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**SCALING UP SLUM IMPROVEMENT:**

**Engaging Slum Dwellers and the Private Sector  
to Finance a Better Future**

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## **SCALING UP SLUM IMPROVEMENT: Engaging Slum Dwellers and the Private Sector to Finance a Better Future**

*“Achieve a significant improvement in the lives of at least 100 million slum dwellers, by 2020.”* (U.N. Millennium Development Goals)

To achieve the U.N. Millennium Development Goals, it is essential to scale up slum improvement programs to a level commensurate with the rapid growth of slum populations. To eliminate slum conditions over the next 30 years (the same amount of time as between the original U.N. Habitat Conference in 1976 and today) will require a sustained effort on a global scale. This is a challenging proposition since it is clear that scaling up slum improvement will require very substantial financial resources. Central and local governments will never have enough money to do the job entirely by themselves. Only by mobilizing private capital and enabling slum dwellers to improve their own housing conditions on a financially sustainable basis will it be possible to achieve such large scale results. This paper will examine cases where private sector finance for housing and municipal infrastructure was used to improve housing conditions in slum communities on a financially sustainable basis in partnership with slum dwellers and local government.

1. Diverse models of microfinance for housing enable slum families to incrementally improve their own houses while also helping to augment their incomes through rents or micro-enterprise expansion. This theme will be illustrated by examples of successful housing microfinance projects.
2. Cities can mobilize domestic private sector financing to substantially expand basic infrastructure into slum neighborhoods and thereby create an environment where slum families will want to improve their own housing. This theme will be illustrated by examples of successful municipal bond financing undertaken by developing cities.

Combining these two financial tools in the slum improvement process enables program implementers to scale up their results to a city-wide scale with the minimum use of scarce government funding.

In order to illustrate the points presented above, this paper will address a series of questions that probe the essential elements of how slum improvement can be financed on a sustainable basis. The first set of questions deal with the concept of slum upgrading: the what, why and how of slum improvement. The second set of questions deal with micro-finance for housing: the most effective way for slum dwellers to improve their own housing and their livelihoods. The third set of questions deal with financing of municipal infrastructure: a crucial component of all slum upgrading efforts. The paper ends with a series of conclusions that are derived from the case materials: what have we learned? More detailed information about the cases is presented in the Annex to this paper.

## I. ESSENTIALS OF SLUM IMPROVEMENT

### A. What is Slum Upgrading and why is it important?

Slum upgrading is a programmatic response to existing slum communities that focuses on keeping the community intact while improving the quality of housing, infrastructure and services in the slum. Slum upgrading minimizes physical and social dislocation of the urban poor compared to alternative programs of “slum clearance” or “slum eradication” that typically drive the urban poor from their homes, bulldoze their shacks (and their belongings), and make inadequate efforts to provide alternative housing that takes into account the economic and social realities of the slum dwellers themselves.

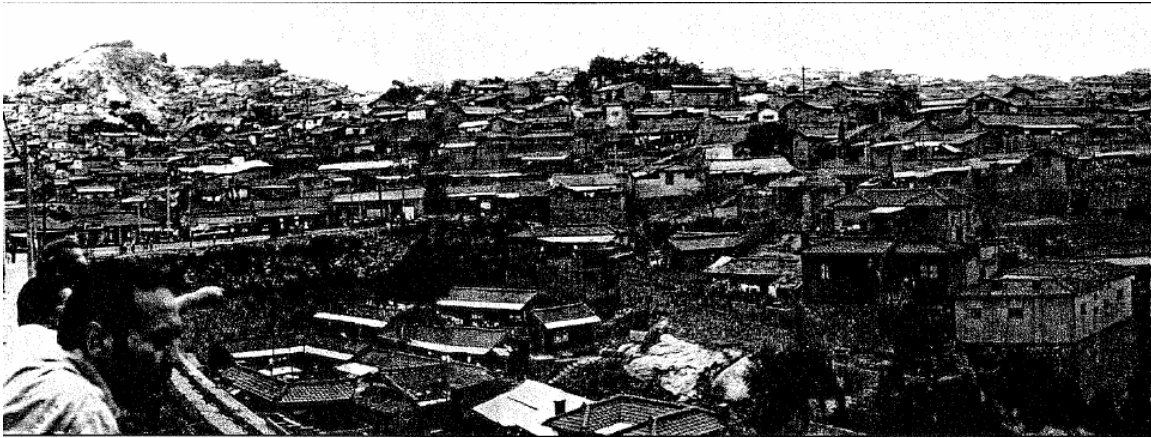
Since the 1970s there have been an increasing number of slum upgrading pilot projects implemented in communities around the world. Forward looking national and municipal governments have experimented with a variety of means to improve the quality of life in the slums. Most of these experiments have been in partnership with international development agencies and multilateral development banks, and they often engaged both local and international NGOs.

Out of this wealth of pilot programs emerged an international consensus among urban development experts (reflected in the creation of the Cities Alliance) that slum upgrading is the preferred public policy response to address existing slum conditions in developing cities. However, the consensus among experts has not translated itself into consistent application of slum upgrading in developing cities. The following provides a brief introduction to the concept of slum upgrading and some of the questions that affect the prospects of applying slum upgrading on a scale that is commensurate with the continuing growth of slums in all developing cities.

### B. Why improve existing slum housing rather than bulldoze it?

Slum conditions are appalling. People are crowded into tiny rooms, hastily constructed of flimsy materials such as bamboo, flattened oil drums, scrap wood, and mud. They live under constant threat of eviction and destruction of their homes. Streets are no more than narrow lanes filled with refuse that turns into a quagmire in the rain. Water is hard to get, usually of poor quality, and many times more expensive than that which is piped into other parts of the city. The lack of sewers and drains means that household wastewater and sewage pools in the lanes and low lying areas, constantly exposing people to health hazards. There are no public schools, no hospitals or public health clinics, and people have little or no access to public services taken for granted in other parts of the city. The following photographs from Seoul, South Korea illustrate these slum conditions.

Two views of the slum community of Oksu – Dong, Seoul, South Korea in 1975



It is easy to understand why city leaders want to make their slums disappear. Yet these same slums offer the only shelter that the urban poor can afford. In cities and countries where slums are expanding, failures of public policy have led to low levels of affordable housing production compared to growing demand. The inevitable result is that insufficient supply has led to rising prices as demand for housing grows with the swelling urban population. It would be better if there were a decent place for everyone to live, but until that happy time, slums will continue to fill a needed role in the housing sector by offering shelter to people who can not afford anything else.

Under these circumstances, it simply will not be possible to make slums disappear by bulldozing them. Cities that destroy a slum community find that their other slum

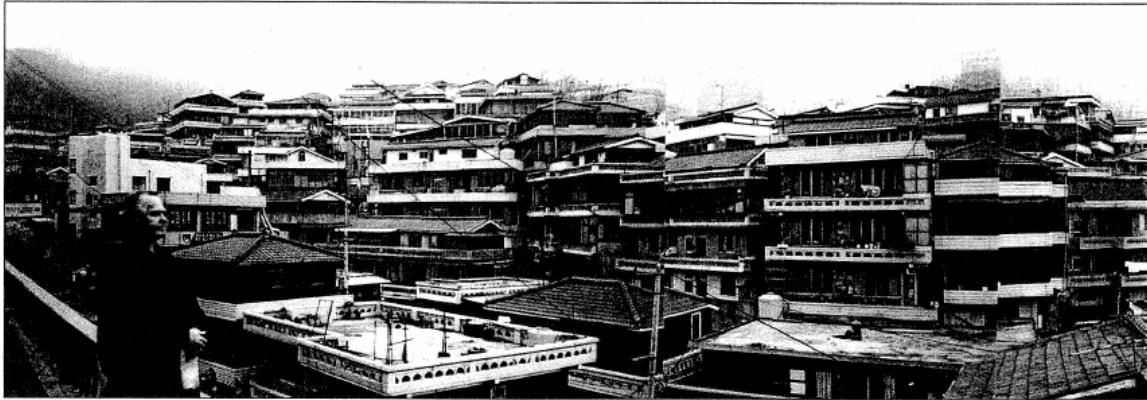
communities grow larger. This is inevitable unless affordable housing is being produced in excess of demand (a condition rarely experienced). No city can bring the supply and demand for housing into balance by subtracting housing units from the housing stock (no matter how poor in quality) while demand for housing is rising more rapidly than supply. Not only is the destruction of slums fundamentally poor housing policy, it is poor economic policy as well. However appalling a slum may appear, a substantial amount of capital has been invested in its construction (capital supplied by the poor themselves in small amounts over time). Destroying a capital investment (even an unsightly one) is bad economic policy since it cuts off the investment's flow of economic benefits that would have otherwise continued to contribute to economic growth. In the case of bulldozing slums, the destruction of capital investment also means that additional capital has to be used to construct replacement housing; capital that is diverted from other uses. In capital scarce countries, this is economic waste of the worst kind.

Fortunately for city leaders, there is good news: it **is** possible to make slums disappear without bulldozers. Slum upgrading has the ability to transform slums into well functioning neighborhoods. Slum upgrading initially takes more time, effort and money than bulldozing, but unlike money spent on bulldozing, those investments are not futile and counterproductive. Where destroying slums just moves the problem to other locations in the city, slum upgrading solves the problem where it exists. Slum upgrading changes the physical environment of the community while preserving, as much as possible, the economic and social capital already invested in the neighborhood by the community itself. Slum upgrading also creates the conditions that enable the urban poor to improve and expand their own housing without relying on the government's scarce resources. The result is an increase in satisfactory and affordable housing rather than a decrease in the housing stock.

To illustrate the impact of slum upgrading, the photographs on the next page were taken from exactly the same place in the same slum communities as the photographs on page 4 but after slum upgrading was completed. They illustrate how conditions have improved over 25 years as the slum evolved into a neighborhood that is more typical of the rest of the surrounding city of Seoul.



Oksu – Dong, Seoul, South Korea in 2000



C. What are the components of a slum upgrading program?

There is no single model for slum upgrading programs since the particular circumstances of every city will vary and the programs need to be tailored to those circumstances. It is more useful to think of slum upgrading programs being derived from a menu of potential interventions or components. Some of these components are core elements of nearly every slum upgrading program. Other components are more, or less, important depending on the specific situation in the city and its slums. The following is not intended to be a fully comprehensive list of possible components for a slum upgrading program, but rather a good starting point.

Core Elements:

- Security of tenure for the residents of the slum;
- Engagement of the residents in the planning of upgrading interventions;
- Assistance in improving housing;
- Improved access to potable water;

- Provision of sewers and drains;
- Grading and paving of streets, lanes and footpaths;
- Regularization of electricity connections;
- Improved solid waste collection;
- Improved access to schools;
- Improved access to health care facilities.

Additional Elements:

- Relocation of families displaced by infrastructure improvements (if any);
- Development of land adjacent to the slum for housing or other purposes;
- Improved access to social services (especially for women);
- Vocational training programs;
- Improved access to public transportation;
- Assistance to businesses and entrepreneurs in the slum;
- Improved access to telecommunications services;
- Sports fields / facilities and community centers.

Most of the core elements of a slum upgrading project involve construction of physical infrastructure: water lines, sewer lines, pumping stations, street paving, schools, clinics / hospitals. These elements require the investment of capital in or very near the slum. Improvement of the houses in the slum also requires capital. Because slums are typically densely settled areas, these capital investments produce economic benefits immediately at a per capita cost that is quite reasonable. The U.N. estimates that it costs an average of \$670 per person to upgrade a slum community.<sup>1</sup> In principal, this makes cost recovery manageable over an appropriate time horizon.

Experience shows that the elements most critical to the success of a slum upgrading project are not physical infrastructure. They are “security of tenure” and “participatory planning”. Without these two elements, any capital invested in housing and infrastructure is in serious jeopardy. In fact, it can be argued that the lack of secure tenure and participatory planning are the most important factors inhibiting housing improvement and neighborhood improvement from taking place in the slum. Experience also shows that introducing secure tenure and using participatory planning in the project are crucial to managing the cost recovery process that allows capital investment to go forward.

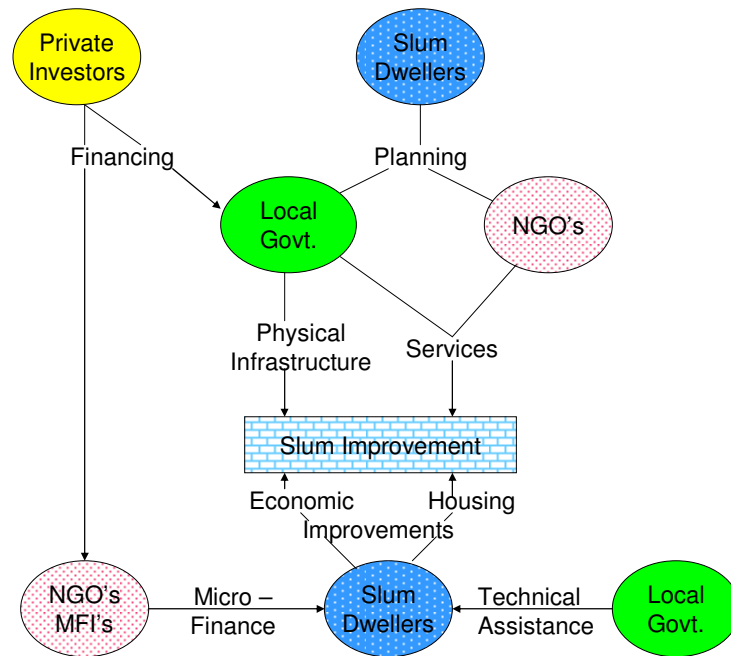
D. *What are the roles of the public sector, civil society, the private sector, and slum dwellers themselves in the slum improvement process?*

The precise roles of the various participants in the slum improvement process will vary from project to project. A general schematic is presented in the diagram below.

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<sup>1</sup> U.N. Millennium Project, 2005

Diagram 1: The Roles of Key Participants in the Slum Improvement Process



It should be noted that this schematic does not show the role of the national government or international development agencies / banks in the process. That is because their role is to facilitate any or all of the roles played by the other participants. If the slum improvement process is to be sustainable on a large scale, neither national governments nor international development agencies can adequately substitute for the key participants. However, they can play a crucial role in strengthening, coaching, providing start-up assistance, and mitigating risks across the board.

Slum improvement has to be approached from both the “top-down” and the “bottom-up” as indicated in the schematic diagram. Most of the key participants in the process have a role in both levels.

### **Slum Dwellers:**

The residents of the slum play the central role in the improvement process. They are the ones who best understand the problems of their neighborhood, and the relative priority for improvements. To have an effective voice in the top-down improvement process, slum dwellers need to organize themselves into Community Based Organizations (CBO's) that can represent their interests. They can then join with local government and NGO's during the planning of infrastructure projects and improvements to social, educational, health and livelihood services delivery. In the bottom-up improvement



process slum dwellers take action as individuals and families to improve the quality (and quantity) of their housing, and to better their economic situation. In this process they need to be assisted by specialized NGO's that offer micro-finance, and local government units that offer technical guidance to improve housing quality.

### **Local Government:**

Local government refers to the city government, any independently governed local public utilities, and other sub-national government entities that exercise authority over the slum area. Local government has the responsibility to assure that slum dwellers have access to essential infrastructure and services. Depending on the jurisdiction, this includes potable water, sewerage, streets, solid waste collection, public transportation, education, health care, police and fire services. Decentralized local government is normally responsible (officially or in fact) for infrastructure planning, construction and financing as well as operation, management, and financing of the services themselves.

Local government may be assisted with some of these responsibilities by national government. However, in the top-down level of the slum improvement process they are the principal provider of infrastructure and basic services. At the bottom-up level of the process, local government can play a useful role by providing housing construction inspection and advice as part of their building permit enforcement responsibility. If possible, this role can be expanded to providing standard building plans, material specifications, or model units to encourage improved housing.

### **Non-Governmental Organizations (NGOs):**

NGO's come in many varieties. Some focus on advocacy for specific policies or the interests of particular groups. Others focus on charitable works and the provision of services that are otherwise unavailable or in short supply. At the top-down level of the slum improvement process there are both advocacy and service delivery roles for NGO's. NGO's can help advocate the interests of the slum dwellers during upgrading project planning and promote policies and investments that support slum improvement. NGO's can also provide direct services to slum dwellers that local government is unable to provide (though it is arguably unwise to provide substitute services in slums that local government normally provides elsewhere in the city).

Direct engagement by NGO's with local government and slum dwellers in planning and service delivery substantially strengthens the slum improvement process. At the bottom-up level, specialized NGO's and Micro Finance Institutions (MFI's) can play a key role in slum improvement by offering micro-credit to slum dwellers for both housing improvement and enterprise development. Micro-credit enables slum dwellers to incrementally improve and expand their housing on an affordable basis so that, over time, housing in the neighborhood comes to resemble the rest of the city.

### **Private Investors:**

Private investors can provide the capital necessary to fuel the slum improvement process. Almost all of this capital will have to come from domestic private investors in the countries concerned. As will be demonstrated in the next section of this paper, the capital required to scale up slum improvement to an adequate level is beyond the budgetary resources of national and local governments as well as international

development agencies / banks. There is no alternative to seeking private capital for the scale up. At the top-down level of the process, capital is required by local governments to finance the construction of infrastructure serving the slum. At the bottom-up level of the process, NGO's and MFI's require capital to expand their micro-lending to slum dwellers. In both cases, private investors will weigh risk and return before they invest. Slum upgrading programs that are structured to attract private capital on market terms are the only ones that will be sustainable at large scale.

E. *What will it cost to scale up the slum upgrading process to a level commensurate with the scope of the problem?*

The U.N. estimated that in 2001 almost 924 million people lived in slums and squatter settlements worldwide (over 94% of these people were in developing countries). The U.N. also estimates that the world's slum population is growing by at least 40 million persons per year – almost entirely in developing countries.<sup>2</sup> Therefore, in 2006 it can be projected that the slum population in developing countries will have passed the 1 billion mark.

Although the cost of slum upgrading depends on a wide variety of project specific factors, the U.N. has estimated that the cost ranges from over \$1300 per person in the Middle East to less than \$550 per person in Sub-Saharan Africa. Using the global location of slum populations as a weighting factor, the U.N. estimates that the average per person investment required for slum upgrading will be \$670 between 2005 and 2020.<sup>3</sup> This means that upgrading all existing slum communities over the next 30 years (an aggressive but not undoable time horizon) will require an investment of \$670 billion or an average of \$22.3 billion per year.

The calculations do not end there. Since slum populations can be expected to continue growing at the rate of 40 million people per year over that same 30 year period, an additional \$26.8 billion per year will be required just to keep up with the expected growth of slum communities. While it would be tempting to assume that affordable housing production in developing countries could be accelerated quickly to head off the growth of slums, the history of housing production over the last 30 years makes such an assumption untenable. Therefore, it can be anticipated that making slums disappear by upgrading them will require a global annual investment of approximately \$49.1 billion per year for the next 30 years.

Investment of \$49.1 billion per year in slum upgrading for the next 30 years is a formidable challenge. It is unlikely that international development assistance will contribute significantly to meeting the investment required. Keep in mind that the total of all Official Development Assistance (ODA) increased from \$52.4 billion in 2001 to \$79.5 billion in 2005, but after netting out the amounts for food aid, emergency relief, debt relief, and administrative costs the amount available for development purposes in 2005 was \$59.8 billion.<sup>4</sup> At the same time, the World Bank notes that... "The \$20 billion increase in bilateral aid that has occurred [2001 – 2003] has been eclipsed by a \$52 billion decline in net official lending, which reflects large repayments made to multilateral

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<sup>2</sup> U.N Human Settlements Program, Facts and Figures about Financing Urban Shelter, September 2005

<sup>3</sup> Ibid.

<sup>4</sup> OECD DAC statistics, 2005.

and bilateral creditors. From a historical perspective, the recent decline in net official flows continues a downward trend that began in the early 1990s.”<sup>5</sup>

Development assistance grants and multilateral development bank loans have to cover a wide range of purposes, from combating the AIDS epidemic to fostering economic growth. While there are no available statistics, it is unlikely that international development agencies have historically invested more than 1% of their annual development expenditure specifically in slum upgrading. That would have amounted to approximately \$600 million in 2005. And even if the central and local governments of developing countries matched those international investments by 10 to 1 (a very unlikely high scenario in the view of urban development experts), the total annual investment from developing country governments and development agencies in slum upgrading would have reached only \$6.6 billion in 2005.

National and local governments and their international development partners need to play a central role in scaling up slum upgrading investment to the \$49.1 billion per year target, but their investments alone will simply not be sufficient. However, if governments and their international development partners focus on using their funds to encourage investment from local capital markets and slum households themselves, it is entirely possible for them to mobilize at 7 or 8 times their own investment.<sup>6</sup> This would make a total investment of \$49.1 billion per annum achievable. The case studies presented in the next two sections of this paper will illustrate that it is possible to mobilize the local investment needed to eliminate slums over the next 30 years if governments and their international development partners use their resources to draw in the additional investment needed to implement slum upgrading on a truly global scale.

## **II. MOBILIZING MICRO-FINANCE FOR HOUSING**

### ***A. How does housing microfinance support slum upgrading?***

Housing is not only a shelter for slum families – it is their social security. It is estimated that 75% - 90% of all new housing is built informally through incremental housing rather than new home construction. More than half of the population in the world is not served by mainstream housing finance. This is particularly true for those living in slum communities.

Furthermore, it is estimated that fewer than 25% of people in developing countries can afford to purchase the least expensive developer built unit with traditional mortgage finance because of the entrenched factors in the developing world<sup>7</sup>. Some of these factors are:

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<sup>5</sup> World Bank, *Global Development Finance*, 2005

<sup>6</sup>For example, international urban development experts estimate that in Indonesia the Kampung Improvement Program (KIP - a major slum upgrading program started in the 1970s) caused local slum communities to invest up to 7 times the amount provided by the Government of Indonesia for the projects. In another example, partial risk guaranties provided by the U.S. Agency for International Development typically mobilize \$7 - \$10 of local private investment capital (depending on the risks involved) for each dollar provided from the agency's ODA.

<sup>7</sup> Fergusson, Bruce. Scaling up Housing Microfinance: a guide to practice, Housing Finance International (feature), International Union for Housing Finance, Vol. 19, Issue 1, p3-13, September, 2004.

1. High real interest rates
2. Lack of long term funding on domestic markets in developing economies which creates interest rate risks for mortgage lending and greatly limits the funding for mortgages.
3. Expensive and costly formal sector systems including those for property registration, land use development and property transfer taxes
4. Instability of household income especially from the informal sector, making long term debt risky for households
5. Many affordable housing projects often poorly fit the needs of low income families.

Due to the above constraints, most slum dwellers do not attempt to build homes and access finance from informal money lenders at rates of interests as high as 120% to 150% a year. These loans have the potential to keep slum dwellers permanently in debt, which may actually destroy whatever security they may have had.

#### *Benefits of Microfinance for Housing:*

**Flexibility and Outreach:** Housing microfinance can reach low income households in developing countries, including slum dwellers. HMF provides a flexible form of finance for a wide range of uses, including home improvement, construction of a small unit on a lot already owned by a family or provided by a low-income developer, the purchase of tenure regularization of a lot, expansion of the core unit provided by local governments or to fill the gap between a public subsidy and a household's down payment for a home.<sup>8</sup>

**Incremental Financing:** As discussed above, incremental housing construction is the norm in most of the slums around the world, which is best served by incremental housing finance. As most slum dwellers have irregular incomes, they are averse to taking on loans with maturities over five years. Housing microfinance offers smaller, more accessible loans with shorter tenures. This type of financing helps the poor establish credit histories, thereby reducing the risk to lenders and ultimately lowering interest rates.

**Formal title not required:** Another major hurdle for slum dwellers' access to finance is their lack of legal title to their properties. Housing microfinance accepts alternative forms of collateral, such as co-signers, forced savings, home appliances and other non-mortgage forms of guarantee. While housing microfinance providers do need some kind of assurance about right of occupancy, they accept tax receipts and other substitutes.

#### *B. How do the diverse models of housing microfinance work?*

##### TRADITIONAL HOUSING MICROFINANCE MODELS

Housing microfinance is generally provided by two categories of practitioners in the field:

1. Micro Finance Institutions (MFI) and

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<sup>8</sup> Fergusson, 2003.

## 2. Shelter Advocacy Institutions (SAI)<sup>9</sup>

The first model, MFI, includes organizations that started as micro lenders for enterprise development and then expanded into the housing microfinance sector. Some of the well known examples include CARD, Philippines, SEWA-India, and K-REP Housing program, Kenya. Three types of program structures are observed under the MFI category:

- a) loan products such as income generation, housing and emergency relief are offered within the same institutional structure by the same loan officers (CARD);
- b) the MFI offers specialized housing programs administered under an affiliated entity, with dedicated capital sources and distinct products (SEWA);
- c) an established MFI enters into a partnership with mainstream housing finance providers. The partnership will take one of two forms. The MFI jointly operates the housing finance program either through a service company arrangement, where the individual loans remain on the mainstream finance provider's books, or through on-lending relationships, in which the MFI retains ownership of the loan portfolio. Both institutions benefit from these partnerships: the MFI builds its capital sources and the mainstream housing finance providers achieve further outreach and productive uses of excess liquidity.

The Shelter Advocacy Institutions (SAI) differ from the MFI model in their priority. SAI prioritizes land acquisition as the first step towards obtaining shelter, with many programs earmarking credit for land purchase. Hence, in slums the SAI emphasize legalization of tenure as a pre-requisite, and work to build infrastructure. SAI programs lobby with local governments for adequate provision of infrastructure and sometimes take a lead role in providing them. Unlike many MFI programs, SAI programs emphasize technical assistance for beneficiaries and spend time and money on building a structure for community based organizations.

The SAI model has four basic categories<sup>10</sup> : the first two are similar to the MFI programs (a and b above). These include specialized housing loans or all kinds of microfinance products; the third category is based on community savings and loan associations, which can qualify for a matching fund or in-kind grant from the government, with individual loans to members of the community association. These funds are guaranteed by a usufruct right to the land and collective liability by all members of the group. In this model, peer pressure and future access to credit effectively ensure timely repayment of loans. The fourth category of SAI program provides bridge financing to low-income community members to enable them to access national housing subsidy programs for which they are eligible. These programs mainly act as intermediaries between the state and the poor. Examples of this type of program include the FUSAI's microcredit program in El Salvador, the uTshani fund, and CHF in South Africa.

### NEW HOUSING MICROFINANCE MODELS

New highly innovative housing microfinance models adapted to local conditions are emerging from different parts of the world. These include building contractors, material

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<sup>9</sup> Housing Micro Finance Initiatives: Synthesis and Regional Summary, USAID/DAI, The Center for Urban Development Studies, Harvard Graduate School of Design, May 2000.

<sup>10</sup> USAID/DAI, 2000..

suppliers and small land developers. Apart from these efforts, some big corporations like CEMEX are downscaling their activities to serve the “bottom of the pyramid” customers (please see case study of CEMEX’s Patrimonio Hoy in Annex B).

C. What are specific common themes among successful models to help practitioners glean lessons learned?

Below are summary lessons learned from the analysis of successful housing microfinance models described in Annex A: The Kuyasa Fund; and Annex B: Patrimonio Hoy.

- Targeting the poor and having high repayment rates are compatible: Kuyasa has shown that a legitimate traditional system of small savings can be used to provide access to credit to the poorest of the poor. The important point is that the social capital inherent in the local traditional systems can be modified and leveraged to use in microfinance. This approach can mitigate the risks associated with lending to the poor to a large extent especially because these systems will be the most suitable for the local community.
- A properly managed loan process, visibility of loan officers and peer pressure from community members can sustain high repayments: moreover, Kuyasa also has shown that the ability of the poorest of the poor to repay loans can be predicted through a strict analysis of saving patterns and past loan records.
- Importance of savings groups as risk management strategy: Kuyasa has shown that the risks of loans can be considerably decreased in a group lending method as clients are pressured by their peers to repay their loans. These groups also fulfil an important social function, as group savings are a form of security for emergencies for poor people. The savings group activities also give them the chance to prove their financial and organizational skills.
- Right of occupancy as permanence proof: Formal title is only one of the ways to recognize permanence of slum dwellers on their plots, probably not the most effective or suitable in many cases (titling registration is expensive and burdensome, no updated registration system, etc). It is more important to recognize permanence, than to recognize ownership.
- The best collateral for housing loans need not always be the mortgage: Savings, co-signers and household articles as collateral can be as effective for housing micro finance.
- Expansion and scaling up requires profitability: the greatest priority is to ensure that operational scale and efficiency is developed to enable operations to be financially sustainable. Once the financial sustainability is achieved, alternative sources of sustainable wholesale financing (loans from banks, access to financial markets) can become available. In the case of micro enterprise MFIs, Principal Debt Outstanding growth is possible by deepening loan activities with existing clients. However, in housing microfinance growth requires expansion, because even though there may be some repeat borrowings, sustained growth means new clients, new areas of operation, and new products.



- The private sector can play a crucial role in slum upgrading by recognizing low income families as clients (*Approach from the Bottom of the Pyramid*<sup>11</sup>). In fact, the CEMEX/Patrimonio Hoy (PH) case demonstrates that the low-income population can be indeed a reliable and profitable segment of the market. PH is a profitable initiative, and provides a comprehensive housing solution for poor people at market prices, with no subsidies, and exclusively relying on private funding. However, corporations need to invest heavily on the front end by understanding the low income segment of the market, and designing products and services tailored to their needs and cultural values (it took PH some seven years to design and roll-out the program).
- Buy-in by stakeholders is a prerequisite of success: Even though the program was designed as a win-win solution for all stakeholders, PH faced internal reluctance from CEMEX Corporation to serve low-income households, as well as initial distrust from this segment of the market. On one side, launching PH required CEMEX corporate funding for years, which clashed with the short-term business vision prevalent in many corporations. In fact, PH reached the break even point on October 2003 (after 42 months), and all the investment was paid back to CEMEX on April 2005 (nearly seven years from the initial concept). Top management's leadership and support to the program was crucial to overcome the internal reluctance. On the other side, PH invested in building trust among the community by fulfilling all of the program's promises, providing high consumer service standard, having local presence, and enrolling members of the community as promoters.
- Knowing the borrower is essential: Instead of strict credit evaluation and collateral, PH preferred to minimize risks by extending a minimum credit to people who sign up to be "members" in the first phase of the program and testing their commitment as the program progresses. This strategy ensures that business volume increases without exposing the company to big risks. This not only helped the company build a credit history of its own clients for future transactions, but also minimized administrative costs. It is also very easy for the new client to understand the rules, thereby lowering access to financial barriers for the low-income market.
- Long term customer retention in this market segment is challenging: Even though customer enrollment is growing at a rapid pace, many members in the PH program take a break from the rigors of repayment once one room is complete. In many cases people cannot afford to pay both the installments and the masonry fees, so they buy the materials at one time, and then after 70 weeks, start building houses. The customer retention problem could also spring from the cultural belief that fate determines outcomes, leading to the conclusion that long term planning is worthless. PH is working to overcome both problems, by creating a "club experience" that motivates productive behavior, and by establishing masonry training facilities for "self construction" for members.

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<sup>11</sup> Prahalad, C.K. (2005) *The Fortune at the Bottom of the Pyramid. Eradicating Poverty Through Profits*. Wharton School Publishing.

- Government also has a role: Governments should adopt policies that can enhance competition in the housing micro finance sector as only heightened competition spurred by new entrants into the market is likely to lower the interest rates on a sustainable basis<sup>12</sup>.
- Diversify funding to capital markets: on balance sheet corporate debt or corporate bonds are the most appropriate for housing micro finance providers because of the small amounts, relatively short term and diversity of housing micro loans<sup>13</sup>.

#### D. Is housing microfinance financially sustainable?

Housing microfinance lies at the intersection of formal housing finance and micro-enterprise finance. It can be sustainable with the necessary scale, on an institutional basis. At scale, several successful housing microfinance providers can be a good tool for national governments in solving the shelter and settlement problems. For example, the Ministry of Housing in Morocco, currently undertaking a large slum upgrading program, estimates that 80% of slum dweller's financing needs will be met by incremental housing microfinance loans as opposed to mortgage finance. The involvement of mainstream financial institutions in housing microfinance is critical to leverage local capital necessary to scale up and make micro lending sustainable. This will help the housing finance institutions improve their market access by providing services to the low/moderate-income households, which constitutes the majority of the population of the developing world.

One of the major challenges for the sustainability of housing microfinance is the access to long term funds for the housing microfinance providers, who often experience a mismatch between the assets and liabilities. In developing countries, this mismatch is true even for mainstream financial organizations, due to institutional constraints on interest rates and access to capital markets.

There are many approaches to solve the problem of access to long term capital: international markets, warehouse lines of credit, secondary market approaches, etc. In the meantime, national governments can encourage the mainstream financial organizations to enter into partnerships with MFIs. However, in some countries, the regulatory environment is not conducive to such arrangements. A common circumstance is that central banks prohibit banks from lending to MFIs. Additionally, the collateral requirements imposed by central banks on national banks for lending to MFIs, where the ultimate sub-loans are not secured by traditional forms of collateral, effectively scuttles any possibility of accessing long term finance by housing MFIs.

The mainstream private sector financial institutions in housing microfinance often lack familiarity and tools to reach the target market. Commercial banks are learning the value of MFIs as a service linkage and are building bank capacity to develop policies that recognize irregular incomes of slum dwellers. Thus, credit policies should be adjusted to meet the needs of low income people. Indeed, a "one size fits all" set of guidelines and regulations for all segments of society will not encourage the mainstream financial institutions to reach out to low income populations.

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<sup>12</sup> Fergusson, 2003

<sup>13</sup> Fergusson, 2003

Another critical aspect for sustainability of housing microfinance is profitability (linked to reaching scale). Profitability will eliminate the dependency on grants to sustain the operations. At present, the high administrative costs amounting to almost 20%<sup>14</sup>, makes the interest rates very high. Even though these rates are low compared to the money lender rates, they deny access to many potential customers, and thus reduce the business for MFIs. Use of appropriate technologies can bring down the administrative costs to a certain level. There are instances where housing microfinance institutions have significantly increased the number of loans processed by one officer by improving the technology. These kinds of improvements will go a long way in making housing microfinance sustainable.

Cross selling other products can augment the coverage of these institutions, and hence subsequently increase the access to slum dwellers. Some examples of offerings include savings products, remittance services, and other types of credit by housing microfinance institutions. This kind of relationship banking with clients in slum dwellers can further contribute to sustainability for housing microfinance institutions. A diverse portfolio of products will increase the number of clients for the housing microfinance institution, as well as raise the repayment rates, contributing to the sustainability of operations.

#### E. What is the impact of financing on housing quality in slums?

Housing microfinance allows the poor people in slums to buy good quality construction materials. Without access to finance, slum dwellers often buy small quantities of construction materials often of low quality, which in turn will negatively impact their housing quality. Quality of housing in slums is an obvious advantage of housing microfinance.

Most housing microfinance providers want to ensure that their clients build good houses. This is in the interest of the housing microfinance provider, given that housing quality will have a direct effect on repayment rates, as well as on the provider's image among slum dwellers. Hence, most housing microfinance providers recommend or even require beneficiaries to purchase materials from a reputed supplier. Housing microfinance staff is trained to ensure that the slum dwellers get better quality materials than what they could buy independently. Some housing microfinance institutions have contracts with material providers through which the borrowers get discounts, while the supplier gets a constant stream of business. Whatever the relationship between the housing microfinance institution and the supplier, it has a positive effect on the housing quality.

As new entrants like construction material suppliers and even cement companies are coming to the market to provide housing micro finance, the quality of housing should continue to improve in slums. The CEMEX/Patrimonio Hoy case places considerable emphasis on enhancing the technical skill of its borrowers. They do so by providing an architect or advisor for the borrowers for a small fee. It is found that good construction practices actually decrease the housing costs, while improving the quality at the same time.

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<sup>14</sup> Fergusson, 2003

#### F. What is needed to scale up slum dwellers' access to housing micro-finance?

Low income communities are inherently considered as risky, and involving high transaction costs and small margins. Private sector involvement, crucial for scaling up any initiative, is limited mainly because of this risk perception. Hence, the main challenge for regulators is to reduce the risks associated with private sector participation, in order to mobilize additional capital.

In addition, it is important to avoid premature and inappropriate regulations, especially interest rate caps. Regulators should not compare housing microfinance interest rates to the mortgage lenders. They should be compared to the rates of informal providers.

1. Governments should replace interest rate subsidies with direct demand subsidies, preferably in the form of portable homeownership vouchers. These subsidies can complement the housing micro finance for poor people and also will effectively avoid distorting the market.
2. Governments could further encourage select private financial institutions with a good track record in serving low income people with other products to demonstrate the feasibility and profitability of housing microfinance. This might require these institutions to develop specialized terms for underwriting, marketing, servicing and collateral guarantees, similarly to what is currently being done by Moroccan banks. In cases where long-term funding for on-lending to MFIs is limited, such funding could be mobilized through international equity investment or bond issues in the local capital markets.
3. Promote research and best practice dissemination in the field of housing microfinance to improve performance of individual institutions and encourage more entrants and competition in the field.
4. Housing microfinance providers can establish strategic business partnerships with a variety of building materials suppliers to market housing microfinance. This is the case of MiBanco in Peru, who established marketing arrangements with the largest cement producer in Peru, a roof manufacturer, an association of lumber suppliers and carpenters, and hardware stores. These alliances will probably evolve into financing partnerships, which will probably enhance the ability of MiBanco to reach a larger number of customers for its housing microfinance products.
5. Capital market developments such as secondary markets, bond issues (discussed below), mortgage insurance, special purpose vehicles, and other such tools could expand housing microfinance.
6. Improvements in portfolio performance (credit underwriting and collections), efficiency, technology, and ultimately, profitability, will be the primary determinants of each institutions' success and of the viability of the model.

### III. MOBILIZING DOMESTIC PRIVATE CAPITAL FOR MUNICIPAL INFRASTRUCTURE

One of the major hurdles for cities currently trying to implement a slum upgrading program encompassing their entire slum population is financing the needed municipal infrastructure. As mentioned earlier in this paper, slum upgrading typically involves the provision of water, sewer, paved roads/lanes, electricity, buildings for schools, clinics, and community centers, either on-site or near the slum community. In a world where decentralization of responsibility is common, the cost of this physical infrastructure has to be borne by the municipality. A typical case will involve the municipality borrowing a substantial sum in order to build the infrastructure, and then repaying its debt over a relatively long time. This approach makes sense, since funding infrastructure construction from annual budgets often leads to long delays as well as higher construction cost, and payment for the infrastructure over a long time makes the payments correspond with the long term benefits received by the community from the infrastructure.

There are a variety of ways in which municipalities can access credit for infrastructure, depending on their circumstances. This paper will focus on a relatively new approach that is showing positive results in a number of developing countries: municipal bonds. Municipal bonds are a financial instrument that enables municipalities to directly access long term investments from their country's capital markets. As such, municipal bonds have the potential mobilize the necessary private investment to supplement local and central government funding, as well as international development aid for slum upgrading. Examples from India will illustrate how this works.

#### *A. How do municipal bonds support slum upgrading?*

Municipal bonds provide a source of financing for a city's capital investment plan that is independent of funding allocations from higher levels of government. To the extent that a city includes a program of slum upgrading in its capital investment plan, municipal bonds become one potential source of funding for the infrastructure component. An successful example of this can be seen in Ahmedabad, a city of approximately 4.5 million people in western India.

In the mid-1990s the Ahmedabad Municipal Corporation (AMC – the city government) prepared a capital investment plan for the period 1996 – 2001. This plan included projects for water supply, sewerage, roads, bridges, solid waste management, and slum upgrading. The total capital requirement to implement the plan amounted to Rs. 6.89 billion (over \$172 million). In 1998, once it's the city's fiscal management was substantially improved, the AMC issued the first municipal bonds in India without a state government guarantee for Rs. 1 billion (\$25 million). As an incentive, USAID matched this funding with a \$25 million loan.<sup>15</sup> Both the bonds and the loan, corresponding to Rs. 4.4 billion (\$110 million), partially financed water supply and sewerage projects, with the remainder coming as a loan from the Government of India.

The plan for water and sewerage projects originally focused its investments in the relatively poorer part of the city, and was designed to include 144 slums housing a

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<sup>15</sup> Indo-US Financial Institutions Reform and Expansion Project – Debt Market Component, Project Note # 17, July 1999.

population of 74,000. Due to a severe water crisis in 1999 and 2000, the investment plan was modified to increase bulk water supply to 60% of the city. This resulted in a permanent and reliable source of surface water for years to come. Between 1998 and 2006, the AMC issued a total of four municipal bonds and raised Rs. 3.58 billion (approximately \$89.5 million) to help finance its capital improvement plans. This investment allowed the slum upgrading projects to continue across the city. One of these projects is the innovative Slum Networking Project known as “Parivartan” (Transformation), which exemplifies the use of participatory planning and implementation with slum dwellers as full partners in the process.<sup>16</sup>

The use of municipal bond financing to help support slum upgrading is not limited to only large developing cities like Ahmedabad. Smaller cities can also tap into the capital markets for infrastructure financing if they are organized into “pooled” financing structures that aggregate the requirements of multiple cities into a single bond issue. Eight cities surrounding Bangalore (a city of 5.7 million) in south central India have participated in a pooled bond issue as part of the financing for the Greater Bangalore Water and Sanitation Project (GBWASP). These eight cities have a combined population of 1.2 million people, and it is estimated that up to 360,000 people live in slums.

A core element of the slum upgrading efforts of these cities is the provision of water connections to poor households. With the help of the Karnataka Urban Infrastructure Development and Finance Corporation (KUIDFC), the eight cities estimated their financing requirements for water system expansion. These ranged from Rs.170 thousand to Rs.6.8 million. Since it would have been impossible to interest capital market investors in eight small bond issues, KUIDFC set up the “Water and Sanitation Pooled Facility” as a special purpose vehicle to issue Rs.1 billion in bonds on behalf of the eight cities in July 2005. In order to facilitate the transaction, USAID provided a partial credit guaranty to the investors who purchased the bond. In this case, USAID committed \$780 thousand of ODA in order to mobilize approximately \$23 million in local private investment in water infrastructure. So, each \$1 of ODA resulted in over \$29 of private investment. As part of the pro-poor focus of the project, KUIDFC and the eight cities are working with a Bangalore based NGO, Janaagraha, to assure that slum dwellers are actively involved in the planning and implementation of the water projects in each slum community.

#### *B. How can municipal infrastructure be financed in the domestic capital market?*

The municipal bonds issued by the Ahmedabad Municipal Corporation and the Water and Sanitation Pooled Facility for the eight cities surrounding Bangalore provide a number of important lessons concerning the financing of municipal infrastructure in local capital markets. Most importantly, they show us that developing cities, both large and small, can access local capital market financing even though they have never done so before, and even when there is no history of municipal bonds in their country. Since Ahmedabad was a pioneer among developing cities issuing municipal bonds, their case is particularly informative.<sup>17</sup>

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<sup>16</sup> Shyam S. Dutta, Partnerships in urban development: a review of Ahmedabad’s experience, *Environment & Urban ization*, Vol. 12, No. 1, April 2000.

<sup>17</sup> Lessons from the Ahmedabad bond issue are taken from the INDO-US FIRE-D, *Project Note #25*, April 2001, by Chetan Vaidya and Brad Johnson.



The Ahmedabad experience starts with laying the groundwork. Local reforms to improve revenue collection are essential. In 1994 the AMC launched a major effort to improve revenue collection from octroi (a tax on goods brought into the city) and property taxes. By 1999 the AMC had gone from a deficit to a cash surplus of over Rs.2 billion (\$54 million). By achieving annual cash surpluses, the AMC demonstrated that it had the financial capacity to repay future debt. This laid a firm foundation for everything else that followed. In addition, management innovations introduced throughout the AMC created a positive image among local citizens.

Careful planning and project development are also essential parts of the groundwork. As part of its management improvement activities, the AMC prepared a Rs.6.89 billion capital investment plan for 1996 – 2001 which included water and sewerage projects totaling Rs.4.4 billion. The AMC projected how much they could invest in the water/sewerage projects from internally generated resources, and how much they could afford to borrow from various sources (including bonds). The AMC made their project financing decisions based on their overall revenue projections rather than just the potential earnings from the water/sewerage tariffs. In this way they were able to plan the use of annual income from octroi and property taxes to finance their water/sewerage investments.

The Ahmedabad experience shows that obtaining a credit rating needs to be part of the groundwork. This was an important innovation because it signaled to the Indian capital markets that Ahmedabad was prepared to have its bonds compared to other investment opportunities on an equal footing. In 1996 Ahmedabad became the first city in India to request and receive a credit rating for a municipal bond issue. The initial rating was “A+” (based on an Indian national scale comparing the risk of local investments where “AAA” is the top of the scale). By adding several “credit enhancement” features to the structure of the bond and pledging all local revenues to repayment of the debt, the AMC was ultimately able to achieve an “AA” rating. The AA rating lowered the cost of interest over the life of the bond, and also served to convince investors that the AMC was a serious borrower willing to be responsive to the needs of investors for greater security.

With the groundwork prepared, Ahmedabad moved on to preparing and implementing the bond transaction. As noted above, the bond was designed to provide several types of credit enhancements to lower the risks to investors. Octroi taxes from ten collection centers were channeled into an escrow account that could not be legally disbursed for any purpose other than repayment of the bonds. The AMC created a “sinking fund” to segregate money that could only be used to repay the principal amount of the bonds thereby keeping it separate from money available for other budgetary purposes. In addition, the AMC pledged in bond “covenants” to maintain an annual debt service coverage ratio of 1.5, and to provide property assets of 1.25 times the principal borrowed. For a variety of reasons, these covenants later proved to lack enforceability; a matter that requires close attention by municipalities in the future.

Another part of the preparation for the bond transaction involved presenting a prospectus or disclosure document. This document is designed to provide capital market investors with the information they need to make intelligent decisions on whether to invest in the bonds, and how to balance the risks and returns of the investment. In the case of the first AMC bond issue the only disclosure guidelines applicable in India at the time were those designed for corporate borrowings. The AMC prospectus complied with

the guidelines set by the Securities and Exchange Board of India, but the degree of detail, and specificity provided fell below international norms. As a rule, the disclosure guidelines for municipal bonds should: 1) provide the investor with sufficient detail, specificity, and information to reach an independent evaluation of risk; and 2) clearly define all covenants, especially debt service covenants.

As the first Ahmedabad bond transaction neared completion, or “financial close”, the AMC entered into a trust indenture, which is the binding legal agreement between the municipality issuing the bonds and a trustee acting on behalf of the bondholders who are the investors. Since the Ahmedabad bond issue of 1998 was the first of its kind in India, the AMC’s trust indenture was not as well crafted as it could have been, and left bondholders’ interests less secure than is desirable. While this has not resulted in a problem for bondholders so far, the lesson to be learned is that the trust indenture should insure that:

- all bondholder interests in the issuer’s income or assets are legally secured at the time bonds are issued or shortly thereafter;
- all credit enhancements discussed in the prospectus are included in the trust indenture;
- call provisions or redemption clauses are included so that the issuer can prepay the bondholders in order to refinance at lower interest rates if the opportunity arises;
- the trustee’s duties are precisely defined and automatically triggered by specific action so that the bondholders’ interests are not subject to discretionary decisions of the trustee.

In this way, the trust indenture can be used to enforce the contractual obligation of the bond issuer not only to repay principal and interest, but to uphold covenants and maintain the credit enhancements promised in the prospectus.

When the Ahmedabad bonds were issued in January 1998, 75% of the bonds were sold through private placement arranged by Indian investment bankers on behalf of the AMC. The investors included State Bank of India, Unit Trust of India, and Housing Development Finance Corporation Ltd., as well as other commercial banks and mutual funds. The other 25% of the bonds were offered to the public on the open market. Even though the public issue was more expensive to carry out, the AMC took this step to create a market image for them, and to stimulate interest in the use of bonds by other municipalities. All bonds were quickly sold out with a coupon rate of 14% and a seven year term. The transaction cost to the AMC for this first bond issue was Rs.28.9 million (\$722 thousand) including fees for underwriters, brokers, lawyers, advertising, and printing. Had the AMC followed the traditional approach to municipal borrowing in India, the transaction costs would have been an estimated Rs.49.9 million (\$1.25 million), 73% higher than the bond transaction.

The Ahmedabad experience does not end with the issuance of the bond. There are lessons to be learned about the use of the proceeds as well. Although the AMC issued their bonds in January 1998, the resources they mobilized were not fully utilized until March 2000. In the bond prospectus, the AMC pledged to establish special project sanctioning procedures to reduce project delays and to appoint private project management consultants to facilitate engineering design, tendering, construction supervision, and payment approval. Unfortunately, the AMC did not follow through on all

these pledges. Despite delays, the AMC found that because they had cash resources in hand, the tenders from private construction contractors came in 10% to 15% lower than the estimated cost. Cash in hand also enabled the AMC to expedite construction work to record speed once the contracts were in place. Nevertheless, the lessons from the Ahmedabad experience are that before bonds are actually issued, the municipality should have: 1) established a phased implementation plan for the project(s) to be financed; 2) prepared final tender documents for the project(s); and 3) established a separate project implementation group – including any needed consultants – under a project officer who will oversee the progress of the work.

The Ahmedabad bond issue was a pioneering effort to find a new way to mobilize private capital for the kind of municipal infrastructure that is essential for slum upgrading. The lessons from the Ahmedabad experience point the way for other municipalities to raise the capital they need to invest in slum upgrading. While every municipality's situation will be different, there are two key conclusions that can be drawn from the Ahmedabad story:

- First, even if no other municipality in your country has issued municipal bonds, this does not mean that a bond issue is impossible. Ingenuity and hard work can prevail.
- Second, the most critical factor in obtaining private capital for municipal infrastructure is having a healthy revenue base and sound fiscal management. Investors need to be able to see that your municipality can repay its debts.

### *C. Is bond financing for municipal infrastructure financially sustainable?*

In many (if not most) developing countries the financial markets have a relatively high degree of liquidity. In the simplest terms, this is because there is a shortage of good investment opportunities in the country compared to available savings in the financial system. In fact, excess liquidity from developing countries often finds its way off-shore (either legally or illegally) to be invested in higher yielding, more secure investments in developed countries. In that context, investors may be interested in municipal bonds if the bonds can meet their criteria for a good investment in terms of risk versus return. When that is the case, municipal bond financing for infrastructure will be sustainable if two conditions are met. First, the borrowing municipalities must be financially sound. Second, the institutional, legal and regulatory environment has to be sufficiently developed that investors feel they can accurately predict the risks of investing in municipal bonds.

Municipal infrastructure requires long term financing – anywhere from 5 to 30 years depending on the useful life of the infrastructure. Most commercial banks operate on short term deposits and therefore do not lend for such long terms, so they are not likely to finance municipal infrastructure. However, life insurance companies and pension funds receive premiums and contributions that need to be invested for long term growth to cover retirement and death benefits that are often decades away. Mutual funds may also be looking for long term investments in order to diversify their portfolios.

Liquidity in the long term capital market institutions creates a potentially favorable climate for municipal bonds. In the end, it is the investment policies of capital market institutions that will fundamentally determine whether there is a sustainable market for municipal bonds. Since municipal bonds are a new type of security in almost every developing country – without a proven track record of performance – it is normal for

there to be initial hesitation among institutional investors. Risk sharing with these investors through the use of partial risk guarantees is an important way for international development agencies and multilateral development banks to encourage the demand for municipal bonds in a responsible manner as USAID has done in India, South Africa, and the Philippines.

Demand for municipal bonds will only be sustainable if they prove to be a reliable investment. Municipalities need to develop their revenues (from property taxes, other taxes, intergovernmental transfer payments, municipal utility income, user charges, and fees) sufficiently to produce a predictable surplus of current revenues over current expenditures as the AMC did in India. Encouraging and facilitating local revenue improvements is an important way for central governments to support the sustainable development of municipal bond financing. For example, the Government of India is doing this as part of the Jawaharlal Nehru National Urban Renewal Mission. At the same time, municipalities need to demonstrate to the investor community that they have developed the capacity to repay their debts. This is why transparent accounting systems need to be introduced at the municipal level, and adequate standards for financial reporting need to be enforced. As demonstrated in India, South Africa, and Mexico, the introduction of municipal credit ratings is a very important way to demonstrate to investors that municipal bonds are a reliable investment that can be compared to other types of credit rated securities.

Investors also need to feel confident that they understand the risks of investing in municipal bonds before they become a sustainable source of infrastructure financing. Lessons from the first Ahmedabad bond issue point to the need for:

- use of appropriate disclosure regulations;
- careful legal drafting of the trust indenture; and
- enforcement of covenants related to debt repayment.

In addition, the investors' claim on municipal revenues and assets must be reliably enforceable in the courts. The rules governing municipal revenues (including regulation of municipal utility tariffs, and intergovernmental transfer payments) should be consistently applied and not subject to arbitrary political decisions. If these conditions are met, most investors will feel confident that the risks they face are reasonably predictable.

*D. What is needed to scale up the use of municipal bonds to finance infrastructure for slums?*

Initiative by municipal governments and their associations

To begin to scale up the use of municipal bonds to finance infrastructure for slums, municipal governments in developing countries will have to take the initiative. Any municipality can start by creating an inventory of slum communities and their infrastructure needs with the help of NGOs and slum dwellers themselves. Based on the information contained in the inventory, the municipality can then develop a citywide multi-year slum upgrading plan as part of a participatory City Development Strategy effort. The slum upgrading plan provides an excellent foundation for a broader multi-year capital investment plan that costs and prioritizes projects in water, sewerage, roads, solid waste disposal, public transportation, and other services to for the entire city.

At the same time that the municipality is developing its slum upgrading plan and its broader capital investment plan, attention needs to be focused on increasing revenues and improving financial management capabilities. The municipality needs to find ways to generate a reliable surplus of current revenues over current expenditures through more effective revenue collection efforts. This step is essential for completing the capital investment plan (including slum upgrading investments), since the municipality needs to know how much it can realistically budget for annual debt repayment, in order to select the projects that will go into each year of the capital investment plan.

Completing these fundamental steps will position municipalities to seek long term financing for slum upgrading from a variety of sources: central government, international development agencies, multilateral development banks (MDBs), and private capital market institutions. By working with specialized financial advisors, municipalities can obtain a credit rating and complete the remaining steps of the bond issuance process to access some, or all, of the capital they need to finance their infrastructure investments. By seeking private financing for all, or most, of their needs, municipalities assert greater control over their own future development. It is always possible to accept financing offers from central government, or MDBs, if that is advantageous as the financing process moves forward, but the municipalities are no longer dependent on sources of funds that are known to be very limited.

Associations of municipalities – national, regional, and international – can help municipalities develop private financing with municipal bonds by providing support services. This can be as basic as information sharing about the municipal bond experience in the country, region, or worldwide. It can be more specific through help in locating advisory services, technical assistance, and training to implement the bond financing process. It can also involve advocating national level policy reforms that enable municipalities to develop reliable revenues and encourage capital market institutions to invest in municipal bonds.

#### Support from central governments

Central governments can play a crucial role in scaling up the use of municipal bonds to finance infrastructure for slum upgrading. They can encourage municipalities to improve their financial position by giving them more authority and responsibility for revenue and expenditure management. Transfer payments from central government to local government can be structured to provide transparent and reliable incentives for improved municipal revenue collection and transparent financial management. Grants and technical assistance from central government to help municipalities create slum inventories, City Development Strategies, citywide slum upgrading plans, and capital investment plans help to lay a firm foundation for municipal borrowing. Central government assistance that helps municipalities develop financing arrangements (including bonds) for their slum upgrading projects is particularly important in the early stages of the scaling up process.

On the capital market side of the equation, central government can adopt policies and regulations that allow (or even encourage) capital market institutions such as life insurance companies, pension funds, and mutual funds to invest in municipal bonds. To help reduce the risks faced by investors, central governments also need to adopt regulations that establish appropriate disclosure rules for municipal bond prospectuses, and put in place standards for trust indentures related to municipal bonds. Central

governments should also encourage the use of credit ratings by both municipalities and investors by making it a requirement for any municipality to be credit rated before they can borrow from any source (including central government or its specialized development banks).

#### Support from international development agencies and Multilateral Development Banks

International development agencies and MDBs can encourage the use of municipal bonds to help finance slum upgrading by assisting central governments to carry out their inherent tasks. Programs that provide technical assistance to municipalities in conjunction with central government incentives to encourage fiscal reform and revenue mobilization are especially important. International partners are often in a good position to provide specialized expertise in municipal finance and municipal bond financing since this expertise is hard to find in many developing countries.

International development agencies and MDBs can also help by sharing the risk of financing municipal infrastructure with local capital market investors. Where possible, this can be done by providing partial risk guaranties (such as USAID's Development Credit Authority – DCA – guarantees; or similar guarantees offered by the IFC's Municipal Fund operations). Co-investing with local capital market institutions is another way of sharing risk. In this approach, the international partner develops a municipal infrastructure investment that helps support slum upgrading. This is done on sound financial principles with municipal bonds forming part of the financing package, with the international partner providing the remainder. Either of these risk sharing approaches will help encourage the use of municipal bonds to finance slum upgrading.

#### Creative response from the local private sector

In the end, the use of municipal bonds to finance slum upgrading can not be scaled up sufficiently to meet the global challenge unless local private investors come forward with capital. Municipal bonds need to be seen as a good business opportunity for both local capital market institutions and private financial services providers – financial advisors, credit rating agencies, lawyers, and investment bankers. There is room for innovative work to be done by all of the private sector participants to develop municipal bonds that respond well to the investment objectives of capital market institutions in each country.

A private sector perspective can help improve the quality of the projects and bonds brought to the market. For instance in India, Ramesh Ramanathan has proposed an approach that could encourage investment in slum upgrading through the introduction of a “Dual-rated Municipal Bond”<sup>18</sup>

“Imagine instead if municipal bonds came with a dual rating – a financial rating, as well as a social rating. Imagine, for example, a municipal bond with a rating of AAA-(5), the ‘AAA’ indicating that the project had strong financial fundamentals, and the ‘(5)’ indicating that the project had the highest social rating as well. ... A social rating of ‘5’ could indicate that the project was conceived by the people with complete participation in determining all aspects of the project, that the project has as its

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<sup>18</sup> Ramesh Ramanathan, “Dual-Rated Bonds: Markets with a Conscience?” Financial Express, December 22, 2005.



beneficiaries a substantial portion of the poor living in the affected area of the project, and so on; lower ratings would not necessarily mean that such projects would not be carried out, but the gaps on the social rating front would be well understood by all. ... Introducing a dual-rating system for public projects could have a transformative effect on public finance. In the same way that firms have investment policies not to invest in anything less than investment-grade instruments, decisions on minimum social ratings could also evolve, making these a part of the idiom of financial markets.”

In developed countries, private capital is the principal source of debt financing for municipal infrastructure, it is also a highly profitable business for financial intermediaries. There is no intrinsic reason why private investors in developing countries can not also gain from the introduction of municipal bonds. Given the shortage of good investment opportunities available to local investors, it is likely that municipal bonds would be a welcomed addition to the market. Developing this business opportunity can be a win-win for both the financial community and municipalities that want to make their slums disappear by upgrading infrastructure that leads to housing improvement.

#### E. What is the impact of infrastructure provision on housing quality in slums?

Providing infrastructure creates a fundamental change in the physical environment of the slum. It also gives the slum dwellers confidence that the municipal government views their community as an integral part of the city – connected by water pipes, electric cable, and paved roads. The improved quality of the environment coupled with their increased confidence in the future encourages slum dwellers to invest in improving their own housing. This phenomenon has been observed in every slum upgrading project around the world. Despite their poverty, slum families will save to invest in their homes. The improvements may be in small, incremental stages (though micro-credits can speed up the process), but the process is inexorable.

It is useful to hear about the impact of infrastructure on housing quality directly from a slum dweller.<sup>19</sup> Champaben is a resident of Sanjay Nagar a slum community in Ahmedabad that was upgraded through the city’s innovative Slum Networking Project. Here is his description of living conditions before and after slum upgrading brought infrastructure to Sanjay Nagar:

*“They [the women of Sanjay Nagar] would have to perform the service of collecting cow dung and taking it to the dump yard to be allowed to fill up one or two buckets of water. Later, out of our own money, we got three or four public taps installed for 200 families. But these were not enough for so many households. We paid Rs.600 for an illegal connection, but that also got disconnected. There was no gutter [drain] line. So everyone would dig soak pits or little ditches in front of their houses which had to be emptied somewhere. There were public toilets, but outsiders and people from the nearby chawls [tenements] would use them. They were overcrowded and never cleaned. ...*

*“Before the project started, the lanes were narrow and would become muddy during monsoon. Waterlogging and poor light and ventilation caused a sever*

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<sup>19</sup> Tripathi Dwijendra, Alliance for Change: A Slum Upgrading Experiment in Ahmedabad, Tata/McGraw Hill, 1998, as presented in Shyam S. Dutta, op. cit.

*mosquito menace. Garbage was dumped in our common open area and small children would play there and would often fall ill.*

*“After the amenities [infrastructure], now it feels very good. The roads are wider. Lorries can come inside the colony. There are no mosquitoes. There is one dustbin [garbage can] for every 20 families. Each family has been provided with a toilet. The facility of electricity has provided much relief. Now the houses have become pucca [built of permanent materials]. We will not be evicted from these houses for ten years. ... The leaders tell everyone to keep their houses and surroundings clean. There is now a lot of spare time. The children can live well. Our life has changed and the mental, economic, and physical condition of our people has improved. Everyone wants to start saving and some have taken loans to further improve their houses.”*

Infrastructure creates the environment where improved housing becomes a rational alternative to living in a dilapidated shack. With a connection to piped water, sewers, and paved streets slum families see good reason to invest their hard earned savings in a house made of permanent building materials with a toilet and finished flooring. Before long, all the shacks have been replaced. The slum has disappeared and the houses look like what you would find in most other parts of the city.

#### **IV. CONCLUSION: BRINGING THE PIECES TOGETHER – WHAT HAVE WE LEARNED?**

**The basic finding is that through innovations in financial models, private sector actors in the field of slum upgrading are able to reach the poor and change their lives.** The case studies provided in the Annex to this paper illustrate this finding. It is very interesting to note that the successful providers of housing and infrastructure to the poor included a wide array of organizations. They include NGOs and MFIs (see CASE 1: Kuyasa in South Africa), local governments (see Case 3: Ahmedabad Municipal Corporation, India), and even a private cement manufacturer (see CASE 2: CEMEX/Patrimonio Hoy in Mexico). It can be seen that the common element for success for all of these institutions is innovation in financial as well as delivery methods. What is noteworthy is that the private sector is able to reach poor people in a sustainable way despite the hurdles it faces in the enabling environment by moving away from traditional methods and adopting innovative practices.

**Another important lesson is the realization that slum upgrading is possible by involving slum dwellers in the formal sector market.** The phenomenal growth and expansion of microfinance has proven that the low income population certainly offers a business opportunity for the private sector. The provision of quality housing and infrastructure for the poor in slums will be enhanced by involving the private sector in government slum upgrading efforts. But it is also evident from the cases that the involvement of the private sector may not occur automatically and certain conditions may be necessary for encouraging the private sector to enter this market. The key is to create an enabling environment in which the private sector can operate. This may look different in different countries. An equally important factor is the adoption of innovative financial models by the private sector so that they can provide the flexibility needed when targeting the poor while keeping their risk at a manageable level.

**A third lesson is that bottlenecks in the enabling environment can be overcome by adopting flexible practices in the financing and production of housing and infrastructure.**

This contradicts the often repeated myth that suggests that success in slum upgrading is only possible when the enabling environment is already conducive and supportive. The case of tenure security is a classic example of this. Many experts claim that a “legal title to the housing plot” is a pre-condition for the involvement of the private sector in housing through slum upgrading programs, especially in the field of housing finance. Yet, many MFIs and private players (including the private cement company CEMEX) are able to facilitate housing improvements undertaken by poor people without any formal title and without the support of an enabling environment where titling is easy to achieve. It is clear that poor people actually invest in their own housing when they believe they have secure tenure and access to finance even though they may not have formal title to their property.

### **Key Findings about Engaging Slum Dwellers and the Private Sector to Finance Slum Improvement:**

The most important fact that affects pro-poor housing finance models is that poor people build their homes incrementally and not all at once. Therefore, successful housing finance providers design their products around incremental construction rather than around a typical mortgage for a finished unit. Slum dwellers need a wide array of **small and sequential housing loan** products that include housing micro finance. This suits the progressive building methods of the poor and is also affordable. This model not only fits the construction practices of the poor, but also reduces the risk for credit providers as the loan amounts are small. Some of the important benefits for the borrowers are the small repayment increments and flexible repayment terms that suit poor people whose income fluctuates unpredictably over the long term. A wide variety of housing finance providers are adopting this method.

The requirement of **collateral** is one of the important obstacles preventing the poor from accessing traditional housing finance. The two in-depth housing finance cases in the Annex (Kuyasa, and CEMEX) show that the use of alternative collateral arrangements are very effective in reducing the risk to the credit providers and thereby enabling the poor to access housing finance. Successful housing finance providers have developed a variety of innovative collateral arrangements for their loans so that they are better suited to poor borrowers. This substantially increases the incentive for poor people to make use of formal housing finance.

One of the important points demonstrated in the case studies pertains to the way that **savings** is used by the providers of housing finance to the poor. Savings forms a very important strategy in many housing finance schemes and its importance goes well beyond its use as collateral. Savings is used in building social capital, mobilizing people, risk management and even for establishing credit history (see CEMEX/Patrimonio Hoy in Mexico). In many countries the regulatory environment does not support mobilization of savings by MFIs or NGOs and definitely not by private companies. But these organizations have been able to overcome this hurdle by designing alternative models for mobilizing savings. This again shows that although a conducive enabling environment can make it easier for private organizations to operate, it may not be an absolute precondition for them to be successful.

Another lesson is that **community involvement** in slum upgrading must go beyond mere consultation with the community or even involvement of the community in the construction process. Such limited involvement does not guarantee success for the program. Successful slum improvement programs go further, to create community ownership. In this model the community plays an active role in the decision making process as well as in the financial management of the program.

In developing countries, **municipal bonds** are a relatively new way to mobilize financing for infrastructure in slum communities. The successful introduction of municipal bonds in India and the degree to which the initial Ahmedabad bond issue has been replicated in over a dozen other Indian cities suggests that this method of financing has great potential. Despite the myth that the “enabling conditions” are not suitable for the introduction of municipal bonds in most developing countries, more and more countries are taking steps to make use of this financing tool. The enabling conditions were far from perfect when Ahmedabad started working to float its first bond issue. But rather than wait for everything to become perfect, Ahmedabad took the initiative to bring their bonds to market by solving a whole series of problems as they arose one-by-one.

The **incremental approach** to problem solving starts with improved financial management at the city level, then moves into making use of municipal credit ratings to provide impartial information to investors. From there it shifts to developing new financial instruments suited to the local capital market, then to securing new types of financial services from the private sector to bring the bonds to market. Finally, the process leads to reforming legal and regulatory structures to make bonds an attractive investment. Whether a city makes use of municipal bonds to finance its slum upgrading programs is determined by its willingness to undertake internal reforms, innovate and seek local private investors with a similar innovative nature. External enabling conditions are not the real constraint.

When it come to getting basic service such as water, sanitation health care, and transportation, **slum dwellers usually pay more** than their wealthier neighbors in other parts of their city. For example, studies on the price of water delivered in slums by informal water vendors show that slum dwellers sometimes pay as much as 10 times the official water tariff to get their water. This means that there is an opportunity for a win-win solution to the problem of financing infrastructure in slum communities. If the service charges across the entire city are raised to only 50% of the prices paid by slum dwellers to informal service providers, it is likely there will be enough additional revenue to finance the expansion of infrastructure into the slums. With access to this new infrastructure, the slum dwellers’ cost of services is reduced by 50% even at the new “higher” service charge.

The key innovation in financing infrastructure in slum upgrading programs is finding the way to channel the substantial amounts currently paid by slum dwellers for inferior services into a **reliable stream of revenue**. This revenue can be used to repay long term debt for infrastructure projects in those same slums. This task can be done by municipalities that work with their slum communities to introduce innovative financing plans for their large scale infrastructure projects. It can also be done by NGOs and CBOs working on more limited scale to introduce neighborhood water taps, toilet blocks or other improvements. Where there is a reliable stream of revenue from a city (or even one slum community), that revenue stream can be converted into a block of capital by borrowing from the local private sector. If the private sector has confidence that their borrower will repay the debt, then **capital will be available** to finance slum upgrading.

One of the important questions for our future is how to combine the innovations taking place in housing and infrastructure finance, and mainstream them so that government as well as private players can actively engage the poor, thereby benefiting all the parties concerned. So far, programs promoting housing micro-finance and municipal bonds have been operating in different communities or with limited coordination. Bringing these two innovations together to serve the same slum communities has the potential to create a kind of **financial synergy** that would greatly accelerate the slum improvement process. If slum dwellers gained access to improved services such as water, sanitation, health care and transportation on commercially viable terms while simultaneously gaining access to the kind of flexible credit they need to incrementally improve their housing, then it would no longer take 20 or 25 year to make slums disappear from the cities of the world.

## ANNEX

### **CASE 1: The Kuyasa Fund – Providing Housing Microfinance for the Poor**

**ORGANIZATION:** The Kuyasa Fund is a non-profit MFI in South Africa specializing in the provision of housing loans for un-banked and under-banked low income households with secure occupational rights. Kuyasa's purpose is to add value to the South African housing subsidy by providing a package of facilitated savings and credit. Kuyasa uses collective peer group dynamics to mobilize savings and assess potential clients.

Kuyasa was started in 1999 as a pilot project by the Development Action Group (DAG), a reputed non governmental organization (NGO) in Cape Town, South Africa and has now grown into an independent organization. Its main market is Khayelitsha, South Africa's fastest growing township.

The vision of Kuyasa can be summarized as follows:

- The poor are credit worthy;
- Through savings mobilization, the poor can build social and financial capital,
- Savings and credit provision are tools to fight poverty;
- Improvement of tenure and provision of basic shelter are priority areas.

**CLIENT PROFILE:** Kuyasa targets low income households whose incomes are just below the poverty datum line for the average urban South African households (around R2,000 – \$310 for a family of six) by focusing on the most vulnerable groups (nearly 70% of Kuyasa borrowers are informally employed, self employed or pensioners). 88% percent of the loans are issued to people earning less than R2,500 (\$385); 54% are very poor, earning less than the minimum subsidy level of R1,500.

**PRODUCT CHARACTERISTICS<sup>20</sup>:** Kuyasa provides housing loans whose key features are:

- Loan size from R1,000- R10,000 (\$150-\$1500). The maximum loan granted is limited to three times the savings or a maximum of R10,000. The average loan is R3,500 (\$540).
- Loan Terms: repayable over 6 to 30 months,
- Conditions: 32% interest rate per year,
- Loan uses: (1) Purchasing houses on serviced sites; (2) Home and/or property improvements to existing housing, such as storage, roofing, etc; (3) Improving and extending developers houses; (4) Purchasing sectional title units in undeveloped land,
- Life insurance (fee based product): Non-repayment risk life-insurance is included in the fee structure of the loan products.

<sup>20</sup> SBI visited the program in Khayelitsha, South Africa. Kuyasa will send us the updated loan portfolio to verify the performance of



**CLIENT ELIGIBILITY:** In order to be eligible for a loan, Kuyasa checks all the following requirements:

- Regular savings pattern: potential borrowers should belong to and save actively in community based savings groups (at least 3 deposits over a 6 month period),
- Should be owner of the property or able to prove an undisputable right of occupancy,
- Loan installments are 30% or less of net household income,
- Security Cash deposit: 10% of the loan value (average R350).

**SAVINGS GROUP MOBILIZATION:** The relevance of savings has been critical to building Kuyasa's sustainability as it both creates networks of support for clients and introduces a culture of savings needed in any loan program. This also encourages resource mobilization and asset building that provides households with the tools to keep their standard of living on an ongoing basis. Kuyasa uses the rich tradition of rotating savings groups and is able to use the savings culture as a basis for credit evaluation.

In Kuyasa's experience, savings groups are an important risk management strategy, as clients are pressured by their peers to repay their loans. Through research by DAG, it was found that households prefer to save in groups.

Kuyasa makes use of the informal relational security mechanisms at work through the "peer pressure" utilized in partnership with the quasi-governmental housing support centers (HSC). These HSC groups serve a relational security function because Kuyasa has the option of withholding loans from households further back in the delivery queue at a particular HSC if earlier borrowers fail to repay. This provides the informal repayment incentive, through the "peer" pressure of the group.

Kuyasa facilitated the involvement of 9,000 households in savings groups, at a value of R16 million in savings value. Average savings is about R200/month with the target saving to start construction being R1800/household. The average Kuyasa client savings balance is R2,657.64.

**EVALUATION AND APPROVAL:** Loan officers run checks and collect the necessary documentation, and then make a recommendation. The Kuyasa manager then takes a decision based on the information gathered by the loan officer, rarely changing the loan officer's recommendation.

**OWNERSHIP:** Even though land title is not required, the potential borrower should be able to prove an undisputable right of occupancy<sup>21</sup>.

**COLLATERAL:** Kuyasa operates entirely without mortgage lien. A mandatory 10% security cash deposit is required. In some cases households' assets are also required.

**TECHNICAL ASSISTANCE:** Kuyasa neither provides technical assistance nor facilitates access to construction materials. Kuyasa maintains that distinction between providing access to housing finance and delivery of construction materials/technical expertise needs to be maintained so institutions can focus on one aspect without being distracted by the failings in another.

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<sup>21</sup> Municipalities in South Africa issue official documents that prove this undisputable right of occupancy.

**DISBURSEMENT:** Clients collect a check from head office, which they must either deposit into a bank account or cash. Loan officers check periodically to see that the loan is being used as per the application.

**LOAN REPAYMENT:** Loans are repaid through a Kuyasa's bank account in the First National Bank. The client is given a card with a client number that is to be entered on deposit slips to allow the head office to identify deposits. The loan officer visits the client and obtains a "promise to pay", a commitment to repay directly into Kuyasa's bank account on a specific date.

**DELINQUENCY AND COLLECTION:** Kuyasa uses a color code system to differentiate loans according to delayed payments. When the loan is not repaid on time, the loan officer visits the borrower and gives him/her a letter notifying the lack of payment. If the loan remains unpaid, the loan officer periodically calls, sends letters and visits the borrower. The loan officers manage the account during the first 60 days of delinquency. The loans that are not paid beyond 60 days are listed at credit bureau and then principal and interest are written off. Kuyasa uses foreclosure on furniture and household's assets as a last resort.

**MARKETING:** Potential clients hear about Kuyasa from other households or HSC in their area, or from provincial or municipal authorities. Kuyasa loan officers make presentations to groups of potential clients on request.

**IMPACT:** Kuyasa facilitated the savings of 9,000 individuals, granted loans to 3,114 households to the value of R14 million. The Kuyasa development methodology delivered 74,736 m<sup>2</sup> of additional housing. In addition, Kuyasa borrowers were able to double the average size of their houses from 23 m<sup>2</sup> (contractor build houses) to 54 m<sup>2</sup> through the micro loans, savings and subsidies.

**REPLICABILITY:** The challenge of an organization of Kuyasa's size is to reach sufficient scale to achieve outreach and sustainability. Kuyasa's funding strategy has been based on a combination of grants for operational costs, soft loans for equity and loan guarantees. Kuyasa is recognized in South Africa as a leader in provision of housing microfinance and is currently negotiating with local sources of commercial finance to expand its operations.

## **CASE 2: CEMEX – Innovative Supply Lending Scheme for the Poor**

**ORGANIZATION:** CEMEX is a multinational cement manufacturing company operating out of Mexico. It is the largest in Mexico, second largest in the U.S. and third largest in the world with 235 cement and ready mix plants. CEMEX sells raw cement, ready mix concrete, aggregates and clinkers.

CEMEX has developed a credit scheme targeting the informal or self-construction segment after observing that this segment of the market outperformed the formal sector during the 1994-1995 Mexican financial crisis (formal sector domestic sales dropped 50% and as compared to a 10-20% drop in those of the informal sector).

Patrimonio Hoy (PH) is an innovative pilot program started by CEMEX in 1998 in the city of Guadalajara. This 100% privately funded program enables very poor people to pay for services and building materials and upgrade their homes by addressing the following issues: inability of poor to save, their lack of access to formal credit and the lack of material and building knowledge (the results of which are a building time of 4 years for a typical room and a materials wastage of 30% in a typical poor community).

The key objectives of PH are:

- Generate business for CEMEX that leverages a competitive advantage,
- Provide access to good quality cement and construction materials at fixed prizes to low income families,
- Provide low income families access to credit,
- Position CEMEX as a responsible corporate citizen that is committed to society,
- Build social capital.

Currently, PH has 48 offices in 23 cities, with more than 75,000 participating families, who have built the equivalent of 33,000 additional 110 sq. ft rooms. The repayment rate is 99.2%

**CLIENT PROFILE:** PH targets low-income workers, whose households earn approximately 50-150 pesos (\$5 - \$15) per day. PH does not target the absolute bottom of the pyramid (less than \$5/day). PH focuses largely on women because it has observed that women are the key savers in the Mexican family.

**PRODUCT CHARACTERISTICS:** The program offers micro-credit for purchasing building materials based on solidarity of a group with no collateral. The key features of the program are:

- Provides \$4 of materials for each \$1 saved,
- Membership: 15 pesos/per member ("socio")/per week,
- Fixed raw material prices for 70 week periods,
- Market price: Though PH offers cost effective solutions to customers, it does not offer low price or lower quality materials. In fact, CEMEX sells construction materials to participants at a slightly higher price than competitors. PH does a market study every month that publishes the prices of competitors and calculates an average price for each month and offers that price to the members enrolling in that month,
- Technical advice for customized house growth project for each family provided on fee basis (one room at a time),
- Warehousing services to store materials according to their needs.

The first phase of the program lasts 10 weeks. During which each member starts by paying PH 105 pesos (after taking 15 from a total of 120 pesos) for the first 5 weeks, totaling 525 pesos. At the end of the 5<sup>th</sup> week, PH delivers raw materials for construction worth 1,050 pesos, effectively providing the members with a credit worth 5 weeks payment. This phase helps to establish the credibility of PH in the community by delivering on the promises it made and also tests the commitments of the members.

The second phase of the program is 11 to 70 weeks, during which members receive raw materials worth ten weeks at the end of week two of the second phase, i.e., a materials advance of eight weeks if they remain committed beyond the first phase. Deliveries are made during weeks 12, 22, 32 42, 52 and 62 if the members keep up their weekly payments and stay committed to the program.

**CLIENT ELIGIBILITY:** Members are the actual customers who enroll in PH. The members form a group of maximum three people. The small size of the group is to enforce discipline in the group. When a group is formed it goes to the nearest neighborhood group PH center (a regional collection of several groups, or cell) and completes an application. No credit history or collateral is required, but each of the members in the group must commit to pay 120 pesos weekly for at least 70 weeks. Each socio in the three member group take turns each month to collect money from other members. For each 120 pesos a socio pays, PH charges a 15 peso membership fee.

**SAVINGS GROUP MOBILIZATION:** PH uses the traditional “Tanda System<sup>22</sup>” of savings in Mexico. This system of weekly savings is based on mutual trust and social capital in the community. The PH team found that lack of financing was the biggest challenge for the poor to purchase materials, in addition to the lack of expertise and planning resulting in wastage of materials.

To address the access to finance problem, PH modified the traditional “Tanda System” making it a program both for savings and credit. Also to modify the distribution network, distributors were selected based on certain parameters which included exclusive dealings with CEMEX, capacity to store inventory and excellent delivery mechanisms. Nearly 1/10 of the distributors qualified under the rigorous selection process.

**EVALUATION AND APPROVAL:** There is no evaluation and approval process. Each potential socio goes to the PH offices, provides his/her contact information and commits verbally to pay 120 pesos on weekly basis for 70 weeks. In this first visit to the PH offices, the socio arranges a meeting to discuss his/her construction project.

**OWNERSHIP & COLLATERAL:** Participation does not require credit history, collateral or ownership. The only requirement is the member’s commitment to pay 120 pesos weekly for at least 70 weeks.

**TECHNICAL ASSISTANCE:** After enrollment, members are eligible for an appointment with an architect/advisor for a low fee. Through an interactive process, the socio receives technical assistance for incremental housing projects, and he is able to determine the types of materials he needs for his building expansion, which room he needs next and the sequence of the following rooms to be constructed in future.

**LOAN REPAYMENT:** Payments are made directly in the PH offices located within the communities. The members receive a receipt (issued by PH) for each payment made. PH offices are open Monday through Saturday from 8:30 AM to 6:30 PM.

**DISTRIBUTION AND DELIVERY:** The members can choose to receive delivery immediately or can take a delivery voucher which can be exchanged later for the materials. The PH makes arrangements for storing the materials with the distributor. This method reduces the chances of wastage. This on-time delivery helped to increase the trust of members in the PH program.

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<sup>22</sup> A tanda -- which literally means a group or a shift – is a small-scale grass-roots savings mechanism widely practiced in Mexico and Central America. It is usually formed among family and friends. A group is formed, say 13 people, each person puts in an agreed-upon amount, say \$100 a week. Everyone gets a turn collecting the pool of money, \$1,300 in this case, and everyone continues paying until everyone in the group has had his or her turn.

**DELINQUENCY AND COLLECTION:** So far, PH has reported a default rate of only 0.45%<sup>23</sup>. PH attributes this high level of success to three factors: penalty fee structure, group commitment and social capital. If any one member of a group fails to make the payment on time, the group as a whole will have to pay a late fee of an additional 50% (60 pesos) per late socio. Apart from that, the delivery for the entire group is delayed by one week and also it will be recorded as a black mark and the group will have problems later when they apply for a new credit. Also the social ostracization of defaulting members acts as a powerful incentive for on time repayment in the program.

**MARKETING AND COMMUNITY OUTREACH:** PH realized that the best way to establish ties with poor communities is through personal interaction. In accordance, PH marketing is done by “promoters”. After identifying the community, PH sets up cells in each community to serve a customer base of 5,000 or a population of 50,000- 100,000. The cells identify “promoters” (95% women) within the community to go door to door and spread the word about the program. Promoters work on a commission basis. This approach generates interest in the community and draws them to the program.

**IMPACT AND OPERATING MODEL:** Since 1999 more than 75,000 families have participated in PH, having built the equivalent of 33,000 additional 110 sq. ft rooms.

The objective of PH is not only to promote a social good, but also to make a profit. Through PH CEMEX has expanded demand for its products by reaching an underserved market (self-constructors). It accelerates the cement use (1 room in 16 vs. 48 months), cross-selling (enabling the company to “package sell” many of its products through a single window) and brand loyalty by members. Moreover, CEMEX is seen as a company committed to society. In addition, PH recognizes that the volumes are very important and hence has based its revenues on a per transaction basis in addition to the sale of cement by CEMEX. The revenue streams for the company are (1) The 12.5% Membership Fee from members for every payment and (2) the Intermediation Fee in the form of a 7% margin from distributors. These two streams are making it possible for the PH to stand alone as a profit center. It is estimated that to break even, a cell needs an average of 700 members.

**REPLICABILITY:** PH is a replicable model. The program is already working in 23 cities in Mexico and recently has launched activities in Nicaragua and Colombia. CEMEX highlights the following key features to replicate PH model successfully:

- The strength and network of the company which determines the company’s ability to influence other suppliers and distributors to join the program.
- The ability of the company to deliver quality materials on time.
- Existence of a “Tanda” type system or the ability to coordinate with governments or NGOs to start a savings group system.
- Knowledge of the local housing and construction sector.
- Ability to market the program as a new product.

The ability of the company to promote and utilize the social capital in a community.

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<sup>23</sup> SBI has not independently verified the performance of the program.

### **CASE 3: Ahmedabad Municipal Corporation – Municipal Bond to Finance Infrastructure**<sup>24</sup>

**BACKGROUND:** India is facing severe shortfalls in the capital required to finance its growing urban infrastructure needs. Estimates indicate that as much as Rs. 300 billion (\$7.5 billion) may be needed annually to provide for India's cities, while only about 30 billion is flowing to this sector. Due to the liberalization of the financial sector, the flow due to directed credit has slowed down to this sector. In this scenario, India's capital market provides a solution to the search for new sources of finance by municipalities and cities in general.

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<sup>24</sup> Lessons from the Ahmedabad bond issue are taken from the INDO-US FIRE-D, Project Note #25, April 2001, by Chetan Vaidya and Brad Johnson.

In January 1998, the Ahmedabad Municipal Corporation (AMC) issued India's first municipal bonds not backed by a state guarantee. Ahmedabad is the seventh largest city in India and the commercial capital of the state of Gujarat. Bonds were issued in partnership with USAID's FIRE-D program. The bonds represented the first step toward a fully market-based system of local government finance.

The AMC opened a Rs. 1 billion (\$ 25 million) issue of municipal bonds. The issue was designed to support an infrastructure investment program in the city. This was a 75% private/25% public issue, and its success gave a new momentum to the national consensus that municipal bonds provide a promising alternative for financing urban infrastructure. Indian financial institutions such as the State Bank of India, Unit Trust of India, Housing Development Finance Corporation (Limited) and commercial banks, subscribed to the bond issue.

**PROGRAM:** The USAID's Financial Institutions Reform and Expansion Project (FIRE-D) project played a multifaceted role in assisting Ahmedabad in developing the bond issue. The goal of the FIRE-D Program was to reform the municipal corporation's finances and to improve human resources, so that the AMC could be in a position to provide basic services for its expanded urban area and growing population, and improve living conditions in the slum neighborhoods.

The partnership with the corporation began in 1994 with the preparation of an urban environmental workbook and an environmental risk assessment, where the FIRE staff helped AMC carry out financial analyses and prepare the corporate investment plan. The FIRE project also assisted Credit Rating and Information Services of India (CRISIL), an independent rating agency, to develop methodology for carrying out credit ratings of local governments in India, and Ahmedabad was the first city where this methodology was applied. In addition, the FIRE project helped create the City Managers Association of Gujarat in 1998, and sponsored participation of AMC staff and elected leaders in training programs and study tours to build their capacity to undertake and sustain reforms<sup>25</sup>.

**MUNICIPAL CREDIT RATING:** A formal credit rating evaluation by a reputable third-party is a key element of the pre-sale stage of a municipal bond issue, for it provides an indication of the risk level associated with the issuer's ability to repay debt. A credit rating is also a powerful public indicator of a city's financial and managerial capacity as it seeks to attract external investors and new residents.

Ahmedabad became the first city in India to request and receive a credit rating for a municipal bond issue. It received a rating of "A+" for the Rs.1 billion bond offer in 1996 that indicated adequate assurance for investors. This also reflected the revenue surplus that AMC achieved through committed leadership. The rating was done by CRISIL with the assistance from the FIRE-D program.

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<sup>25</sup> Increasing Resources to Local Government in Ahmedabad, India. Available at <http://www3.iclei.org/localstrategies/>

**STRUCTURING THE BOND:** With the assistance of the FIRE-D project, a re-examination of the financial structure was done and the bond issue was modified from a general bond issue to a structured debt obligation (SDO). This was done because SDO provides greater security for investors, in that the debt service was linked to revenues from ten tax collection centers and an escrow account was created which would be independently monitored by a trustee. Further credit enhancement was achieved through over collateralization with a minimum debt service ratio of 1.5 and provisions giving investors recourse to the general revenue of the corporation. AMC then returned to CRISIL with this SDO and received an improved credit rating of “AA-.” This strengthened the perceptions of potential investors, a critical element in the bond issue.

**TRANSACTION DOCUMENTS:** The key financial documents in a municipal bond transaction are the disclosure (Prospectus) document and trust indenture. The prospectus for the AMC bonds provided a general overview of the economic, environmental and fiscal condition of AMC, and was written to comply with the SEBI regulations designed for corporate bond offerings. Due to this, the prospectus did not fully explain the risks, underlining the need for specific guidelines and disclosure norms for municipal bonds.

A trust Indenture is a binding legal agreement between an issuer and a trustee acting on behalf of the bond holders. A model trust indenture should ensure that all security interest is in place at the time bonds are issued, that all credit enhancements discussed in the prospectus are included, and that redemption clauses are included to manage interest rate risk and trustees duties are precisely defined. AMC’s trust indenture lacked some of these elements, and hence needs to be refined prior further use by other municipalities.

**TRANSACTION COSTS:** The transaction costs for the AMC bonds, including underwriters, brokers, legal fees and advertising charges equaled 2.89% of the bond offering (Rs.28.9 million/ \$722,500). This excludes stamp duty costs.<sup>26</sup>

**USING THE BOND PROCEEDS:** The bond prospectus of AMC had pledged to establish special project sanctioning procedures to reduce project delays and to appoint private project management consultants. However, AMC did not follow through on these pledges, and the lack of specialized project management support contributed to delays in project implementation. Under pressure from an impending water crisis in the city, AMC expended the bond proceeds to implement an emergency bulk water supply scheme, the Raska Water project, in a record 5 months. It can be noted that the two years that AMC took to use the bond proceeds is within the norms in the U.S.

Due to a decline in interest rates following the bond issuance, invested portions of the bond proceeds came to represent a revenue liability. However, AMC claims that the availability of up-front liquidity permitted the municipality to obtain highly competitive bids from contractors, representing a 10-15% cost savings on initial estimates, and this adequately offset the interest liability on bond service.

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<sup>26</sup> Use of an available state government guarantee of the bonds could have resulted in considerable savings in transaction costs. However, the fee for the guarantee would have cost AMC about Rs.49.9 million (\$ 1.25 million). Thus, in sum the seemingly high transaction costs provided a better cost-benefit when paired with the risk-mitigating SDO instrument.



**ISSUANCE OF THE BONDS:** A decision was made to apportion the issue as 75% private placement, i.e., sale of the bonds through pre-negotiated agreements with specific institutional investors. The remaining 25% were publicly placed, even though it was more expensive, to create a market image and to help further the agenda for creating a municipal credit system. By 1997 December, the draft prospectus was approved by Securities and Exchange Board of India and the issue opened in January 1998 with a face value of bonds at Rs. 5,000 (\$125) and in multiples of Rs.1,000 thereafter, with a coupon rate of 14%, 7 year term, and “balloon” principal repayment during the final three years. The private placement was allotted to a dozen Indian financial institutions. For the public placement, greater than 95% subscribers were individuals and the issue was over-subscribed by more than 10%. Since that time, some trading of these bonds has taken place, signaling the development of a nascent secondary market.

**FINANCING THE AHMEDABAD WATER SUPPLY AND SEWERAGE PROJECT:** The city developed a capital investment plan of approximately Rs. 5.89 billion (\$147 million) in water supply, sewerage and other infrastructure projects. At the same time, it initiated an Rs.1 billion project to provide sewerage treatment and slum up-grading with private sector participation. AMC prioritized these projects due to their commercial viability as investment opportunities. The remaining Rs. 3.89 billion was to be raised through loans from FIRE-D program of USAID, other institutional finance and internal AMC resources. Besides, the availability of cash from the bonds issue permitted AMC to rapidly respond to an impending water crisis.

**FINANCING INFRASTRUCTURE IN SLUMS:** The healthy state of municipal finances enabled AMC to partner with the business community, NGOs and other organizations to undertake the new initiative. For example, in the Slum Networking Project the corporation partnered with a prominent textile company, an NGO and the slum community to improve basic infrastructure and provide water and toilets to households. The textile company set up a trust and executed the project while the NGO mobilized the community and AMC acted as facilitator for a pilot community called Sanjay Nagar. The project was completed within the stipulated time and without any cost overruns.

#### **LESSONS LEARNED:**

**Municipal bonds provide a promising alternative for financing urban infrastructure.** There is a global recognition now of the need for market-based approaches for development, and municipal bonds represent a promising area. Municipal bonds provide long-term financing that more equitably matches government revenue and tax-payer obligations to the useful life of capital infrastructure.

**Municipal bonds represent an approach to capital market borrowing by municipalities and local governments that have some advantages over “traditional” pay-as-you-go capital finance approaches.** Chief among these, in the emerging markets context, is the imposition of market discipline required for the preparation of a successful bond offering, with positive impacts in improving municipal financial management and transparency.

**Areas of attention.** Based on the FIRE-D experience, the following three areas require attention if municipal bonds are to be successful: (1) System development; (2) Capacity building for issuers and advisors and (3) Support for Instrument development:

### **1) System Development:**

- Need to develop a regulatory framework for permission to issue bonds and disclosure norms in consonance with market-based corporate debt instruments prescribed by market regulators.
- Need to develop a long term debt market.
- Need to liberalize investment guidelines for long term funds and other resources, as long term lending is one way of providing cheaper financing. Also access to alternative financing sources, such as pension and insurance funds should be explored.
- Need to develop bankruptcy legislation for local bodies and other issuers to strengthen investor confidence.
- Need to provide tax and fiscal incentives for the issuance of bonds.

### **(2) Capacity – Building for Issuers and Advisors:**

- Need to build capacity for project development and management to ensure the timely and efficient utilization of bond proceeds. Projects should be designed in a commercially viable way and a good risk management strategy should be in place.
- Need to enact local reforms in accounting and financial management to meet rigorous disclosure norms.
- Need to reform tariff structure to improve financial viability.
- Need to share information and experiences among rating agencies, lenders, investment bankers and financial advisors.

### **(3) Support for Instrument Development:**

- Need to support credit enhancements through sustainable and commercially viable mechanisms. There need to be alternatives for the blanket state government guarantees such as escrow arrangement with reserve funds and bond insurance structured on market principles.
- Need to compile comparative information on the performance of potential issuers to develop industry norms and benchmarks.
- Need to develop new structured financing arrangements within urban finance framework.

Need to develop pooling arrangements for small issuers to enable small municipalities tap the capital market

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