Innovative financing for low-income housing

Lessons from Central America

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in collaboration with Luis Castillo

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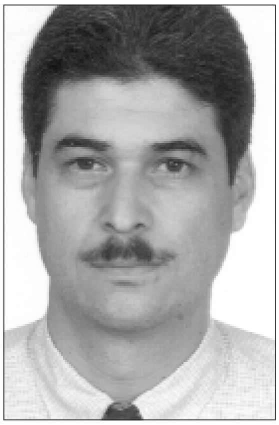

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Introduction

This *Building issue* addresses some principal lessons learned from the support given by the Swedish International Development Cooperation Agency (Sida) to the design and implementation of non-conventional financial systems for the construction and improvement of low-income housing in urban areas in Central America.

The paper identifies some of the main outcomes as well as the opportunities and obstacles faced by these programmes, and how the obstacles can be overcome in the future. The document describes some financial mechanisms that have proven to be effective and affordable by the urban poor in their search for better housing.

The paper shows how different policies and interventions by national and sub-national governments as well as "non-market incentives" are required to make low-income housing programmes feasible and affordable. It is extremely important to understand these processes, particularly when the donor community increasingly promotes micro-finance policies and programmes for low-income housing.

It is expected that the lessons learned, especially those issues related to the financial and institutional sustainability of these programmes, can shed light on and offer suggestions for other international donors and national institutions that are trying to design new financial products for low-income housing.

Finally, a word of caution: as all success stories, there is no guarantee that what worked in one place will automatically work in another part of the world. Cultural as well as political and socio-economic conditions (at the national, municipal and local levels) must be considered during both the design and implementation of these programmes.

The Problem

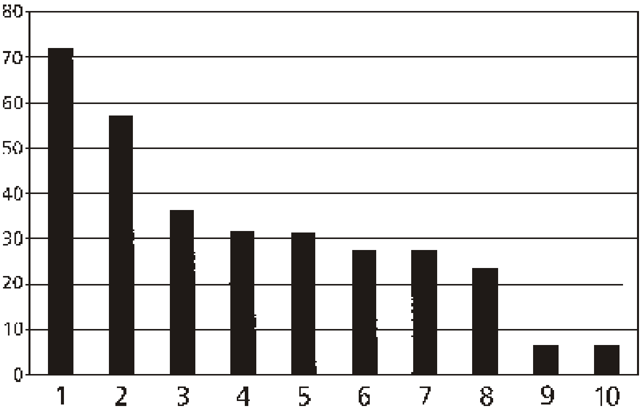
An urbanized world

About half of the world's population lives in urban areas, and by 2030 it will probably reach 60 percent. The urban population in the poorest countries is growing fastest. Over the next 30 years, the urbanized population of low and middle-income regions will increase by almost 3% per annum. In 2002, almost two billion people lived in the urbanized regions of the developing world; by 2030 that number will reach four billion – in a global population of about eight billion. The highest number of urban dwellers will live in regions that currently have the lowest GDP per capita (Millennium Project Task Force on Improving the Lives of Slum Dwellers 2002). Moreover, it is estimated that 78% of the urban population is low-income families living in slums, varying from one continent to the other (see Graph No. 1 on slum dwellers as percentage of urban population by region in 2001).

The implications of this are enormous, as most of this population will face problems of poverty: insufficient income and increased vulnerability to environmental health problems. These squatter areas are often characterized by poor quality of the building environment and high-density accommodation, inadequate basic services and infrastructure, lack of access to affordable and secure land, residential segregation and increased violence.

Given the fact that in the coming decades most of the new urban dwellers of the world will be poor, it is vital to have effective urban policies capable of addressing their problems and financing their housing. This is one of the main goals approved by the United Nations' Millennium Assembly in September 2000. According to the UN, by 2020 a significant improvement in the lives of at least 100 million slum dwellers should be achieved while stopping the formation of new slums (Millennium Project Task Force 8 2003).

Slum dwellers as percentage of urban population by region in 2001



1 Sub-Saharan Africa
2 South Central Asia
3 Eastern Asia
4 Western Asia
5 Latin America and Caribbean
6 Sout Eastern Asia
7 Northern Africa
8 Oceania
9 Europe
10 Other

Source *Interim Report Millennium Development Task Force No. 8 on Improving the Lives of Slum Dwellers, 2004.*

Housing finance for the urban poor

In most cities there is a wide and diverse range of *housing sub-markets* that respond to the multiplicity of needs, resources and financial capacities of low income groups. Organized land invasions, squatter settlements (often illegal and without any services), rental tenements and rental accommodation are some examples of these sub-markets.

It is estimated that 75–90 percent of all new housing in the less developed world is built outside any officially approved land development and housing construction process, including most low-income urban development. For the majority of low-income households who organize the construction of their housing, this construction process is, by necessity, incremental and over a long period, as they do not have the resources and cannot afford to build complete houses immediately (Mittlin 2000) or to cover the costs of home ownership. Recent studies suggest that low-income households use their savings, labour and other resources to build their houses over a period of between five and fifteen years (Ferguson 1999).

One of the reasons for this is that the urban poor lack access to the traditional private and public housing financial systems. Increasing evidence suggests that formal private financial systems around the world are uniformly unresponsive to the needs and potential of the urban poor (MDG Task Force 8 2003).

Housing finance sources in low-income countries can be classified into three categories. The first includes commercial private financial and banking institutions, which provide credit for upper-income groups at market interest rates upon the certification of income and the provision of collateral and guarantees. These financial institutions usually avoid involvement in housing finance for the poor because they lack solid collateral (usually linked to mortgage lending) and stable income. Other factors include inadequate land and housing registry systems, the perceived high default risk with low-income households, and the high transaction and administrative costs of each small loan that can be affordable by the poor. The costs of foreclosure are also generally very high relative to the value of the property and there are low profit margins (Center for Urban Development Studies 2001 and PM Global Infrastructure Inc. 2003).

The second source of finance for housing is the public sector, which usually provides subsidized funds for middle-income groups and civil servants through specialized or non-specialized housing intermediaries. However, public programmes in low-income countries usually fail to reach the poor. Their eligible beneficiaries typically operate within the formal economy, possess basic home ownership capacities, and have some access to capital, even if only a little. Public programmes attempting to target lower income groups have usually been hampered by lack of political will, leakage of funds to non-eligible groups due to corruption or a failure to take into account the socio-economic and political dynamics of the situation within which the poor operate. These programmes usually operate with "hidden" and subsidized rates of interests, although in recent years the subsidy is given to the family directly (as a bonus) and not through the rate of interest (Center for Urban Development Studies 2001).

The lower middle, moderate, and low-income households, most of whom work in the informal economy, have with few exceptions been excluded from accessing capital from formal private or public financial institutions. These groups have consistently relied on informal sources, including savings, informal loans from friends and family, remittances from family members working abroad and the sale of whatever assets they have (Center for Urban Development Studies 2001).

In recent years however, there is an increased number of non-traditional financial institutions that service these sectors with innovative financial schemes. These experiences show that the housing needs of the poor can be financed in a way that is economically viable, affordable, and consistent with tested methods of delivering finance services to the poor (Daphnis 2002). Some of these institutions and schemes have been supported by international donor agencies, including Sida.

The Method

This desk study is based on the authors' own experience during the past 15 years in the design and implementation of low-income housing programmes in Central America, financed by Sida, and a review of articles, reports and studies written by professionals and practitioners involved in developing and systematizing alternative and non-conventional financing for housing improvement for the urban poor in different parts of the world.

Organization of the Report

The first part of this document describes the problem of financing low-income housing improvement programmes, urbanization trends in the world, and the main types of financial schemes and *sub-markets for housing* for the urban poor found in low-income countries. The diversity of sub-markets suggests that the housing solutions required are incremental in time and cannot be uniform throughout regions or even within a city.

The second part describes the objectives and the main characteristics of the low-income housing programmes that Sida financed in Central America. It defines some financial concepts that are often used in these types of programmes. Afterwards it discusses in detail the issues of management of low-income housing loan portfolios, the financial conditions including the type of interest rates and collateral used, and other aspects that constitute the core of the financial housing schemes used by these programmes.

The third part draws conclusions and recommendations.

The document argues that low-income housing improvement schemes cannot and should not be treated strictly as a regular type of *market product* offered by conventional or non-conventional housing financing and micro-lending institutions.

General Considerations

Experiences in Central America confirm the increasing evidence throughout the world that borrowers from the poorer social sectors are extremely responsible payers when it comes to the repayment of loans for housing improvements and new housing. What is required is enabling environments, processes and institutions that improve the capacity of the poor to access viable social, technical and financial solutions and resources. The experiences also show that revolving funds and non-traditional micro-lending institutions are becoming important financial instruments for targeting the urban poor. The experiences illustrate the importance for external agencies to invest in institutional development, in order to have strong programmes and organizations capable of carrying out the difficult task of working with the poor and, at the same time, ensuring financial sustainability.

There is a tension between the aims of on the one hand, achieving, the financial sustainability of the programmes and the executing institutions and, on the other hand, making sure that funds are accessible for the poorer sectors. This continues to be a critical aspect of the evolution of these experiences. There is an on-going debate on which goals and methods are the best to institutionalize and govern the programmes, to increase their social impact, to make significant interventions in the housing sector within the target population, and to secure the sustainability and growth of the revolving funds. This discussion has been very useful to clarify the mission and operative components of programmes.

It is difficult to foresee that the revolving funds for low-income housing will evolve into formal banking or financial institutions, in the sense of the micro-finance industry. Nevertheless, there is no question about their contribution to establishing alternative models based on a holistic perspective of the qualitative and quantitative housing problems of the urban poor in Central America. The five Sida supported programmes together form a large-scale operation reaching tens of thousands of poor households throughout the main squatter areas of the region.

The experiences show the important role that an external funding agency can have: to offer technical and financial assistance, especially when there are clearly identified national organizations to execute the programmes, and when national policies in the sector are not already well defined and functioning.

Models for financing low-income housing

Since 1988, Sida has financed housing and local development programmes in Central America with total resources of US$ 50 million. At the end of 2003, the programmes had helped about 80,000 low-income families, or about 400,000 people, in the main urban areas of the region to improve their habitat conditions (Boman and Peck 2003).

In spite of the differences between the countries, the model promoted by Sida in the region was relatively simple. The programmes are based on lending credits to low-income families to improve or to expand their existing house or to build a new house. Credits are given directly by the institution, or through organizations that have specialized as financial intermediary institutions that give long term and short-term loans. The credits are sometimes combined with subsidies from government and complemented with the family's own savings, self-help and labour efforts (Asdi 2001). In some of the programmes, lines of credit or matching funds are given to municipalities to provide basic services in new and existing low-income settlements.

> The resources from Sida have been channelled through different institutions and programmes: the Housing Promotion Foundation (FUPROVI) in Costa Rica, the Local Development Program (PRODEL) in Nicaragua, the Salvadoran Integral Assistance Foundation (FUSAI) in El Salvador, the Urban and Rural Social Housing Development Foundation (FUNDEVI) in Honduras and the Local Development Trust Fund (FDLG) in Guatemala.

In addition to financial assistance these intermediary institutions also provide technical, social and legal assistance to help the participant families get secure land tenure, basic services and infrastructure and appropriate designs to improve and expand their houses. All the programmes use an incremental and gradual housing process, corresponding to the participant families' capacity to save, to repay loans and advances in-kind, and to contribute money and labour.

In new formal settlements the institutions are involved in planning the new settlement, providing infrastructure and basic services, assisting in land titling, lending to the families, giving technical assistance to construct the houses through self-help and resettling the families into the new houses. In existing informal settlements, the steps can be reversed: lending can take place before building or improving the house, and before the provision of infrastructure and basic services. In some cases only basic services are introduced, with little possibilities of lending given the income level of the target population. Thus, different approaches have been developed to work both with formal and informal settlements (see Tables No. 1, 2 and 3).

Credits are usually given with some interest charged, but not necessarily at market rates. In the majority of the programmes the interest rates reflect, but do not necessarily match, the market rates for mortgages in the formal sector. The programmes accept a wide variety of collateral and security from the households (especially mortgages, deposited objects and co-signer loans). The flexibility in the use of collateral has allowed participation of low-income households in the programmes even if they have not fully resolved the legality of their land tenure.

Once the credits are recovered, the resources are reinvested into new loans to families of the same income strata. This ongoing operation has allowed the creation of various revolving and rotating funds. The basic principle that guides these funds is to try to maintain the value of the original seed capital so that it can be reinvested in the same target population over a relatively long period. Thus, the recovery of the funds and the maintenance of its value become important tools for urban poverty alleviation.

Sida's policy through the region has been that housing subsidies are primarily a responsibility of national governments that act as the counterparts of the international agency. That is why most of the funds allocated by Sida have been channelled to finance three main components of these programmes: loans (including micro-loans for housing improvement and new housing), technical assistance (both to executing agencies and the target population) and institutional development, especially of those institutions that manage the Swedish funds.

Lessons learned

The experience gained by the Sida supported programmes and institutions during the last fifteen years shows that there is a number of key issues that have a decisive influence in the way poor families use their scarce income and resources to access to affordable housing. These factors are common and have been addressed in all Sida supported programmes. The understanding of these factors can be significant for structuring housing policies that target poor families. They also help to understand why the programmes have been successful.

Housing policies
Incremental housing projects, squatter and slum upgrading programmes and consequently credit lending for housing improvement were influenced by two paradoxical processes that took place simultaneously in Central America in the last twenty years: on the one hand, the accelerated levels of urbanization and on the other hand, a rapid increase in the levels of urban poverty.

> Central America has one of the highest urbanization growth rates in the world. In 2001, it had a population of about 37 million, of which 52% lived in urban areas, and about 42% of this urban population lived in slums. The region's income distribution is also one of the most unequal in the entire world (UN-HABITAT 2003).

In this rapidly changing context, conventional and official national policies and programmes have not been efficient and sufficiently competent to allocate the financial resources and institutional capacities required to meet the quantitative and qualitative housing backlog, both in terms of basic services and adequate shelter with security of tenure. It is only recently that housing improvement is slowly emerging as a key element of urban poverty reduction strategies and of housing policies that try to address the qualitative housing deficit of the majority of the population. These improvement programmes are based on the real demands of low-income households, not only the supply side of the housing solutions that conventional programmes offer. As such, small and micro-lending programmes have the potential to become significant instruments to support state housing policies (Angel 2002).

Sida's experiences in the region show that the credit for low-income housing requires a delicate balance between addressing the needs of the target population and the political goals of the public administration. In more than one situation, and despite the quantitative impact of the programmes, national governments do not give these actions any priority; they usually see the backlog deficit of housing as a quantitative problem that needs to be addressed through the construction of new housing, and as a qualitative problem requiring improvements in existing informal settlements. Thus, scarce national resources available for housing usually go to construction of new housing units by conventional private building companies without any significant impact on solving the problems of the poor.

That is one of the reasons why all Sida supported programmes and institutions have tried to elaborate strategies that allow them to have some influence in shaping housing policies. In some of the programmes, the aim is to protect these innovative lending and financial housing schemes from political influence or outside pressures, but these efforts are still at an early stage of development, and require more awareness and more lobbying on behalf of the cooperating institutions to achieve the necessary institutional reforms.

> In the past three years the low-income lending housing programmes of FUNDEVI in Honduras were subject to political pressures by members of Parliament. Before elections they tried to force approval of loans for organized target groups assisted by the institution. Members of Parliament were not at all interested in the negative economic repercussions on the sustainability of the programmes and the continuation of the lending operations to thousands of poor families.
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> The change of Minister of Housing in Costa Rica every four years affects FUPROVI's relationship with the national government. Every four years, the institution is forced to redefine and negotiate its relations with the government to maintain its independent status and be eligible to access to governmental subsidies for the poor. To a lesser degree the same situation occurs with FUSAI in El Salvador, where subsidies sometimes are not delivered on time due to the government's political priorities.
>
> In Nicaragua, changes of national and municipal authorities every four years means PRODEL must inform candidates standing for election to public office about the objectives, the scale and methods of operation of the programme. It has happened that change of government resulted in changes in technical staff of the municipalities. These persons were crucial for project implementation, thus forcing the programme to invest in training new personnel.

Integrated interventions and the participation of multiple actors
Housing improvement and new housing construction by incremental methods require the participation of different actors in the provision and delivery of critical inputs including: access to land and land tenure legalization, management and mitigation of environmental risks and natural disaster hazards, introduction and maintenance of basic services, and improvement of household conditions and living space.

That is why it has been important for the Sida supported projects to establish alliances with other institutions and actors. A clear division of functions and responsibilities is required between the institutions specialized in giving and recovering the loans, local governments and other governmental agencies that specialize in providing basic services, and the end users of the credit.

The design and implementation of these programmes always recognized the linkages between housing improvement loans, new housing by incremental methods, social participation and financial sustainability. The programmes prove that an environment that enables the participation of different actors, especially the target communities, will increase the likelihood of successful implementation and good cost recovery.

As different projects around the world show, participation through mutual and self-help methods increases the affordability of low-income housing to the urban poor in two ways: on the one hand, it eliminates the cash down payment that formal financial housing institutions usually require. On the other hand, incremental development by self-help methods costs less that formal housing construction (Bamberger et al. 1982).

A key in this participatory process is the technical assistance provided to families and communities to help them better handle their loans, and the technical and construction aspects of their shelter improvements and new housing solutions.

Most programmes supported by Sida conceive participation as a means to mobilize resources, increase community capacities and empower families. The results are eloquent. Savings and self-help efforts contribute about 20% of each dollar given by an external agency (Stein 2001).

> In the case of PRODEL in Nicaragua, during a period of nine years, the basic service and infrastructure component executed 417 projects (introduction and expansion of water and sewage systems, roads, school improvements, etc.) that benefited 60,000 families in 193 poor neighbourhoods of 8 cities. The total costs of the projects were US$ 9.1 million. Local communities contributed with 13% of the costs, local governments 32% and Sida 55% (INIFOM-PRODEL 2003).

This assistance has also helped to raise consciousness among participating families that they must repay the loan to the financial intermediary institutions. In this sense, it is not the micro-finance lending per se, but the way the programmes create social inclusion, social justice and empowerment that complements the good results of the lending programmes.

Subsidies

In the design and development of these programmes, there was always careful analysis of the possibilities and advantages of working with existing national and complementary subsidy schemes to the loan schemes. This is important when trying to achieve the right balance between the financial sustainability of the programmes and the need to make the programmes accessible to families that are very poor, and also when the cost of the housing solution is over US$ 800.

Usually, the funds given by the programmes as loans serve as bridging finance until the families are able to access the national subsidy system. This is the case in Costa Rica, El Salvador and Honduras. Usually, the subsidy system is targeted at families that earn less than four times the monthly income of an unskilled construction labourer, thus the lower the income of the household the higher the level of subsidy that the family is entitled to receive. As a result, the bulk of the resources spent on the subsidy should go to the poorest families. The subsidy system also helps low income population gain access to mortgage based credit for their housing solution.

> The organizations supported by Sida use the existing subsidy system in their respective countries in the following way. A house costs US$ 1,000. The family can only afford a US$ 500 loan and can contribute another US$ 100 from its own resources. According to their income level, the family is entitled to a certain amount of a state subsidy. In this case, the family is entitled to a subsidy of US$ 400. The Sida supported organization will advance a US$ 900 loan to the family. Once the subsidy amount is received by the organization, it will deduct this amount from the loan so the outstanding balance will only be US$ 500. The US$ 400 recovered via the subsidy in a relatively short time will be used by the organization to cover its technical assistance costs and to give a new loan to another family.

The experiences in these countries show that the subsidy system must be transparent and focus on the demand side and not on the rate of interest. It also shows that subsidies must be ready and accessible in time when needed. If not, the intermediary institutions that handle the loans will be seriously affected in their cash flow and financial statements, because they depend on these subsidies to recover the partial costs of capital and to continue giving more credits.

Revolving funds

The housing loan programmes supported by Sida in Central America have been designed and managed as revolving funds, and not necessarily as micro-finance lending institutions. The main principle that guides the revolving funds is that the recovered funds should maintain their real value and generate a small nominal capitalization of the fund in the medium and long term (Castillo 2001). However, Sida insists that the revolving fund should always aim to serve the main target population (Boman and Peck 2003) and not necessarily families with higher incomes.

Thus, the operative sustainability of the programmes is very much related to the way the revolving funds are administered, how cost recovery and reinvestment of the seed capital is done, and the way any liquid assets not in use for loans are managed and invested. In many cases the earnings gained by reinvestment of unused liquid assets generate additional resources that enable poorer target groups access to the programmes. Revolving funds remain sustainable only if macro-economic conditions are stable. This means that if inflation is too high, or that structural adjustment policies affect the incomes of the families, the possibility of maintaining the value of the fund in the long term is more difficult.

One of the common problems for lending programmes is that the financial institutions, working with small and micro-lending for housing, face a term disparity between their assets and liabilities. Availability of medium term capital is also a constraint (PM Global Infrastructure Inc. 2003). The long-term support given by Sida (an average of nine years per programme) allows these institutions to access this medium term capital.

The experiences also show that there is an important difference, not always recognized, between the operative sustainability and development of the housing programmes and the revolving funds, and the financial sustainability of the institutions responsible for the implementation of the programmes.

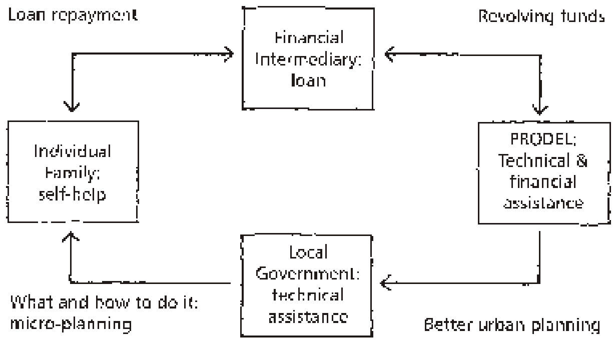
Sida has stressed that the bookkeeping of the revolving funds should be kept separate from that of the implementing agency. Thus, the revolving funds have an independent financial balance and statement from that of the implementing institution. The legal property of the funds, their rules of operation, the costs that the revolving funds should cover and their final use is still a matter of debate. However, these are issues that are defined and negotiated between the executing agencies and Sida in the different project documents approved (Boman and Peck 2003).

Mechanisms for channelling financial resources

Although there are still no conclusive findings, experience shows that there are different mechanisms to channel resources and to set up lines of credit for the target population: the direct creation and administration of loan portfolios, selling of loan portfolios to micro-finance institutions, establishing specialized entities to administer the revolving funds, and funds that are not recovered but serve as leverage to mobilize local resources. During these years, a range of financial intermediary systems were developed and combined depending on the approach and goals of each programme and institution.

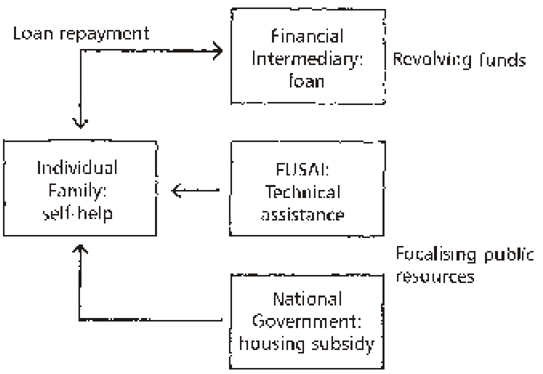
If the approach is to make resources accessible to the target population, develop models of integrated support to address the habitat problems of the urban poor.

The case of PRODEL in Nicaragua illustrates this approach. An executing unit was established within a governmental institution. This unit is now being transformed into a non-governmental foundation. PRODEL operates as a sort of "second tier" institution. It started by establishing lines of micro-credit for micro-entrepreneurs and for housing improvement through a formal bank, trying to prove that it was possible to "downscale" a bank to work with loans for the urban poor. The financial circumstances of Nicaragua forced the transfer of the loan portfolio from the bank to existing NGOs specialized in financing micro-enterprises and to developing housing improvement micro-lending schemes. The PRODEL experience showed that the process of conversion of an NGO that specialized in loans for micro-entrepreneurs to one that lends micro-credits for housing improvement requires important adjustments, so that the institutions can assimilate in their procedures the different variables that intervene in the process of analysis, lending and recovery of a housing improvement loan. PRODEL also channels resources through local governments for basic services and infrastructure, but funds are not recovered.



If the perspective of the programme is to expand, make massive lending and mobilize resources and to increase the value of the capital, then institutional changes are critical.

The case of FUSAI in El Salvador illustrates this approach. FUSAI has established a special private micro-lending institution called Integral to leverage and mobilize private capital and national savings, and to be responsible for the lending and recovery of the housing loans identified in FUSAI's activities. Thus FUSAI is trying to accomplish what, in the theoretical debate of micro-lending institutions, is called the "up-grading" of a non-conventional financial intermediary into a more formal type of financial institution.



In FUPROVI in Costa Rica support was given to consolidate a non-governmental institution as direct financial intermediary of the funds.

In Honduras, support started through a governmental programme that received financial and technical assistance from KfW of Germany. This programme was later on transformed into a public foundation, known today as FUNDEVI.

In Guatemala a trust fund was established. FDGL offers financial and technical assistance to NGOs that also offer micro-credits to groups or individual persons. Infrastructure projects are given as loans to municipalities.

In the majority of the programmes, it has been difficult to involve banks, to convince the formal system to assume risks and manage the micro-lending schemes. It is possible to show that revolving funds can produce important revenues and profit margins. However, the small sizes of each individual loan together with the huge volume of individual loans required to achieve a break even point and the difficulties and social risks that are common to the type of neighbourhoods where credits are given are some of the factors that inhibit the participation of the formal banking system in these schemes. In addition, in many of the countries of the region, the formal financing system is precarious, and many financial institutions have gone bankrupt or are under government intervention (IPC 2001).

Thus, the tendency in Sida has been to support the creation and strengthening of micro-lending programmes for housing improvements through non-governmental intermediary institutions that specialize in the management of revolving funds. The exception has been FUSAI who is transforming part of its operation into a specialized financial micro-lending institution. Sida will have to look very carefully at their experience to see how micro-financing institutions are able to leverage private capital and national savings into their operations.

Institutional development

Sida has supported each programme to develop according to the diversity and differences found among countries in the region. It recognized that the formula that enables success in one country does not guarantee success in another. It was forced to analyse the context and the institutional capacities of the organizations identified as the intermediary and administrators of the funds to ensure the best possible organizational and institutional system to reach the target population and fulfil the social and financial goals.

The limitations and weaknesses of the institutions should not hamper the development of housing improvement lending programmes even in contexts that are quite adverse to these processes.

A good external follow up on behalf of the funding agency, in this case by Sida, accompanied by solid leadership of the institution, has secured good systems to handle funds. Nevertheless, the continuation of these programmes should be based on national and local capacities and never be supplanted by external assistance. Thus, it is critical for the success of the housing improvement lending programmes that the funding agency provides these organizations with institutional development.

Technical and financial assistance for the institutional development of the organizations is required, and not only for the development of the programmes and the revolving funds. Sida is aware that these costs cannot be fully charged to the families and recovered through the loans. In this sense, the resources are a sort of subsidy for the institution. Nevertheless, they have allowed institutional learning and the development of models to make programmes more accessible for the urban poor.

Credit Conditions

The analysis of a small housing improvement loan has certain basic principles that are similar and universal to every loan analysis. However, there are certain parameters that differ from those applied to micro-lending for productive, services or trade activities. Housing micro-loans tend to be larger, have longer terms and lower interest rates than loans for micro-enterprise.

The understanding of the conditions for conceding a housing improvement loan is vital. On the one hand, it is important to understand the processes and means by which low-income families improve their housing conditions, with or without the assistance of a loan. These are complex and long term processes in which the household mobilizes scarce savings from the nuclear and the extended family. These efforts are recognized and encouraged by the housing loan programmes without trying to inhibit or suppress them.

The analysis done by the programme for a housing improvement loan takes into consideration the monthly family income as well as the monthly expenditures of the household as a whole. This differs from the micro-enterprise loan analysis in which a cash flow analysis is done to the economic activity of the business.

There are different factors considered in the analysis of the family income. This requires the assessment of all the members that compose the household and contribute, or do not contribute, to meet the living costs of the household (including the type of work done, if they are temporary or stable wages, if the person works in the informal or formal sector, etc). An assessment of the assets of the family (including non-monetary assets), years of living on the site, willingness and culture of payment, family stability, track record with other lending institutions, and even their ways of involvement in a community are also important factors that are taken into account.

> FUNDEVI in Honduras complements the income analysis of a household with a factor called Basic Food Basket (BFB): The BFB refers to the food products that are considered indispensable to cover the subsistence needs of a population in a given time. Income is assessed as BFB in relation to the members of a household that live from that income. Thus, the ideal minimum income should cover all food needs of the group in the household. For example, the minimum income of a family of eight members cannot be the same as the minimum income of a family of five members. The BFB allows setting differences among families, and how they can access the financial package of a loan given by FUNDEVI and the subsidy from the state.

The programmes are also creative with the type of collateral offered by the families and accepted by the financial intermediaries. In very rare opportunities, families are willing to give their land title as a mortgage guarantee for amounts that are relatively small compared to the value of the land they occupy or own.

The experiences of Central America also show that the rate of interest is not the main obstacle impeding low-income families' access to housing finance. Obviously, these cannot be as high as in the case of loans for micro-entrepreneurs. The repayment periods, the amount of the loan and the variety of guarantees accepted as collateral can be more important for effective access to credit.

> The case of PRODEL in Nicaragua shows that for credits under US$ 700 there are other types of collateral as efficient as a mortgage: co-signers that eventually can put their properties as mortgage, objects of value, and municipal certificates that show security of tenure but not necessarily a land title. Only half of the more than 5,000 loans given by the year 2000 were mortgaged and delinquency rates were still very low. The PRODEL experience also corroborates the difference between security of tenure and land ownership (Durand-Lasserve 2003). PRODEL gives loans to families that do not have full land ownership, but are able to demonstrate security of tenure.

When giving a mortgage loan, it is important that the institution is able to verify that there are no legal impediments on the land. This does not mean that the land should be fully titled in favour of the borrower. Attempts to integrate informal markets, including land and housing markets, with the formal market economy, especially through large scale titling programmes, are sometimes inefficient and can result in a greater inequality in distribution of wealth and resources (Durand-Lasserve 2003).

The loan contract between the lending institution and the client establishes the conditions of the loan: interest rates, amounts, fees, service charges and commissions that need to be paid, period of repayment, collateral and guarantees.

There are usually three types of payments: fixed monthly payments, decreasing and increasing monthly payments (see Example 1). The decreasing or increasing payments usually are used when there is a variation in the market rate interests. In some programmes such as PRODEL in Nicaragua, the loan given in the national currency takes into consideration the devaluation of the national currency vis-à-vis the US Dollar.

Usually, the way to calculate interest of a housing improvement loan is based on the declining balance method and not the flat method that is commonly used in the micro-enterprise industry. However, the interest necessary to charge on loans is determined by what each institution intends with its program. If the idea is to have a massive impact and leverage private capital and savings, then the institutional design assumes a logic that requires the establishment of market interest rates. If the idea is that the process is a social laboratory for the identification of innovative responses to the housing sector, then the way to determine costs and the interest rates should be different.

New housing however requires a combination of actors and a longer period of maturity of the projects. Therefore, the logic of the investments and the margin of profit have to be considered in a longer perspective. Costs of a new housing project include land, basic services, technical assistance, and financial costs during the construction period, costs of the housing building materials and indirect costs of financing.

In the new housing schemes developed by FUSAI in El Salvador there are four distinct phases: pre-feasibility, buying of land, road and infrastructure development and construction of new houses by self-help methods. The costs of the pre-feasibility stage include social promotion, surveys, identification of potential demand, social assessment of the projects and future clients. Usually the process is done with funds from FUSAI. All costs are counted: technical assistance, paper work, transport, and other miscellaneous costs. The cost of land, plus taxes and costs of land legalization all are included in the final cost of the house. The cost of road and infrastructure development is also done with FUSAI funds. Land is titled in favour of FUSAI who parcels and gives individual titles once the families pay back the loan.

The monthly payment includes the cost of the house plus the rate of interest. The amount to be financed by the loan equals the price of the house including the road and infrastructure development minus the subsidy received by the state minus the value of the self-help contribution by the family.

When working in informal settlements the logic is not the same. It is possible to work only with lending for housing improvement without engaging in the rest of the phases.

In the case of FUSAI, the rate of interest for housing improvement of a loan is formed by the following elements: the cost of the capital that will be lent to the end user (the cost of leverage of the funds plus inflation costs) + the operational and administrative expenses (promotion, selection and screening of potential loan users, legalization of the loan and follow up) + reserve for loan losses (delinquency defaults that cannot be recovered) + the margin of profit of the institution that provides the financial service (or the desired capitalization rate).

Cost Recovery

If the loan principal is not recovered at the scheduled time, loans to other potential borrowers cannot be made and payment of some expenses can also be delayed (Ledgerwood 1999). Sida's experiences in Central America show that as in any other credit programme, there are not necessarily bad debtors, but good quality methods of cost recovery that secure the success of the housing credit lending programmes. And one of the best ways to secure good cost recovery is to have high-quality pre-credit and credit analysis and client screening before loans are given.

This also requires that the staffs in charge of the credit process understand the importance of cost recovery and follow-up of the clients during the whole period of repayment. The experience of FUNDEVI in Honduras shows that it is very important to have a continuous process of training and consciousness awareness campaigns among the staff directly linked to credit analysis and cost recovery. Sometimes staff working with low-income groups tend to be more sensitive to the daily struggles that these groups have to survive with their fragile incomes. Thus, it is sometimes difficult for them to confront their clients with demands for repayments. In this sense, it is advisable to separate the promotion of the loans from the process of approval, disbursement and follow-up of the repayment of the loan. This will contribute to the continuity and sustainability of the operation and reduce the risks of increasing delinquency rates among clients. Staff should understand that the recovery of the loan is what makes the continuation of further assistance to other poor families possible.

Recommendations

The following recommendations reflect to a large extent the lessons learned from the experiences that make Sida supported programmes positive examples of innovative financial schemes that assist the urban poor to address their housing problems.

Housing policies
In a world in which cities in low-income countries are growing rapidly, economic growth is relatively slow and urban poverty increasing, the possibilities of delivering new housing for the urban poor are very limited. Housing improvement schemes through non-conventional financial intermediaries that work through participatory approaches with the poor should become part of poverty reduction strategies and housing policies in low-income countries. Building norms and standards for housing as well as for land subdivisions should be adapted to these economic conditions.

Moreover, the definition of what is an adequate shelter and the type of solutions for the quantitative and qualitative housing deficit should be adapted to the type of limited resources available for housing in each country (Angel 2002).

Full land titling is proven to be expensive and bureaucratic however recognition of secure land tenure can enhance individual initiatives in housing improvement by the urban poor. The introduction of new basic services will always be more expensive than improving or expanding existing ones, and their provision and delivery always lag behind the increasing needs of the urban poor.

Politicians, private building companies, government officials at central and local levels and international agencies should be convinced that the best way to deal with the qualitative backlog of housing is to create enabling low-income housing policies. These policies should recognize the incremental strategies that low-income families use to construct and improve their housing over time.

This type of programmes should however always be aware of the political risks linked to the execution of low-income housing. Political changes in government after elections, even within the same party, can have serious consequences to their development. Changes of ministers and also of political leaders at local level can sometimes define new priorities. Lowering the priority of low-income housing could jeopardize the work done within a previous administration.

It is therefore important to elaborate strategies that allow programmes to start having some influence in the definition of housing policies, to achieve and sustain institutional reforms required in the housing sector. These efforts might aim to avoid the pressures and political manipulations that sometimes try to influence and modify these innovative lending and financial housing schemes. Low-income housing programmes must be a long-term commitment from both governments and funding agencies. It takes time to build up systems and programmes and achieve results. The long-term commitment of Sida with the programmes, even amid crucial political changes in Central America, has allowed them to evolve positively over time.

Integrated interventions and participation of multiple actors
The key in this participatory process is the technical assistance that these programmes have provided to families and communities in order to handle the loans, subsidies and their own monetary resources better, as well as the technical and constructive aspects of their shelter improvements and new housing solutions. It is important to conceive participation as a means to mobilize resources, increase community capacities and empower families. The creation of enabling environments, processes and institutions that improve the capacity of the poor to access viable social, technical and financial solutions and resources is a key factor that has made the Sida supported programmes successful.

It is not the micro-finance lending per se, but the way the programmes create social inclusion, social justice and empowerment that complements the good results of the lending programmes. Knowledge of local conditions is indispensable and data collection should also be locally generated (Bolnick et al. 2003).

Participation however should be a process that is not too long in time and that can provide tangible results in a relatively short period. If it takes too long, the participating families may be disappointed and feel that their expectations are not fulfilled.

However, it is always important to remember that working with low-income housing can be very different from one continent to another. What is possible to organize in Latin America may be impossible in Africa or Asia and vice versa. It is thus important to be aware of cultural differences and their impact on the development of low-income housing schemes.

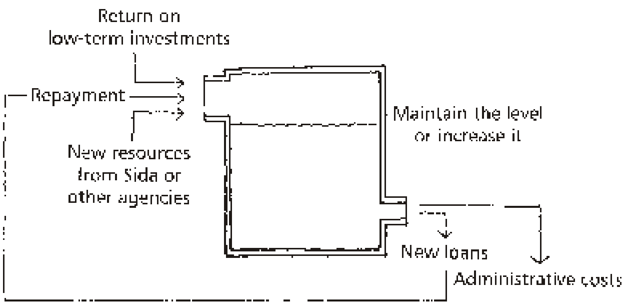
Subsidies
The subsidy system for housing improvement must be transparent and focused on the demand side and not on the rate of interest. Subsidies must be managed in a system that can be accountable to both clients and financial intermediaries. The principal function of the public sector is to set out the parameters of the system and to finance the demand side subsidy. Authorized institutions, such as the organizations supported by Sida, should be the agents that issue the mortgages and handle the subsidies. These organizations should also receive an administrative fee for handling subsidies. Thus, subsidies must be ready and accessible in time when needed by those institutions responsible of managing the loans. The bulk of the subsidies should be aimed to the poorest sectors of society.

Institutions that have small amounts of capital to invest, however, should have contingency plans for times when governments simply do not have resources for subsidies or when they try to manipulate these subsidies politically.

Revolving funds
Revolving funds are one of the best ways to ensure that seed capital given by the external funding agency can be maintained and used for the same purposes during a long period.

The sustainability of the revolving funds depends on the strategic financial and administrative decisions that an institution takes regarding the target population, the way liquid assets are invested, and the period of the rotation of the fund. The faster it rotates, the greater the possibility of recovering the funds and achieving financial sustainability. The sustainability of the revolving fund is not the same as the sustainability of the institution responsible in administering the fund.

The bookkeeping of the revolving funds should be kept separate from the accounting of the implementing agency. Thus, the revolving funds have an independent financial balance and statement from that of the implementing institution. The composition of a board of directors of a revolving fund is also important to achieve transparency and accountability.



Revolving Funds

Mechanisms for channelling financial resources
If the approach is to make resources accessible to the target population, there are models of integrated support to address the habitat problems of the urban poor. If the perspective of the programme is to expand, offer massive lending and mobilize resources as well as to increase the value of the capital, then institutional changes are critical. Supporting the creation and strengthening of micro-lending programmes for housing improvements through non-governmental intermediary institutions that specialize in the management of revolving funds is one mechanism.

Institutional development
It is critical for the success of the housing improvement lending programmes for the funding agency to provide institutional development to the intermediary organizations. All Sida supported programmes had such funds. Technical and financial assistance for the institutional development of the organizations is required, and not only for the development of the programmes and the revolving funds.

It is important for micro-lending institutions to have indicators regarding their institutional development in handling the loan portfolio. The target population being served, operative efficiency, technical management of the loans, and financial administration of the portfolio are some possible indicators.

Credit characteristics and conditions
Loans for housing improvement should be small and match what the families can afford, according to their regular monthly income. The process of approval and disbursement of the loans and the start of the building process should be rapid and without too much bureaucracy. In many cases it does not take more than fifteen days. Credits should also be incremental in time, with short-term repayment periods (two to four years). The longer the repayment period, the greater is the risk of default. Since no mortgage collateral is required, given the small amounts of the loan, the interest rate can be higher than housing loans with a longer period of repayment (Becerra 2003).

It is important to be creative with the type of collateral requested of the families and recognized by the financial intermediaries. In micro-lending, alternatives to land titles could and should be used: for example, recognition of land occupancy by a governmental organization; payment of taxes done by the family to governmental institutions, number of years that the family has lived on the site without threat of eviction by the original owners (Becerra 2003).

Usually, the way to calculate interest of a house improvement loan is based on the declining balance method, and not the flat method that is commonly used in the micro-enterprise industry. However, how much interest to charge on loans is determined by decisions made by each institution in its program. If the idea is to have a massive impact and leverage private capital and savings, then the programme design requires market interest rates. If the idea is that the process is a social laboratory to identify innovative responses to the housing sector, then there should be a different way to determine costs and the interest rates.

New housing requires a combination of actors and a long period for the projects to mature. Therefore, the logic of the investments and the margin of profit have to be looked at in a longer perspective. Costs of a new housing project include land, basic services, technical assistance, and financial costs during the construction period, costs of the housing building materials and indirect costs of financing.

Cost recovery
One of the best ways to secure good cost recovery is to have high-quality pre-credit and credit analysis and client screening before loans are given. This also requires that the institutions give exact information to clients, and carefully observe the attitudes of clients to payment. The staff in charge of the credit process must understand the importance of cost recovery and follow up the clients during the whole repayment period. It is very important to have a continuous process of training and consciousness raising campaigns among the staff directly linked to credit analysis and cost recovery. This will contribute to the continuation and sustainability of the operation and reduce the risks of increasing delinquency rates among clients.

Table 1 *Basic characteristics of the low-income housing credit programmes financed by Sida in Central America*

Characteristics	*Sites and Services*	*New Housing Construction*	*Infrastructure and basic services*	*Micro-credit for housing improvement*
Description	Developed land with minimum basic services and land tenure legalization	Developed land, land tenure legalization, basic housing units with or without basic services	Introduction, improvement or expansion of basic services and infrastructure to existing neighbourhoods.	Improvement or expansion of walls, rooms, roofs, floors and basic services
Main aspects and financial conditions	Revolving fund. Medium and long-term finance (4 to 10 years), Maximum amount per loan US$ 4,000. Positive and market rate interests over the outstanding loan. Cost recovery of operational and inflation costs. Mortgage loans. Needs a complementary subsidy from the state, especially for infrastructure and basic services.	Revolving fund. Medium and long-term finance (5 to 10 years). Maximum amount per loan US$ 4,000. Positive and market rate interests over the outstanding loan. Cost recovery of operational and inflation costs. Mortgage loans. Needs a complementary subsidy from the state, especially for infrastructure and basic services.	Revolving fund. Long-term finance to families (5 to 10 years). Positive interest and market rates over the outstanding loan. Cost recovery of operational costs and inflation. Collective collateral and mortgage loans. Requires complementary subsidies from the state or from local governments.	Revolving fund. Short and medium term finance (2 to 5 years loans). Loans between US$ 200 and US$ 1,500. Positive and market rate interests over the outstanding loan. Different type of collateral: mortgage, pawn, and co-signers. No need for state subsidies.
Role of families	Self-help and repayment of the loan	Participation in the design and self-help construction of the house and repayment of the loan	Design, administration, supervision, construction and payment of the loan	Self-help, design, management of the cash flow of the loan, repayment of the loan
Role of community based organizations	Organizing the demand and administration of resources	Organizing the demand and administration of the funds	Organizing the demand and administration of the funds	Organizing the demand
Role of local governments	Identification of sites + potential demand. In cases, developers of sites and services and resource administration.	Identification of the potential demand	Identification of the communities and administrators of resources	Technical assistance to individual families, construction permissions
Role of central government	Provision of long tem finance through subsidies schemes	Provision of long tem finance through subsidies schemes	Provision of long tem finance through subsidies schemes	Supervision and monitoring
Role of the external funding agency	Provision of technical assistance to the responsible organizations, monitoring and supervision	Provision of technical assistance to the responsible organizations, monitoring and supervision	Provision of technical assistance to the responsible organizations, monitoring and supervision	Provision of technical assistance to the responsible organizations, monitoring and supervision
Role of the financial intermediary	Intermediaries of funds and technical assistance	Intermediaries of funds and technical assistance	Intermediaries of funds and technical assistance	Intermediaries of funds and technical assistance
Target Population	Poor families with monthly income between 0.5 and 4 minimum wages and payment capacity	Poor families with monthly income between 2 and 6 minimum wages and payment capacity	Extremely poor families with monthly income between 0 and 5 minimum wages and payment capacity	Poor families with monthly income between 1 and 5 minimum wages and payment capacity

Source *Based on Castillo (2001) and information and documents for the institutions.*

Table 2 *Characteristics of the Programmes supported by Sida in Central America*

Characteristics	*FUPROVI*	*PRODEL*	*FUSAI*	*FUNDEVI*	*FDGL*
Country of operation	Costa Rica	Nicaragua	El Salvador	Honduras	Guatemala
Year programme started	1988	1994	1999	1999	1999
Type of organization	Originated as an NGO	Started as a Government programme and has become an NGO	Originated as an NGO	Started as governmental programmes transformed into a Public Foundation	Trust Fund with government participation working with NGOs
Type of programmes executed	New housing including infrastructure and basic services and housing improvement	Housing improvement and infrastructure and basic services	New housing including infrastructure and basic services and housing improvement	New housing, including infrastructure and basic services and housing improvement	Housing improvement and infrastructure and basic services
Fund intermediation	Loans are given directly to families by the institution. It works both with formal and informal settlements.	Loans given via regulated and non-regulated micro-finance institutions. Usually in established low-income settlements. PRODEL acts as second tier institution	Loans are given directly to families. It works both with formal and informal settlements	Loans are given directly to families, it works both with formal and informal settlements	Loans given via regulated and non-regulated micro-finance institutions, in formal and informal settlements. FDGL acts as second tier financial institution
Commissions charged by the intermediary	10% for technical assistance in the construction phase, 2% for administrative fees 2.5% for legal costs	10% for technical assistance for construction 1% for legal fees and paperwork	2.5% per year on each payment for administration 2.5% on the total loan amount for transaction costs; 1% per year charged on each payment for life insurance in amount of loan balance 1% up front for legal costs Mortgage fees	6% on the total cost of the housing solution 1.2% of the total cost of the housing solution U$ 6 for documentation costs	
Interest Rates	19% per year	18% per year	23% per year	20% per year	25% per year
Loan Term	Up to 15 years for new construction Up to 8 years improvements	Maximum four years for housing improvements	Maximum 7 years	Maximum 10 years for new construction 5 years for home improvements	Maximum 4 years

Source *Based on data from Daphnis (2002).*

Table 3 *Cost of housing improvements and new housing in different programmes supported by Sida in Central America (US dollars)*

Characteristics	*Costa Rica*	*Nicaragua*	*El Salvador*	*Honduras*	*Guatemala*
GNP per capita	4,100	420	2,000	850	1,700
Population below poverty line	20%	50%	48%	53%	57%
Sida supported institution and programme	FUPROVI	PRODEL	FUSAI	FUNDEVI	FDGL
Type of organization	NGO	Govern-mental	NGO	Public foundation	Trust fund
Housing improvement costs (a)					
Average cost for housing improvement	2,000	1,000	1,500	1,500	1,100
Average loan for housing improvement (b)	1,200	700	1,000	1.000	700
Average subsidy for housing improvement by state	600	200	350	350	300
Average self-help for housing improvement	200	100	150	150	100
Average cost minimum basic services for housing improvement	500	300	400	400	400
Average cost of land for housing improvement	500	400	400	400	400
Average cost of land, services and housing improvement	3,000	1,700	2,300	2,300	1,900
New housing costs					
Average cost of new housing	3,500	2,500	2,800	3,800	3,000
Average loan new housing (d)	2,100	1,500	1,700	2,300	1,800
Average subsidy for new housing provided by state	1,000	700	800	1,100	900
Average self-help for new housing	400	400	300	400	300
Average cost minimum basic services for new housing	1,400	1,100	1 200	1,100	1,500
Average cost of land for new housing	1,000	700	800	800	800
Average cost of land, services and new housing	5,900	4,300	4 800	5,700	5,300

Notes:
(a) In existing squatter or slum settlements where land regularization is possible with community and household participation.
(b) Repayment period: 2 – 5 years, non-subsidised interest rates.
(c) New settlements, including sites and services plus core housing unit of an average 25 square meters with community participation.
(d) Repayment period: 8 – 10 years, non-subsidised interest rates.
** Average direct costs for one household based on costs for 500 housing improvement solutions in existing settlements.*
*** Average direct costs for one household based on costs for 300 new houses in new settlements.*

Example 1 *Affordability, interest rates and repayment periods*

The following example shows how important are the repayment period and the affordability criteria in the micro-housing loan analysis. The analysis of these factors also depends on the how the organization seeks to obtain the delicate balance of not excluding poorer sectors of having access to a loan with achieving good cost recovery and therefore securing the possibility of making the revolving funds financially sustainable.

A loan of US$ 1,000 to be repaid in five years shows that monthly payment does not have such a strong variation if the interest rate increases say two points, from 16% or 18% per annum on a declining balance method. The monthly payment only varies from US$ 24.32 to US$ 25.39. However, if the borrower is able to afford 20% of its household monthly income to pay the loan, this means that the family requires a monthly income of US$ 121.59 to cover the payment. If the borrower is able to afford 25% of its household monthly income it requires a family income of $ 97.27. Thus, it is possible to see that the percentage of the income required to pay the loan has a bigger effect than a rate of interest in relatively short periods of time. However, the lending institution should be very careful not to increase the percentage of affordability proportion in such a way that it can put at risk the recovery of the loan during the period of five years.

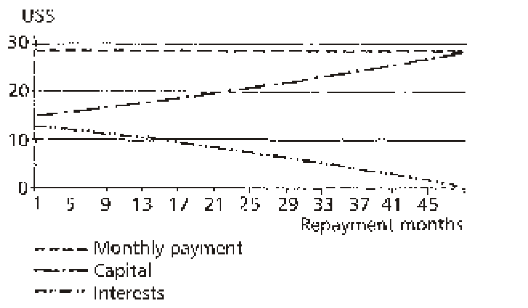
Interest rate	*16%*	*16%*	*18%*	*18%*
Amount of the loan	$ 1,000	$ 1,000	$ 1,000	$ 1,000
Repayment period (in months)	60	60	60	60
Monthly Payment of the loan	$ 24.32	$ 24.32	$ 25.39	$ 25.39
Affordability (client's capacity to pay)	20%	25%	20%	25%
Monthly household income required to repay the loan	$ 121.59	$ 97.27	$ 126.97	$ 101.57

The same is applicable to the repayment period. The same loan of US$ 1,000 with an interest of 16% per annum established on a declining balance method shows that the longer the period, the monthly payment decreases. However, the longer the period, the risk also increases as it is impossible to know if the family, especially those belonging to the informal sector, will have a regular income for such a period of time.

		Interest rate = 16% per annum	
Years to repay back the loan	*Monthly Payment in US$*	*20% of the monthly household income affordable to repay the loan*	*25% of the monthly household income affordable to repay the loan*
1	90.73	453.65	362.92
2	48.96	244.82	195.85
3	35.16	175.79	140.63
4	28.34	141.70	113.36
5	24.32	121.59	97.27
6	21.69	108.46	86.77
7	19.86	99.31	79.45
8	18.53	92.64	74.12
9	17.53	87.63	70.10
10	16.75	83.76	67.01

Loan Amount $ 1,000
Interest Rate 16% per annum
Repayment Period 48 months

Months	*Monthly Payment*	*Capital*	*Interests*	*Outstanding Balance*
1	28.34	15.01	13.33	984.99
2	28.34	15.21	13.13	969.79
3	28.34	15.41	12.93	954.38
4	28.34	15.62	12.73	938.76
5	28.34	15.82	12.52	922.94
6	28.34	16.03	12.31	906.90
7	28.34	16.25	12.09	890.65
8	28.34	16.46	11.88	874.19
9	28.34	16.68	11.66	857.51
10	28.34	16.91	11.43	840.60
11	28.34	17.13	11.21	823.47
12	28.34	17.36	10.98	806.11
13	28.34	17.59	10.75	788.51
14	28.34	17.83	10.51	770.69
15	28.34	18.06	10.28	752.62
16	28.34	18.31	10.03	734.32
17	28.34	18.55	9.79	715.77
18	28.34	18.80	9.54	696.97
19	28.34	19.05	9.29	677.92
20	28.34	19.30	9.04	658.62
21	28.34	19.56	8.78	639.06
22	28.34	19.82	8.52	619.24
23	28.34	20.08	8.26	599.16
24	28.34	20.35	7.99	578.81
25	28.34	20.62	7.72	558.19
26	28.34	20.90	7.44	537.29
27	28.34	21.18	7.16	516.11
28	28.34	21.46	6.88	494.65
29	28.34	21.74	6.60	472.91
30	28.34	22.03	6.31	450.87
31	28.34	22.33	6.01	428.54
32	28.34	22.63	5.71	405.92
33	28.34	22.93	5.41	382.99
34	28.34	23.23	5.11	359.76
35	28.34	23.54	4.80	336.21
36	28.34	23.86	4.48	312.36
37	28.34	24.18	4.16	288.18
38	28.34	24.50	3.84	263.68
39	28.34	24.82	3.52	238.86
40	28.34	25.16	3.18	213.70
41	28.34	25.49	2.85	188.21
42	28.34	25.83	2.51	162.38
43	28.34	26.18	2.17	136.21
44	28.34	26.52	1.82	109.68
45	28.34	26.88	1.46	82.80
46	28.34	27.24	1.10	55.57
47	28.34	27.60	0.74	27.97
48	28.34	27.97	0.37	0.00



Monthly payment, capital and interest of a US$ 1,000 housing improvement loan

Some basic concepts on the management of a housing loan portfolio[1]

Affordability analysis: assessment that relates a particular housing solution to the amount that can be paid without overstretching the payer and household's resources.

Arrears: Amount of debt still outstanding due to delayed repayments.

Capacity to Pay: the amount of capital a household can borrow and is able to repay periodically.

Collateral: A form of security given to the lender by the borrower as a guarantee for the repayment of the money. Traditionally, property, land, machinery and other fixed assets. Alternative forms of collateral include group guarantees, compulsory savings, nominal assets, and personal guarantees.

Co-signer: a person who agrees to be legally responsible for a loan but has not usually received a loan.

Credit: borrowed funds with specified terms of repayment.

Debt capacity: the ability of a client to repay borrowed funds.

Declining balance method: calculates interest as a percentage of the amount outstanding over the loan term. Interest calculated on the declining balance means that interest is charged only on the amount that the borrower still owes.

Default: Failure to pay or meet financial obligations.

Down payment: the money that has to be paid as the first instalment of a series of payments in a repayment scheme. Usually is 10–20% of the total cost. In many circumstances the down payment is substituted by the amount of labour and resources that the borrower puts into the housing solution.

Loan loss provision: is the amount expensed in a period to increase the loan loss reserve to an adequate level to cover expected defaults of the loan portfolio. This should be based on historical information regarding loan defaults and the amounts of time loans have been delinquent.

Mortgage lending usually requires that households hold full legal title to their property.

Portfolio at Risk: The portion of the loan portfolio that is contaminated by arrears and therefore at risk of not being repaid. It is calculated by dividing the Outstanding Balance on Arrears over 30 days + Total Gross Outstanding Refinance (restructure) Portfolio by the Total Outstanding Gross Portfolio as of a certain date.

Repayment Period: the number of years that the entire loan (principal and interests) requires to be repaid.

1 The majority of concepts can be found in UNCHS (1991), MicroRate (2002), Daphnis (2002) and Ledgerwood (1998).

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