysia and Singapore[7], as well as provident funds in India and on the Philippines. Local government managed provident funds for housing have also been setup recently in China.

Minimum investment floors for housing are at times very high, rendering the funds the character of a tax-funded housing bank rather than a mutual fund[8]. Conflicts of interest between the two mandates become particular pronounced if the funds are obliged to provide loan guarantees for members. Design problems include excessive loan subsidies to borrowing brothers and subsequent rationing effects, exacerbated by an inappropriate savings/loan relation due to minimum loan sizes implied by the mandate to provide formal housing solutions[9]. These effects typically result in subsidy allocations that at best take lottery character, and at worst result in a seriously regressive incidence of the fund's operations.[10] High levels of leakage through credit losses due to the loan guaranty provided may add to that. As a result of the conflict of interest, many mandatory provident funds dedicated to housing today are facing political pressure to reduce contribution rates, or convert to voluntary schemes.

In contrast, special *contractual savings systems for housing (CSH)* are offering a voluntary savings product which hence needs to be attractive for savers. CSH are thus operated by a regulated financial intermediary (e.g. banking institution), do convey simplified underwriting rather than a loan guaranty, and feature limited internal cross-subsidization. Because of the need to limit savings period and amounts and provide a maximum number of savers with loans, loans typically cover only a smaller percentage of the house price (typically 20%). In order to increase the systems attractiveness for savers, CSH typically have additional features, such as a guaranteed loan rate following the savings period (i.e., an interest rate option), fixed savings-lending spreads, as well as

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7 Both Malaysia's and Singapore's provident funds charge high contribution rates. As a result, contribution withdrawal schemes for home downpayments have become significant. Those schemes are less frequent in developed countries. An exeption is Switzerland, which has since 1995 a Law on Homeownership Assistance with Means of Occupational Pensions (Wohneigentumsfoerderung mit Mitteln der beruflichen Vorsorge). Mandatary contributions to OPP in Switzerland currently average 8% of pre-tax, pre-social security contribution income. South Africa uses OPP contributions to credit enhance mortgage operations.

8 Pag-IBIG provident fund in the Philippines which raises a lower proportion of salary than Singapore and Malaysia is mandated to invest 70% of its assets in housing and runs loan schemes conveying an implicit loan guarantee to members.

9 Supervised contractual savings schemes have to follow certain minimum operational conditions. These include a minimum savings/loan relation, liquidity and interest rate risk management conditions especially if real or absolute saving/loan spreads are guaranteed, real value maintenance mechanisms under inflation, etc... To illustrate the potential size of rationing and implicitly mistargeting, the estimated number of households currently participating as savers and borrowers in Venezuela and the Philippines are given: Ahorro Habitactional/Venezuela (500,000 savers/50,000 borrowers), Pag-IBIG/Philippines (400,000 contributors/40,000 borrowers); own estimates.

10 Member loans are usually dedicated to formal homeownership while collecting from households which in their majority cannot afford this type of tenure due to levels of the formal house prices above median fund income. See Llanto et. al. for an illustration with the example of Pag-IBIG/Philippines.

public cash and tax subsidies to savers. Examples in Europe are the German Bauspar system operating with ex-ante guaranteed nominal loan interest rates and savings/loans spreads as well as a the special bank principle. In the French Epargne Logement system, in contrast, no special bank principle is applied and interest rates may vary with capital market conditions[11]. The German system has been introduced, with varying parameters, in the Czech Republic, Slovakia and Hungary as well as in Poland - here in addition to a traditional housing savings system. Common to all countries are high subsidy expenditures for savers under the schemes[12]. Slovenia has introduced a scheme inspired by the Austrian contractual savings system, guaranteeing loans, subsidies as well as fixed rates and spreads over government benchmark rates. Epargne Logement had been introduced in the 1960s in North Africa (e.g., Tunisia, Morocco), but later discontinued. Similarly, Chile abolished its CSP program in 1988. Contractual savings schemes continue to be run, however, by many government housing banks in other developing countries.[13]

Special savings circuits, such as contractual savings schemes for housing, are frequently suggested as an ideal savings mobilization and credit enhancement instrument for housing that deserve fiscal support[14]. The case for subsidies is usually made by demonstrating the existence of an incremental effect on savings by enforcing a dedication to housing at an early point in the household's lifecycle. In fact, although empirical evidence is inconclusive, it appears plausible that a reduced first time buyer age may raise lifetime household savings ratios. A more important argument for housing savings subsidies, however, should be the screening and signaling function of contractual savings schemes for private mortgage lenders and insurers, especially if a private credit assessment industry is absent that could provide historic credit information[15]. However, both savings behavior and screening effects may be achieved through less complex subsidy schemes as well, as the successful Chilean general housing subsidy scheme has demonstrated (see below).

## 2. Public Service Provision or Intervention into Mortgage Markets

The most prominent form of loan subsidies is *interest rate subsidies* provided through various mechanisms by public lenders enjoying funding advantages, or through subsidized loan programs funded directly by the public sector. For a comparative overview of eight selected national programs, see Diamond (1997).

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11 See Lea and Renaud (1995) for a comparison of the German and French system.

12 In the Czech Republic, for instance, despite the fact that the contract conveys an interest rate option on the future loan, currently deposit yields are subsidized up to the market levels of comparable bank time deposits. The interest rate option is, hence, sold for free. Unsurprisingly, demand for CSH contracts has been high.

13 E.g., until 1996, loans from the Korean Housing and Commercial Bank were linked to borrowers who had contributed to a below-market contractual savings accounts. Since 1996, loans are available to non-savers at slightly higher rates. Brazil‘s CEF, as private savings banks, offers savings contracts yielding lower deposit rates (Certificado de Poupanca Vinculada) linked with a loan guaranty. India's BHN offers contractual savings schemes for housing.

14 A condition is that use of the subsidy for housing purposes is ensured. This condition is frequently violated (e.g., current Bauspar subsidy regulations in the Czech Republic).

15 Also, contractual savings may provide for direct credit enhancement, through covering the second mortgage loan position (e.g. German Bauspar system).

*Housing banks* enjoy a wide range of subsidies, including direct tax-based funding, directed deposits with tax or regulation-preferred status or government guarantees, exemption from income taxation, exemption from stamp duties, lien registration costs. Today housing banks continue play a prominent role in developing countries[16]. There is only little privatization[17].As the example of Thailand shows, housing bank operations may be efficient and fulfill lender of last resort functions in a financial crisis situation[18]. Also, most housing banks often exercise important specialized mortgage finance regulation as well as housing policy functions, where sector ministries are absent or powerless. Frequently, however, the funding advantage of housing banks has led to excessive growth, and their specialization fosters market and credit risk concentration as well as operational risks due to high fixed costs, adding significant bail-out costs to the subsidies embedded in current results of financial operations[19][20]. In contrast, the mandate to specialize on low-income operations would appear to a less prominent reason for housing bank failure. As markets develop, housing banks frequently suffer from conflicts of interest between targeting of the embedded subsidies and financial sustainability. In many cases, housing banks in developing countries have focussed to serve primarily government employees[21].

Countries with historically developed mortgage markets have created housing banks primarily with the focus to channel public resources into housing in the aftermath of wars or disasters[22]. There is ample evidence that, even decades after the event, it is hard to privatize these institutions or been force them into a narrower mandate. For instance, Germany's KfW has won a second mandate for housing operations after reunification[23], Japan’s GHLC continues to be a monopoly in low-income mortgage finance. Also, in many continental European countries, in addition a large share of middle-income lending

16 Examples are Brazil, Argentina, Venezuela, Jordan, India, Indonesia, Korea (until 1997), and Thailand.

17 An example is Koreas/KHB which was privatized 1997 (today HCB).

18 GHB is widely perceived to have pursued efficient credit risk policies. During the 1998 macroeconomic crises, GHB’s market share in outstanding loans rose from 27% at the end of 1996 to close to 37% in June 1998. The bank was at times the only active mortgage lender in Thailand.

Thailand is also an example for an emerging mortgage market that does not rely on mortgage subsidy policies. Beyond the effect of the funding advantages of GHB which was passed through to low-income borrowers, the mortgage market in Thailand has been essentially at market rates throughout the 1990s. There have a been only few social housing programs (limited on scale and time). Public housing program cover only about 5% of annual housing output or less.

19 See Guttentag (1998) for a general approach to the reform of housing banks.

20 Examples for failed housing banks due to excessive market coverage are NHMFC/Philippines (1996), BTN/Indonesia (closure under discussion) and BHN/Brazil (closed in 1986).

21 In India, 16-20% of housing subsidies channeled by HUDCO and the National Housing Bank largely to private and public loan programmes, are estimated to go to government employees. While recently the levels of subsidies appears to have been reduced through adjustment to market rates, rising default levels – in particular of state retail lending programmes indicate an increase in leakage. See Pandey, Sundaram (1998)

22 Examples are US State Housing Agencies, special loan programs for low-income homeowners in Germany, France, Netherlands, etc.. The possibly single exception appears to be the UK - however, second only to the Netherlands the UK disposes of the largest public housing sector in Western Europe to cater low-income households (1990: 26% of stock).

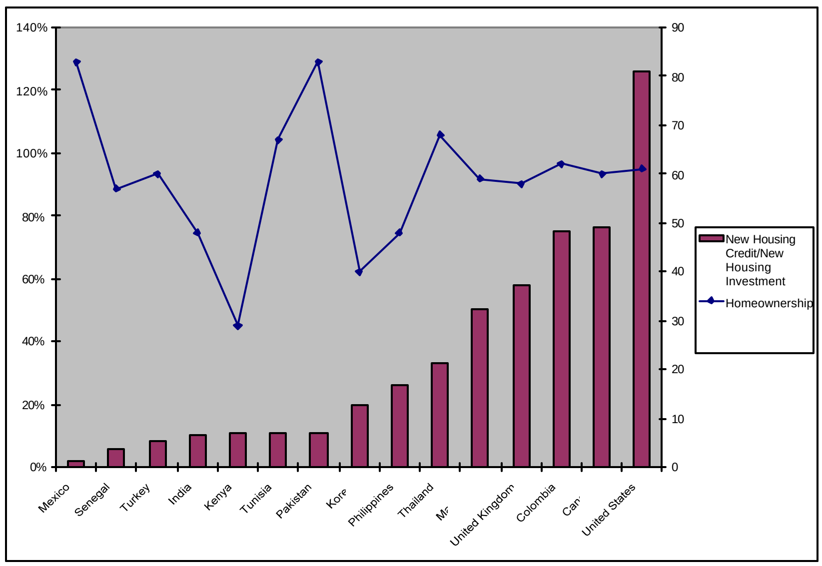
23 ` KfW’s main housing operations consist of below-market loans to low-income families and housing modernization loans (primarily East Germany).

continues to be provided by non-specialized public lenders, often at unfair terms to private lenders funded through internal cross-subsidization and low shareholder return and without specific targeting[24].

*Direct lending by public agencies and ministries* is widespread as well, not only in low-income markets[25]. Chile continues to entertain a public lending system despite a booming private mortgage market (see below). Direct government lending tends to create a direct conflict of interest, as Ministries are perceived rather as subsidy donor than as lender. Similarly, many *low-income housing finance programs* sponsored by government agencies or housing banks but managed and executed by the private sector (banks, thrifts, NGO's) suffer from deficiencies in that government risk exposure is not limited and incentives are not set correctly. Almost all OECD countries continue to operate such programs with private lenders enjoying tax, refinancing and regulatory preferences for specific loan classes or purposes[26]. Frequently those programs are run with subsovereign resources or backing (Germany, US).

General untargeted mortgage loan subsidy mechanisms, such as investment floor requirements for banks and institutional investors in housing, tax support, regulatory privileges, soft public refinancing are standard intervention instruments both in developed and developing countries. *Investment floors* for banks and institutional investors in mortgages or mortgage-related securities have been important support instruments for special circuits; they exist in particular in high inflation economies and to support bond market programs[27].

**Figure 1 Use of Housing Credit and Formal Homeownership**




Note/Sources: Use of Housing Credit: net new mortgage lending/gross new housing investment (definitions and data adopted from Buckley (1994)). Formal homeownership ratios adopted from The Housing Indicator Program (1993).

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24 Examples are public savings banks in Germany and Italy, as well as public savings and commercial banks in France.

25 Middle- and high-income oriented direct lending programs exist for instance in Israel, Chile, the Czech Republic, Malaysia, India and Sweden (prior to 1992 reforms).

26 France continues to run a system of special purpose loans for general homeownership support, social ownership finance and rental housing finance. The extension of these loans has been privatized to a large extent.

27 Soft and hard regulatory privileges for investors have traditionally played a significant role for European mortgage bond markets.

Generally weakly targeted *tax support mechanisms* have recently reached vast dimensions, as both mortgage markets and homeownership ratios in developed countries grew. Interest deductibility from the income tax base has traditionally been the dominant instrument. All Anglo-Saxon countries and at least 13 continental EU countries allowed for at least partial interest deductibility[28]. The instrument is based on the notion that a housing unit is an investment good from the perspective of the household (investor). Hence, tax-deductible capital costs are offset by imputed rental values (Belgium, Denmark, Spain, Netherlands, Australia, US)[29]. However, in practice this offset is usually modest as the imputed rents are based on very low estimates of market value or carries other distortions[30]. Tax support instruments are also applied by many developing countries, despite lower tax base and even more obvious regressive effects. Examples are India and the Philippines. More recently, *tax credit* has replaced tax deductibility from the tax base in some countries in order to correct distributional inefficiencies (e.g., Germany, see below)[31][32].

What has been the allocative and distributional impact of these loan subsidies? Figure 1 arrives at a simple assessment of the distributional impact, comparing mortgage market depth and formal homeownership ratios for 15 countries. Because of the strong discrepancies between formal homeownership and use of credit, in many countries subsidies likely accrue only to high-income households. This self-targeting effect is exacerbated in countries with low formal homeownership ratios.

The most important allocative aspect concerns house price dynamics. In a first round effect, loan subsidies do increase borrower affordability substantially. However, distributing subsidies within a supply and budget constrained system clearly has had an impact to increase, rather than decrease, the formal house price barrier for the majority of the poor. In many countries this has made additional government intervention into low-income housing finance and rental housing necessary[33]. In highly urbanized countries, the policy reaction has been to redirect mortgage subsidies to smaller units, channel subsidies into public land banks or enhance rental market intervention.

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28 In countries with preference for lower leverage, interest deductibility has been substituted by lump-sum or buy-down tax credit or allowances (e.g., Germany).

29 Australia has used until 1986 tax support to support a 13.5% interest ceiling.

30 E.g., Belgium approximates market values of the year 1975, Denmark a fixed factor of 2% of the market value. Other parameters vary widely: for instance maximum deductible amounts are not general (for details on Europe see Duebel, Lea and Welter (1997)).

31 During the discussion on the elimination of the German tax support scheme for homeowners, it was estimated that more than 50% of foregone tax revenues accrued to the top quintile of the household income distribution (see Ulbrich (1994)).

32 Tax instruments are frequently used in low-income rental housing policies, e.g., recent US low-income housing tax credit.

33 Examples for these discussions were Netherlands, Sweden, Germany, the UK, and the US. The Netherlands is particularly interesting, since it is still allowing for full interest deductibility while retaining a relatively rigid urban land supply policy (Randstad). With interest rates strongly falling during the 1990's, average prices for newly constructed houses have drastically increased since the mid-1990's, largely due to both a strong increase in square metre consumption and construction/land costs. This situation is widely seen to have crowded out low-income households from the market, despite a generally generous subsidy framework for these groups.

Secondly, a specific allocative aspect of public lending and mortgage market subsidy programs is the frequent excessive application of subsidies per beneficiary due to misspecification of the lending terms. Subsidies have been historically sustained permanently at a scale of around 20-40% (e.g., Sweden), for some low-income programs over 50% (e.g., Philippines) of construction costs. This deepens rationing, creates a capital allocation lottery and - for the beneficiaries - may entail negative aid effects. Also, deep loan subsidies have the potential to block securitization, funding subsidies may crowd out other forms of capital market access, and public housing programs tend to block the development of specialist low-income origination and servicing.

### 3. Public Service Provision or Intervention into Mortgage-related Insurance and Financial Guaranty Markets

It is useful to devote some room to the discussion of subsidies embedded in public service provision of or intervention into insurance and financial guaranty arrangements, although these have not been at the center of recent subsidy reform programs. There are three reasons for this: first, in the past two decades, in many countries the public sector has withdrawn from direct mortgage lending in favor of the provision of credit enhancements for private lending operations. By doing so, a more complex information and incentive structure is created, with substantial potential fiscal risks. Secondly, many of these policies were motivated by drawing analogies from the almost 70 year old US model of supporting private credit through an extensive system of public guarantees. One of the features of that model is that over time public guarantors were able to enforce a surprising level of homogeneity on markets with a pronounced heterogeneity of households and properties to be financed, a set of characteristics that is shared by many developing countries. It is therefore useful to analyze the subsidy content of this model in some detail. Thirdly, more recently, the introduction of public bond market guarantees have been pushed by advocates of an extensive capital market funding of mortgage loans, but also by special interest groups such as investment banks and rating agencies. This process, brought forward with technological arguments, has put governments and financial regulators in many countries under considerable pressure for support.

#### *a) Insurance*

The rationale for public provision of or intervention into *mortgage (loan) insurance* follows traditional arguments of private market failure, in a variety of situations. First, mortgage insurance may stimulate private sector investment by closing gaps in borrower and property information as well as loan standardization infrastructure that cause the mortgage market to perceive credit risk heterogeneity and high individual information costs. If the private lenders or insurers fail to develop such an information specialist, economies of scale effects in combination with frequent regulatory restrictions to price discrimination are likely to force lenders to limit themselves to a very small upscale market where information is readily available with the existing technology[34]. Information pools developed by an insurer may also serve to overcome collateral enforcement constraints since they broaden the information base for prudent loan underwriting. Secondly, depending on the size of the jurisdiction certain mortgage-related risks may not be efficiently insurable by private agents with limited access to capital or means to mitigate the risk. Examples are a sudden rise in national unemployment rates leading to a rise in defaults, house price risk, or systemic difficulties to enforce collateral on loans in default. While mortgage credit risk is usually concentrated in the first years of loan life, that risk exposure has long tails, requiring high capital coverage for catastrophic events over an extended period. As a result, many bank regulators demand or encourage external mortgage insurance for specific underwriting situations, in particular high loan-to-value ratios. Thirdly, a given pool of loans may suffer in a competitive market from adverse selection, as a result of asymmetric information (e.g., information about individual unemployment risks), discouraging private agents from market provision. Determined on an actuarial basis, the second and third factors combined may imply a minimum capital base that is beyond what would be efficient to hold for a private insurer, as well as usually additional public regulatory intervention (e.g., mandatory enrollment) in order to minimize adverse selection.[35]

Public retail mortgage insurers are being created in an increasing number of developed and developing countries with completely different market contexts and housing policy objectives[36]. Contrasting with the market failure rationale, schemes have been historically primarily introduced with the purpose to enhance formal homeownership and pump-prime the economy[37]. Most of them, while having a monopoly market position, nevertheless distribute high implicit subsidies, at least during an initial phase. The most common subsidy elements are the absence of pricing of the provision of contingent public capital in case of catastrophic events or equivalently under-capitalization, mispricing of individual risks through the absence of actuarial pricing models with a steering function and the dominance of risk pooling (most funds are in fact rather loss equalization funds than insurers), and leakage arising through inefficient lender surveillance operations, giving rise to moral hazard. In addition to direct provision, many countries intervene into the private mortgage insurance markets with the result of horizontal (income/loan volume limits) or vertical (LTV limits) market segmentation and artificial creation of markets. Australia and the United Kingdom appear to be among the only counterexamples where the industry is completely privately owned, however both

34 In most jurisdictions, the scope for price discrimination to account for borrower heterogeneity (e.g., by location, income, unemployment risk) is legally constrained – as a result mortgage lenders/insurers usually price discriminate according to only few factors (typically only LTV, loan volume), severing credit rationing.

35 Within OECD, there appear to be only four countries with a competitive private mortgage insurance industry; Australia, the US, the UK, and France. All four countries have embarked upon explicit and implicit policies to stem adverse selection.

36 Countries with formal mortgage insurance institutions include Mexico, Guatemala, Costa Rica, Venezuela, Brazil, US, Canada, Philippines, Korea, Hong Kong, South Africa, Jordan, Netherlands, Sweden, France. Prior to full privatization, the Australian market was dominated by a public mortgage insurer.

37 The first US mortgage insurer, FHA, was founded in 1932 during the Great Depression, with the explicit mandate to pump-prime the economy by making private sector credit available to the residential housing sector. Similarly the VA insurance scheme was adopted after WWII in order to smoothen the transition of the US from a war into a peace economy.

countries display strong regulatory intervention[38]. Conversely, private mortgage insurance enjoys public support, primarily through mortgage interest deductibility, both due to its direct applicability on insurance premiums and its effect on increasing leverage[39], but also with regulatory[40] and tax preferences.

In developing countries market failures and gaps in the information infrastructure are more persistent. Unavailability of credible reinsurance/government back-stop for private entrants and limited market size here add to market entry barriers for private insurers. More importantly, public mortgage insurance introduced at an early stage entails the risk to block self-insurance by mortgage lenders of efficiently diversifiable risks, distorting the risk management capacity of the mortgage markets[41]. Beyond overexposure, a particular danger of public mortgage insurers lies in it being primarily used as a subsidy instrument, resulting in distortions of lender surveillance and actuarial information base[42].

A special issue is that many governments in high inflation economies continue to be involved in directly managing catastrophic macroeconomic (or market) risks, primarily by enabling dual indexation schemes that would limit borrower payment increases due to inflation (currently implemented in Mexico, Brazil until 1993). Lenders will typically be insured against the risk of retaining residual debt at contract maturity, due to negative amortization arising from mismatches between rates paid to depositors or bond holders - usually linked to inflation or a short-term interest rate benchmark - and rates charged from mortgage borrowers. While the schemes may be seen to have a positive impact on maintaining a market by eliminating the real repayment effect associated to high nominal mortgage rates during inflationary spells, political and juridical intervention into program parameters and premia as well as poor design and underfunding have frequently led to large actuarial deficits of the funds and even insurers defaults[43]. At the same time,

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38 The UK mortgage insurance market underwent substantial structural changes during the 1990's. As monolines with limited cross-subsidization capacity, after the peak of the default crisis in 1989-1991 the surviving insurers had to raise premia to recover their losses and tighten underwriting conditions. This coincided with a strong margin decline due to increased competition and a general tax-induced shift from endowment mortgages to amortizing mortgages which reduced the demand for mortgage insurance and further raised its costs. Building societies and banks, who had been hit less hardly by the crisis than insurers and received some implicit assistance by the government to contain defaults (introduction of MID in 1992), reacted by shifting to self-insurance mechanisms, in particular the creation of captive insurance daughters. It is likely that the continued favourable capital treatment of residential loans after the crises contributed to this change in the credit enhancement structure.

39 Reduced mortgage interest rate deductibility has been a key factor for the UK marketed switching from endowment mortgages to amortizing mortgages over the past decade. In parallel, the share of contracts subject to self insurance by lenders (through LTV pricing) has strongly increased.

40 Capital treatment for insured mortgage loans in OECD countries takes the full range between zero and 4%. Unequal capital treatment of insured loans has been a major deterrent for a private US insurer to enter the Canadian public mortgage insurance market.

41 E.g., by insurance low LTV loan portions in high-income markets.

42 There are cases where mortgage insurers have degenerated to conduits for tax benefits or relief from capital requirement and other regulatory benefits, with the effect that benefiting lenders do not call on guarantees unless property prices fall drastically, distorting the actuarial information base. HIGC/ Philippines represents such a scheme with revenues from investment in guaranteed loans enjoying tax exemptions (with some limits) and loans guaranteed zero risk weighting. The mechanisms both substitutes private mortgage interest deductibility and enhances the already dominant market position of the insurer.

43 In the case of Brazil, the actuarial deficit of a central government fund that reimburses banks for negative amortization incurred as a result of double indexation is currently estimated to be in the range of 5% and 7% of GDP. The fund has defaulted on its cash obligations and is currently paying his creditors in government bonds.

because this type of insurance is usually not targeted by construction[44], they tend to have a regressive distribution impact.

### *b) Financial Guaranty Instruments*

Capital market instruments for mortgage finance can be grouped into two broad classes: mortgage bonds and mortgage-backed securities, with a variety of descendants. Their development has been in particular a cornerstone for promoting emerging mortgage markets. Public intervention into the supply conditions for decentral mortgage bonds has been traditionally limited[45]. The exception is cases where specific market risks were transferred to the capital market[46]. However, mortgage bonds have also been issued centrally, by public institutions, with typical subsidy impact[47]. Intervention into true secondary markets which imply sales of loan pools – primarily through provision of direct financial guarantees or ownership of a financial guarantor ('Secondary Market Institution') as well as regulatory privileges and tax subsidies – has been deeper since the markets have developed historically developed through central issuers.

The rationale to support capital market instruments, and in particular the secondary market, includes widely held concerns about the capacities of financial intermediaries to handle the risks of mortgage finance: credit risk, liquidity risk and market (interest rate) risk. In building a centralized secondary market institution, this argument is typically mixed with the market failure arguments developed above for mortgage insurers, in particular information management. However, it would appear that the rationale for public intervention into developing a secondary market is weaker than for mortgage insurers. First, it is frequently overlooked that secondary markets cannot address all of the risk concerns carried against banks simultaneously, nor do they per se contribute to mitigate risk. They will primarily provide for a redistribution of risks - either within the financial sector from one class of institutions to another, or, more likely in many countries, from the financial sector to the public sector. Secondly, arbitrage-free conditions assumed, it is unclear where the optimal level of capital market funding for housing finance in relation to bank deposit funding is, i.e. what the additional benefit of creating an additional channel for risk management is. The currently observable funding splits appear to be driven by restrictive bank regulations or direct public interventions,

44 An exception is the Venezolan scheme „fondo de rescate“ which differentiates the minimum contract maturity to be covered in two income level/loan volume classes.

45 The introduction of mortgage bonds has been frequently associated to tax subsidies: while Czech Republic recently introduced a mortgage bond market with income tax exemptions for domestic investors - following the example of the reintroduction of “Social” Pfandbriefe in Germany in the 1950s with temporary tax exemptions - so far Poland which has introduced a mortgage bond act has chosen not to follow that route.

46 In addition to tax support to enhance after tax yields directly, the Danish capital markets feature also regulatory/tax intervention mechanisms to support long-term mortgageloans that carry the prepayment option. For details of tax intervention mechanisms into prepayment in Denmark see Graven Lasen (1994), Duebel and Lea (1997b).

47 Primarily France and Spain.

not allowing an assessment[48]. Thirdly, many examples, such as Australia or European markets, show that a government intervention to create secondary markets is not needed if primary mortgage insurers exist or underwriting is conservative[49]. Fourthly, a rationale is seldom defined for which mortgage related risks should in fact be transferred to the capital markets, credit or market risk, and what the role of the public sector in absorbing either should be[50].

The development of secondary markets also commands caution since, as a result of the complexity of the arrangement, the likelihood of distortions in credit risk management typically rises, with potentially high follow up regulatory and subsidy costs. The key to the success of secondary market operations is effective surveillance by the loan purchaser and MBS guarantor over the loan seller's underwriting. Under infancy market conditions, as in any guaranty arrangement, the guarantor would ideally require not only standardized property appraisal and borrower evaluation as well as external mortgage insurance for high-risk portions of the loan[51], but also recourse or first loss credit enhancements provided by the loan seller himself, against a reduction in the guaranty fee. However, many secondary markets in both emerging and developed markets have been set up without the seller retaining such interests, for instance because governments are ready to take the additional risk in exchange for promoting the system for a minimal fee, or simply because the regulatory system only differentiates between either true sale or financing. In fact, bank regulations in many countries *demand* the full transfer of credit risk to afford *any* capital relief to originators[52], or even bar banks from providing credit enhancement for assigned loan pools, even if full capital would be charged. Both setup problems leave governments developing secondary mortgage markets frequently with severe surveillance and subsequent risk mitigation problems; also, under very plausible infancy circumstances the desired risk allocation between originators, public sector and

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48 Empirically, while capital market sources do fund in some cases the vast majority of mortgage loans in a few countries, for instance in Chile or Denmark, the ratio in most countries is small – in Western Europe it does not exceed 20%, in the UK market with relatively free market access not 5%, and even in the US with a government sponsored second tier bank landscape it is below 40%

49 Direct financial guarantees through secondary market institutions are one mean to provide the necessary credit enhancement for MBS, competing primarily with private label MBS issuance based on retention of a subordinate pool tranche by the originator, or private external financial guarantees provided by banks and specialized insurers. Frequently, to foster securitization, public mortgage insurers in emerging markets have simply diversified into financial guarantee operations.

50 For instance, while many hold the understanding that capital market investors, such as pension funds and insurance companies, should manage market risk while primary mortgage lenders, the interface to the borrower, should manage credit risk, most existing secondary markets arrangements transfer good parts of both risks to a - often publicly owned - secondary market institution.

51 E.g., CMHC/Canada, FHA/GNMA and private top-loss mortgage insurance for loans purchased by Fannie Mae and Freddie Mac in the US.

52 This holds true, for instance, for most countries in Latin America and South East Asia.

the capital markets may become perverted[53]. In extreme cases, this structure may result in the bankruptcy of the secondary market institution.[54]

The setup conditions as well as the form of public intervention into and subsidies for the secondary mortgage market have been subject of intensive debates in the US[55], whose system of public mortgage guaranty operations has frequently served as a model for emerging markets. Contrary to Europe, the US failed to develop a regulatory framework for mortgage bonds in the late 19th century that would have enabled individual lenders to limit liquidity risks by tapping the capital market, based on portfolio quality and signature[56]. Rather, in the light of a severe housing construction crisis around 1930, the government decided to develop both public mortgage insurance and a centralized wholesale mortgage market which eventually developed into today's system of financial guaranty operations through government sponsored enterprises (GSE). This system on the one hand has resulted in highly standardized and liquid primary and secondary mortgage markets, but on the other hand led to monopolies in large parts of the US market for conduits, mortgage insurers and financial guarantors barring technological progress and competition. Public intervention into GSE's over time included public ownership, exemptions from bank/insurance regulations, tax subsidies and other financial preferences, as well as political definition of business lines and conditions, in particular by housing policy. GSE's therefore have enjoyed and continue to enjoy considerable implicit and explicit subsidies. However, one implication of the monopoly position have been financial guaranty fees charged by the GSE's are widely considered larger than costs, even if deducting subsidies.[57] As a result of both, high levels of profits have arisen that render these institutions are among the largest and most profitable financial institutions in the world[58][59].

Many developing countries are following an infant industry approach for the secondary mortgage market. The case of the SMI Cagamas/Malaysia[60] created in 1986 may serve as an illustration for the typical range of regulatory and tax benefits in the case of a privately

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53 In most cases MBS markets are started through reselling pools 'back-to-back' to originators, typically special circuit or mortgage lenders with tax or subsidy privileges. The reason is that those lenders frequently constitute the only short-term source of demand for the securities. This leads to the paradox result that credit risk is 'sold' to the public sector, while market risk, and to some extent also liquidity risk, remains with the originator.

54 An example is NHMFC/Philippines which was set up as a secondary market institution. Absent adequate underwriting and servicing standards and without enforcement of recourse to originators, the corporation went into bankruptcy in 1996 due to a credit risk crisis (see below). The setup of a new SMI, based on private management and capital, is currently planned.

55 See CBO (1996) for a general discussion.

56 See Lea (1997).

57 In the Fannie Mae/Freddie Mac market 25 bp vs. 3-4 bp actuarial losses. See also Pollock (1999), who discusses an alternative financial guarantee mechanism for the FHLB system.

58 For example, CBO (1996) has estimated that Fannie Mae and Freddie Mac retain pass through only less than 60% of their implicit subsidies, explaining mostly their high RoE (in the 1990s consistently higher than 20%) and derivative firm value (market-to-book ratio of both institutions combined in 1995 higher than 2.5).

59 Currently only Ginnie Mae operates exclusively as a financial guarantor only. Both Fannie Mae and Freddie Mac in addition inter alia fulfill conduit functions for MBS and run portfolio mortgage business funded primarily through bonds.

60 See Chiquier (1998)

managed and majority privately owned corporation, including: minimum housing loan quotas imposed on participating lenders (5% of portfolio in 1995), government backing through partial ownership (20%) and Board representation, special incentives for bond investors and loan originators[61], expedite securities issuance process and other privileges. Cagamas passes on parts of the economic benefits of these exemptions by cross-subsidized purchasing and funding of below market low income loans, so far it has not been determined to what extent. There are indications of excess profits.[62] The findings of Chiquier appear to be consistent with observations in many other cases of SMIs in developing countries, of which a majority has direct or substantial minority government ownership.

61 Preferences for bond investors: Exemption from the statutory and liquidity reserves requirements, bonds backed by low-income loans eligible for tier-1 capital, 10% risk-weighting, eligibility for technical reserves for insurance companies. Preferences for loan sale: special exemption from stamp duty.

62 During the second half of the 1990s, Cagamas performed with one of the highest RoEs of Malaysian financial institutions.

An important aspect is whether excess profits will be reinvested to provide for sufficient capitalization in the case of catastrophic events and cushion the risk taking behaviour of the institution. As an example, GSEs in the US have recently been submitted by their regulator to new stress test assumptions and forced to increase their capital. Due to their high risk concentration and moral hazard problems embedded in loan sales, bankruptcies or near bankrupticies of SMIs have repeatedly occurred (e.g., Fannie Mae/US in 1982; NHMFC/Philippines in 1996).

## C. REFORM OF MORTGAGE MARKET SUBSIDIES – NINE CASE STUDIES

The worldwide sluggishness of housing finance reform brings about a dearth of seasoned models to investigate empirically the strategies that have been adopted to reduce and transform mortgage market subsidies for homeowners. The countries that did are very heterogeneous in terms of their overall development and macroeconomic context, the level of mortgage market penetration – especially supply to low-income households -, and the depth of public involvement in direct provision of low-income mortgage and housing services. Three main reform contexts can be identified:

- Mortgage subsidy reform in private mature mortgage markets, primarily with the goal of *fiscal reform*.
- Mortgage subsidy reform in markets dominated by public provision of lending and guaranty services, primarily with the goal of *financial sector reform*.
- Mortgage subsidy reform with the goal to build a private low-income mortgage finance system, primarily with the goal of *housing sector reform*.

Below, three country cases for the three categories have been selected that serve to illustrate the initial situation that triggered reform, the main reform steps, as well as outcome of reform after the first years. A common denominator of the country cases is the use of the instrument of direct homeownership assistance; either as a main reform goal by itself or a major element of reforms. A second common denominator, closely linked to the first, in all but one case is the simultaneous implementation of deep mortgage market reform. A ranking of the nine programs is undertaken.

### 1. Mortgage Subsidy Reform in the Context of Fiscal Reform

In many developed mortgage markets reform programs have been over the past decade with the goal to reduce the high levels of mortgage subsidies within a largely private mortgage finance system. Secondary reform goals were the improvement of the micro-efficiency of homeownership subsidies, such as improved targeting, mitigation of negative externalities such as the impact of taxation instruments for shape and structure of cities, and facilitation of regional harmonization and cross-border competition.

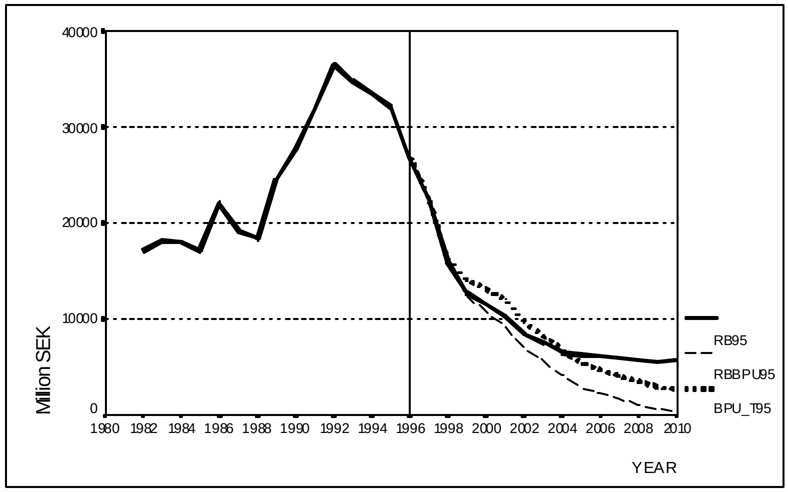
Three cases are selected from Europe which has traditionally featured high budgeted housing subsidy budgets and mortgage market subsidies, especially tax and interest subsidies targeted to middle-class homeowners[63]. A common notion has been that these subsidies supported high house prices and, by redistributing wealth to sitting homeowners rather than financially weak market entrants, did little for market penetration. The main trigger for reform, however, has not been housing policy debate but added fiscal pressure, especially after the 1992 Maastricht treaty.

By the beginning of the 1990's, reforms in Europe became possible through a sustained drop in long-term interest rates, which allowed for a gradual removal in particular of

[63] Van Vennep/Van Velzen (1994) for an overview. levels in the range of 1-3 % of GDP by the end of the 1980’s

subsidies.[64] A common reform strategy in Europe has been to limit or even replace tax and direct public lending instruments by direct housing transfer mechanisms and an increased role of government as a mortgage insurer or social safety net provider for homeowners.

**Figure 2 Mortgage Interest Subsidies in Sweden: 1980 - 1996, and Projections**




Source: Turner (1997)

Mortgage market subsidy reform at the turn of the decade in **Sweden** was triggered by a fiscal crisis, to which high housing subsidy levels had significantly contributed (see Figure 2). Homeowner support included inter alia a system of public second mortgages (Stadshypothek) with high subsidy and default leakage, as well as high subsidies provided through full income tax deductibility of mortgage interest, at marginal income tax rates as high as 75% during the 1980s. Budgeted housing subsidies peaked in 1992 at around 3% of GDP.

Turner (1997) provides evidence that excessive subsidies had helped to create a house price bubble around 1990. In 1991, interest rates rose and housing market entered a severe recession; at the same time government in a fiscal reform package had begun to cut back tax subsidies by introducing a new tax credit scheme that defined maximum square metre applicable costs. As homeowners had defaulted during the house price recession on a massive scale on the public second mortgages, the instrument was abolished in 1993. It was replaced by a new public mortgage insurance fund (BKN) which offers optional enrollment for all newly originated mortgage loans in the Swedish economy[65]. First experiences with the fund give little evidence of excessive public exposure to retail mortgage risks; however, the share of enrolled mortgage loans is low and the market has still not broadly recovered. By 1997, housing subsidies had been cut back to 1.7% of GDP.

**Rating:**
**- Subsidy Reform: successful.**
**- Mortgage Market Reform: partly successful.**[66]

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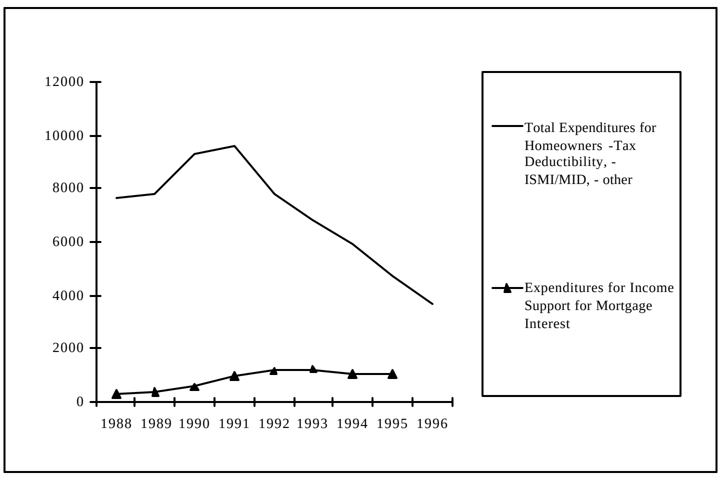
64 For further reading see EMF (1997) and McLennan et.al. (1998).

65 There is some indication of underpricing of the insurance coverage of BKN, however, losses mostly concentrated with the rental housing loan portfolio.

66 For Rating Categories, see Table 3.

Similarly the **United Kingdom,** with the highest homeownership rate in Western Europe, significantly cut mortgage market subsidies during the 1990's while strengthening private insurance mechanisms and a reforming the safety net for homeowners. By 1990, mortgage subsidies made up for the bulk of housing subsidies which ran at 1.7% of GDP (see Figure 3). The main element of mortgage subsidies was a tax credit, mortgage interest relief at source (MIRAS). In contrast to Sweden, the main trigger for reform here was a residential default crisis which started in 1989 and enforced a switch towards instruments that were conducive to stabilize the mortgage finance industry. Reforms took place in several steps, beginning in 1992 with the introduction of Mortgage Interest Direct (MID), a substitute for the traditional social welfare aid for homeowners, ISMI, paid to homeowners in the first months of default. Subsequently, the government stimulated a private insurance market for cash flow insurance schemes for homeowners that temporarily lost employment ("mortgage protection"). Finally, in several steps the MIRAS was reduced, and finally eliminated in 1999. As a result of reforms, by 1997, homeownership subsidies had been reduced to 0.5% of GDP, reflecting to a large extent the safety net expenditures for ISMI/MID. In the meantime, mortgage protection schemes are covering approx. 60% of new originations in 1998.

**Figure 3 Mortgage Market Subsidies in the UK, 1988-1996**




A drawback of reforms has been the continued unlimited time for which social welfare for homeowners is offered, which limits incentives for a debt workout. Also, after the credit risk crisis private mortgage insurance has lost ground against an increase in lender self-insurance through captives.

**Rating:**
**- Subsidy Reform: highly successful.**
**- Mortgage Market Reform: partly successful.**

In **Germany,** until 1995 the homeownership support system consisted of leverage neutral subsidies in the form of tax deductible fictive property depreciation allowances. At marginal tax rates of 56%, the instrument was highly regressive – by 1993 more than 50% of the benefits accrued to the top 20% of the household population. By contrast, savings premia for contractual savings for housing operated with tight absolute income limits. The high fiscal costs and distributional inefficiencies of the tax scheme were at the key driving forces of a reform of the system. In January 1996, a direct housing assistance scheme was introduced, which consists of a constant buy-down over 8 years (with family component).

After three years, it would appear that mortgage subsidy reform has been successful. The total costs of the buy-down scheme is ~0.5% of GDP, significantly below amounts provided by the previous tax scheme. Since 1996 single-family housing production and mortgage loan demand by low-income households has been stimulated somewhat, although the cohort effect of babyboomers coming into the family building age appears to dominate. At the same time, market entrants are still crowded out by excessive property and property sales taxation, an inefficient housing finance system[67] and high house price to income ratios. Against these factors, the limited directed subsidy has only a small affordability impact.

**Rating:**
**- Subsidy Reform: successful.**
**- Mortgage Market Reform: neutral.**

## 2. Mortgage Subsidy Reform in the Context of Financial Sector Reform

The cases of Hungary, the Philippines and Costa Rica have been selected to demonstrate different approaches pursued in countries with permanent high levels of public housing finance service provision, suggesting a higher than optimal level of mortgage market penetration. A specific goal of reforms in these countries has been to reduce and refocus mortgage subsidies, while enhancing the private provision of mortgage finance services.

The **Hungarian** mortgage market reform program provides for an example for the transition from an entirely public to a privately owned mortgage finance system, and trial and error in identifying the optimal homeownership subsidy system. Under the socialist regime, both a deep mortgage market and high levels of housing subsidies existed. Hegedues, Mark and Tosics (1996) estimate for 1988 an explicit housing subsidy budget of 7.4% of public expenditures, and in addition 4% off-budget subsidies. The latter primarily took the form of below market mortgage rates of the public savings bank OTP, while the former included a traditional up-front subsidy for home construction based primarily on household size (Social Policy Allowance, SPA).

**Table 1 Mortgage Market Subsidies in Hungary**

| in % | 1988 | 1992 |
|---|---|---|
| Share of subsidies in budget | 7.4 | 3.6 |
| Off-budget subsidies as a share of budget | 4.0 | 2.4 |

Source: Hegedues, Mark and Tosics (1996)

During the housing finance reform of 1989, OTP's new loan conditions changed from fixed to adjustable-rate, and rates were increased to match market conditions[68]. A special first-time buyer mortgage subsidy was introduced to prevent loan demand from

67 See Diamond and Lea (1995).

68 Court intervention prevented the conversion of the existing loan portfolio, resulting in the transfer of the loans to a bond-financed housing fund and establishment of a 30% tax on savings deposit to cover the losses. Later, most of the old portfolio was liquidated against a 50% discount and conversion to market conditions.

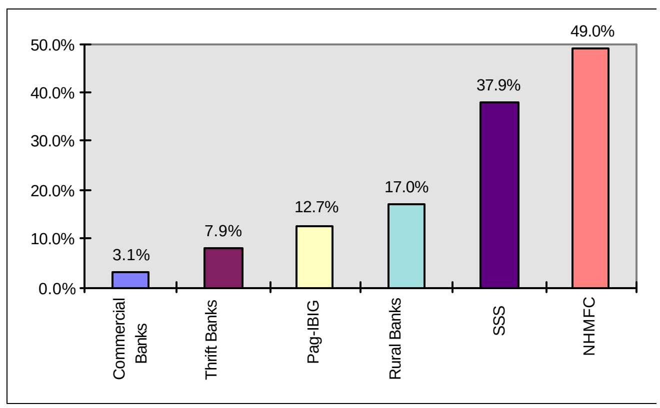
collapsing. While total housing subsidies fell due to diminished interest subsidies (Table 1), direct subsidies became initially very deep. This was true since - to cushion delinquencies - the new mortgagor subsidies had been formulated in proportion to debt service, which rose as interest rates continued to increase. This translated into large subsidies for OTP[69]. In 1994, parallel to privatization efforts for OTP, a new graduated buy-down subsidy in combination with a tax credit replaced the scheme. In addition, SPA general homeowner assistance terms were improved under a successor scheme, introducing higher levels of support for larger families. However, the terms of the reformed scheme had been overly generous, and conditions needed to be tightened as subsidy demand became soon excessive. A new scheme was introduced recently, based on a maximum house size and household housing expenditures. In addition, as other transition countries Hungary has introduced subsidies for contractual savings for housing. As of 1999, the country is still experimenting with new subsidies (VAT exemption) to promote the mortgage market demand.

Subsidy reform in Hungary therefore initially closely followed the financial sector restructuring needs and later entered into a trial-and-error phase to identify the best direct subsidy instrument. While the reforms have on the whole successfully reduced and refocused subsidies, deeper financial sector reforms including the de-monopolization and unbundling of the mortgage market services remain ahead[70].

**Rating:**
**- Subsidy reform: successful.**
**- Mortgage market reform: partly successful.**

After the bankruptcy of National Home Mortgage Corporation (NHMFC), a public housing bank, due to a long history of negative spreads and rising default rates, the government of the **Philippines** in 1996 launched a major initiative to rebuild the mortgage finance system. The reform goals were to reduce governments exposure to the sector, streamline and refocus mortgage finance subsidies, and open up the closed circuit funding system for low-income mortgage finance to capital market funding.

**Figure 4 Arrears on Private Banks' Total Loan Portfolios and on Selected Public Lenders' Housing Portfolios**

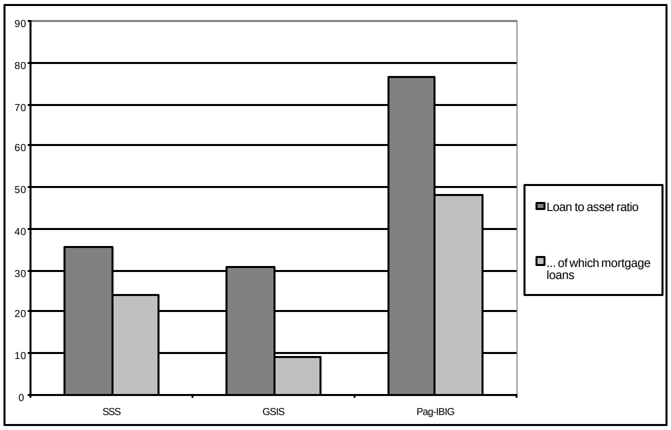



69 After transition, loan delinquencies reached moderate levels of 7 to 10%.

70 For a deeper discussion of current mortgage market issues in transition, see Diamond.

By 1996, the Philippines had developed a large public mortgage finance system, with approx. P$ 70 bn in outstanding low-income lending ($4^{th}$ to $7^{th}$ income decile) and in addition P$ 20 bn outstanding guaranty exposure covering private sector high-income lending. The government thus covered the credit risk of almost the entire, small Filipino mortgage market. Under the National Shelter Program initiated in 1992 the contractual savings institutions GSIS and SSS (private and public social security system), and the Pag-IBIG mandatory mutual fund, had been obliged to provide liquidity for low-income operations. In addition, only a small proportion of credit and operations risks were to be assumed by the public mortgage insurer HIGC, or the government budget. As Figure 6 and 7 show, operations especially of the National Home Mortgage Corporation, which administrated low-income loans funded by SSS, GSIS and Pag-IBIG, and, to a lesser extent, Pag-IBIG's own loan operations suffered from high defaults. High loan subsidies created additional leakages[71], which resulted in pension and mutual fund contributors holding strongly under-performing assets. The fiscal losses consisted mainly of repeated recapitalizations of National Home Mortgage Corporation.

**Figure 5 Loan Portfolio of the Social Security System and Mandatory Provident Fund Pag-IBIG**




Note: SSS: Social Security System. GSIS: Government Social Insurance Service. Pag-IBIG: Home Development Mutual Fund. Mortgage loan data for GSIS not available.

The guaranty operations of HIGC constituted an indirect fiscal drain, although taken as a profit center they were profit making: the trick was that lenders would not call on the guaranty provided, in exchange for continued guaranty enrollment which brought about regulatory privileges[72] and substantial tax subsidies. While this mechanism is likely to have contributed to low credit risk in private sector operations, which do apply stricter underwriting and pass on market risk to borrowers than public lenders, on the whole, in addition to its high fiscal costs, it has hampered the development of the high- and middle-income mortgage finance through subsidy rationing[73].

Llanto et. al. (1997) have shown the overall regressivity of the mortgage market subsidies, arising both from the political preference for subsidizing the formal mortgage

[71] Public lending operations used below-market fixed rate loans, which in an environment of high interest volatility amounted to ~45% subsidy in present value of reduced lender cash flow, on a P180,000 loan. In addition, 20-25% of the property value would be subsidized through tax and other regulatory preferences for developers.

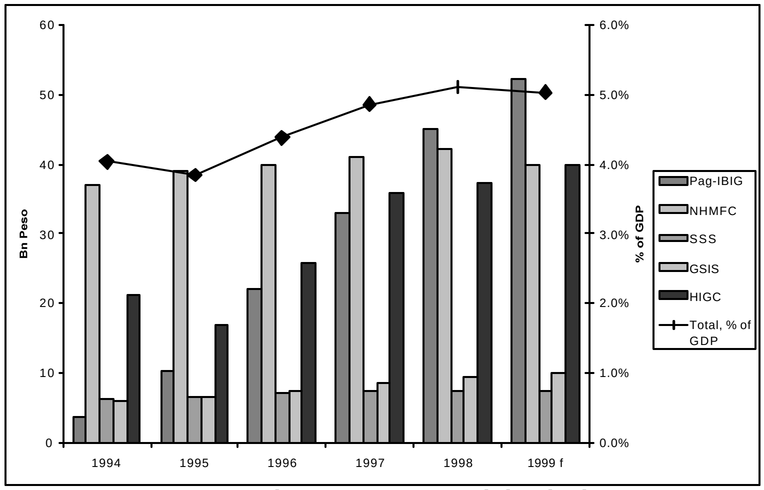
[72] Among other things, zero capital requirement and exception from real estate related large exposure rules.

[73] HIGC's guaranty exposure is capped at 20 times equity. Mortgage interest deductibility in the Philippines is limited to HIGC covered loans.

sector over other housing subsectors, and the distribution of subsidies and defaults within the formal mortgage sector itself[74].

The reform concept developed still under the Ramos administration with the assistance of the World Bank focussed on strengthening the viable elements of the mortgage finance system, especially the specialized private low-income developer industry that had produced mass housing projects with considerable success[75], and a limited number of private lenders that had traditionally been involved in low-income mortgage origination and servicing operations. The urgent credit performance and subsidy issues implied a comprehensive operational and institutional restructuring of public housing finance agencies, with the final goal to eventually withdraw from operations that could be performed by the private sector, such as loan origination, servicing and eventually insurance. At the same time, alternative housing delivery systems were scheduled to be strengthened, such as the rental housing sector and the successful, but under-funded, community-led housing programs with strong NGO involvement. Despite this diversification strategy, the program focussed its resources around rebuilding the low-income mortgage finance system, since a discontinuation of liquidity flows would have jeopardized the low-income housing development industry, which already had been at the brink of extinction after a macroeconomic crisis in the mid-1980's. In particular, successful mortgage market reform was seen as a precondition for contractual savings reform.

**Figure 6 Public Retail Mortgage Finance Exposure in the Philippines (Stock), 1994 - 1999**




Notes: Data cover entire retail mortgage exposure, including developer guaranty's. Data exclude inter-agency collateralized lending; however, some SSS and GSIS lending carries HIGC guarantees (for the calculation of the total, a ratio of 50% is assumed). 1999 author's forecast.

However, as a reaction to National Home's bankruptcy the public and private social security funds had withdrawn almost entirely from subsidized lending, with little co-ordination with housing policy makers. Demand subsequently shifted to the mutual Pag-IBIG fund, which operated formally as a housing policy institution and still provided subsidized loans.

74 In fact, while annual budgeted housing subsidies which went to resettlement and community programs hardly exceeded 0.1% of GDP, indirect mortgage market subsidies were at least in the range of 0.25% of GDP, excluding recapitalization and below-market RoE of government banks and agencies.

75 A formal house on the Philippines is available for ~ 1.2 times median household income.

In the two following years, the growth of the fund combined with increased public mortgage guaranty exposure led not only to a switch in role within the contractual savings institutions, but also to a significant increase, rather than decrease, of public risk exposure. By 1998, Pag-IBIG fund had doubled its mortgage portfolio size over 1995, at the cost of performance. Absent cover by the public mortgage insurer or the budget it had to tighten underwriting and curtail mortgage subsidies in the interest of its members. As a result, as of 1999 the loan takeout backlogs increased again and - although total mortgage risk exposure of the government altogether soared from 3.7% of GDP in 1995 to over 5% in 1998 - housing policy makers became under pressure to abolish subsidy reforms. By October 1999, the reform program was terminated, and a new Presidential Mass Housing Commission introduced with the goal of implementing a new subsidized mass housing program, funded by the social security funds.

**Rating:**
- **Subsidy reform: partly successful.**
- **Mortgage market reform: unsuccessful.**

The **Czech Republic** entered mortgage market reforms with high general housing subsidy levels but only a small retail mortgage market[76] Housing subsidies were absorbed by construction of public housing with low cost recovery. The owner-occupied housing sector was traditionally small, and demand was depressed to low rent levels and high construction costs. However, the Czech Republic had early macroeconomic stabilization results in the region, including low interest rates and the highest levels of credit to the private sector in transition countries, raising hopes for swift mortgage finance reform contributing to the desired transformation of the housing sector.

**Table 2 Housing Subsidies in the Czech Republic, 1992 and 1995**

| | 1992 | 1995 |
|---|---|---|
| **Public Sector** | 9.0 | 1.7 |
| Completion of "complex" state housing | 8.7 | 0.5 |
| Completion of unfinished communal housing | 0.3 | 0.4 |
| Support for new communal construction | - | 0.8 |
| **Private Sector** | 0.6 | 2.0 |
| Contract saving premiums | - | 0.8 |
| Grant for mortgages | - | 0.4 |
| Interest-free modernization loans | - | 0.3 |
| New rent support | - | 0.2 |
| other | 0.6 | 0.3 |
| **Miscellaneous** | 1.0 | 2.3 |
| New construction of old people's homes | 1.0 | 1.7 |
| New land development | ... | 0.6 |
| **Total** | 10.8 | 6.0 |

Note: in bn Koruna at Current Prices

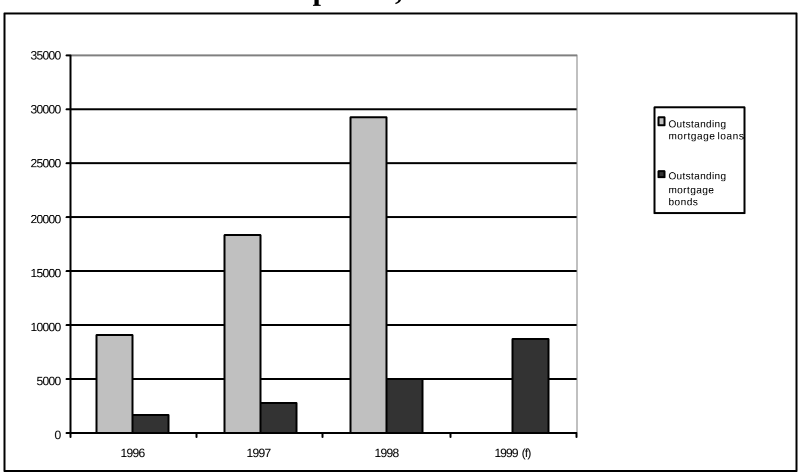
Subsidy reform went through two phases: the reduction of public construction and mortgage loan subsidies until 1995 and the build-up of a homeownership subsidy system with the primary goal to build a private mortgage market, which did not exist by 1993, and support homeownership. Table 2 gives an overview over the substantive swing in fiscal allocations in the initial phase of reforms. By 1995, private sector subsidies had taken over public housing subsidies. By 1999, the most generous system of subsidies for mortgage finance in the transition countries has been created, including: a premium system for contractual savings for housing; a 4 percentage point buy-down for retail mortgage loans, payable up to 20 years under very lenient limitations; full tax exemption of mortgage bond revenues while government bond revenues were taxed, tax exemption of mortgage banking

76 At transition, old subsidized mortgage loans outstanding were in the range of 2.4% of GDP.

activities of commercial banks, tax deductibility of mortgage interest, and a zero interest public second mortgage loan. Also, public construction subsidies are being increased again.

By 1999, the savings premia for the special purpose contractual savings contracts (Bausparen) have grown to 6.25 bn Korona, more than 0.4 % of GDP and 43% of the approved housing support budget. Because of excessive subsidization, Bauspar contracts were in high demand. Additional Bauspar deposits have driven the strong Czech M2 growth in the years after 1995 relative to neighboring countries. However, the excessive liquidity in the system created by this growth relative to mortgage market demand forced the government later to relax the purpose limitations of Bauspar funds. At the same time, the slow mortgage demand has led to little pick-up of the remaining subsidy programs, resulting in total budgeted subsidies for 1999 not in excess of 1% of GDP, despite the high number of programs. Diamond (1997) estimates that although combined subsidies leading to a 0% effective real mortgage rate and Bauspar loans being abundantly available at below market rates, the mortgage market has reached less than 10% of its potential.

**Figure 7 Growth of Primary Mortgage and Mortgage Bond Market in the Czech Republic, 1994-1998**




% of GDP.

The case presents a good example of the problems of timing and sequencing mortgage market and housing sector reform. Most of the negative relative price and legal housing sector conditions in the Czech Republic have not changed through the 1990's and continue to impede mortgage demand. Particularly distorting is the continued reliance on public rent subsidies and private sector rent control, as well as strong eviction controls. In addition, mortgage market and subsidy reforms have been special interest-driven rather than based on a comprehensive sector reform framework. As of 1999, still mortgage market infrastructure conditions reduce the willingness of mortgage lenders to invest available funds in housing: the land and lien title registration system has severe gaps and foreclosure is still infeasible. Matching a distorted rental and mortgage market with high mortgage market subsidies has thus failed to stimulate the market and helped to create financial sector distortions.

**Rating:**

- **Subsidy reform: highly unsuccessful.**
- **Mortgage market reform: neutral.**

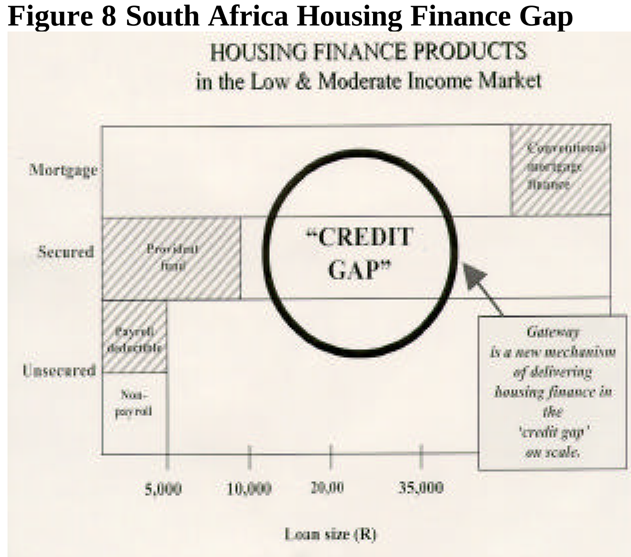
## 3. Mortgage Subsidy Reform in the Context of Housing Sector Reform

Mortgage market reforms have been frequently pursued in the context of general housing sector reform. Here the specific contexts of excessively subsidized public rental housing markets (Chile, South Africa) and regressive mortgage market subsidies (Costa Rica) is pursued.

A typical housing sector problem is that because of rent controls and subsidies, public housing markets tend to block household filtering over time, as both job and social mobility rise, and therefore the system as a whole fails to mobilize sufficient private household's resources for housing production. Also, public housing subsidies have often proven to be financially unsustainable, rationing many poor households out of the market. The build-up of a retail mortgage market, based on a free market for low-cost mass housing units has been seen as a main policy alternative, especially more recently some European countries with high rental housing shares. However, this reform rationale has also been pursued by many developing and transition economies, from different starting points.

**South Africa** under apartheid ran a costly public and enterprise housing system for the majority of its population. Willingness to pay for the subsidies was high, as public housing meant a feasible mean for the ruling minority to maintain the desired spatial segregation of population groups. Towards the end of the apartheid regime, however, public housing operations had become increasingly unsustainable, both financially and politically. Adopting an explicit subsidy strategy towards equilibrating private capital stock holdings of the minority and majority population, South Africa with the housing White Paper in 1992 decided to embark on a large program to promote mass homeownership.

**Figure 8 South Africa Housing Finance Gap**




Source: NHFC/Gateway.

The initial condition for reform around 1990 was characterized by the absence of mortgage finance for the house price range affordable to the majority of the population. Conditions for an increase in market penetration were weak: a history of non-payment had led to average default rates of 30% on private rental and up to 90% of public rental contracts in townships. Retail mortgage loan portfolios had default rates similar to private rental. Credit risk was particularly high with traditional clients in areas of economic restructuring, which gained pace during the 1990's. A first attempt to expand traditional mortgage lending after 1990 to the new client classes outrightly failed[77].

[77] By the end of the 1990's, the traditional mortgage finance system has 60,000 loans in repossession.

To improve the situation, the government promoted legal rent and mortgage reform, and sought a complete redevelopment of the low-income housing finance system:

To cater the most immediate new housing needs and create an immediately effective redistribution mechanism independent from access to finance, a National Housing Scheme based on grants was introduced in 1997. It provided deeply progressive grants for homeowners of between US$ 1,000 and US$ 3,000 per household, depending solely on income (no savings requirement)[78]. In addition, local governments were entitled to pay a topping-up in order to reflect local construction cost differences.

In parallel, the Housing Act of 1995 introduced a new housing finance system geared towards bridging the credit gap that arose after the subsidy to afford a low-cost unit. The Act created a second tier bank (NHFC) and a private mortgage insurer (HLGC); with the vision to build an unbundled mortgage finance system based on low-cost servicing and securitization. Due to the traditional enforcement problem for mortgages, NHFC's main program Gateway operates with personal guarantees and other readily accessible financial collateral, in particular provident fund contributions managed by employers.[79] The program faces significant initial problems to grow to significant levels due to high origination and servicing costs.

Tucker (1999) notes, however, that the most dynamic element of transition has been small micro housing loans that are supported by the banks in conjunction with employers. Employers perform critical functions as loan originators, as payment agent for the lender and by registering financial collateral. As significant portfolio is held both by micro-lenders and banks, the market is estimated to have the potential to provide access to housing finance for 20% of the uncatered population.

The success of South Africa's route to create new adapted housing finance models based on traditional and widely accepted collateral mechanisms remains to be seen. The focus on improving the micro efficiency of lending operations and providing a basic transparent homeowner subsidy promises to support a stable basis of receivables; low-income households begin to see alternatives to the severely rationed public projects or squatting. The program has demonstrated so far the limits to expand formal mortgage finance, before fundamental conditions, especially payment discipline, improve. Also, housing sector fringe conditions important for mortgage finance, such as the high subsidy leakage of public housing projects through continue to exist.

**Rating:**
**- Subsidy reform: partly successful.**
**- Mortgage market reform: partly successful.**

Housing has a high political priority in **Chile**, as reflected by high housing production figures and public housing expenditures. Against the regional trends, the Settlement

[78] At the income margin, the subsidy is higher than 1.5 multiples of annual income, highlighting the strongly redistributive character of the program.

[79] For further reading see Reddy and Brijal (1992), Diamond (1997)

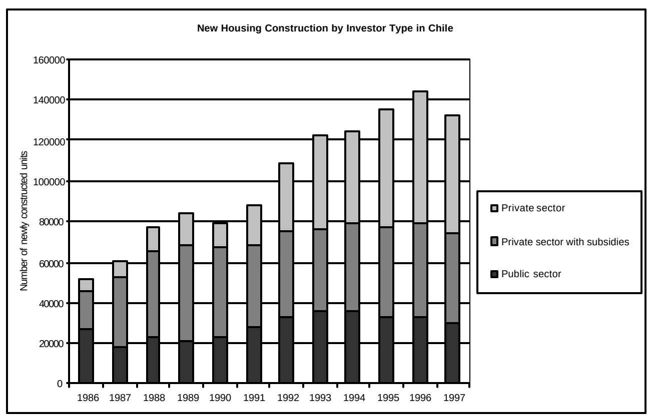
Upgrading Program launched in 1983 has almost eradicated substandard settlements, and a public housing construction boom in the early 1990's followed by increased private construction based on an expanding mortgage finance system has helped to reduce the general housing deficit. The active housing policy stance is reflected by the fact that two thirds of Chile's annual housing production carries some form of public subsidies, and one fourth continues to be produced directly by the Ministry of Housing and Urban Development (1997).

A unique feature of the Chilean experience is the combination of housing policy and financial sector reforms upon which the country embarked in the 1970's[80]. The reforms had two main goals:

- to develop a public housing policy model that replaced the regressive homeownership policy of the 1960's and 1970's as well as ineffective public rental housing programs of the early 1970's, and
- to maximize private participation in the financing and construction of housing, without directed credit elements.

Despite its costs, the Chilean housing policy program initiated in 1978 has become a model for other Latin American countries. A key element of subsidy reform was the introduction of "housing saving accounts" (~ 1.4 million) [81] under the Allocated Subsidy Program introduced in 1978. Mistargeted subsidies, such as through the contractual savings for housing, were abolished (1988).

**Figure 9 Housing Finance Reforms in Chile – Change in Public-Private Construction Split 1986 - 1997**




The changes implemented radically altered the production structure of public housing from costly apartment complexes to sites and services/core housing and basic finished detached housing production[82]. Between the mid-1970's and mid-1990's

80 For an in-depth discussion of Chilean housing policy see Rojas (1999), for a discussion of the housing finance system see Pardo (1999).

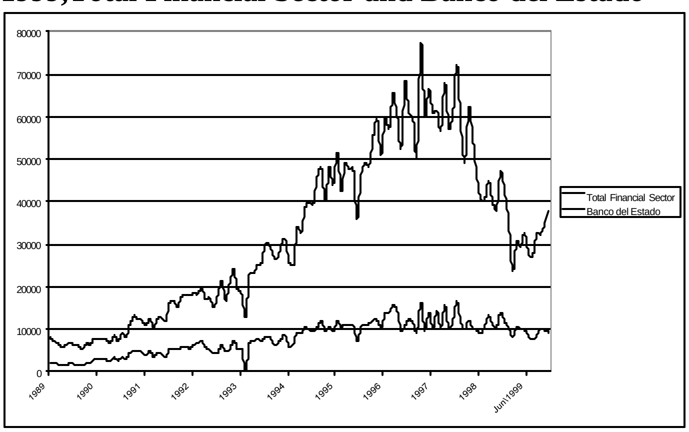
81 Subsidies are accorded in combination with a point system related to accredited savings required in relation to the program chosen. Potential beneficiaries are required to save in advance in banks and financial companies including regulated housing co-operatives and social welfare services. Savings passbooks are transferable. Prioritization of beneficiaries is made according to total advance savings, fulfilment of terms of savings contract, family size and in particular the size of amount of subsidy sought. Subsidy vouchers are disbursed by SERVIU, a branch of the Ministry of Housing and Urban Development (MINVU).

82 Low-income programs in Chile are currently subdivided by income brackets: Progressive Housing Program, for the lowest income groups, requiring minimum savings of 7% of the unit costs, in order to receive a grant of USD 3,700 towards a core house of USD 3,900 on a serviced plot (fixed price, size). Basic Housing Program carrying higher absolute but lower relative minimum savings (~5%). The grant level is about same absolute size as in the PHP, however, there is an additional loan by the Ministry to arrive at the costs of a finished house of about USD 6,500. Private mortgage finance comes only into a third program ("government-assisted"), the Unified Subsidies Program for housing up to USAD 30,000. The grant level declines with house prices subject to an income maximum. However, at the maximum it is still 5% of the house price. Minimum savings requirements rise to between 7 and 2.5 multiples of monthly income.

housing subsidies per beneficiary strongly decreased in size, while the mobilization of savings and private sector loan funding increased [83]. It is widely held that the reforms have substantially improved the targeting efficiency of housing subsidies, although there is indication that the strict savings requirements crowd out some of the poorest households. Similarly, the rental housing sector remains underdeveloped, at least partly since subsidies primarily target homeownership.

Parallel to housing reforms, Chile had embarked upon a series of capital market reforms[84] that expanded the demand and supply of mortgage-backed financial assets. Contrary to other Latin American countries, the pension system's high investment in mortgage assets was not mandated, but based on sound credit and market risk characteristics of the assets[85]. The strong growth of the private mortgage market was supported by real wage growth and moderate inflation levels, accounting now for ~40% of housing production. Mortgage market reform has facilitated the elimination of the high previous housing subsidies for high-income households: today mortgage market subsidies are moderate[86] and targeted to the middle-income market.

**Figure 10 New Mortgage Originations Chile, 1989-1999,Total Financial Sector and Banco del Estado**




However, it appears that private lenders continue to cover only loans affordable for households above median household income (> US$ 45,000), resulting in a financing gap between private mortgage finance and the highest-end low-income housing program, which obtains loans primarily from Banco del Estado de Chile ( < US$ 30,000). As Figure 10 shows, Banco del Estado continues to holds a sizeable share of the market. In the low-cost Basic Housing Program the ministry itself acts in a triple function as developer, subsidy donor, mortgage lender, resulting in high building quality and loan servicing problems and a strong increase in the MINVU budget[87]. A new tax law (June 1999) is

83 Over time, similar schemes have been introduced in Costa Rica, Ecuador, Colombia, Venezuela (proposed), Suriname, Uruguay, Paraguay, and Chile.

84 1976: introduction of indexed Mortgage Bonds; 1980: introduction of a private pension system; 1986: introduction of Endorsable Mortgage Credit instrument.

85 Withdrawal option of pension contributions for housing were discussed, but dismissed in favor of supporting both savings streams, see Lira (1994).

86 Exemption from inheritance property tax and exemption from property tax during the initial years of the investment; up to ~ 80,000 annual income.

87 It is widely held that MINVU loans were considered by borrowers as de-facto grants. The MINVU budget almost tripled between 1988 and 1993.

addressing issues of private mortgage market penetration, by granting a small tax credit ~50$ to borrowers with monthly mortgage payments under US$ 500.

A result of the continuing dominance of government in low-income housing finance is high default rates, with perverse subsidy incidence effects[88]. Regressivity is furthermore introduced due to a lack of integration of urban land and housing policy, leading to lower-income developments in peripheral locations.

**Rating:**
**- Subsidy Reform: successful.**
**- Mortgage Market Reform: neutral.**

The focus of **Costa Rica**'s 1995 reforms was primarily to improve the previously highly regressive of mortgage loan subsidies by refocusing subsidies to low-income households without access to finance. The key issue arising during reform, as in other Latin American countries, was whether such a delinking strategy, while creating immediate distributional benefits, would be sufficient to induce private lenders to begin lending to low-income market segments.

Costa Rica's low-income housing finance system consists of a state-owned second tier bank (BANHVI), administering the National Housing Fund (FONAVI) and the Housing Subsidy Fund (FOSUVI). The main subsidy instrument applied prior to 1995 was an interest rate free 15 year loan, funded by BANHVI and channeled to public and private mortgage lenders as a second mortgage. First mortgage operations of the system were traditionally plagued by high default rates, despite an almost exclusive focus on the high-income urban population. Also, the public second mortgage had been generally perceived as a grant. It has been estimated that due to the urban bias 95% of subsidies went to the top 39% of household population, while the bottom 32% of the household distribution did not benefit at all.[89]

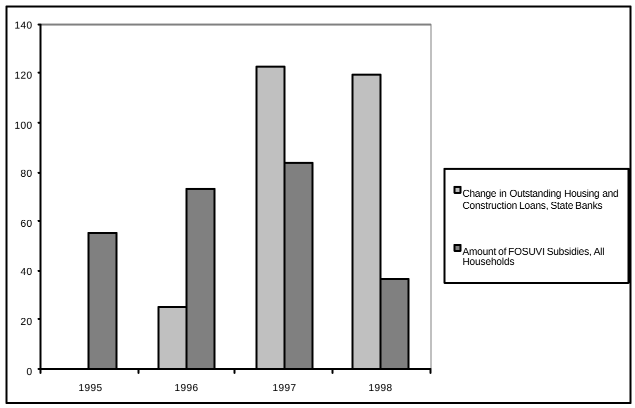
In a major shift of mortgage subsidy policies and instruments, in 1995 the second mortgage was converted into an explicit lump-sum up-front grant. It was ruled that a high minimum share had to be applied in rural areas, with typically lower house prices but higher poverty incidence. In addition, the new subsidy scheme was formulated progressively relative to income (however, contrary to the Chile no link to savings was required). Due to these measures, the previously regressive incidence of housing subsidies has reportedly become largely reverted. Also, since subsidies were de-linked from access to finance, the program boomed especially with low-income households.

88 The Basic Housing program, which has a lending component, due to high defaults carries higher subsidies than the Progressive housing program targeted to households with lower income.

89 See Gonzales Arrieta, G., 1998.

However, a low-income mortgage finance system that would guarantee sufficient cost recovery to attract private mortgage lenders was not in place,[90] while the new subsidy strongly stimulated housing loan demand by low-income households. New lending, in particular of state banks and credit co-operatives who continued to offer soft loan terms, soared (see Figure 11). The lending boom ended in an aggravation of the latent credit risk crisis. By December 1998, state banks held 59% of the mortgage portfolio, against a share of 39% in total assets. 27% of the loan portfolio was in default, with credit co-operatives and BANHVI being hit hardest. Also, the subsidy program itself had proven costly and an easy political target: in 1997 it absorbed 5% of public sector spending - the scheme was subsequently repeatedly overhauled. Currently, a new housing finance system is being developed under which subsidies shall be linked to new housing savings plan, copying closer the Chilean model. The plan also intends to refocus subsidies to middle class households in order to strengthen the mortgage portfolio.

**Figure 11 Costa Rica: Growth of State Bank Housing and Construction Loan Portfolio and FOSUVI Subsidies**




Source: Alberdi (1998). In million US$.

**Rating:**

**- Subsidy reform: partly successful.**

**- Mortgage market reform: highly unsuccessful.**

90 Mortgage lending is currently suffering from high nominal and real interest rates (January 1999: 25%/12%). Lenders are in theory secured through high overcollateralization; however, there are high default rates on the entire mortgage portfolio (average December 1998: 27%) with subsequent bankruptcies, especially in the co-operative bank sector.

## Table 3: Rating System Mortgage Subsidy and Mortgage Market Reform

| Primary Reform Context | Reform Period | Mortgage market/GDP around Reform Start | Reduction of Mortgage Market Subsidies | Reduction Level of General Housing Subsidies | Improvement of Low-Income Focus of Subsidies | **Subsidy Reform Rating** | Change in Low-Income Market Penetration | Change in Private Sector Participation | Change in Level of Mortgage Market Distortions | **Mortgage Market Reform Rating** | **Overall Reform Rating** |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | *a* | *b* | *c* | *I* | *d* | *e* | *f* | *II* | *(I + II)/2* |
| | | | *33%* | *33%* | *33%* | *[(a+b+c)/3]-3* | *25%* | *25%* | *50%* | *[(a+b+2*c)/4]-3* | |
| **Fiscal Reform** | | | | | | | | | | | |
| Sweden | 1992-1995 | 54 | 4.5 | 4.0 | 2.5 | **0.7** | 2.5 | 4.0 | 3.5 | **0.4** | **0.5** |
| United Kingdom | 1990-1999 | 55 | 5.0 | 3.5 | 3.5 | **1.0** | 3.0 | 3.5 | 3.5 | **0.4** | **0.7** |
| Germany | 1996 | 50 | 4.0 | 3.0 | 3.5 | **0.5** | 2.5 | 3.0 | 3.0 | **-0.1** | **0.2** |
| **Financial Sector Reform** | | | | | | | | | | | |
| Hungary | 1990-1995 | 5 | 4.5 | 3.5 | 3.5 | **0.8** | 2.0 | 3.5 | 3.5 | **0.1** | **0.5** |
| Philippines | 1996-1999 | 6 | 4.0 | 3.0 | 3.5 | **0.5** | 1.5 | 3.0 | 2.0 | **-0.9** | **-0.2** |
| Czech Republic | 1990-1997 | 3 | 1.0 | 2.5 | 2.0 | **-1.2** | 3.0 | 4.5 | 1.5 | **-0.4** | **-0.8** |
| **Housing Sector Reform** | | | | | | | | | | | |
| South Africa | 1992-1995 | 15 | 3.0 | 2.0 | 4.5 | **0.2** | 4.0 | 3.5 | 2.5 | **0.1** | **0.1** |
| Chile | 1977-mid 80's | 10 | 2.0 | 3.5 | 5.0 | **0.5** | 3.0 | 4.0 | 1.5 | **-0.5** | **0.0** |
| Costa Rica | 1995-1999 | 6 | 4.0 | 2.0 | 4.0 | **0.3** | 3.5 | 1.5 | 1.0 | **-1.3** | **-0.5** |

Notes:

Rating Classes Reform Components: 1 – strong increase, 2 – increase, 3 – neutral, 4 – decline, 5 - strong decline.

Rating Classes Reform Summary: <-1.0: highly unsuccessful, -1.0<-0.5: unsuccessful, -0.5<0.0: neutral, 0.0<0.5: partly successful, 0.5<1.0: successful, >1.0: highly successful.

## D. LESSONS FOR MORTGAGE MARKET SUBSIDY REFORM

### 1. The Increasing Need for Subsidy Reform

Where permanently applied, indirect mortgage market subsidies have brought about large fiscal costs, mortgage market distortions, and were generally poorly targeted to the insiders of the mortgage market as opposed to households at the threshold of access to credit. In many countries, public lending operations with low cost recovery have on a large scale blocked swifter mortgage market development and created high current and contingent liabilities for the government. Additional subsidies targeted to private mortgage lenders have also frequently led to negative externalities, in particular a backlog in the improvement of private mortgage market infrastructure conditions, such as foreclosure and eviction. Technological trends in mortgage finance have the potential to further enhance the subsidy options[91], in particular in the context of public exposure in primary mortgage insurance and secondary mortgage market financial guaranty instruments. Because of the persistence of interventionist policies, mortgage subsidy reform will remain a permanent task.

The analysis has only sketched the size of this task, which is large even under status quo technological conditions and formal homeownership rates. It would appear that housing policy has most fundamentally shifted instruments and subsidy volumes in Western European mature housing and mortgage markets, starting from clearly excessive levels, and with significant time lags[92]. Analyses for Central and Eastern Europe indicates a partly excessive increase in mortgage market subsidies there, justified with the need for incentives to rebuild the housing finance systems[93]. For Latin America it would appear that despite the trend reduction in inflation which brought about a shift in subsidy instruments, mortgage subsidies continue to play a large role, in particular through the continuing exposure of the public sector as low-income mortgage lender and special circuits. The Asian experience appears more heterogeneous than the European or Latin American, where copying of housing policy models has been more pervasive. South East Asia features both good and bad practice examples of mortgage market subsidies. Mortgage subsidy reform has been embarked upon in a number of countries, focussing primarily on closing, restructuring or privatizating housing banks, restructuring low-income housing programs and developing secondary mortgage markets.

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91 See Hoek-Smit (1999)

92 See MacLennan et.al. (1998).

93 See Diamond (1998b)

## 2. Conditions for Success of Mortgage Subsidy Reform

**Integrate mortgage market and subsidy reform into both, long-term financial sector and housing policy reform**

A common flaw of reform programs is that cutbacks of mortgage market subsidies are often driven primarily by indirect (financial sector, Philippines) or direct fiscal considerations (tax reform, Sweden). While such a focus clearly helps to reduce subsidy levels and eliminate the worst practices in the short run, its long-term success depends on the ability of the system to provide housing solutions, and is therefore highly context-specific. In economies with immature housing and mortgage markets there is a clearly danger that a fiscal reform agenda alone leaves key development problems of low-income housing remain un-addressed, and subsidies are likely to re-emerge if housing sector reforms remain stuck (Philippines). Vice versa, clearly the build-up of a subsidy portfolio without deeper housing sector reforms does not lead to a satisfactory market development (Czech Republic).

In the same vein, a redistributing mortgage subsidies (Costa Rica) is likely to fail or produce purely fiscal results. In many of the reviewed cases, including Chile and Costa Rica, inefficient public lending and guaranty operations continued to hamper thorough subsidy and mortgage market reform.

The key lesson is that integrated approaches take time. The more successful reform countries reviewed (UK, Hungary, Chile) have taken 10 years or longer to reduce financial subsidies, and usually followed a broader housing sector and financial sector reform agenda.

**Prioritize subsidy reduction and start in high- and middle-income markets**

This conclusion is motivated by allocative rather than distributional arguments. Many countries have attempted reforming low-income mortgage market institutions or programs (Philippines, Costa Rica) without improving general mortgage sector conditions or privatizing key lenders or insurers in the high-income market. The development of a completely private high-income market of Chile during the 1990's demonstrates the potential impact of non-subsidized mortgage markets for capital market and financial sector development, which is likely to ultimately transfer to the development of a low-income housing finance market. Separating subsidies from finance is also a necessary condition for unbundling mortgage market services, with the impact of spread reduction and better risk management through specialized servicers and securitization. If nevertheless general homeowner subsidies are desired for middle and high-income households, these should be implemented through separate institutional and financial structures, such as housing assistance funds or specific social safety net features. Finally, in many emerging markets with liquid domestic capital markets, public intervention into capital market access schemes may not be necessary, or levels be reduced, if traditional middle- and high-income subsidies are scrapped at an early stage.

While a temporary split between markets along income levels appears to be justified, subsidy reduction should be a priority in low-income mortgage programs in order to stimulate private capital flows, enhance public program performance and reduce rationing.

**Convert implicit into explicit contingent government liabilities**

Many reform programs have prioritized economy-wide mortgage insurance and social safety net programs for homeowners, so the Swedish and British program reviewed, but also programs in developing countries building public mortgage insurers (Philippines, South Africa). Motivations have differed: while the European programs have focussed on stabilizing the private mortgage market and substituting subsidies, the South African and Filipino programs adhere to the classical motivation of expanding formal homeownership beyond the traditional bankable borrower.

Explicit mortgage market credit enhancement programs usually carry strong cyclical or catastrophic risks which should be made explicit and controlled through capital and other regulatory standards. Since privatization in these markets is often infeasible, a functioning monitoring and supervision structure will be only feasible in a strong public sector development context[94]. Contingent or paid-up capital allocation to mortgage insurers, financial guarantors or (implicitly) to homeowner social safety net programs should be targeted, just as traditional subsidy programs.

**Differentiate financial technologies to address lack of access to finance**

Private lenders have an interest in tapping the middle- and low-income mortgage markets. However, as the cases of South Africa and the Philippines show, expanding even performing high income mortgage markets may not always be a feasible strategy, in particular if the income distribution is skewed, the borrower information environment is poor, or the market for complete housing is small due to high costs. Rather than enforcing a mass housing market with public guarantees and subsidies, it is therefore often preferable to accept the reality of different income populations and housing problems and develop the technological differentiation of the mortgage markets. This means the development of special underwriting standards, collateral requirements, monitoring and subsidy instruments. Among the nine programs reviewed, only South Africa and the Philippines have a diversified portfolio of employer-based, community-based or micro-finance mortgage lending. Only South Africa appears to have pursued a rental housing reform program during mortgage reform.

**Support savings for housing**

Sufficient downpayment capacity is a key condition for the success of mortgage subsidy reform, in particular if the goal is reduction of overall credit risk as well as implicit and explicit public risk exposure. Most country cases reviewed have taken steps to increase downpayment capacity. There is risk, however, that savings requirements do substantially reduce first-time buyer age if housing savings are crowded out by mandatory contractual savings, such as general and occupational pension or insurance schemes. Also, complex

[94] An example is the Dutch WSW mortgage guaranty fund with its central-local government control mechanisms, see above.

contractual savings or mandated savings schemes for housing with dual mandates should be avoided. Policy options without use of subsidies include the introduction of a savings withdrawal option for housing down payments where general mandatory contractual savings are high (e.g., Singapore), or where the contractual savings system has a more limited size, to support personal housing savings through direct downpayment subsidies (e.g., Chile).

**Reduce the supply costs of low-income housing.**

Mortgage subsidy reform should be integrated with real sector reform, such as urban land and infrastructure policies and in particular measures to lower the supply costs of housing (such as the build-up of a mass housing development industry). The cases show that the presence of high formal house-price-to-income ratios may render direct assistance programs infeasible, or will lead to a shift the demand impact of subsidies from urban to rural areas (Hungary, Germany). To counter the effect of land prices, South Africa allows for local subsidy differentiation with a central/local government funding mix. Obviously, acceptable formal supply standards must be differentiated in economies with high income inequality.

**Define rationale and target group for subsidies**

Subsidies to support mortgagors are almost by construction mistargeted. Is there a rationale for direct subsidies which are financially separated from but linked to mortgage lending?

The majority of households in emerging mortgage markets lack access to formal long-term debt finance. As a result, lump-sum construction or purchase subsidies, assistance with land acquisition, titling, registration and infrastructure provision are more important to increase home-ownership and improve the asset distribution in favor of low-income households than subsidies linked to finance. A review of the explicit and implicit public commitments in the housing production system may yield that specific subsidies targeted to mortgagors are not needed, or counterproductive because they raise the house-price-to-income ratio. "Fingerprint" once-in-a-lifetime and savings-based construction or purchase subsidies would be preferable options for implementation of basic housing subsidies; they have been implemented in South Africa, Hungary, Germany and the Latin American cases reviewed.

The introduction of direct subsidies to mortgagors may in turn facilitate structural mortgage market reforms. Because of their targeting disadvantage, they should be subject to more stringent targeting and transparency requirements, follow specific development goals, and generally be sunsetted. Successful cases of focussed mortgagor subsidies appear have been applied in Central Europe, in order to alleviate the affordability impact of interest rate liberalization. The Hungarian case, however, indicates the fiscal risks of this approach. Appealing is also the option to use subsidies to stimulate down payments through general housing savings schemes, with the direct effect of reducing systemic mortgage credit risk by lowering the underwriting loan-to-value ratio and giving rise to a more steady savings behavior. A third goal is to clearly to win political support for the replacement of subsidized credit or loan guaranty operations.

An little explored alternative to direct subsidies to mortgagors that has been little explored are well-defined and incentive compatible social safety net programs for homeowners, which may limit the costs of credit risk crisis for the banking system and enhance private lenders willingness to lend to marginal groups.

**Define subsidy commitment and subsidy delivery structure**

The experience in most country cases reviewed demonstrates that long-term budgetary commitment for housing policy should be in place to render credibility to the choice of a particular subsidy instrument. In Hungary and Costa Rica as well as in many other places, well-designed direct housing certificate programs had to be discontinued because of fiscal stress, and on-budget instruments are clearly more exposed to political risk.

This argument also implies the development of a specific institutional infrastructure for subsidy delivery. The cases reviewed would suggest a decentral institutional structure by maximizing the involvement of competing housing finance and community-based institutions, private sector and NGO's, in subsidy implementation. Conflicts of interest and political pressure can be minimized by reducing central decision making through strengthening simple subsidy allocation rules and decentralization. A main reason for success for the Chilean subsidy scheme is its decentral delivery through local financial and social security institutions, involving an enhancement of borrower options (e.g., portability of the subsidy claim). Partial or full decentralization of subsidy design and delivery in very heterogeneous countries as South Africa, Australia, Sri Lanka, and the US.

## E. REFERENCES

ALBERDI, B., 1998, "The Costa Rican Housing Finance Market", Mission Report, The World Bank, Washington, D.C.

BOELHOUWER, P. (ed), 1997, "Financing the Social Rented Sector in Western Europe", Housing and Urban Policy Studies No. 13, Delft University Press.

BOLEAT, M., 1985, "National Housing Finance Systems, a Comparative Study", Croom Helm Ltd, Dover, NH.

BOURASSA, S., HAURIN, D., HAURIN, R., AND P.HENDERSHOTT, 1994, "Independent Living and Homeownership: An Analysis of Australian Youth", in: *Australian Economic Review*, 107.

BUCKLEY, ROBERT M., 1991, "The Measurement and Targeting of Housing Finance Subsidies: the Case of Argentina", in: *Public Finance*, No. 3/1991.

BUCKLEY, ROBERT M., 1994, "Housing Finance in Developing Countries: The Role of Credible Contracts", in: Economic Development and Cultural Change, March 1994.

CHIQUIER, L., 1998, "Secondary Mortgage Facility Case Study of Cagamas Berhad in Malaysia", Study for the World Bank (Capital Market Development Department), unpublished.

CONGRESSIONAL BUDGET OFFICE, 1996, "Assessing the Public Costs and Benefits of Fannie Mae and Freddie Mac", Congress of the United States: Washington, D.C.

DEUTSCHES INSTITUT FÜR WIRTSCHAFTSFORSCHUNG, 1995, "Tschechische Wohnungswirtschaft in der Transformation", in: DIW-Wochenberichte Nr. 49/95, DIW: Berlin.

CORPORACION DE INVESTIGACION, ESTUDIO Y DESAROLLO DE LA SEGURIDAD SOCIAL CIEDSS (EDS), 1993, "Policies for Financing Housing in Chile", Proceedings of the First International Seminar on Chilean Experience in Financing Housing sponsored by USAID, September 1993.

DIAMOND, D., 1997, "The Promises and Perils of Interest Rate Subsidies: A Survey of Eight Selected Programs", Report prepared for USAID, Washington, D.C.

DIAMOND, D., 1998A, "The Current Operation of the Bauspar Systems in the Czech Republic, Hungary and Slovakia", Study commissioned by USAID, Washington, D.C.

DIAMOND, D., 1998B, The Transition in Housing Finance in Central Europe, Study commissioned by USAID, Washington, D.C.

DÜBEL, A., 1997, "Transition and Reform of Socialized and Economic Housing in the Philippines - Concept and Short-term Budgetary Issues", Report prepared for HUDCC, Manila.

DÜBEL, A., AND LEA, M, 1997, "Micro- and Macroeconomic Consequences of Residential Mortgage Prepayment, Evidence from the Denmark, France, Germany, the United Kingdom and the United States", forthcoming.

DÜBEL, A., 1998A, "Models in Mortgage Protection: European Evidence", in: *Housing Finance International*, June 1998.

DÜBEL, A., 1998B, "Residential Mortgage Market Subsidies in Western Europe: Politics vs. Efficiency", Presentation to the USAID Conference on Housing Finance in Hungary, November 1998, Budapest.

ENGELHARDT, G., 1996, "Tax Subsidies and Household Saving: Evidence from Canada", in *Quarterly Journal of Economics*, Vol , 1996.

EUROPEAN MORTGAGE FEDERATION, 1997, "Owner-Occupied Housing in the European Union: Tax Aid, Subsidies and Costs Comparative Study", mimeo: Brussels.

FOLLAIN, J., AND L. MELAMED, 1998, "The False Messiah of Tax Policy: What Elimination of the Home Mortgage Interest Deduction Promises and a Careful Look at What it Delivers, in: *Journal of Housing Research*, Vol. 9, Issue 2.

FORD, J, KEMPSON, E, AND M. WILSON, 1995, "Mortgage Arrears and Possessions; Perspectives from Borrowers, Lenders and the Courts", Housing Research Report, HMSO Department of the Environment: London.

GALLARDO, J. , 1998, "Rationalizing Housing Finance and Developing Capital Markets in the Philippines", in: Watanabe (ed): *New Directions in Asian Housing Finance*, International Finance Corporation, Washington, DC.

GONZALES ARRIETA, G., 1998, "Access to Housing and Direct Subsidies: Lessons from Latin American Experiences, in: *Housing Finance International*, Vol. XIII / No. 1, September 1998.

GRAVEN LASEN, B., 1993, "The Yield Differential Between Mortgage-Credit and Government Bonds", in: *Monetary Review - August 1993*, Danmarks Nationalbank: Copenhagen.

GUTTENTAG, J., 1998, "Reorganizing Housing Banks", in: *Housing Finance International*, March 1998.

HEGEDUES, J., MARK, K., AND I. TOSICS, 1996, "Hungarian Housing in Transition", in: *Struyk, R. (ed), Economic Restructuring in the Former Soviet Bloc: The Case of Housing*, The Urban Institute Press: Washington, D.C.

HOEK-SMIT, M., 1997, “Mortgage Finance Subsidies, Case Study: Indonesia”, Presentation given at the Housing Finance Seminar at the Wharton School, Philadelphia.

HOEK-SMIT, M., 1999, “Mortgage Finance Subsidies - International Trends”, Presentation given at the 1999 Annual Conference of the International Union of Housing Finance Institutions, Rio de Janeiro.

JOINT CENTER FOR HOUSING STUDIES OF HARVARD UNIVERSITY, 1999, “The State of the Nation’s Housing: 1999”, Harvard University Press.

KALAVAKONDA, V., LESTER, R., AND A. DUEBEL, 1999, “Mortgage Loan and Pool Insurance, Issues and Options for Emerging Mortgage Markets”, forthcoming internal Policy Note.

KLEPIKOVA, E., AND STRUYK, R., 1997, “Efficient Subsidies to Encourage Homeownership: Russia’s Downpayment Subsidy Scheme”, Institute for Urban Economics Moscow, mimeo.

LEA, M., 1997, "The Role of Government in the Capital Market Funding of Housing: a Comparative Analysis", Report for the Office of Federal Housing Enterprise Oversight, Washington, D.C.

LEA, M., AND B. RENAUD, 1995, “Contractual Savings for Housing - How Suitable Are They for Transitional Economies?”, *World Bank Policy Research Working Paper,* The World Bank: Washington, D.C.

LIRA, R., 1994, Pension Funds and Housing Finance in Chile, in*: Journal of Housing Research*, Vol. 5, Issue 2.

LLANTO, G., ORBETA, A., SANCHEZ, M-T., AND M TANG, 1997, “A Study of Housing Subsidies in the Philippines”, Report prepared for the World Bank and Urban Development Coordinating Council, unpublished, Philippine Institute for Development Studies, Manila.

LOWRY, I., 1996, “Rent Control and Housing Assistance: The US Experience”, mimeo, USAID, Washington, D.C.

MALPEZZI, S. AND S. MAYO, 1997, “Getting Housing Incentives Right: A Case Study of the Effects of Regulation, Taxation, and Subsidies on Housing Supply in Malaysia, in: *Land Economics,* August 1997, 73(3): 372-91.

MACLENNAN, D., MUELLBAUER, J. AND M. STEPHENS, 1998, “Asymmetries in Housing and Financial Market Institutions and EMU”, in: *Oxford Review of Economic Policy,* Fall 1998.

MIKELSONS, M., 1996, “Regional Experience with Consumer-based Housing Subsidies and An Assessment of the Potential for Housing Allowances in Slovakia”, The Urban Institute, Project prepared for USAID, Washington, D.C.

PANDEY, R., AND P. SUNDARAM, 1998, “Volume and Composition of Housing Subsidies in India Through Central Government”, in: *HABITAT INTERNATIONAL*, Vol 22. No. 2, pp. 87-95.

PAPA, O, 1992, “Housing Systems in Europe: Part II - A Comparative Study of Housing Finance”, Delft University Press: Delft, The Netherlands.

PARDO, C., 1999, "Housing Finance in Chile: Primary and Secondary Mortgage Financing", in: *Housing Finance International*, September 1999.

PERSAUD, T., 1992, "Housing Delivery System and the Urban Poor: Comparison among Six Latin American Countries", *LAC Technical Department Regional Studies Program*, Report No 23., The World Bank, Washington, D.C.

POLLOCK, A., 1999, “A New Housing Finance Option in the US: MPF vs. MBS”, in: *Housing Finance International*, March 1999.

REDDY, P.S., AND P. BRIJLAL, 1992, “The Role of Pension Funds in Housing Finance: The South African Scenario, in: *Development Southern Africa*, Vol. 9, No.2 May 1992.

RENAUD, B., 1997, "Financial Markets and the Financing of Social Housing, the View from Developing Countries", paper presented at the Conference on Social Housing Finance in the European Union, Nunspeet, The Netherlands, 27-28 February 1997.

ROJAS, E., 1999, “The Long Road to Housing Reform – Lessons from the Chilean Experience”, Mimeo, IDB, Washington, D.C.

THE WORLD BANK, 1993, "Housing, Enabling Markets to Work", The World Bank, Washington, DC.

THE WORLD BANK, 1997, “Philippines - Housing Finance: Reforming Public Provision and Promoting Private Participation”, Final Draft, unpublished.

THE HOUSING INDICATORS PROGRAM, 1993, “Extensive Survey of Housing Indicators – 1990”, UNCHS and The World Bank, Washington, D.C., April 1993.

ULBRICH, R., 1994, “Instrumente der Wohnungsbauförderung”, Study for the Ministry of Regional Planning, Construction and Urbanism, Bonn.

VAN WEESEP, J., AND R. VAN VELZEN, 1994, “A Comparative Study of Financial Housing Instruments in Selected Industrialized Countries: Inventory and Prospects”, Report prepared for the Federal Ministry for Regional Planning, Building and Urban Development for the Expert Commission for Housing Policy, Bonn.

YARON, J., 1992, “Assessing Development Finance Institutions - A Public Interest Analysis”, World Bank Discussion Paper 174, The World Bank, Washington, D.C.

## F. ANNEX: MEASURING SUBSIDIES GIVEN BY STATE HOUSING FINANCE INSTITUTIONS

The World Bank has recently intensified the use of the methodology of the subsidy dependence index (SDI) in assessing the financial performance of state owned financial institutions and state programs of directed credit The methodology of the SDI is useful in providing a better understanding of the overall cost involved in operating such subsidized programs as it unearths all subsidies received by a financial intermediary, much of which is not reflected in the related audited financial statements of the financial intermediary involved.

The SDI can be expressed as follows:

$$SDI = \text{Annual net subsidies received (S) / Average annual interest income (LP * i)}$$

$$= (A\,(m - c) + [(E * m) - P] + K) / (LP * i)$$

Where

A = Average annual outstanding concessionally-borrowed funds;
m = Interest rate the FI is assumed to pay for borrowed funds if access to concessionally borrowed funds were eliminated. This is generally the market reference deposit interest rate, adjusted for reserve requirements and the administrative cost associated with mobilizing and servicing deposits;
c = Weighted average annual concessional interest rate actually paid by the FI on its average annual outstanding concessionally borrowed funds;
E = average annual equity;
P = Reported annual profit before tax (adjusted for appropriate loan loss provisions and inflation);
K = The sum of all other annual subsidies received by the FI (such as partial or complete coverage of the FI's operating costs by the state or other donor);
LP*i = interest earned on loan portfolio, as reported in income statement (adjustment when needed to provisions for loan losses);
LP = Average annual outstanding loan portfolio of the FI; and
i = Average annual yield attained on the FI's loan portfolio = Annual interest earned / Average annual loan portfolio

*Source: Adapted from Yaron (1992).*

The SDI is a formula that is generally applicable to financial institutions. Eventually it constitutes a ratio that measures the subsidy received from society against the income of interest earned by the FI from ultimate borrowers in the form of interest paid on their loans (and related fee income). Since it does not take into account the amount of subsidies received by borrowers, or efficiency losses within the financial institutions, it will only give a lower boundary of subsidies. It does so by using only two sources of data: financial statement data, if necessary adjusted by the analyst, and a single market opportunity cost measure, m.

For the analysis of Housing Finance Institution which tend to run high leverage ratios, duration gaps and associated capital risk, it may be appropriate to determine m in a way that captures the subsidy impact of access to long-term funding (yield curve) as well as the additional equity risk premium required, over and above the market reference deposit interest rate.