**Housing finance and urban infrastructure finance**
Kim, Kyung-Hwan
*Urban Studies;* Oct 1997; 34, 10; ProQuest
pg. 1597

*Urban Studies, Vol. 34, No. 10, 1597–1620, 1997*

# Housing Finance and Urban Infrastructure Finance

Kyung-Hwan Kim

*[Paper received in final form, May 1997]*

**Summary. Financing issues received major attention in the discussions of human settlement development policy through the preparatory process for Habitat II and at the Conference itself. This paper presents an overview of the existing knowledge and policy experience in housing finance and urban infrastructure finance taking note of changes in economic environment such as globalisation, financial liberalisation and decentralisation as well as progress made over the past two decades using cases of good practice. Despite the positive developments such as micro-finance and private–public partnerships, the financing challenge of today is no smaller than before. It includes how to tap the enormous wealth generated through continued urbanisation to improve the conditions in housing and basic services of all income groups and how to translate the willingness to pay of citizens into efficient, accountable and responsive service delivery. The solution requires not only financial innovation but also good governance and political commitment.**

## 1. Introduction

A sector is said to be only as good as its ability to finance because the efficiency of the financing mechanism determines its performance and the scope of expansion. A well-functioning housing finance system is essential in expanding effective demand for housing and improving the housing conditions of a nation. Likewise, adequate finance for urban infrastructure and its operation and maintenance is a prerequisite in ensuring that cities function effectively as the engines of growth. Proper pricing of some infrastructure and services also can contribute to enhancing the quality of urban environment. On the other hand, poor performance of housing and urban finance sectors has a far-reaching impact on the national economy as exemplified by the failure of some US thrifts in the 1980s and the recent bankruptcy of their Japanese counterpart.

During the past two decades intervening between the 1976 UN Conference on Human Settlements and its sequel Habitat II held in 1996, financing issues have emerged as a key element of human settlements. The main focus of debate at Habitat I in Vancouver was placed on spatial and distributional aspects of human settlement development. The set of 64 recommendations for national action highlighted the need for balanced development

*Kyung-Hwan Kim is in the Department of Economics, Sogang University, CPO Box 1142, Seoul, Korea. Fax:(82-2)705-8497. E-mail: kyungkim@ccs.sogang.ac.kr. This paper is based on an UNCHS report entitled 'Sustainable Financing Strategies for Housing and Urban Development : A Contribution to the City Summit', prepared for the Habitat II Conference in June 1996. The author acknowledges helpful comments and suggestions from many individuals at UNCHS and other institutions he worked with during tenure as Urban Finance Advisor at UNCHS. However, the author takes sole responsibility for the views expressed in the paper.*

0042-0980/97/101597-24 $7.00 © 1997 The Editors of Urban Studies

between rural and urban areas, and for the provision of adequate shelter and services to lower-income groups. Finance was viewed as a tool for achieving these policy goals of redressing inequity, but its feasibility and sustainability were not thought through carefully. For example, low-interest loans, loan guarantees and subsidies were recommended as a housing policy instrument for low-income households, and active use of pricing policies was advocated as a mechanism for enhancing equity in access to infrastructure and services for all segments of the population. But there were no discussions about the source of funds for low-income housing loans or implications of underpricing of services on municipal finance (United Nations, 1976).

On the other hand, the importance of finance was clearly recognised from the beginning of the Habitat II preparatory process and by the Conference itself. UNCHS spearheaded the initiative to develop a guideline for financing strategies for housing and urban development by mobilising individual and institutional expertise through a series of regional and global consultations throughout the Habitat II preparations and parallel events during the Conference organised jointly with various partners including the World Bank and regional development banks. The Habitat Agenda adopted by the Habitat II Conference paid serious attention to financing issues, providing a large number of specific recommendations on various aspects of housing and municipal finance (UNCHS, 1996a, 1996b).

A major driving force behind this change is the enabling approach to housing policy which comprises the backbone of the Global Strategy for Shelter adopted by the United Nations in 1988, and promoted by UNCHS and the World Bank (Kim, 1993; Pugh, 1992; World Bank, 1991, 1993). The GSS redefined the role of government as the facilitator and regulator rather than the direct provider of housing. Noting that the public sector has neither sufficient funds nor institutional capacities to meet the financing challenge of providing adequate shelter for all income groups to keep pace with continued urbanisation, the GSS calls for utilising private-sector's comparative advantages in the production of housing and the supply of financial services. Government is expected to provide the legal and regulatory environment which is conducive to the operation of the private sector. More specifically on the housing finance side, an emphasis is placed on developing broad-based housing finance systems as an integral part of the nation's financial sector, rather than special circuit institutions which were taken for granted in the Vancouver conference and until quite some time later. Transparent and targeted direct subsides have also been promoted instead of interest subsidies which proved to offer large benefits for the lucky few, not necessarily members of the very poor. Such moves were further affected by the structural adjustment programmes imposed by multilateral donors which called for reducing budget deficits.

In the case of municipal finance, the recognition of the central role played by local authorities in delivering services, mobilising revenue required for service delivery and managing the mobilised financial resources is a marked change from Vancouver to Istanbul. This is reflected in the worldwide trend towards decentralisation (Dillinger, 1994). The Habitat Agenda also advocates partnerships with the private sector and community organisations in service delivery and its finance as well as the participation of citizens in local authorities' decision-making to enhance accountability. It also recommends full cost recovery on urban services through user charges while addressing the concern for the poor through subsidies.

Another important development is the emergence of micro-lending as an effective vehicle for providing access to credit for low-income households and small enterprises. Although micro-lending is geared primarily towards assisting them in building their own economic livelihood, some micro-finance operations include housing and basic urban services as an integral part of community development. In light of the inherent reluctance to do business with low-income households on the part of formal-sector housing finance institutions, micro-lending appears to be a promising alternative to address the financing needs of the poor and to help them establish long-term credit worthiness.

With this background, this paper seeks to synthesise the current state of our knowledge in the field of housing and urban infrastructure finance, as well as micro-finance, as relevant for housing and municipal finance. Obviously, these three subjects are interrelated. For example, lack of availability of housing finance may lead to residential development in isolation from the urban infrastructure network and hence raise infrastructure finance needs, as was the case in Rio de Janeiro after the collapse of Brazil's housing finance system in the mid 1980s. However, these three subjects have substantially different characteristics as well. For instance, the provision of micro-enterprise finance and housing finance is individual-oriented, whereas infrastructure finance is institution-oriented. Micro-lending involves short-term credit, while housing finance requires long-term credit. Considering these differences and limited space, the paper is organised into two substantive sections, one on housing finance and the other on urban infrastructure finance. Relevant aspects of micro-finance are incorporated into these sections, mostly that on housing finance. For each subject area, major problems are described; key policy questions are summarised; and some strategic options are discussed together with constraints and barriers to improve current policy practice. To the extent possible, efforts are made to present promising cases and to draw lessons from them. The last section concludes the paper with some remarks on the way ahead.

## 2. Housing Finance

### *The Institutional Framework*

Mortgage financing is highly limited in developing countries. The formal sector finances only a small portion, less than 20 per cent, of home purchases in many cities of the developing world so that loans from relatives, employers and money lenders supplement savings and current income to finance housing (Renaud, 1985). This is mainly because of the lack of stable long-term sources of funds and the narrow base of the financial institutions engaged in housing finance. Attempts in many developing countries to use housing finance as a means to promote social objectives further discourage the entry of potential private-sector players into the home loan business.

The essence of building a sustainable housing finance system is to identify and properly manage the various risks involved—see Table 1 (Diamond and Lea, 1995). Macroeconomic stability and enforcement of well-defined property rights and foreclosure laws are indispensable to managing cash-flow and credit risks. Inflation is the most serious obstacle to developing long-term housing finance, since it reduces savings and also makes the cash-flow risk of long-term fixed-rate mortgages unbearably high. Indexing of deposits and mortgage products can only deal with moderate inflation (Buckley, 1996). A mortgage on a house can be used to reduce repayment risk, but only when property rights are clearly defined and enforced. The ability to foreclose provides additional protection against credit risk when the collateral is sufficient.

The consensus is that the most effective way to secure sustainable housing finance is through the development of a market-based system as an integral part of the overall financial and capital markets. Experiences of directed credit schemes for housing finance demonstrate that these schemes often end up lending smaller volumes for housing than those which would have resulted from a more neutral and market-based system (World Bank, 1993, p. 118). Therefore, housing finance institutions should be allowed to compete on both sides of their balance sheet—i.e. to compete for funds at positive real interest rates and for clients through product development and other financial services. A good example is the case of the

**Table 1.** Risk management in housing finance

| The nature of risk | Management |
|---|---|
| Credit risk: principal and interest will not be paid on a timely basis. | Appropriate underwriting and enforceable contracts. |
| Liquidity risk: money will be needed before it is due. | Access to long-term funds possibly through wholesale liquidity facility. |
| Cash-flow risk: changes in market conditions will alter the scheduled real or nominal cash flows. | Appropriate instrument design. |
| Agency risk: a divergence of interests will cause an intermediary to behave in a manner other than that expected. | Adequate capital and supervision. |
| System risk: a crisis at one institution or in one part of the system will spread to the rest of the system. | Appropriate institutional design that can accommodate changes in the economic environment. |
| Political risk: that the legal and political framework within which the lending takes place will change. | " |

*Source:* Diamond and Lea (1995).

Government Housing Bank of Thailand (Table 2).

There is no single model of institutional development in housing finance. Commercial banks have emerged as major mortgage lenders in all Asian countries, whereas the largest originator of mortgages in the US is no longer a bank but a mortgage banking company (Crane and Bodie 1996, p. 112). Building societies with a mutual status in Australia, New Zealand and South Africa have been converted into publicly owned banks through a stock market flotation. The Housing Development Finance Corporation of India (Table 3) illustrates how the private-sector financial institution specialising in housing loans has redefined its role as an integrated financial intermediary.

As the directed credit system collapses in many economies in the developing world and the nature of specialisation in financial services undergoes major revision, the role of public-sector specialised housing finance institutions needs to be redefined (Munjee, 1994, p. 10). Such restructuring should ideally be designed and implemented in the context of the overall financial sector reform. It is also important to manage the transition to the market-based system by mitigating the possible negative impact on low-income households.

### *Resource Mobilisation for Housing Finance*

A fundamental question in housing finance development is how to facilitate stable long-term resource mobilisation, because the liquidity risk involved in long-term mortgages with short-term liabilities is very large. As a general rule, policies that encourage financial deepening and the linkage to the broader financial sector and capital markets are essential for an increasing flow of funds to housing. There are four alternative models of housing finance systems which rely on different resource mobilisation mechanisms (Lea and Bernstein, 1995).

The first and most traditional model is the deposit-taking system. In this model, an institution mobilises household savings and makes loans to home buyers. Under this model, the lending institution performs all three functions—i.e. origination, servicing and fund-raising. In recent years, there has been a decline of specialist deposit-funded institutions such as savings and loans associ-

**Table 2.** The Government Housing Bank of Thailand

The Government Housing Bank (GHB) is the single largest provider of housing finance in Thailand with a market share of 22 per cent, although commercial banks as a whole account for 68–69 per cent of loan origination. Although it is a state enterprise controlled by the government, GHB operates completely on a commercial basis. It competes with other financial institutions for savings as well as on interest rates and other terms of mortgage loans and financial services.

Since 1982, the Government Housing Bank has tapped the domestic savings market using attractive deposit instruments as well as accessing wholesale funds by issuing debt instruments. These two sources respectively accounted for 62 per cent and 31 per cent of total funding in 1994. GHB does not receive government-directed funding or subsidies. GHB initiated competition in the housing finance industry by raising the deposit rate and lowering the lending rate. This was possible due to relatively low overheads, computerisation and contracting-out of some operations. The bank provides extra services such as staying open over the weekends. GHB offers both fixed-rate and variable-rate mortgages for home purchase up to a period of 25 years. It has been lending to developers of rental apartments for low- and middle-income groups since 1986.

*Source:* Tanphiphat (1995).

**Table 3.** The Housing Development Finance Corporation of India

The Housing Development Finance Corporation (HDFC) was established in 1978 as India's first private-sector housing finance institution and is currently the largest mortgage lender in the country. It started with an initial share capital of Rs 100 million and US$4 million line of credit from the International Finance Corporation (IFC), and the capital has increased tenfold since then. HDFC has entered the deposit market in 1991 from which it currently raises one-third of its funds. HDFC also issues bonds to tap wholesale funds and mobilises additional funds through loans from domestic banks and financial institutions as well as through refinancing from the National Housing Bank. HDFC provides loans for purchase, construction, extension and renovation of dwelling units. HDFC has successfully managed credit risk emanating from the lack of effective foreclosure law by sophisticated management information systems and loan recovery procedures. Loans in arrears over a period of one year amount to only 0.5 per cent of total loan outstanding.

HDFC has expanded and diversified its operations over the past few years. In 1993, it established a joint venture with a US corporation to offer consumer finance to households for automobiles and consumer durables. The HDFC Bank, promoted with a UK counterpart, began operation in 1995. HDFC also plans to offer insurance-related products. This network of institutions serves the HDFC customer base with a wide range of financial services.

*Source:* HDFC.

ations and building societies (Diamond and Lea, 1992; and Lea, 1994). The second model is the contract savings system. An institution generates funds from potential home buyers through contract savings at a below market interest rate and provides housing loans at a below market interest rate to those who fulfil savings requirement. Government support is provided to the system through favourable tax treatment or interest subsidies (Lea and Renaud, 1995). The system has been in operation for a long time with success in countries such as France, Germany and Austria, among others. Singapore has a special form of contract savings through a broad-based pension fund (Table 4).

**Table 4.** The Central Provident Fund of Singapore

Singapore has a well developed pension system known as the Central Provident Fund (CPF). It was established in 1955 as a comprehensive social security system. CPF is a principal source of mortgage finance in Singapore. All employers and employees are mandated to contribute 20 per cent of the workers' salaries to individual accounts in CPF. Since 1968 individual workers have been allowed to withdraw funds from their CPF account for the purchase of public flats provided by the HDB (Housing Development Board), since 1981 for the purchase of private housing, and since 1989 for the upgrading of public flats and estate. The Fund holds the first lien of the property and households obtain supplementary loans from banks.

*Sources:* Lea and Bernstein (1995); Vittas (1995b).

**Table 5.** Pension funds and secondary mortgage markets in Chile

Chile has a very active secondary mortgage market in which pension funds and insurance companies are dominant investors. The current social security system of Chile, introduced in 1991, is based on fully funded individual capitalisation. It is mandated and regulated by the government but managed by specialised private pension fund management companies known as AFPs. Chilean banks provide home loans in the form of mortgage-backed certificates (MBCs), a financial instrument guaranteed with the first mortgage on a property which pays amortisation and interest to the bearer. Both the MBCs (the liability of the banks) and the loans (the asset of the banks) are expressed in Unidades de Fomento (UF) which is an accounting currency adjusted for inflation. The certificates are traded on a stock exchange at market-determined prices, forming the secondary market for mortgages. The holdings of the pension funds represented 62 per cent of mortgage bonds (MBCs) in 1994.

*Sources:* Vittas (1995a); CIEDESS (1995).

A third model features mortgage banks which specialise in originating and servicing a portfolio of mortgages loans. The mortgages are funded by securities they issue which are purchased by long-term investors such as pension funds and insurance companies. The mortgage bank system is used extensively in continental Europe. For example, mortgage banks are responsible for 95 per cent and 80 per cent of all housing loans made in Denmark and Sweden, respectively (Lea and Bernstein, 1995).

The fourth and most recent model is the secondary mortgage market (SMM) system. The SMM model was originally developed in the US to reduce the interest-rate risk associated with fixed-rate mortgage lending. It involves the sale of mortgage loans or securities backed by a pool of mortgages on the capital market. The secondary mortgage market model has a few important advantages. First, it creates an instrument called mortgage-backed securities (MBS) which can be traded during the term of the mortgage. The liquidity of the instrument allows the mortgage lenders to access the long-term funds. Secondly, it offers an effective mechanism to tap the capital market—i.e. pension funds, mutual funds and insurance companies which control the bulk of long-term savings. Thirdly, the SMM model transfers the risks and ownership of mortgage loans to a third party, thereby allowing for the separation of the origination, servicing and fundraising aspects of mortgage finance. This division of labour reduces the relative cost of mortgage loans.

Attempts to introduce secondary mortgage markets in developing countries have produced mixed results. This was because some prerequisites were not fulfilled or the initiative was not supported by the monetary and financial policy-makers. However, an example of successful linkage between pension funds and the secondary mortgage market can be found in Chile (Table 5).

**Table 6.** Cagamas Berhad of Malaysia: a secondary mortgage facility

Cagamas Berhad was created in 1987, with the support of government, as a conduit for mortgage lenders to securitise their housing loans in the secondary market. The shares of Cagamas are held by the Central Bank (20 per cent), merchant banks (10 per cent), finance companies (25 per cent) and commercial banks (45 per cent). Cagamas purchases conventional housing loans and Islamic housing debts originated by the financial institutions as well as staff housing loans originated by the government and selected corporations. The eligible housing loans (fully disbursed and with no more than three months in arrears) are purchased at their book value, and the selling institutions are required to pay instalments to Cagamas at regular intervals. At the end of the contract review period, the selling institutions are given the option to repurchase the mortgages they had sold to Cagamas or to continue the contract for a further review period.

Cagamas issues bonds and notes to raise funds from the capital market to purchase mortgages. These bonds and notes are general obligations of the company and not collateralised by mortgages. They are rated and traded in the secondary market. It is argued that Cagamas has contributed not only to reducing the liquidity risk of primary mortgage lenders, but also to improving the allocation of interest risk by matching long-term mortgages with long-term sources of funds of bond investors.

*Sources:* Cagamas Berhad (1995); Lea and Bernstein (1995).

A more practical approach is to create a refinance facility referred to as liquidity or secondary mortgage facilities (SMF). Such a facility, often government-owned or supported, purchases mortgages from primary market lenders with the funds generated through issuance of general obligation bonds. An example is Cagamas of Malaysia which purchases both market-rate and government-subsidised loans (Table 6).

Capital markets can be utilised to support low-income housing to a limited extent. In the US, a risk-sharing arrangement between housing finance agencies and the Housing and Urban Development Department was made on a pilot basis in order to achieve greater access to capital to finance the development of multi-family housing (Wallace, 1995, pp. 806–808). In Canada, Canadian Mortgage and Housing Corporation issues bonds to raise funds required to provide its own five-year mortgages since 1993. Since the bonds are comparable to government bonds in terms of risk-return parameters, the interest rate on the mortgages is set at the bond rate plus an administrative fee of 1/8 per cent. The lending programme offers the most cost-effective method of tapping the capital market in Canada (Van Dyk, 1995, pp. 840–844).

Although domestic savings raised from national capital markets comprise the primary source of long-term housing finance, international debt and capital markets could, in principle, provide additional funding. Viable cross-border finance requires currency convertibility and transferability, and adequate information about local housing markets. Currently some British building societies tap wholesale funds through Euro-bonds (Lea and Bernstein, 1995, p. 226). Fannie Mae and Freddie Mac of the US have issued global bonds totalling $10.23 billion and $5.0 billion, respectively. Fannie Mae's global bonds represent about 13 per cent of the company's total long-term debts. Recently, Argentine sold mortgage-backed securities to CS Boston First and Deutsche Morgan Grenfell (*The Financial Times*, February 1996).

Opinions are divided as to the prospect of cross-border housing finance, especially for developing countries. On the positive side, the trends toward more integrated financial markets will continue, and deregulation and enhanced competition together with securitisation and despecialisation of specialised housing finance institutions will enhance opportunities for international banking groups to expand their mortgage business abroad. Those with less optimistic expectations point to the fundamental difficulties which exist in operating home loan businesses across the national borders even after the legal and regulatory barriers are eventually removed. They argue that the business itself is nation-specific due to differences in the land law, tax codes, the culture and attitude toward home-ownership as well as the language barrier. They take the view that it is also difficult to achieve scale economies due to limited scope for standardising the product as well as distribution and servicing systems (Boleat, 1992, p. 12).

### *Allocation of Housing Finance*

The ultimate goal of housing finance is to improve the housing conditions of all income groups by providing the widest possible range of housing options. In reality, however, formal-sector housing finance in many countries heavily favours new dwellings and owner-occupied units, and offers very limited support to home improvement and rental housing development. One explanation is that, in a distorted housing finance market where mortgages are offered at below market interest, lenders ration mortgages based on the type of dwelling occupied by borrowers with lower risk.

Competition among housing finance institutions operating in a market-based system can take care of the problem to some extent. At the same time, home-ownership and rental options need to be treated on equal terms in national housing policy. Since there are households who cannot afford to purchase homes even with the best financial arrangements and also those who choose to be renters for mobility reasons, private rental housing is a vital component in achieving the goal of ‘adequate shelter for all’ called for by the Habitat Agenda. Governments should deregulate rent controls and rationalise other constraints on private rental sector development. Loans to private developers of rental housing should be encouraged. Lower-income borrowers should be given greater flexibility in the use of funds to purchase land, construction materials and labour for building new dwellings, or for upgrading and expanding the existing structure according to their schedule, taking into account their housing needs and the availability of resources.

Innovative loan products should be exploited to make housing finance more affordable. More frequent repayments can help families with irregular incomes. The payment schedule can be tailored to fit the borrower’s income stream over time by gradually increasing monthly payments to reduce the initial burden (graduated payment mortgages). Payments can be indexed to inflation, as long as it is not excessive, to ensure that a positive real interest rate is paid to lenders; and to the income profile of the borrowers, so that affordability is maintained within a reasonable range (dual-index mortgages) (Buckley, 1996).

However, housing finance systems should not be burdened with the task of solving the housing affordability problem caused by excessive regulations and other supply-side constraints. In order to maximise the contribution of housing finance to promoting home-ownership and to improving housing conditions, it is equally important to rationalise the factor markets and regulations governing their functioning. Facilitating the process of providing serviced land, streamlining the procedures to obtain building permits, setting realistic building and design standards, and making the construction industry more competitive are among the required measures. It was the combination of increased supply of competitive housing loans from GHB and the country’s responsive housing supply system which has contributed to making housing much more affordable to 70–80 per cent of the Thai population.

### *Finance and Subsidies*

Strong cases can be made for providing government subsidies to improve the housing conditions of the poor. In light of the scarce resources of the public sector, however, it is necessary to utilise them in an efficient, equi-

**Table 7.** Examples of lump-sum subsidy schemes

Chile has a direct housing subsidy scheme under which qualified households are eligible for a one-off capital grant. Successful applicants are selected using a points system and are awarded a certificate or a voucher of the grant. The certificate can be used towards payment for a home purchase. Although the original idea was to have the beneficiary combine the voucher with a loan taken from participating banks, this did not materialise because of reluctance on the part of private banks to do business with low-income households. Consequently, the Ministry of Housing provides loans at below market rate, but the government suffers from huge arrears as the loans are considered *de facto* grants. The size of subsidy is determined based on the amount of savings and the maximum house price and decreases with income level. The subsidy programme is funded out of government budget and is managed by regional housing service companies.

The Chilean system has been copied by other Latin American countries such as Costa Rica, Colombia and Uruguay. Targeted and explicit one-off capital grants have replaced interest subsidies in Sri Lanka, since the early 1990s. Experience in these countries provides some useful lessons:

(1) The subsidy programme should be protected from political influence, especially in the selection of beneficiaries.
(2) Since the subsidy scheme can succeed only if production of low-income housing rises in response to increased demand, government intervention to jump-start or short-term construction finance to private developers may be necessary.
(3) Local government has an important role to play as a facilitator by providing serviced land and processing development approval in a timely manner.
(4) In order to ensure that the subsidy will not displace investments that participating households would have made out of their savings, the programme should include a mandatory saving scheme as an integral part.

*Sources:* Rojas and Greene (1995); Jacobs (1996); Pugh, (1994).

table and transparent manner. The traditional interest subsidies miss the point since they do not address the root of the housing finance problem of the poor—i.e. lack of access to credit itself (Kim, 1995). They cannot operate on a large and sustainable scale beyond pilot programmes. Besides, subsidised loans frequently fail to reach the poor and are instead raided by the middle-income group.

In order to avoid inefficiency and inequity of interest-rate subsides, it is necessary to separate government subsidies from housing finance. If the policy objective of interest subsidies is to help the poor, they should be phased out starting with those accruing to the middle-income group and be replaced by well-targeted lump-sum grants to low-income households financed with government budget. The new system can help the poor by allowing the beneficiaries to combine the government cash grants with loans taken at market terms to finance home purchases. By relying on market-rate mortgages, such a system can attract more private capital to support housing finance, which in turn can stimulate the supply of low-cost housing. The lump-sum grant can be used to enhance the purchasing power of low-income households and enable them to enter the housing markets. The difficult part is finding politically acceptable ways of implementing the reform. The very fact that the main beneficiaries of interest subsidies are the middle-income groups imposes a huge pressure on governments to maintain the subsidies. Therefore, the move to lump-sum subsidies targeted at low-income households is a political challenge, rather than a technical choice over financial options. Chile has the best-known system of lump-sum subsidies, which has been adopted by other countries in Latin America as well as in Asia more recently (Table 7).

Since many low-income households cannot afford to be home-owners, it is important that subsidies be offered to increase the stock of low-cost rental housing. The most efficient but politically unpopular mode of supply-side subsidy is direct capital grant to private developers of rental housing (Wallace, 1995). If credit/tax packages do not produce rental housing units that are affordable to the poor, additional demand-side subsidies may be necessary to fill the gap between the economically viable rent level and the ability to pay of low-income renters. However, a more realistic approach in developing countries could be to support the informal provision of rental housing. Many low-income households do rent in cities in the developing world, and many of them live in squatter areas or informal settlements. For example, almost one-half of dwelling units in Delhi slum settlements can be classified as rental units (Lall, 1996). In this situation, small, short-term loans for home-owners wishing to extend their houses by adding rooms can be highly effective in increasing the provision of low-cost rental housing at affordable costs as well as improving the overall quality of the housing stock.

### *Micro-finance and Low-income Housing Finance*

Conventional finance institutions seldom lend down-market to serve the needs of low-income families and women-headed households. These groups are very often denied access to credit altogether for any purpose, making the discussion of the interest rate charged and other terms of finance irrelevant. The fundamental problem is not so much unaffordable terms of loans as the lack of access to credit itself (Kim, 1995). The problem is attributable to practical difficulties arising from the discrepancy between the mode of operation followed by financial institutions and the economic characteristics and financing needs of low-income households. Over the past 10 years, successful micro-finance institutions which provide credit to small entrepreneurs and producers have demonstrated that poor people, when given access to responsive and timely financial services at market rates, repay their loans and use the proceeds to increase their income and assets.

The most rapidly growing segment of the world's urban population is located in informal settlements and most employment opportunities for the urban poor exist in the informal sector. Therefore, micro-enterprise development can be a logical starting point in addressing the problem of inadequate housing conditions of the poor as an integral part of poverty alleviation. But it is important that low-income housing finance be approached from the perspective of the customers. Improvement in the housing conditions of the urban poor follows economic livelihood, because they first need income above subsistence level before they can build or upgrade their shelter. This is why all successful micro-finance practitioners have used a broad-based approach of providing multi-purpose loans or composite credit for income generation, housing improvement and consumption support (Lall, 1996).

The success stories of SEWA and Grameen Bank (Table 8) demonstrate that the process of incremental shelter improvement for the poor and women can be accelerated with small, short-term loans. In both cases, the clients become eligible for the housing loan only after they have established a repayment record through previous loans directed at more conventional micro-enterprise activities. This approach helps to build financial discipline among the poor and hence to keep arrears within a manageable limit. The Urban Development Office of Thailand is an example of a government institution which serves the multi-faceted financing needs of the poor (Table 9).

Securing timely credit for land purchase often proves to be the most difficult aspect of low-income housing development projects. Some countries enforce specific regulations which prohibit banks from lending to finance land purchase, while loan processing can be thwarted by inadequate titling systems in

**Table 8.** The SEWA Co-operative Bank of India and Grameen Bank of Bangladesh

The SEWA Bank is a people's organisation which has served the financial needs of women for over 20 years. Since it started making housing loans in 1975, SEWA Bank has developed a variety of savings and loan products aimed at improving the shelter needs of its members, including savings schemes for buying and improving homes and loan products for new homes, repairs and monsoon-proofing. It has also set up a trust fund specifically dedicated to improving housing for self-employed women.

In 1993, SEWA Bank introduced a special contractual savings scheme named 'My Own Home Scheme' where women saved the same amount every month to put towards buying a home. SEWA Bank also offers housing loans with a three-year term and monthly payments. The interest rate for housing loans is the same as for other business loans whether the loan is for repairs, upgrading, new construction or monsoon-proofing. The repayment rate for housing loans in 1995 was 96 per cent.

Grameen Bank was established in 1976 as a rural bank that provides credit and organisational help to the poor, the vast majority of whom are women. The bank has successfully served the rural poor with no physical collateral, relying on group responsibility to replace collateral requirements. Women account for 92 per cent of borrowers. Grameen Bank introduced house-building loans in 1984 as a part of its social development programme. Small loans are made to groups of five members who agree to apply for and sign together for loans. Borrowers are required to make weekly repayments over 10 years. The repayment rate is over 98 per cent.

*Sources:* Barry *et al.* (1996); Khandker *et al.* (1995).

other places. Since the price of land tends to rise faster than other prices and wages in rapidly urbanising economies, the delay in land purchase makes housing less affordable over time. The Group Land Acquisition and Development Programme of the Philippines seeks to address this problem through group lending (Table 10).

**Table 9.** The Urban Community Development Office of Thailand: The People's Bank

The Urban Community Development Office (UCDO) was established in 1992 as a government-sponsored organisation with the mandate of providing credit to enhance the capacity of slum-dwellers and the urban poor to generate income on a stable basis and to obtain adequate housing with secure rights and an improved living environment. The office provides wholesale loans to qualified savings and credit organisations to on-lend to individuals to support community development. To be eligible for a UCDO loan, the savings group must have been engaged in savings activities for at least three months and demonstrate a clear management structure. Credit is provided as a tool to unleash communities' potential for self-improvement.

The credit from UCDO consists of general-purpose revolving loans to meet immediate household or community needs with a maximum of 3 years; income enhancement loans for up to 5 years to support equipment purchase and working capital; and housing loans of a maximum 15 years' maturity to finance group housing projects including land purchase and non-project housing loans for up to 5 years. Housing loans account for the largest share, followed by income enhancement loans and general-purpose loans. All committee members of a community group must sign their names as guarantors for a loan. The community or savings group may repay daily, weekly, fortnightly or monthly, according to the needs and process decided by the community. The repayment rate stands at 98.7 per cent.

*Sources:* Wattanasiritham *et al.* (1996); Boonybancha (1995).

**Table 10.** The Group Land Acquisition and Development (GLAD) Programme in the Philippines

GLAD offers a collective loan for land purchase, site development and housing construction provided by the Home Development Mutual Fund (HDMF), a nation-wide savings system which mobilises funds from mandatory contributions paid by formal-sector employers and employees as well as small savings in order to generate long-term funds to meet the housing finance requirements of its members. The maximum amount of a GLAD loan made to an employee-group or a community association is equivalent to the aggregate loan entitlements of the individual member-beneficiaries as provided under HDMF's regular housing loan programmes. The loan proceed is given directly to the owner of the land to be purchased by the group. The loan remains a collective liability of the group until the completion of site development which should not exceed two years from the date of initial loan release. During this time, the officers of the association are responsible for collecting monthly payments from individual beneficiaries and remitting them to HDMF. The default rate is somewhat high at about 20 per cent.

*Source:* Alonzo (1994).

## 3. Urban Infrastructure Finance

### *The Institutional Framework*

Infrastructure refers to the whole stock of capital and facilities for producing public goods (Martinnand *et al.*, 1993, p. 57). Infrastructure services can be grouped into two categories which require different financing mechanisms. The recurrent costs of providing water, garbage collection and other services whose direct beneficiaries are readily identifiable should be financed by user-charges. Financing of other services such as drainage, schools and roads, for which charges cannot be levied on the direct beneficiaries, should be provided from general taxes and other revenue sources.

Although responsibilities for financing urban infrastructure investments and their operation and maintenance do not rest exclusively with urban local governments, a greater role is being assigned to them through devolution. The problem is that many municipalities are endowed with inelastic revenue sources which generate inadequate revenue to pay for the costs of existing service responsibilities and have very limited autonomy over setting the level of taxes and charges. Therefore, it is essential simultaneously to decentralise revenue sources and functional responsibilities by granting local financial autonomy and rationalising tax assignment and intergovernmental transfer systems. At the same time, incentives should be put in place for local governments to exercise the increased autonomy.

Some of the institutional arrangements under which local governments operate provide perverse incentives. For example, transfers from central government unrelated to the financial performance of local authorities discourage their efforts to collect taxes and charges. Faced with a substantial increase in intergovernmental fiscal transfers through the recent decentralisation process, the Philippines local government units have been reluctant fully to exercise their taxing power. The practice of line-item budgeting unrelated to output discourages efforts to save costs once the budget is approved (Osborne and Gaebler, 1993). Co-existence of grants and loans competing with each other favours grants at the cost of losing the opportunity to enhance the financial discipline of local government through responsible borrowing. Earmarked grants for infrastructure investment with no provisions for maintenance discourage local government efforts for proper maintenance and hence inflate new investment requirements. These and other regulations and practices should be reviewed and fixed. Mexico and Pakistan have introduced a revenue-sharing formula which rewards localities for tax effort relative to tax capacity (Urban Institute, 1996).

**Table 11.** Cost recovery by SODECI in Côte d'Ivoire

Since 1987, SODECI has been responsible for all urban water supply services in Côte d'Ivoire under a comprehensive concession as well as providing sewerage services under a management contract. SODECI's capital is owned 52 per cent by Ivorian local interests, 46 per cent by a French water distributor, and 2 per cent by a government investment fund. SODECI provides water services close to the standards of industrial countries to 70 per cent of the country's urban population.

The company manages all the installations at its own risk and takes up all operations and maintenance without government subsidies. All new investments in water supply assets are self-financed through the National Water Fund. In fact, revenue from water sales has fully covered capital as well as operating and maintenance costs. This has been possible by keeping unaccounted-for water at less than 15 per cent and the level of collection from private consumers at 97–98 per cent.

*Sources:* World Bank (1994a); and Bi (1996).

Another important trend in urban finance and service delivery is the increasing involvement of the private sector. The main advantage of private-sector participation (PSP) is that it enables the public sector to draw on the financial, managerial and technical capabilities of the private sector by placing decision-making on private contractors and investors who have incentives to pursue maximum efficiency. Operational experience clearly illustrates that the success of a PSP approach hinges on an adequate legal, regulatory and administrative structure, the political will of government and the competitiveness of the private sector, as well as the technical capacities of all parties involved.

### *Pricing of Services and Other Own-source Revenue*

Pricing serves a few critical functions in infrastructure investments besides being an important funding mechanism. First, an efficient level of investment can be achieved by setting the charge equal to the incremental cost of infrastructure. Secondly, well-designed pricing schemes can control the demand for urban services and also contribute to reducing pollution and congestion. So-called infrastructure investment needs could be substantially reduced by adequate demand management by way of pricing. Thirdly, cost recovery is a pre-condition for privatisation of urban services because the tariff level is a major determinant of the financial feasibility of an investment project financed by commercial capital. In reality, the level of cost recovery is extremely low in most developing countries, with few exceptions such as SODECI of Côte d'Ivoire (Table 11). According to a World Bank estimate, the price charged for water covers only about 35 per cent of its average cost (*The Economist*, 24 February 1996, pp. 69–70). Underpricing of services can be caused by the ceiling on charges imposed by higher-level governments or the lack of political will of local government to raise tariffs to recover full costs.

To the extent that the poor care more about access to services and that they actually pay a much higher price (as large as 20–100 times; Keare, 1996, p. 29) to purchase basic services such as water from private vendors compared to the price charged by the municipality, full-cost pricing may not necessarily be an impossible goal. At the same time, increases in the user charge could be minimised by reducing leakage, improving collection and cutting unnecessary staff. Nevertheless, a social safety-net should be secured to protect the very poor who cannot afford to pay for the services provided on a commercial base. Increasing block-tariffs can provide lower prices for the essential 'life-line' quantities consumed by the poor while charging the non-poor the full cost for most of the services they consume (Landjouw, 1995).

Full cost recovery raises the affordability question. In theory, lump-sum subsidies should be provided directly to the low-income group in order to raise their capacity to pay for services priced at full costs. For example, water charges in Chile reflect full economic cost while subsidies are provided to low-income households directly from the central government budget (Idelovitch and Ringskog, 1995, p. 9). Credit for the capital costs of initial connection also proves to be helpful. Cross-subsidisation can be used as an interim measure until pricing mechanisms are made completely transparent and systems are in place to protect the life-line levels of services to meet the needs of the poor (Times Research Foundation and USAID/RHUDO, 1995).

Although the property tax is one of the most important local revenue sources in developed countries, its full potential is seldom utilised in developing countries (Youngman and Malme, 1994). There is no norm as to how much municipalities should rely upon property taxation to raise revenue since it depends on tax assignment and intergovernmental fiscal arrangements. Ideally, local authorities should be given the power to set the tax rates and tax base assessments so that the effective tax burden can be determined by local consensus. However, there is a politically acceptable limit on raising revenue from even a well-administered property tax system because of the high visibility of the tax. This can be seen from the property tax revolt in the US which started in the late 1970s.

Therefore, it is necessary to broaden the revenue base considering revenue potential and the cost of administration. Taxes on motor vehicles and businesses are promising local taxes. As to non-tax revenue sources, commercial development of municipal land could be appropriate especially for transition economies. Special assessments or betterment charges can be levied on property developers to recover the cost of sewerage, access roads and electricity. The municipality of Curitiba, Brazil, sells the right to develop extra floors beyond the legal limit. Buyers of such permits pay cash or transfer land to the city, which uses the funds and land to provide low-income housing (Rabinovitch and Leitman, 1996, p. 50). The Hong Kong government sells development rights on sites adjacent to stations of its mass transit system on long-term leases. Profits from property development and fare revenues financed Hong Kong's initial three lines of mass transit (Brisbane, 1996, p. 12). The land readjustment mechanism can be an effective option since basic infrastructure can be paid out of the project benefits without imposing any further cost on local government. But the technical capacity required to implement the scheme and the lengthy process of consensus-building may limit its value.

Local authorities in the developing world suffer from ineffective administration of the property tax and other taxes and charges, from identification and recording of the taxable objects and chargeable services to valuation, assessment, billing, collection, and arrears management. It is essential to establish and maintain an up-to-date information system covering the whole process of tax administration. Personal contacts between taxpayers and collectors can be minimised through computerised billing and payment at banks. Strict penalties against delinquent taxpayers such as surcharge and property seizure can provide a greater incentive to pay. Although a reform should be comprehensive and cover all these aspects properly, the experience of property tax administration reforms in the Philippines and Indonesia suggests that the strategic focus should be placed on improving collection (Table 12). The case of Harare, Zimbabwe, is an example of municipal efforts to improve collection of property tax by linking it to water bills (Table 12).

A major reason for the poor collection of

**Table 12.** Property tax administration in Indonesia, the Philippines and Zimbabwe

The Philippines Real Property Tax Administration Project (RPTA) focused on improving cadastre information and property valuation using a simple mass appraisal method. The project succeeded in producing tax maps and revised assessments, but revenue increased by only 1.1 per cent because of poor collection and large arrears. In fact, increased assessments were more than offset by decreases in collection efficiency in many jurisdictions.

On the other hand, Indonesia has implemented a comprehensive reform with a focus on enhancing collection efficiency through the payment point system (SISTEP) and improved valuation and assessment through the establishment of a comprehensive information system (SISMIOP). SISMIOP covers the process of billing, collection and enforcement as well as a providing property data management, valuation and taxpayer service. Consequently, collection efficiency rose from 65 per cent to 79 per cent and the share of property tax revenue in total own source revenue of sub-national government jumped from 15 per cent to 26 per cent between 1990 and 1991.

Harare, Zimbabwe, introduced a new system of combined billing of the property tax (rates) and water in July 1994 in an attempt to improve collection of rates. Its innovative feature is that the city can force payments of rates through disconnection of water regardless of the payment status in the water account. A property owner with arrears in his/her rates account is not allowed to settle water bills only. Instead, any payment of the combined bill is first credited to the rates account. This is a much more powerful and time-saving device compared to the old system of relying on the legal procedure to seize property on which there were unpaid rates. However, the scheme has generated political uproar and the full impact is yet to be seen.

*Sources:* Dillinger (1988, 1989); Kelly (1993, 1995); Rosengard (1992); Shah and Qureshi (1994); Sidik (1995); and Kinyungu (1996).

taxes and fees in developing country cities is the lack of willingness to pay by citizens. They do not trust that their contribution will be properly used to provide and improve services, and hence refuse to pay. With less money available, municipalities find it more difficult to deliver services. This further discourages the citizens from paying their dues, hence a vicious cycle. Therefore, it is essential to enhance willingness to pay by communicating to the public the linkages between what they pay and what they get. Again, the difficult part is to convince the citizens through real examples. Working with respected NGOs and community groups as well as local media can be helpful.

### *Access to Capital*

Prudent local borrowing is an appropriate means of financing infrastructure investment projects which generate benefits over a long period of time. In practice, cities and municipalities in many developing countries are not allowed to borrow from banks or to raise capital from open markets. Where they are allowed to borrow, local authorities are often considered not creditworthy by lenders and investors due to poor financial performance and inadequate capacity to prepare projects. Underdeveloped domestic financial and capital markets further limit local government access to credit.

Local authorities should be allowed to borrow or issue bonds within their debt-carrying capacity and within the overall public-sector debt limit. When decentralisation laws lifted all forms of state control on local government borrowing while at the same time financial deregulation took place in France, local governments attained access to all credit institutions and to financial markets at market conditions (Cacheux and Tourjansky, 1992, p. 33). A few local government units in the Philippines have floated bonds at market rates to finance housing, markets and transport projects since they were empowered to borrow under the Local Government Code of 1991. A more difficult task lies in making municipalities bankable. Central government can make a contribution by granting local authorities greater financial autonomy and incentives for improving their debt-carrying capacity and budget management. Government guarantees should be limited to mobilising capital to finance social infrastructure whereas funds to finance other infrastructure projects should be raised on the capital market (Stone, 1996, p. 8).

Government can also facilitate the establishment of credit-rating agencies and private bond insurance companies. A transparent system of credit rating can help commercial banks and potential investors assess the creditworthiness of local government. Bond insurance can provide credit enhancement by lowering the perceived risk of municipal bonds and hence lowering interest costs to borrowers with less-than-sterling credit ratings without government guarantee. Although tax-exempt municipal bonds bring down the cost of funds for cities and municipalities, they may discourage the participation of the private sector in urban infrastructure financing, thereby reducing the overall investment in urban infrastructure (McGoldrick, 1995). On the other hand, government can provide seed capital to a municipal credit facility which can be further leveraged. The State Revolving Loan Fund in the US appears to be an innovative example of extending long-term credit to cities. Resources of the Fund consisting of the seed capital from the federal government and matching contribution from the states can be used to provide credit enhancements, guarantees, collateral financing or refinancing (McGoldrick, 1994).

In addition to issuing bonds or borrowing directly, local government can tap private capital to finance specific infrastructure projects through partnership with the private sector involving various arrangements for the ownership of the facility. Under a BOO (Build-Own-Operate) contract, a private contractor builds, owns and operates a facility used by the public. BOT (Build-Operate-Transfer) is similar to BOO except that the facility is returned to the urban authority after a specified period of ownership and operation by the private contractor. Both BOO and BOT can be considered special cases of BOOT (Build-Own-Operate-Transfer) in terms of if and when the ownership of the facility built by the private project company is transferred to the public sector. BOOT schemes can finance large projects through complex financing packages combining equity investment and commercial loans from a consortium of domestic (and international) financiers.

When local authorities cannot access market-based credit, municipal credit institutions (MCIs) can be a realistic mechanism of channelling funds to them. However, the overall track record of MCIs in developing countries is still unsatisfactory. In order to be sustainable, MCIs should operate on commercial terms. Lending rates should be set close to the competitive rates reflecting the true opportunity cost of funds. Projects eligible for funding should be selected mainly on the basis of their economic feasibility. Grants, rather than subsidised loans, should be used as an instrument to achieve objectives of reducing fiscal inequality among local authorities. Delinquent borrowers should be penalised, for instance, through an arrangement which allows the lender to intercept central government transfers to local authorities. The loan could be disbursed in phases conditional upon the satisfactory servicing of the debt in the previous phases. Central government could reduce budget transfers to local authorities with poor repayment records. The success of FINDETER of Colombia is attributable to some of these factors (Table 13).

Whether or not MCIs should be regarded as an interim solution to the problem of the lack of source from which to raise capital to finance urban infrastructure investment is somewhat controversial. There is a view that MCIs should be a transitory way-station until local governments become capable of raising capital directly from financial and capital markets. For example, Credit Local of France has evolved from a directed credit institution to become a commercial-base lending institution mobilising funds on both

**Table 13.** FINDETER of Colombia: a successful municipal credit institution

FINDETER was created in 1989 as a corporation owned by the National Treasury (85 per cent) and (regional) Departments (15 per cent). It is an autonomous financial corporation designed to provide long-term credit to finance local infrastructure investment. FINDETER also administers co-financing programmes of the government and provides technical assistance to smaller municipalities on identification, assessment and preparation of investment projects.

FINDETER does not lend directly to municipal governments. Instead, it operates as a second-tier bank, or a discount agency to private-sector and state-owned commercial banks that provide municipal credit. The banks lend to municipalities based on their credit analysis bearing the full default risk, and charge competitive interest rates. They retain the right to a portion of the borrower's revenue source as a guaranty.

FINDETER's funding comes from bond issues, recycling of its loans, and foreign credits from bilateral and multilateral sources. Its resource mobilisation strategies may have to undergo substantial changes over the next few years as the initial capitalisation programme of the government is almost over and the package of external credit is in its final stage of disbursements. Faced with the need to diversify revenue mobilisation, FINDETER issued $40 million in Territorial Savings Titles in 1994.

*Sources:* Garzon (1992); Ramirez Vallejo (1996); and World Bank (1994b, p. 103).

domestic and international capital markets. This view becomes more convincing as the directed credit systems collapse and the composition of the international flow of capital changes from predominantly debt to equity instruments. However, the fact that the vast majority of local governments have a long way to go before they become bankable to private-sector financial institutions suggests that MCIs may be the only realistic option for some time to come.

Finally, cross-border finance needs to be explored more strategically. Ever-growing world capital markets offer a great potential for financing selected infrastructure projects. Power and telecommunications sectors in Asia and Latin America as well as water projects in Francophone Africa have already benefited from institutional investors and foreign direct capital. Recently, some successful cases have emerged which mobilise global capital to finance urban infrastructure projects in developing countries and transition economies. A private consortium which involved foreign financiers was awarded with a concession to provide water and sewerage services in Buenos Aires, Argentine. The City of Prague in the Czech Republic floated bonds worth $250 million at the London Stock Exchange in 1994 using a 'BBB-' rating received from the Standard and Poor's, a major municipal bond rating agency (Johnson and McCullough, 1996, p. 28).

Macroeconomic stability, currency convertibility and capital market development are crucial pre-conditions in tapping the international capital markets. Credit rating of the host country is essential because commercial loans to a BOT project in a particular country count as loans to that country for purposes of exposure limits (Augenblick and Custer, 1989, p. 32). In terms of instruments, revenue bonds for particular projects are a more realistic starting-point than the general obligations bonds. MCIs could be used as a conduit to channel international capital to municipalities. For example, the Municipal Development Fund of the Czech Republic borrows funds from abroad, with a national government and US government guaranty, then on-lends the funds to domestic commercial banks, which in turn lend to municipalities. The municipalities make project selection and project preparation, while the commercial banks perform all credit analysis and accept all repayment risks. The MDF merely confirms the creditworthiness of the commercial banks to which it on-lends and makes capital available to participating commercial banks so as to strengthen competition (Urban Institute, 1996). Credit Local of

**Table 14.** The Tilburg model and the Phoenix model

In Tilburg, elected politicians are responsible for policy decision-making, but service managers are given considerable freedom in implementing policies in the most efficient way. City divisions are managed like business enterprises consisting of a network of profit centres. Managers are contracted to secure a particular service and their performance is measured in terms of profits and concrete indicators of service quality. The profit centres are open to competition from private contractors including voluntary community organisations to deliver services on the basis of agreed targets and a business plan.

The case of Phoenix represents a customer-friendly, broadly private-sector-inspired, result-oriented, entrepreneurial model. It has a sophisticated management system with business planning, internal trading accounts and merit pay for senior staff. It engages the private sector in service delivery through competitive privatisation under which service departments of the city compete with private contractors for service.

*Source:* Fenwick (1995).

France, which is the dominant supplier of credit to local authorities, raises 86 per cent of its funds through international bond issues with the excellent rating of AAA/Aaa.

### *Service Delivery, Community Participation and Accountability*

Rationalising expenditure management is equally as important as enhancing resource mobilisation capacity, since the ultimate goal of strengthening municipal finance is to provide quality services to urban residents at reasonable prices. Therefore, cost-consciousness and customer-orientation are required for resource management and service delivery in local government units. The cases of Tilburg in the Netherlands and Phoenix, Arizona, provide good examples (Table 14). Also, service standards should be set within the limit of citizens' ability to pay using appropriate technology (Franceys and Cotton, 1994).

Service delivery can be made more responsive and accountable to the citizens by engaging grassroots community organisations through internal decentralisation of both resources and responsibilities. In these cases, agreements are reached in which community groups plan and set priorities for their own internal infrastructure service improvements; the municipality provides part of the resources with the community mobilising the rest from its members; the municipality provides technical assistance and facilitates the process; and the community groups play a sizeable role in implementation (Table 15) (Urban Institute, 1996).

Also, micro-enterprises are increasingly recognised as effective providers of urban services in the developing world, especially in low-income settlements. Micro-enterprises already offer many services ordinarily considered to require capital investments beyond the scope of very small firms, including garbage collection (Cairo and CORFAS, Colombia), small-scale energy production and sales (New Delhi and Guatemala City) and water supply. Quite often, these urban services are provided on a commercial basis with no assistance from government. Yet, many micro-enterprises suffer from the lack of adequate credit to finance operations and equipment purchases (Phelps, 1995).

Private-sector participation (PSP), if properly designed and implemented, can contribute greatly to improving urban service delivery and infrastructure finance. Greater efficiency can be achieved through relating the costs of municipal services more closely to their users. The magnitude of efficiency gains from private—public partnerships varies substantially across specific services concerned. For example, competitive privatisation of solid waste services in Phoenix, Arizona, is estimated to have made cost savings of almost 50 per cent, despite a nearly 50 per cent increase in population since late

**Table 15.** Examples of partnerships between municipalities and community organisations

In 1988, the mayor of Adjame, Côte d'Ivoire (one of the municipalised districts of metropolitan Abidjan), established neighbourhood committees (CDQs) in each of the municipality's 19 neighbourhoods. The CDQs generate revenues from user-fees for the services they provide. The municipality nurtures them and provides seed capital, but does not subsidise their operating costs. Most CDQs have been able substantially to reduce the costs of water provision. CDQs mobilised funds which amounted to about 30 per cent of infrastructure project costs, and the municipality achieved leverage ratios of six or more on pubic resources invested.

Tijuana, Mexico, established a Miens a la Obra (Hands-On Work) programme where the municipality subsidises 40–60 per cent of the cost of internal community improvements. Community groups select priorities, pay for the residual cost, and perform the work themselves either by hiring local contractors or on a self-help basis. Through this programme, streets have been built at much less expense than if the municipality had handled the work.

*Source:* Urban Institute (1996).

1970s (Donovan, 1994; Jensen, 1995). Increased competition through private-sector participation in the UK has led to an overall 6.5 per cent cost reduction on average, and rising. Garbage collection, building cleaning and ground maintenance reported the deepest cut in cost (Walsh and Davis, 1993).

Although the expected positive outcome was delivered in some successful cases, private-sector participation is not a panacea in addressing problems in urban infrastructure service delivery and its financing. Some lessons can be drawn from experience. First of all, political will from the top is necessary to overcome bureaucratic inertia and outright opposition to engaging the private sector. It is also important to deal properly with the problem of surplus labour caused by private-sector participation. For example, the government of Argentina helped to finance voluntary retirements for the former employees of the public utility and 10 per cent of the shares in the newly created private consortium were allocated to employees (*The Economist*, 24 February 1996). In the case of Phoenix, each contract required that the successful contractor offered displaced workers a position. The city also held open vacancies prior to bids to allow displaced drivers to retain employment within the city (Donovan, 1994).

Secondly, political commitment to public–private partnerships must be realised through an enabling legal framework which permits various forms of collaboration and clarifies the rules of the game, and through effective and transparent enforcement of the norms and terms of contracts. In the Philippines, the BOT Law, first enacted in 1989 and amended in 1994, provides a legal basis for private-sector participation and sets the procedure for partnerships (Garcia, 1994). Within the legal framework, the municipality needs to be a project manager and an enabler, rather than a direct provider. It should be able to identify services to be privatised, to prepare tender documents, to monitor performance and to safeguard the public interest.

Finally, private-sector participation can enhance efficiency only when competition is present, not only among potential private-sector participants, but also between the private sector and the public sector. For example, unions of city employees and private contractors are engaged in direct competition with each other in garbage collection and disposal in Phoenix, Arizona. The Citizen's Charter in the UK requires competition in all service delivery fields, measurement and public disclosure of service performance, and the inclusion of users on service management committees (Urban Institute, 1996).

Greater autonomy requires commensurate financial control and accountability, which in turn depends upon accurate and timely avail-

**Table 16.** Participatory budgeting and service management in Porto Alegre, Brazil

Faced with a widening gap between revenue and capital expenditure needs, the City of Porto Alegre introduced a process of engaging the public in its budgetary process beginning in 1990. Since the city's revenue base improved as a result of a tax reform in 1991, the participatory process was further strengthened so that the citizens collectively decide where, how and how much municipal resources are to be solicited, monitor contracting processes and project implementation as well as controlling the public expenditure.

For the purpose of the participatory budget process, the city is divided into 16 geo-political sections. Each year, the City Hall promotes two huge assemblies. In the first session, the previous year's investment account is presented for public review. In the second session, the inhabitants participate in the selection of delegates to the thematic plenaries in which citizens' representatives discuss sector policies and strategies for development of the city together with professional associations and NGOs. Then the Regional and Thematic Delegate Forum and the Municipal Council of Government Plan and Budget are formed, which produce a budget proposal through a series of consultations. Once the size of the budget is approved, the Investment Plan is drawn up to be approved by the Council, and then by the Municipal Town Councillors after a negotiation process.

Since the introduction of the participatory budget process, Porto Alegre has increased its own-source revenue and hence has become less dependent upon federal and state transfer funds. The city was able to allocate 15–25 per cent of its revenue to investment projects, especially to basic sanitation works which were given the highest priority in the budget process. The city's water and waste water services are also managed in a participatory manner. Capital and operating costs as well as recruitment of personnel are discussed with the public. All this contributed to raising the level of consumer satisfaction.

*Sources:* Eduardo Utzig (1995); and Ulrich and Mentz (1996).

able information. Adequate information is also essential in obtaining credit rating on municipal bond issues. However, financial information is provided often too late, or is inadequate and incomprehensible to the public. Although adequate financial accounting standards need to be enforced to achieve financial control, reader-friendly budget and financial statements should be provided to councillors and to the public to enhance accountability.

In many cities the world over, infrastructure investment programming and budgeting are not open to citizens. This practice often leads to a waste of resources by adopting unrealistic standards and inappropriate technology. Efforts should be made to make the process transparent by engaging the public in development planning, setting infrastructure standards and determining investment priorities, and monitoring the performance. The case of Porto Alegre, Brazil, is a good example (Table 16).

## 4. Concluding Remarks

This article has tried to present an overview of the existing knowledge and policy experience in housing and urban infrastructure finance, taking note of changes in the economic environment and progress made since Vancouver. We noted positive developments which have put financing issues at the forefront of policy discussions on human settlements in Istanbul. However, today's financing challenge is no smaller than that of two decades ago. The reality is that housing and urban services must ultimately be paid for; that enormous wealth generated through urbanisation is not being utilised properly to finance shelter and urban infrastructure development and service delivery so as to further economic development and to improve the quality of life of urban dwellers; local authorities struggle to raise revenue to pay for the costs of basic services and maintenance of existing infrastructure, let alone to provide long-term capital to finance new infrastructure investments. A large segment of the urban population in the developing world has no access to such basic services as safe water; the formal-sector housing finance institutions fail to reach the vast majority of home-purchasers in developing countries, while a fortunate small minority enjoy large subsidies. The prospects of continued growth in the urban population in the developing world and of declining public funds and official development assistance will make it more difficult to support sustainable human settlement development in an urbanising world and to facilitate the provision of adequate shelter for all.

Changes in the global economic and policy environment characterised by increased market-based competition for financial resources caused by financial liberalisation and integration of world credit and capital markets have led to the private financial sector playing the dominant role in mobilising the funds for shelter and urban development in most countries. The fact that low-income families pay much more for basic services provided informally than do those served by existing trunk infrastructure suggests that urban infrastructure can be a high-return sector. Urban housing is also a secure investment as long as property rights are well-defined and foreclosure procedures are enforced as necessary. A fundamental challenge in this market-oriented environment is how to extend financial services for the poor, women and vulnerable groups currently not served by the formal finance sector, while providing proper subsidies for those who deserve assistance.

A few points can be made on the ways to cope with the challenge. The first observation concerns micro-finance. Over the past decade, micro-finance institutions have demonstrated that banking for the poor can be both sustainable and profitable. Micro-finance has received enormous attention from the international community as was vindicated by the Micro-lending Summit held in February 1997. Although micro-finance has proved itself to be an effective mechanism of extending credit to low-income households to support their efforts to build an economic livelihood and improve their housing conditions, attaining financial viability and sustainability remains a major institutional challenge. The irony is that micro-finance lending, to be sustainable, should be grounded in market principles, since large-scale lending cannot be accomplished through subsidies. In any case, enhancing the credit-worthiness of the urban poor, making them more ‘bankable’ to financial institutions and enabling them to qualify for long-term credit from the formal sector must be a key objective of financial sector reforms. Micro-finance institutions have a lot to contribute by building financial discipline and educating borrowers about repayment requirements.

The second point relates to cross-border finance. Although domestic savings are the most important source of funds to finance housing and urban infrastructure, cross-border finance may provide an opportunity to mobilise additional resources. There has been a clear trend for reduction in official development assistance and bank loans on the one hand, and a rapid growth in foreign direct investment and private capital market funds on the other. For now, most of these funds are not directed at housing and urban services, and are heavily concentrated in about a dozen lively economies. With developments of secondary mortgage markets, more active participation of the private sector in the urban sector, and enhanced credit-worthiness of municipalities, some countries with macroeconomic stability and adequate property rights systems may be able to take advantage of such funds to finance housing and urban development. For the rest, however, the prospects for the immediate future appear to be less bright.

A third point is about the broad perspective on improving urban finance. The main problem is not just the lack of supply of capital; it is also the lack of credit-worthiness. The lack of citizens’ willingness—rather than their ability—to pay for services, when these services are poor and/or poorly maintained, is also a serious problem. The critical questions, therefore, are: how to make municipal institutions work better; and to encourage willingness to pay and to translate it into better service delivery; to make cities and municipalities more credit-worthy to potential lenders and investors. Comprehensive solutions should be found in the broad context of good governance and accountability, as well as in financial innovation. In fact, accountability is the first step towards making municipalities credible and hence raising revenue.

Finally, it needs to be emphasised that the process of devising and implementing a policy reform involves building constituency and consensus. Redefining the role of specialised public-sector housing finance institutions, separating subsidies from finance, raising the level of taxes and tariffs and many other policy moves cannot be made without a painstaking process of consensus-building as well as a strong political commitment. The success of this process hinges upon the broad-based participation of relevant stake-holders and an adequate flow of information. In addition, the upgrading of the capacity of all relevant actors involved in the reform and cross-nurturing based on experiences of its implementation are also essential for success.

## References

Alonzo, A. (1994) The development of housing finance for the urban poor in the Philippines: the experience of the home Development Mutual Fund, *Cities*, 11(6), pp. 398–401.

Augenblick, M. and Custer, S. B. Jr (1989) *The build, operate and transfer (BOT) approach to infrastructure projects in developing countries*. Working Paper No. 498, The World Bank, Washington, DC.

Barry, N., Armacost, N. and Kawas, C. (1996) ‘*Putting poor people's economics at the center of urban strategies*. Women's World Banking, New York. (mimeograph).

Bi, A. T. G. (1996) Private company and state partnership in the management of water supply and sewage services: the case of SODECI in Côte d'Ivoire, in: K. Ray and Dzikus, A. (Eds) *Managing Water Resources for Large Cities and Towns*, pp. 90–102. Nairobi: UNCHS.

Boleat, M. (1992) The impact of the single European market on housing finance in the UK, *Housing Finance International*, December, pp. 10–12.

Boonyabancha, S. (1995) *Enabling communities through savings and integrated credit schemes as a strategy for dealing with poverty alleviation*. Paper presented at the *International Symposium on Korean Housing Policy and Asian Regional Conference on Financing Strategies for Habitat II*, Seoul, Korea, March.

Brisbane, W. G. (1996) *Case study on land development*. Paper presented at the *Urban Infrastructure Finance Seminar*, Asian Development Bank, Manila, the Philippines, April.

Buckley, R. M. (1996) *Housing Finance in Developing Countries*. New York: Macmillan.

Building Society Association (BSA) (1989) *Housing Finance—An International Perspective, Proceedings of the International Housing Finance Conference. London, 21–22 November 1988*. London: BSA.

Cacheux, J. L. and Tourjansky, L. (1992) The French decentralization ten years on: local government finances, *Local Government Studies*, 4, pp. 28–38.

Cagamas Berhad (1995) *Annual Report 1995*. Kuala Lumpur: Cagamas Berhad.

Carlson, E. and Carlson, L. (Eds) (1995) *Habitat and housing finance for Millennium III: Report of the ECO-HAB International Forum*. New York: ECO-HAB International Inc.

Choguill, C. L. and Choguill, M. B. G. (1996) Towards sustainable infrastructure for low-income communities, in: C. Pugh (Ed.) *Sustainability, the Environment and Urbanization*, pp. 83–102, London: Earthscan.

Corporacion de Investigacion, Estudio y Desarrollo de la Seguridad Social (CIEDESS) (1995) *Policies for Financing Housing in Chile*, Santiago de Chile: CIEDESS.

Crane, D. B. and Bodie, Z. (1996) The transformation of banking, *Harvard Business Review*, March/April, pp. 109–117.

Diamond, D. B. and Lea, M. (1992) The decline of special circuits in developed country housing finance, *Housing Policy Debate*, 3(3), pp. 747–777.

Diamond, D. B. and Lea, M. (1995) *Sustainable financing for housing: a contribution to Habitat II*, Working Paper, Fannie Mae Office of Housing Research, Washington, DC.

Dillinger, W. (1988) *Urban property tax reform: the case of the Philippines' Real Property Tax Administration Project*, Discussion Paper INU 16, World Bank, Washington, DC.

Dillinger, W. (1989) *Urban property taxation: lessons from Brazil*. Discussion Paper INU 27, World Bank, Washington, DC.

Dillinger, W. (1994) *Decentralization and its implications for urban service delivery*.

Discussion Paper 16, Urban Management Programme, The World Bank, Washington, DC.

Donovan, R. (1994) Phoenix, Arizona: privatization of solid waster water services, *Urban Age* (The World Bank), October, p. 14.

Eduardo Utzig, J. (1995) *Demographic and popular participation in the public field: the experience of the participative budget in Porto Alegre (1989–1995)*. Porto Alegre (mimeograph).

Fenwick, J. (1995) *Managing Local Government*. London: Chapman and Hall.

Franceys, R. and Cotton, A. (1994) Infrastructure for the urban poor, policy and planning issues, *Cities*, 11(1), pp. 15–24.

Garcia, J. B. Jr (1994) BOT law in the Philippines, *Infrastructure Finance*, October/November, pp. 60–62.

Garzon, R. H. (1992) Municipal credit institutions: the case of Colombia, INURD Working Paper No. 17, The World Bank, Washington, DC.

Idelovitch, E. and Ringskog, K. (1995) *Private sector participation in water supply and sanitation in Latin America*. The World Bank, Washington, DC.

Instituto Brasileiro de Administracao Municipal (IBAM) (Ed.) (1996) *Strategies on urban finance in Latin America and the Caribbean: final report*, Rio de Janeiro, January.

Jacobs, M. (1996) *Housing subsidies in Costa Rica: a technical note on a voucher programme*. InterAmerican Development Bank, Washington, DC. (mimeograph).

Jensen, R. (1995) *Managed competition: a tool for achieving excellence in government*. Paper presented at the *Regional Seminar on Megacities Management in Asia and the Pacific*, Asian Development Bank, Manila.

Johnson, R. W. and McCullough, J. S. (1996) Case study on urban local government finance. Paper presented at the Urban Infrastructure Seminar, Asian Development Bank, Manila, April.

Keare, D. (1996) *Theme paper on resource mobilization and financial management for urban infrastructure*. Paper presented at the *Urban Infrastructure Finance Seminar*, Asian Development Bank, Manila, April.

Kelly, R. (1993) Property tax reform in Indonesia: applying a collection-led implementation strategy, *Bulletin of Indonesian Economic Studies*, 29(1), pp. 85–104.

Kelly, R. (1995) Property tax reform in southeast Asia: a comparative analysis of Indonesia, the Philippines and Thailand, *Journal of Property Tax and Administration*, pp. 60–81.

Khandker, S., Khalily, B. and Kahn, Z. (1995) *Grameen Bank: performance and sustainability*. Discussion Paper 306, World Bank, Washington, DC.

Kim, K. H. (1993) Housing finance: Habitat II and the way ahead, *Housing Finance International*, 8(1), 23–25, 44.

Kim, K. H. (1995) Access to credit, terms of housing finance and affordability of housing, *Housing Finance International*, 9(4), pp. 22–27.

Kim, K. H. (1997) Improving local government finance in a changing environment, *Habitat International*, 21(1), pp. 17–28.

Kinyungu, N. (1996) *Mobilization of land-related local resources as a good example of good municipal finance by Harare, Zimbabwe*, Urban Management Programme, UNCHS, Nairobi. (mimeograph).

Lall, V. D. (1996) *Accessing the poor to formal housing finance*. Paper presented at the *Asian Regional Consultation on Financing Habitat for the Urban Poor*, Manila, April.

Landjouw, P. (1995) Infrastructure: a ladder for the poor, *Finance and Development* (IMF), Washington, DC. March.

Lea, J. M. and Bernstein, S. A. (1995) *International Housing Finance Sourcebook*. Chicago, IL: International Union of Housing Finance Institutions.

Lea, M. (1994) Mutual to stock conversion: an international comparison, *Housing Finance International*, 9, September, pp. 13–17.

Lea, M. and Renaud, B. (1995) *Contractual savings for housing—how suitable are they for transitional economies?* Policy Research Working Paper 1516, World Bank, Washington, DC.

Martinnand, et al. (1993) *Private Financing of Public Infrastructure: The French Experience*. Paris: French Ministry of Public Works, Transport and Tourism.

McGoldrick, B. (1994) Revolution in state revolving loan funds, *Infrastructure Finance*, April/May, pp. 25–27.

McGoldrick, B. (1995) Rethinking municipal finance, *Infrastructure Finance*, June/July, pp. 22–27.

Munjee, N. (1994) Housing finance development: is there an emerging paradigm for developing countries in Asia?, *Housing Finance International*, 8(4), June, pp. 6–10.

Okpala, D. C. I. (1994) Financing housing in developing countries: a review of the pitfalls and potentials in the development of formal housing finance systems, *Urban Studies*, 31, pp. 1571–1586.

Osborne, D. and Gaebler, F. (1993) *Reinventing Government: How the Entrepreneurial Spirit is Transforming the Public Sector*. New York: Plume/Penguin.

Otero, M. and Rhyne, E. (1994) *The New World* *of Microenterprise Finance: Building Healthy Financial Institutions for the Poor*. West Hartford, CT: Kumarian Press.

Phelps, P. (1995) *Building linkages between the microenterprise and shelter sectors: an issues paper*. GEMINI, Bethesda, MD.

Pugh, C. (1992) Development of housing finance and the global strategy for shelter, *Cities*, 11(6), pp. 384–392.

Pugh, C. (1994) The role of the World Bank in housing, in: B.C. Aldrich and R.S. Sandhu (Eds) *Housing the Urban Poor: Policy and Practice in Developing Countries*, pp. 34–92. London: Zed Books.

Rabinovitch, J. and Leitman, J. (1996) Urban planning in Curtiba, *Scientific American*: March, pp. 46–53.

Ramirez Vallejo, J. (1996) The Financial Bank for Urban Infrastructure Model in Colombia, in: IBAM (Ed.) *Strategies on Urban Finance in Latin America and the Caribbean: Final Report*. Rio de Janeiro: IBAM.

Renaud, B. (1985) Financing shelter, in: L. Rodwin (Ed.) *Shelter, Settlement and Development*, pp. 179–203. Boston: Allen and Unwin.

Rojas, E. and Greene, M. (1995) Reaching the poor: lessons from the Chilean housing experience, Inter-American Development Bank, Washington, DC. (mimeograph).

Rosengard, J. K. (1992) *Building on a land mine: property tax reform in developing countries*. Unpublished PhD thesis, Harvard University, Cambridge, MA.

Shah, A. and Qureshi, Z. (1994) *Intergovernmental fiscal relations in Indonesia: issues and reform options*. Discussion Paper 239, World Bank, Washington, DC.

Sidik, M. (1995) *Developing land and building tax administration in Indonesia*. Urban Management Programme, UNCHS, Nairobi. (mimeograph).

Stone, A. (1996) *Theme paper on private sector participation*. Paper presented at the *Urban Infrastructure Finance Seminar*, Asian Development Bank, Manila, the Philippines, April.

Tanphiphat, S. (1995) *Housing finance in Thailand and the government Housing Bank*. Paper submitted to the *Dubai International Conference on Best Practice for Habitat II*, November.

Times Research Foundation and USAID-RHUDO (1995) *Urban Infrastructure: Improvement and Finance*. New Delhi: TRF and USAID-RHUDO.

Ulrich, L. and Mentz, D. (1996) City sewerage management: Porto Alegre's mixed sewerage tariff, in: IBAM (Ed.) *Strategies on Urban Finance in Latin America and the Caribbean: Final Report*, Rio de Janeiro: IBAM.

United Nations (1976) *Report of Habitat: United Nations Conference on Human Settlements*. New York: UN.

United Nations Centre for Human Settlements (UNCHS) (1996a) *Sustainable financing strategies for housing and urban development: a contribution to the City Summit*. Nairobi (revised, August).

United Nations Centre for Human Settlements (UNCHS) (1996b) *The Habitat Agenda*. Nairobi: UNCHS.

Urban Institute (1996) *Summary of Habitat II Urban Finance Colloquium*. Washington, DC: Urban Institute.

Van Dyk, N. (1995) Financing social housing in Canada, *Housing Policy Debate*, 6(4), pp. 815–848.

Vittas, D. (1995a) *Strengths and weaknesses of the Chilean pension reform*. Financial Sector Development Department, The World Bank, Washington, DC, May. (mimeograph).

Vittas, D. (1995b) *Pension funds and capital markets*. Financial Sector Development Department, The World Bank, Washington, DC, August. (mimeograph).

Wallace, J. E. (1995) Financing affordable housing in the United States, *Housing Policy Debate*, 6(4), pp. 785–814.

Walsh, K. and Davis, H. (1993) *Competition and Service: The Impact of the Local Government Act 1988*. Department of the Environment, London: HMSO.

Wattanasiritham, P., Boonyabancha, S. and Mueller, L. (1996) *UCDO the Urban Community Development Office: The People's Bank*. Paper presented at the *Asian Regional Consultation on Financing Habitat for the Urban Poor*, Manila, the Philippines, April.

World Bank (1991) *Urban Policy and Economic Development: An Agenda for the 1990s*. Washington, DC: World Bank.

World Bank (1993) *Housing: Enabling Markets to Work*. Washington, DC: World Bank.

World Bank (1994a) Côte d'Ivoire: public sector participation in water supply and sanitation, *Urban Age*, October.

World Bank (1994b) *World Development Report 1994*. New York: Oxford University Press.

Youngman, J. M. and Malme, J. H. (1994) *An International Survey of Taxes on Land and Buildings*. Lincoln Institute of Land Policy. Boston: Kluwer.