

## *Chapter 3*

### **Pushing the boundaries of innovative finance**

This chapter seeks to evaluate which innovative financial instruments have been used in the water sector to access market-based repayable financing over recent years and with which results. Each type of innovative financing instrument is examined in turn, starting with a short description of the instrument, an evaluation of its current use in the water and sanitation sector and an evaluation of the role that ODA can play in developing the use of such instruments. Indeed, as mentioned in the Camdessus report, “aid should be used to catalyse other financial flows by such means as funding initial overhead costs, providing equity for revolving funds, guarantees, and subsidies targeted to performance (such as output-based aid)”<sup>1</sup>.

Table 3.1 can be used as a guide to navigate through the Chapter, as it links the innovative financial mechanisms presented in the Chapter with the critical mismatches they are seeking to address. The list that appears in this table is clearly not exhaustive, as there is almost unlimited potential for innovation in this area. Besides, such innovations are often combined as financial structures need to be tailored so as to adapt to the critical mismatches that materialise in each case. Table 3.3 at the end of the section evaluates the applicability of these financial mechanisms to different sets of circumstances.

#### **3.1. Blending grants and repayable financing**

*What does blending of grants and repayable financing consist of?*

Blending grants and repayable financing consists of combining concessional financing (either straight grants or loans with a grant element) with repayable finance (from IFIs or market-based sources) in order to support a single project or a comprehensive lending program. Blending ODA grant funding and IFI loans allows minimising the affordability constraint so as to facilitate access for populations that are not served and mitigating the perceived risks, thus creating better conditions to attract more local currency loans from

commercial banks and equity from the private sector. The main purpose of blending is to use grants so as to allow attracting repayable financing that would not have been provided otherwise, whilst ensuring that the resulting project is not so expensive that the poor are excluded from the service.

Such blending can take many forms, some of which are reviewed in turn in the following sections. For example, ODA grants can be provided as interest rate subsidies (Section 3.2), seed financing for revolving funds (Sections 3.2 and 3.5), contributions to the establishment of project preparation facilities (Section 3.9), etc. A key distinction is that blending can either be achieved at project level or at institutional level.

At the level of a particular project, blending can be achieved by defining the overall financing needs of the project and mobilizing resources from various sources into a single financial package in order to make it more acceptable and affordable to beneficiary populations and to allocate the risks more appropriately between project sponsors and financiers. One institution would usually need to act as the lead financier, much in the same way as a

**Table 3.1. Examples of innovative financial mechanisms in the water sector**

Critical mismatch	Examples of innovative financial mechanisms
Affordability constraints at household level	<ul style="list-style-type: none"> <li>• Blending grants and repayable financing (Section 3.1)</li> <li>• Micro-finance (Section 3.2)</li> <li>• Output-based aid (Section 3.3)</li> </ul>
Limited availability of funds for domestic operators and SSWSPs	<ul style="list-style-type: none"> <li>• Micro-finance (Section 3.2)</li> <li>• Output-based aid and innovative contract (Section 3.3)</li> </ul>
Risk profile and difficulties in managing certain risks (e.g. political risk, foreign exchange risk)	<ul style="list-style-type: none"> <li>• Blending grants and repayable financing (Section 3.1)</li> <li>• Guarantees and risk insurance (Section 3.4)</li> <li>• Devaluation backstopping facility (Section 3.4)</li> <li>• Local-currency financing (Sections 3.4 and 3.6)</li> <li>• Revenue agreements in lieu of guarantees (Section 3.6)</li> </ul>
Lack of funds at decentralised level	<ul style="list-style-type: none"> <li>• Municipal bonds (Section 2.2)</li> <li>• Pooled funds, revolving funds and bond banks (Section 3.5)</li> <li>• Instruments to increase sub-sovereign lending (Section 3.6)</li> </ul>
Short tenor of available financing	<ul style="list-style-type: none"> <li>• Guarantees (Section 3.4)</li> <li>• Equity contributions (Section 3.7)</li> </ul>
Under-capitalized balance sheets	<ul style="list-style-type: none"> <li>• Raising equity to strengthen the balance sheet, convertible loans, debt-equity swaps, “asset-light” expansion models (Section 3.7)</li> </ul>
Lack of understanding by external lenders and investors	<ul style="list-style-type: none"> <li>• Blending grants and repayable financing (Section 3.1)</li> <li>• Credit ratings (Section 3.8)</li> <li>• Project preparation facilities (Section 3.9)</li> </ul>
Lack of “bankable” projects	<ul style="list-style-type: none"> <li>• Project preparation facilities (Section 3.9)</li> </ul>

leading bank organises a banking syndicate to pool resources in order to finance a single project and spread the risks; the key difference being that some financing is in form of grants rather than loans. The different types of financing provided can match the risk profile of each project component, with some institutions providing grants for components which are more risky or with strong affordability constraints, such as connections in peri-urban areas.

Blending can also be achieved when specific financial institutions are set up to pool financing from both concessionary and market-based sources and where public funds are used to trigger financing on a market basis. The difference with a project by project approach is that it is explicitly written in the mandate of such institutions that they should seek to combine financing sources.

*To which extent has blending been achieved in the water and sanitation sector?*

***At the project level.*** Blending has been achieved in a few cases in the water and sanitation sector when a single IFI or donor has taken the lead to develop an overall project and pulled in financing from various other donors and, in some cases, commercial banks. This was done by the World Bank in the case of the water sector reforms in Senegal, for example (Box 3.14). In Mozambique, the European Investment Bank (EIB) took the lead to finance investments for an existing lease contract in the capital Maputo.<sup>2</sup> The EIB provided core funding for the infrastructure via a loan whilst other donors provided grant financing, such as the EU Water Facility or the Agence Française de Développement (AFD).

The five co-financiers of the Maputo water supply project in Mozambique signed a Memorandum of Understanding setting common procedures, namely for procurement, disbursement and approvals that benefit significantly the promoter and the project implementation in particular. About half of current 335 SSWSPs (small scale water service providers) operating in Maputo are likely to benefit from the project via an Output Based Aid component (Section 3.2). They are to be awarded small concession-type contracts, on the basis of which they can go to the commercial banking sector in order to (pre) finance their investment. This type of “anchor” financing gives the opportunity to all forms of financing to be provided rapidly as the overall project framework has been well defined upfront and allowed an IFI such as the EIB to provide repayable financing (at rates which are close to market rates) in areas where those funds would otherwise be too expensive.

***At the institutional level.*** Blending can also be institutionalised, so that different types of funders do not have to match up for each specific project. This allows reducing transaction costs and financing of smaller projects,

including technical assistance support or project preparation. Examples of such blending at the institutional level exist at the international level, such as the ACP-EU Water Facility or the Private Infrastructure Development Group (PIDG) (Section 3.9) and at the national level, such as FINDETER in Colombia, the Bulgarian Fund for Local Authorities and Governments (FLAG) in Bulgaria<sup>3</sup> or the Philippines Water Revolving Fund, recently set up with support from the United States Agency for International Development (USAID) and the Japan Bank for International Cooperation (JBIC).<sup>4</sup>

**International facilities.** In 2004, the European Union established the EU-ACP Water Facility with a view to increase the effectiveness of its assistance to the water sector in countries signatory to the Cotonou Agreement in Africa, the Caribbean and the Pacific (ACP) and catalyse additional financing. The process for releasing the funds was demand-based. Two tranches of EU grant funding of Euros 250 million each were released successively in 2004 to 2005, following a call for proposals that generated applications from 1 300 applicants. This facility was successful at mobilising additional financing (with a leverage ratio of 1.74 in the first tranche and 1.80 in the second tranche) for a mix of projects (including some at sub-sovereign levels). Loans remained limited, however, as they only accounted for 14% of total costs and contributions from market-based sources were minimal.<sup>5</sup> Similarly, the African Water Facility, was created in 2004 following an initiative from the African Ministers' Council on Water (AMCOW) in order to mobilize resources to finance water resources development activities in Africa. Its core financial mechanism includes the provision of grant financing in order to mobilize matching financial resources in the form of concessionary or commercial loans or grants.

A group of donors created PIDG with a more specific focus on mobilising private sector investment to assist developing countries to provide infrastructure for development.<sup>6</sup> PIDG is an umbrella organisation for several facilities and associated programmes, which were set up to address specific gaps in the market for the provision of infrastructure by combining public and private financing. Overall, PIDG vehicles have had very limited activities in the water sector.<sup>7</sup> The Emerging Africa Infrastructure Fund (EAIF), set up to provide long-term foreign exchange debt in Sub-Saharan Africa by blending repayable finance with grants, has not signed any projects in the water sector despite several attempts at doing so. InfraCo, an infrastructure project development company designed to assume the risks and costs of early stage project development in areas where many traditional developers have retreated, has been working on a number of water and sanitation projects although none of them had come to financial close as of mid 2009. In Madagascar, for example, InfraCo is developing the Sandandrano water project which proposes to establish a new water supply utility to serve approximately 11 communes that surround the capital city (total project costs are estimated at USD 50 million). The financial crisis

combined with recent political upheaval on the island means that the prospects for identifying a private investor are limited, especially given that the project would require substantial amounts of grant financing in order to be financially viable. Finally, GuarantCo, a local currency guarantee facility under PIDG designed to mitigate credit risk for local currency financing of infrastructure has yet to provide a guarantee in the water sector. Such dearth of water projects has prompted the PIDG management team to examine in more details what needs to be done in order for PIDG facilities to increase their activities in the sector. They found that, given the difficulties encountered to finance the sector compared to opportunities in other sectors, a dedicated financing vehicle (a “PIDG Water Window”) should be set up in order to blend grant financing with the financial instruments provided by PIDG facilities and therefore reduce the cost of finance. This vehicle is still at the feasibility stage at present.

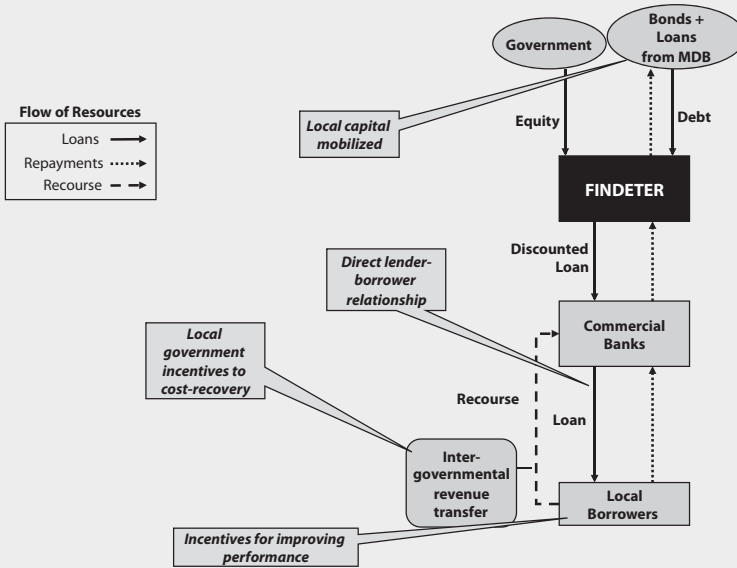
**Box 3.1. FINDETER in Colombia: incentivizing commercial banks to lend to local entities**

The Colombian government established FINDETER (*Financiera de Desarrollo Territorial*) in 1989 to help support a major decentralisation program. At the time, municipal governments had no experience with borrowing from banks. Commercial lenders had only short-term deposits and no experience with lending to municipal governments. By lowering the cost of loans, FINDETER enhanced commercial banks’ willingness to lend to municipal governments. The Republic of Colombia owns around 90% of FINDETER’s shares, with the remaining owned by Colombia’s local governments. Although it relied on international financing at the start (primarily from the Inter American Development Bank and the World Bank), FINDETER’s revenues from existing loans financed more than 78% of its activities in 2006. In addition, FINDETER has achieved an AAA local credit rating (from Duff & Phelps), which has helped accessing less expensive financing.

FINDETER acts as a second-tier lender, encouraging first tier lenders (commercial banks) to enter into direct relationships with local entities. Local entities can be local governments or corporatised entities under the control of a local government. FINDETER rediscounts loans that commercial banks make to local borrowers, making it more financially attractive for commercial banks to lend to local entities, as shown below. In practice, this means that a local entity applies for a loan to a commercial bank. The bank and FINDETER appraise the proposal. If approved, the bank lends to the local entity. FINDETER then in turn lends that amount at a discounted rate to the bank. The commercial bank remains responsible for servicing its rediscounted loan from FINDETER regardless of its own repayment experience from the local borrower. The bank thus absorbs 100% of the credit risk. The local borrower also has to set up a special account into which intergovernmental payments flow. The bank has a senior right to intercept revenues if loan payments are due. The bank in turn endorses these liens to FINDETER. Thus, if a participating bank becomes insolvent, FINDETER can still collect its dues directly from that bank’s local borrowers. This set-up is represented in the figure below.

Box 3.1. **FINDETER in Colombia: incentivizing commercial banks to lend to local entities**  
(continued)

**FINDETER – Colombia**



FINDETER rediscounts all or part of a loan and can offer maturities of 8 to 15 years, whereas loans to municipalities without FINDETER support would usually not exceed 5 years. Where appropriate, there can be a capital grace period of up to 3 years and an interest grace period of up to one year. Thanks to FINDETER, commercial banks have been willing to operate in the local debt market and to offer local borrowers long-term loans at attractive rates. From 1990 to 2003, FINDETER has financed about USD 2 billion in loans to more than 700 municipalities while maintaining low levels of bad debt (under 2% in 2003). Some years, FINDETER has approved more than USD300 million in new loans. Water and sanitation investments represent about 25% of these loans. One criticism was that FINDETER’s process to appraise loans was long. In 2003 FINDETER introduced a streamlined process, which led to an increase in its lending activity. This streamlined process reflects FINDETER’s increasing comfort with the loan origination by banks. Finally, although one of the former President of the organisation had to step down due to corruption allegations in 2001, the organisation has received the all-clear from the National Audit Office (Contraloría General) in recent years.

Source: Kehew, R., T. Matsukawa and J. Petersen (2005); Castalia (2008); FINDETER website: [www.findeter.gov.co/aymsite/index.php?alr=&](http://www.findeter.gov.co/aymsite/index.php?alr=&).

*National-level facilities – the example of FINDETER.* At the national level, a number of institutions have been set up which have successfully blended concessionary and commercial financing in the water sector. For example, FINDETER was set up in Colombia to attract commercial bank financing into local infrastructure by lowering the cost of these loans to municipal borrowers. About 25% of the portfolio of FINDETER has been in the water and sanitation sector (Box 3.1).

*What is the potential for further development?*

Blending of concessionary finance with market-based repayable financing appears to hold great potential for financing the water sector going forward, given that an element of subsidy is almost always going to be required in any financing package for projects in the sector. In the context of the ongoing financial crisis, the importance of such blending is likely to become more important and will require the creation of new types of financing vehicles, particularly at domestic level, in order to achieve this. One note of caution here, however, is that as for grouped financing vehicles (Section 3.5), the setting up of such institutions often takes time and the initial costs of doing so can only be off-set over a long time frame

A benefit of blending is that it can minimise the risk of “crowding-out” of market-based financing by concessionary financing, a risk that is often encountered in countries which are highly dependent on external financial assistance. Water sector utilities may not even try to arrange a commercial loan when donors offer better financing terms and are eager to disburse funds for the few bankable projects they can identify. By deliberately blending both types of financing, donors can avoid crowding out commercial lending and help increase understanding of the sector by external financiers.

### **3.2. Extending the range of potential borrowers via micro-finance**

*What is micro-finance and what role can it play in the water and sanitation sector?*

Micro-finance refers to all financial services offered to individuals or businesses that do not have access to mainstream financial institutions in order to help them to initiate and develop their economic activities. Micro-finance products are usually available with flexible collateral conditions and are offered by specialized micro-finance institutions (MFIs), which can be of varied size. With respect to lending instruments, loan size can range from very small loans for household investments or micro-business development to funding of small projects with loan sizes of less than half a million USD offered on a commercial basis by micro-finance and other financial

sector players. To offer products to their customers on a sustainable basis, MFIs need to pay careful attention to their financial, institutional and organisational viability. The MFIs would usually be well established in the community, which gives them an edge in terms of assessing a borrowers' ability to repay and enables them to rely on peer pressure and community cohesion to obtain repayment.

In the water and sanitation sector, micro-finance can be used to provide access to finance to those who would otherwise be excluded, such as households, SSWSPs or even community based organisations (CBOs) and non-governmental organisations (NGOs). It can help address the affordability constraint at household level, as it enables them to spread investments over a longer period of time and reduces the impact of the initial cash outlay. MFIs may also be present in areas where commercial banks do not reach, such as in rural areas, which is particularly important when responsibilities for WSS have been decentralised.

### *How has micro-finance been applied in the water sector?*

Even though micro-finance as a financing model is now well-established with a solid track record, its applications to the financing of WSS has remained somewhat limited. From the experience to date, there appears to be a remarkable potential to develop, although this is likely to require support from governments and international financial institutions, in the form of financial support and capacity-building. A recent review conducted by Meera Mehta for the Gates Foundation sought to evaluate the importance of micro-finance in the water and sanitation sector.<sup>8</sup> The study confirmed that, contrary to other sectors such as education, health and housing, where microfinance institutions are very active, MFIs rarely offer tailored products for WSS. Only a few large MFIs in Asia have achieved significant scale in these areas, such as BRAC, Grameen Bank and ASA in Bangladesh, SEWA in India and the Vietnam Bank for Social Policy in Vietnam (Box 3.2).

As Mehta (2008) indicates: “Experiences so far suggest that although several pilots are available to study, the sustainability and scalability of the market is still unknown”. Mehta (2008) identified three types of micro-finance products in the water sector: retail loans to help households access WSS, loans to small and medium enterprises (SME) for small water supply investment and loans for urban service upgrading and shared facilities in low income areas of towns and cities. These are described in more detail below.

***Retail loans for water and sanitation household investment.*** Retail loans are generally used for new water connections, construction of family wells, bathrooms, toilets, or purchasing water purifiers. They are provided to individuals with tenor of less than three years. The loan amount ranges from



approximately USD 30 to 250 (sanitation loans tend to be smaller). Next to these targeted MFI products, an important share of general purpose loans from MFIs acting in India and in a few African countries (Benin, Zambia, Uganda) is increasingly used for water and sanitation activities. According to the Indian microfinance institution SEWA Bank, 15% of the loans it provided in the city of Admedabad have been used for water or sanitation sector activities in the past five years.

Donors have provided support for the development of retail loans for water and sanitation. In particular, they have concentrated on building linkages with regular MFIs or banks. For instance, in September 2006, Bank Rakyat Indonesia (BRI) signed a Memorandum of Understanding with a

### Box 3.2. Revolving funds for water and sanitation in Vietnam

In 2001, a Sanitation Revolving Fund (SRF) component was incorporated in the World Bank-financed Three Cities Sanitation Project in Vietnam to provide loans to low-income households for building on-site sanitation facilities. The SRF provided small loans (USD 145) at partially subsidized rates to low-income and poor households to build a septic tank, a urine diverting / composting latrine or a sewer connection. To access the loans, households needed to join a Savings and Credit group, which bring together 12 to 20 people who must live close to each other to ensure community control. The loans covered approximately 65% of the average costs of a septic tank and enabled the household to spread these costs over two years. The loans acted as a catalyst for household investment although households needed to find other sources of finance to cover total investment costs, such as borrowing from friends and family.

The initial working capital for the revolving funds (USD 3 million) was provided as a grant by the World Bank, Denmark and Finland. The SRF was managed by the Women's Union, a countrywide organisation representing the rights and interests of women that has a long experience with running micro-finance schemes. The initial working capital was revolved more than twice during the first phase of the project (2001 to 2004) and was then transferred for subsequent phases to be revolved further. Combined with demand generation and hygiene promotion activities, the SRF helped around 200 000 households build sanitation facilities over the course of seven years. The revolving fund mechanism allowed leveraging household investment by a factor of up to 25 times the amount of public funds spent. Repayment rates are extremely high (almost 100%).

This pilot approach has since been scaled up, via other World Bank-funded projects (with an outstanding working capital of about USD 25 million as of March 2009) or through the Vietnam Bank for Social Policy (VSBP). The latter offers separate products for water and sanitation, through the Safe Water and Rural Environmental Sanitation Program (SWRESP). In 2007, the amount of loans for SWRESP was USD 20 million.

*Source:* Trémolet, S. with Perez, E. and Koslky, P. (2010); Mehta, M. (2008).

water utility company (PDAM) initiating a micro-credit financing scheme for household water connections. This initiative, supported by USAID Environmental Services Program, is to be scaled up countrywide with a target of 10 000 connections by 2009. In Vietnam, the World Bank and the Governments of Finland and Denmark provided seed money for a revolving fund for household sanitation investments. The fund, which was managed by the Women's Union, a pervasive organisation throughout the country with a long experience in micro-finance schemes, proved very successful and was scaled up through further World Bank projects and the Vietnam Bank for Social Policies (Box 3.2)

Such revolving fund mechanism can be seen as an extension of the traditional group lending methods (such as *tontines* in West Africa).<sup>9</sup> In many countries, their record has been patchy because of difficulties with maintaining the value of the initial fund. However, when the revolving funds are organised with external seed financing to provide initial working capital (at subsidised rates) and the support of an established MFI, such as in the example in Vietnam, they appear to be an effective way of leveraging private finance (household investment in on-site sanitation in that case).

***SME loans for water and sanitation.*** SME loans can be provided to community groups, private providers in greenfield contexts, or for augmentation/rehabilitation of WSS. According to Mehta (2008), experience with this market segment is limited, and has not gone beyond a few pilot projects. SME loans have been provided to small public utilities or small service providers.

For example, in Togo, CREPA (Centre Regional pour l'Eau Potable et l'Assainissement à Faible Coût), an institution bringing together seventeen African states and dealing with water-related issues, encouraged a change towards private provision of services in 2001, due to important water shortages and an inefficient public utility. A credit scheme was elaborated via six domestic microfinance institutions. It was foreseen that at least two households from a given area would be allowed to contract a loan for new water investments (either a USD 3 000 loan for a shallow borehole or a USD 1 000 loan for a rainwater harvesting tank). Although the loans are subscribed by households, funds are disbursed directly to the private drilling companies. The viability of these loans is linked to the reselling of water in bulk or in buckets by the households, which act as small private providers. From 2001 to 2006, approximately 1 200 households had their own water points funded through loans from local MFIs.

Although they are currently limited and have so far remained at the level of pilot projects, SME loans could significantly help small water supply projects. To secure access to finance for SSWSPs in such a way, other reforms would need to be adopted, such as the definition of clear legal and regulatory frameworks for SSWSPs to operate under. In poor areas, where affordability

constraints may limit their development, such loans may need to be combined with subsidies (preferably output-based subsidies), as it was done in a project financed by K-Rep in Kenya (Box 3.4).

***Loans for urban upgrading and shared facilities.*** In urban slums, the provision of improved WSS would often require prior activities to upgrade the settlement as a whole. Micro-finance can be used to provide loans for an overall upgrade and financing shared facilities. A few MFIs in Latin America and India have ventured into this critical but challenging area. For example, the Peruvian microfinance institution Mibanco is offering its customers a line of credit entitled “urban upgrade”, to offer loans to communities who plan to upgrade water, electricity and road infrastructure in their neighbourhoods. These are individual loans for each community member but the funds are paid out directly to the project provider, contractor, or network installer. The loans can be for USD 10 000 to 160 000 to cover up to 90% of the project costs. They have a tenor of six months to five years and carry a 25% interest rate.

In those communities, microfinance can play a key bridging role when subsidies or public investments have been promised but take time to be delivered. However, this would require improving the design of subsidy schemes so as to encourage, not exclude, the use of microfinance in urban services upgrading. This would also require enhancing links with local governments to ensure effective links between slums settlement programmes and local services utility networks.

It should be noted, however, that microfinance is particularly suited for relatively small investments and where the commercial banking sector is weak or underdeveloped (*i.e.* rural areas). Due to the typical tenure and interest rates, such finance is usually not well adapted to support investment with long pay-back times or requiring significant investment. In addition, due to relatively limited experience with using microfinance for water and sanitation investments (partly because they are not recognised by some as income-generating investments), it would be preferable to use microfinance in areas where strong microfinance institutions already exist and are looking to extend their activities to the water and sanitation sectors.

### *What role can ODA play to catalyse the development of micro-finance products?*

Many of the existing experiences of using micro-finance for WSS have been carried out with the support of donors, in the context of major programmes for improved water and sanitation with associated technical assistance. For example, the work of BRAC, a Bangladeshi NGO delivering MF products to the water sector is linked to a program supported by the Dutch Government.

Donor funding could be used to catalyse the development of micro-finance products for the water and sanitation markets by addressing the following constraints:

- Lack of awareness of WSS sector issues among MFIs in the country/region where they operate. There is a similar lack of awareness among WSS sector practitioners of the potential applications of micro-finance instruments to the sector;
- Lack of specialised products for water and sanitation promoted and tested by MFIs, especially for SME-type products structured around project finance approaches;
- Limited access to medium/long-term funds for MFIs to finance their activities (particularly in the context of the global financial crisis) and difficulties to blend micro-finance products with subsidies in order to meet affordability concerns.
- Grant funding for technical assistance, training and sector development, particularly when a change in the institutional set-up is needed.

### 3.3. Alleviating affordability constraints with output-based aid

*What is output-based aid and what role can it play in the water and sanitation sector?*

Output-based aid (OBA) is a mechanism that ties the disbursement of public funding to the achievement of clearly specified results that directly support the delivery of basic services.<sup>10</sup> The full amount of subsidies is paid to the beneficiary (private or community operators) *only once these results have been met*. This allows leveraging private sector funds, which usually need to pre-finance a large portion of the costs. The need for subsidy is assessed on the basis of demand, costs and social benefits generated. The amount of subsidy is reduced by introducing competitive pressure on the operators, which incites them to keep costs down for the same service quality. OBA financing helps to direct subsidies to the targeted populations more accurately and to make operators accountable for funds through the monitoring of their actual performance. The objective is that OBA payments should only complement and never substitute for user tariffs as the main source of service providers' revenue.

Marin (2002) identified four potential ways for applying the OBA concept to the design of water concessions,<sup>11</sup> including: to improve affordability for targeted groups via consumption subsidies, to expand water and sanitation coverage via connection subsidies, to ease the transition to cost-covering tariffs and to expand wastewater treatment. The Camdessus report had also

recommended that output-based aid could be used to expand networks or fund revenue shortfalls on a diminishing basis under a concession (Box 1.3).

### *How has OBA been applied in the water sector?*

The main concept behind OBA (*i.e.* to pay subsidies only after the output has been delivered) has been applied in a number of cases, either through World Bank funded projects or via other channels. According to a recent review by GPOBA,<sup>12</sup> there are currently 33 OBA projects with World Bank participation in the water and sanitation sectors, of which 24 are water supply schemes, 3 are sanitation schemes and 6 are providing both water and sanitation. In terms of volume of subsidies disbursed, the water and sanitation sector accounted for 26% of GPOBA's portfolio, the largest share attributable to a single sector.

The majority of projects identified involved one-off subsidies for access. They mainly include piped-water schemes, and access is usually defined as the delivery of working connections as demonstrated through a paid water bill. Of the projects identified in the water and sanitation sectors, 9 include OBA subsidies funded by IDA and IBRD, for a total OBA subsidy funding for the water sector of USD 90 million. The review concluded that “OBA is still at the pilot stage in the water sector, although lessons for scale-up are now available”.

Aside from the GPOBA programme, OBA principles are frequently referred to but have yet to be mainstreamed into the design of projects by governments and donor agencies.<sup>13</sup> There are a few important exceptions, however, where OBA principles have been applied without necessarily being tagged as OBA projects. For example, social connection schemes in West Africa (such as in Senegal or Ivory Coast) can be considered as early OBA schemes. In India, the approach of the Total Sanitation Campaign (a nationwide programme to boost sanitation coverage, particularly in rural areas) was revised in 2004 to make the payment of the subsidy to below-poverty line (BPL) households dependent on the entire village reaching Open Defecation Free (ODF) status.<sup>14</sup> OBA mechanisms have also been considered by bilateral donors, such as the AFD in Morocco and South Africa,<sup>15</sup> but they are yet to apply those principles on a significant scale.

So far, the most popular way of using OBA in the water and sanitation sector has been to support poor households who cannot afford the full cost of a water connection. This mechanism works as follows: a fixed subsidy amount is paid to a private operator for each new water connection installed in a poor neighbourhood. Such a scheme allows mobilizing private funding in support of coverage extension objectives and provides flexibility to the operator, both in the funding sources and for carrying out the expansion

plan. A significant risk with such approach, however, is that the newly connected users might not receive adequate service from the operator after the connection has been installed. To enhance the sustainability of the schemes, a portion of the output-based payment can be withheld until several months of service delivery have been made. For instance, in the Vietnam Rural Water project involving East-Meets West (EMW), an international NGO, 80% of the subsidy is disbursed from GPOBA to EMW upon realisation of the connection and the remaining 20% after proof of six months of satisfactory service provision. In the Kenya Microfinance for Community Water Schemes project, the community water associations are bearing performance risk as they do not get paid until evidence of outputs has been received in the form of working connections, several months of service delivery and in some cases demonstration of increased sales.

In order to focus subsidies on the poor, OBA projects often rely on geographic targeting, *i.e.* they target areas where the poorest are concentrated and where there is little risk of including beneficiaries who are not considered deserving. In addition, a number of these projects use self selection and/ or means tested targeting mechanisms, which can increase their targeting effectiveness. In the Philippines, for example, the Manila Water Supply project uses a combination of geographic targeting and means tested targeting. The project targets communities that are officially certified as “indigent” as per standardized means proxy tests indicating that a majority of households fall under the national poverty line. By contrast, the India Improved Rural Community Water in Andhra Pradesh project successfully combines three major targeting mechanisms – geographic, means tested and self-selection – and is highly effective in reaching the poor. To target individual beneficiaries in the villages, the project uses the government’s “white ration card”, a system that entitles low-income individuals to obtain basic commodities (such as rice or flour) at a reduced price.

A key finding of the GPOBA/IDA-IFC review is that “OBA is not geared to extensive leveraging of private debt and equity in and of itself, but that the real success of OBA is the ability of relatively small amounts of subsidy to mobilize private sector expertise for poor areas where the private sector would otherwise not go”.<sup>16</sup> A World Bank funded OBA project in Paraguay, for example, sought to attract local Paraguayan operators (*aguateros*) and construction firms active in the water sector to unserved rural areas and small towns by providing an output-based aid subsidy, awarded through competitive bidding (Box 3.3).

The introduction of an OBA subsidy requires that each project be pre-financed using other sources of funds. In some cases, such pre-financing requirements can be a real constraint, especially when the service providers are relatively small and have difficulties in mobilising funds for investment.

### Box 3.3. OBA to support Paraguay's aguateros development into rural areas

In the early 2000s, the rural water agency in Paraguay (SENASA), in charge of providing water and sanitation service to rural communities with fewer than 10 000 inhabitants, reached about 37% of the rural population (or about 18% of households nationwide). In the process, it created more than 1 000 water users associations, which assumed responsibility for service provision. In addition to partially contributing to the costs of constructing the systems, SENASA had to provide large subsidies to communities since they often failed to make agreed cash contributions or to service their debt. Reliance on public financing was high and public subsidies for rural water and sanitation systems amounted to an estimated USD 300-400 per connection. With this system, Paraguay would have needed more than 20 years to reach 85% coverage in rural areas.

Alongside the public water utility in charge for urban areas (ESSAP), small private providers known as aguateros were supplying water to about 500 000 people in peri-urban areas, mainly in the greater metropolitan region of Asunción. These small operators had constructed piped water supply systems over the previous 20 years without public financing. Many were not registered as businesses, operating as part of Paraguay's active informal sector. Altogether, aguateros served around 9% of the country's population in 2004 or about 17% of all Paraguayans with piped water supply. Given the constraints of the state water utility and the traditional water user association model, public authorities concluded that private providers would be the best means of reaching unserved communities and rapidly expanding rural coverage. SENASA agreed to implement a pilot output-based aid program to attract aguateros and local construction companies to serve small towns.

In the first phase of the pilot, it was determined that a per-connection subsidy (amounting to USD 150 for each connection) would be provided. The winning bid, matching both technical requirements and the lowest connection fee, was extremely competitive, committing the winning consortium (two construction companies and an aguatero) to build water systems in all four towns at USD 200-217 per connection. To make it easier for poor residents to pay, the winning consortium hired these residents during construction, paying them with cash and with vouchers to reduce their connection fee.

In the second phase, the bidding variable changed from the connection charge paid by users to the connection subsidy provided by the government. The connection charge per household was fixed at USD 80 per household. In the first phase of the pilot all subsidy payments were withheld until the operator had demonstrated it had successfully provided the connections, constraining the private sector to mobilize most of the construction financing. In the second phase, shares of the total subsidy payment were to be progressively released as the operator completes components of the system.

*Source:* Drees, F., Schwartz, J. and A. Bakalian (2004).

Combining OBA subsidies with micro-finance can therefore be an attractive way of facilitating pre-financing by local service providers whilst maintaining the incentives on serving poor customers. This approach is being piloted in Kenya, via K-Rep bank, a local bank with a focus on micro-finance and development projects (Box 3.4).

An alternative way of financing SSWSP which does enable substantial leverage of private financing by SSWSPS is the DBL (Design Build Lease model), which is a form of project finance suited to relatively small-scale operators. A key difference, however, is that most of the financing under the DBL model is provided up-front, and the operators need to repay the loan via payment of a lease fee intended to cover the initial capital outlay. The World Bank has experimented with these models in the Philippines, Indonesia and Cambodia. In Cambodia, for example, the design-build lease approach provides long-term financing and technical assistance to entrepreneurs willing to build and operate systems in small towns. The entrepreneurs need to finance only 10% of the initial capital costs up-front and then pay the rest of the capital costs put up by the Government of Cambodia in the form of a lease payment. In that way, they benefit from the very advantageous borrowing rates of the Government, which passes on long-term financing at terms comparable to what it receives from the World Bank. In addition, entrepreneurs are provided up-front with fairly detailed designs, which help them in bid evaluation and project start-up. The incentive to provide services over the long-term is strong, since they need to generate sufficient revenues in order to pay the lease payment every year.

*What may be needed to expand the use of OBA subsidies in the water sector?*

In terms of sources of funds, OBA consists of using taxes and transfers in order to leverage market-based repayable financing and help reach low-income households in a more cost-efficient manner. Reasons for its limited use in the water and sanitation sector so far are varied. The OBA approach, as practiced by GPOBA, has been criticised by some as being overly complex, which sometimes generates relatively high transaction costs and makes it more difficult to scale-up beyond the pilot stage. There appears to be trade-offs between the quality of the targeting and incentive mechanisms and the costs of designing and operating the schemes. However, it is ultimately the quality of the design of the scheme that enable the poor to truly benefit from the scheme: this requires that the right incentives be established for service providers, via granting the contracts on a competitive basis, designing the contracts and establishing regulatory oversight.

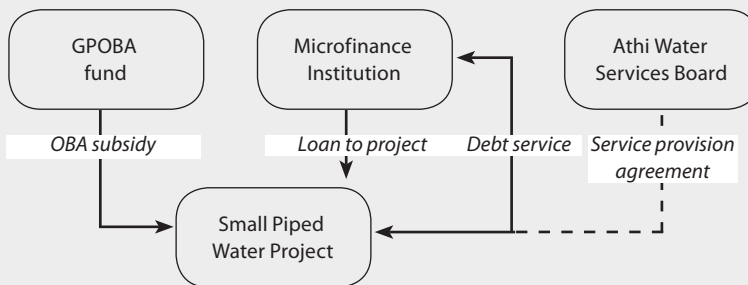
Besides, most of the OBA schemes so far implemented have been designed as pilot schemes in the context of broader World Bank projects, which partly



### Box 3.4. Combining OBA with micro-finance in Kenya: the experience of K-Rep bank

The Water and Sanitation Program and K-Rep bank have developed a pilot project for supporting local water service providers in Kenya that combines micro-finance to leverage commercial resources with output-based subsidies to ensure appropriate focus on network extensions. K-Rep Bank was officially established in Kenya in 1999, as a bank with a focus on micro-finance, small and medium enterprises, poor households and development-oriented enterprises.

The pilot project was designed to address some of the constraints weighing on water service providers in reaching communities through micro-finance, which include limited MFI exposure to the water sector and/or project finance; interest rates and tenors beyond what is affordable; and a lack of up-front collateral for small piped water systems. Institutional and financial arrangements work as follows: the small piped water project (the borrower) contracts a loan with the micro-finance institution (K-Rep Bank) and is responsible for making debt service payments to this institution. Further to the Kenyan Water Act of 2002, the small water project has to sign a Service Provision Agreement (SPA) with the Water Service Board (WSB) in whose jurisdiction it falls (for example, the Athi Water Services Board-AWSB for the area surrounding Nairobi). Upon successful completion of the project, the Global Partnership for Output-based Aid (GPOBA) pays subsidies to the small piped water project (figure below), which reduces the overall size of the loan to the communities, and keeps debt service payments affordable. It also provides better risk management from the lender's perspective and increases incentives for project completion as the subsidy is transferred upon the delivery of agreed outputs (including the increase in the number of connections and changes in revenues collected).



Prior to the subsidy release, the K-Rep Bank's loan amounts to 80% of the total investment. This share drops to about 40% upon successful delivery of the outputs (which needs to be independently verified) and payment of the subsidy. After the release of the subsidy, the MFI remains responsible for collecting the remainder of the loan that is to be covered from water revenues. Technical assistance grants are also provided to assist with project development: each community project receives a grant for management assistance during project implementation and during the first year of operations.

Sources: Trémolet, S., Cardone, R., Da Silva, C. and C. Fonseca (2007); Mehta, M. and K. Virjee (2007).

undermines their ability to be scaled-up and mainstreamed through a country's overall financing strategy. One potential way of achieving quicker scale-up could be to establish funds (such as Universal Service Funds in the telecommunications sector) which could provide OBA subsidies to targeted communities on an on-going basis rather than as one-off projects. This approach is currently being tested with GPOBA support, in the form of an OBA facility in Honduras.<sup>17</sup> The Facility is to be housed within the Honduran Fund for Social Investment (FHIS) and will provide USD 4 million in subsidies for the financing of eligible water and sanitation infrastructure projects, selected based on rigorous identification criteria. The OBA Facility will effectively work as a challenge fund, in which subprojects compete with each other for funding. Pre-financing will also be made available through the Facility for those project implementers that need it, although the payment of the subsidy will remain linked to the output. Although the approach seems promising, the facility has yet to produce results, which means that it is too early at this stage to evaluate whether such “mainstreaming” of an OBA approach can be successful or not.

Finally, recognising the constraints on pre-financing at programme-design stage (as it was done in Kenya, where OBA was combined with micro-finance) can help in making OBA subsidies more attractive to water and sanitation service providers which are otherwise struggling to maintain their financial equilibrium, let alone to invest in expanding their services.

### 3.4. Mitigating risks with guarantees and insurance

*What are risk mitigation instruments and what role can they play in WSS?*

Risk mitigation instruments can help with mobilising market-based repayable financing for the water sector in many ways. Risk mitigation instruments are “financial instruments that transfer certain defined risks from project financiers (lenders and equity investors) to creditworthy third parties (guarantors and insurers) that have a better capacity to accept such risks”.<sup>18</sup> These instruments can be used to improve access to finance for developing country governments and local infrastructure companies by improving the terms of their commercial debt (extending tenor and reducing interest rates) or helping to attract equity investors. In developing countries, such instruments would typically be provided by international financial institutions (IFIs), bilateral donors, export credit agencies (ECAs) or private political risk insurers. In OECD countries, private companies referred to as “monoline insurers” can also provide guarantees to water companies or local governments which would otherwise have difficulties in accessing repayable finance via the market.<sup>19</sup>

A broad range of risk mitigation instruments is therefore available from a variety of institutions. As each of the potential provider refers to their products

in slightly different ways, understanding what is on offer and which risks can be mitigated in such a way can be slightly complicated. Table 3.2 summarises the main types of instruments provided by IFIs, bilateral donors and ECAs.

In particular, Partial Credit Guarantees (PCGs) and Partial Risk Guarantees (PRGs) are two key instruments that can be used to lengthen the terms and reduce interest rates for water infrastructure projects (Table 3.2). The key difference between these two instruments is that a PCG covers part of the debt service of a debt instrument regardless of the reasons for default whereas a PRG covers commercial lenders in private projects for the full amount of debt in the event of default caused by certain risks, as specified in the guarantee instrument. Whereas PCGs are used to support public investments projects involving sovereign borrowing, PRGs are usually used to support private sector projects. The use of these two key instruments is described in more detail (Table 3.2).

Table 3.2. **Risk mitigation instruments: definitions and applications**

Risk mitigation instrument	Definition	Examples of risks covered
Partial Credit Guarantee (PCG)	Covers part of the debt service of a debt instrument regardless of the reasons for default. Provided by IFIs and a few bilateral donors. Improves a borrower's market access and the terms of its commercial debt.	Most risks, including commercial risk and political risk.
Full Credit Guarantee or Wrap Guarantee	Covers the full amount of the debt service in the event of default. Usually provided by private monoline insurers to achieve a higher credit rating for bond issuers.	Most risks, including commercial risk and political risk.
Export Credit Guarantee or Insurance	Covers losses for exporters or lenders financing projects tied to the export of goods and services. Provided by ECAs.	Percentage of political risk and commercial risk.
Partial Risk Guarantee or Political Risk Guarantee (PRG)	Covers commercial lenders in private projects for the full amount of debt in the event of default caused by certain risks, as specified in the guarantee instrument. Those risks are political in nature and defined on a case-by-case basis. Provided by IFIs and some bilateral donors.	Political risks, for a wider range than those provided by the market, including government contractual obligations and actions having a material adverse impact on the project.
Political Risk Insurance (PRI)	Covers equity investors or lenders in the event of default due to political risks. Coverage is usually less than 100% of the investment or loan. Provided by IFIs, ECAs and private investment and political risk insurers.	Political risks, such as currency inconvertibility and transfer restrictions, expropriation, war and civil disturbance.

Source: adapted from Matsukawa, T. and O. Habeck (2007). For a detailed list of available risk mitigation instrument, refer to INFRADEV's website on: [www.globalclearinghouse.org/InfraDev/rmlist.cfm](http://www.globalclearinghouse.org/InfraDev/rmlist.cfm).

**Partial Credit Guarantees (PCGs).** PCGs are flexible and can be structured to meet the needs of specific debt instruments and market conditions. Traditionally used by governments or public entities, PCG are also being more recently used by sub-sovereign governments, municipalities and private companies to borrow domestically from commercial banks or issue in the domestic capital market in local currency. A Partial Credit Guarantee can lift the borrower's credit rating above a critical threshold, at which access to the market is possible. The guaranteed coverage level is set to achieve a target bond rating to facilitate bond issuance, or at a level required to encourage commercial bank lenders to participate. The International Finance Corporation (IFC) is among the international agencies that offer credit-enhancing PCGs to private companies. These partial guarantees have the special feature of being able to be issued in foreign or locally denominated currency. This feature has the advantage of eliminating the foreign exchange risk for local borrowers, which means that they can be used to issue bonds in local currency for example.

**Partial risk guarantees (PRGs).** In addition to standard political risks, this mechanism can be applied for regulatory, legal and contractual risks. It can cover breach of contracts, changes in law, licenses requirements, obstruction in the process of arbitration and non-payment of termination amount. In countries with nascent regulatory regimes, PRGs can cover part of the regulatory risk if the government's obligations are specified in a contract, by activating the "breach of contract" clause.

Risk mitigation instruments are not a panacea, however. Underlying projects must be "bankable" (*i.e.* their return on investment must be sufficient to attract private investors) or entities receiving finance need to be creditworthy in the eyes of the entities that accept to mitigate such risks. Besides, providers of risk mitigation instruments may still require a sovereign guarantee or counter-guarantee from the central government when they are providing guarantees to local governments or utilities.

Sovereign guarantees are issued by central Governments to guarantee that a borrower's obligation will be satisfied if the latter defaults on its obligations. These guarantees may be difficult to obtain when governments are under considerable pressure to keep their overall debt exposure down and limit their off-balance sheet commitments. Even where a government is financially strong, a government's willingness to give a guarantee will depend on the degree to which it is committed to the project as well as on its perception of what the market will bear.

Finally, some risk mitigation instruments have been criticised when they shelter project sponsors and lenders from market forces and discipline. For example, a 100% credit risk cover may reduce the effort a lender puts into investigating the status and prospects of the borrower. In response, one can

argue that a guarantee that raises borrowers' credit standing to the point where they enter the local market for the first time exposes them to market forces in a healthy way. As a result, guarantees can be most successful where they have a catalytic effect for countries or institutions that are at or just below creditworthiness. And even when risk mitigation instruments are in place, project sponsors and lenders must still manage risks actively in order to minimise the likelihood of project failure, not only because it is in their interest to reap the benefits from the project (or the investment, in the case of a utility) but also because mobilising cover via such instruments may be difficult and costly.

### *How have risk mitigation instruments been used in the water sector?*

Although a broad range of risk mitigation instruments is available to borrowers and investors, these have not been used on a large scale in the water sector, especially when compared to their extensive use in other infrastructure sectors such as power or roads. There are only a few examples where such instruments have been used for water sector projects, as briefly summarised below.

***Partial Credit Guarantees.*** The International Finance Corporation (IFC) has provided Partial Credit Guarantees (PCGs) to the City of Johannesburg in South Africa (Box 2.2) or to the Tlalnepantla water project in Mexico (Box 3.11). In both cases, an interesting feature of these PCGs is that they were provided for debt instruments denominated in local currency. This can be done only in countries where IFIs can borrow in local currency so as to be able to hedge the currency risk.

USAID has also been active in this area, via its Development Credit Authority (DCA), which was established in late 1999 to stimulate commercial lending through the use of partial credit guarantees.<sup>20</sup> Since its creation, USAID-DCA has made more than 200 partial credit loan and bond guarantees, which has enabled approximately USD 1.6 billion of private capital to be lent in more than 60 countries (note that this applies to all sectors, not only water and sanitation). The cost to USAID was approximately USD 53 million, meaning that for every dollar spent by USAID, an average of USD 30 was made available by the private sector. On the overall portfolio, the actual default rate was less than 1%. With about USD 250 million of total lending, the water and sanitation sector accounted for about 15% of that total portfolio, showing that the sector has been relatively slow in taking up this kind of innovation. A notable example of a PCG issued by USAID in the water sector was in the context of a pooled financing facility in the State of Tamil Nadu in India (Box 3.9).

By contrast, other international institutions that offer PCGs to their clients, such as the World Bank, have not used this type of instrument in the water sector so far despite willingness and interest to do so. They attribute this to a number of factors. On the one hand, the World Bank's charter requires that a counterguarantee be provided by the Government as an indicator of their interest in the project.<sup>21</sup> This limits the potential for sub-sovereign projects to obtain such types of guarantees, as local governments may face difficulties in obtaining a sovereign guarantee from their Government. Second, they have seen very limited demand from the water sector for innovative financial instruments due to a lack of familiarity and insufficient training to adapt such instruments to the needs of a particular project.

***Partial Risk Guarantees.*** MIGA (Multilateral Investment Guarantee Agency, a member of the World Bank group) provided political risk insurance for a private water concession for the first time in 2001. This was to support a concession in Guayaquil (Ecuador) (Box 3.5). Since this landmark deal, however, MIGA's involvement in the water sector has been limited, something they would attribute to a lack of demand for their products on the part of governments and project sponsors except in the Chinese market where demand has consistently been strong, where they have provided guarantees as well as mediation services for a number of projects.<sup>22</sup>

Another interesting innovation has been the creation of country-specific guarantee facilities, such as the Local Government Unit Guarantee Corporation (LGUGC) in the Philippines, which is a credit enhancement mechanism for municipal infrastructure that has been used extensively to guarantee the financing of water sector projects (Box 3.6).

### *What can be done to increase the use of risk mitigation instruments in the water sector?*

The Camdessus report had noted the limited use of guarantees in the water sector and made specific recommendations on how to increase their application (Box 1.3). Six years down the line, it appears that many of these recommendations still apply, given that the use of risk mitigation instruments has not gone beyond a few landmark transactions by international institutions and guarantee facilities in a few countries.

***Changes to IFIs and donors internal rules and procedures.*** The Camdessus report had identified a number of constraints on the broader use of guarantees, including certain rules within donor organisations, and made recommendations for their amendment which still hold true today. For example, although risk mitigation instruments enable IFIs and bilateral donors to leverage private sector funds with a limited use of their own funds, guarantees and other types of contingency instruments are often treated on

**Box 3.5. Political risk guarantee for water and sanitation:  
the role of MIGA in Guayaquil (Ecuador)**

MIGA mitigates non-commercial risks by insuring investments against the risks of currency inconvertibility and transfer restrictions, expropriation, war and civil disturbance, and breach of contract. Besides, MIGA offers mediation services for guaranteed investments to prevent disputes from escalating. This IFI also provides technical assistance to help countries attract and retain foreign direct investment, as well as providing free online information on investment opportunities. The types of foreign investments they can cover include equity, shareholder loans, and shareholder loan guarantees, provided the loans have a minimum maturity of three years. Equity investments can be covered up to 90%, and debt up to 95%, with coverage typically available for up to 15 years, and in some cases, for up to 20 years. MIGA may insure up to USD 200 million, and if necessary more can be arranged through syndication of insurance. Pricing is determined on the basis of both country and project risk.

The first MIGA guarantee for water investments was signed in Guayaquil, Ecuador in 2001 to guarantee USD 18 million investment for International Water Services B.V. of the Netherlands in an Ecuadorian subsidiary (Interagua). This was a 30-year concession with a performance bond for non-compliance by the company. The guarantee offers protection for the investment against the risks of expropriation, war and civil disturbance. It also covers the performance bond against the risk of wrongful call. The guarantee provides that the amount of compensation cannot exceed the performance bond. The concession aimed to improve the services and operating performance of the existing municipal water utility, especially to poor areas that have little access to potable water and poor sanitary conditions, by reducing the amount of water that is unaccounted for, increasing cash collection and increasing service coverage by 30-40%. Overall, the municipality expected to increase coverage to 90% and 60% for water and sewage services, respectively, by 2013.

In January 2008, a complaint was filed by residents of the city of Guayaquil and the Asociación Movimiento Mi Cometa y Observatorio Ciudadano de Servicios Públicos, regarding International Project Water Services Guayaquil (Interagua). The complaint raised the following social and environmental concerns: repeated cuts of residential water to the poor, lack of service provision to poorer neighbourhoods, lack of wastewater treatment, noncompliance with the concession contract, resulting in infringements of MIGA's safeguard policies. The IFC Ombudsman (CAO) visited the project site in February 2008, to meet with the complainants, the company, and the regulator and try and resolve the issues. As of early 2009, the concession was still running, despite a difficult political context, and the MIGA guarantee had not been exercised.

*Sources:* Baietti, A. and P. Raymond (2005); Pinsent Masons (2008); MIGA website: [www.miga.org/](http://www.miga.org/).

the same basis as loans by IFIs and donor agencies in their internal tracking systems. In other words, guarantees are treated as if they were equivalent to a loan exposure for 100% of the amount. This situation discourages the use of guarantees and many IFIs and bilateral donors have an institutional bias in favour of providing loans and grants rather than issuing guarantees. In order to lift these barriers to develop the use of guarantees, the Panel recommended that IFIs should revise their policies on capital provisioning, where these are undue constraints on the use of guarantees. According to John Wasielewski at USAID-DCA, IFIs and donor agencies tend to be overly conservative and risk-averse in their use of guarantee products with a view to maintaining their own credit worthiness (IFIs usually benefit from an AAA rating, which is critical to ensure relatively low borrowing costs). In his opinion, these institutions are behaving more like private financiers than development institutions. USAID-DCA itself can be viewed as too conservative given that the default rates have been very low, which means that they have not been sufficiently willing to push the boundaries of “acceptable” risk.

Most IFIs would require sovereign counter-guarantees for issuing their instruments for public projects (such as the World Bank, as discussed above). By contrast, the private sector arms of the IFIs (for example, MIGA and IFC) can, in principle, issue their risk products without sovereign counterguarantees. However, it turns out that counterguarantees are often required even for private projects, especially for breach-of-contract cover in countries with inadequate legal, regulatory, and institutional frameworks. This is especially the case for WSS projects in non-investment-grade countries. Although many emerging market infrastructure projects utilizing project financing have been conceived, most have been stillborn mainly because sovereign guarantees could not be obtained.

Furthermore, whereas most IFIs are able to issue guarantees on a standalone basis, others restrict the use of guarantees to loans in which they participate. According to Camdessus, such participation requirements complicate the structuring of financing transactions since the IFIs concerned have to make a direct loan to the borrower even if a guarantee is all that is required. Thus, the Camdessus report recommended that these IFIs should amend their articles so as to enable them to have the freedom to issue guarantee on a standalone basis.<sup>23</sup>

***Instruments to mitigate foreign-exchange risk.*** One specific recommendation formulated by the Camdessus report was the creation of a devaluation backstopping facility in order to mitigate foreign exchange risks, as these are notoriously difficult to manage in water projects (where revenues are usually denominated in local currency whilst a high percentage of costs, including most financing costs, are usually in foreign currency).



### Box 3.6. Local Government Unit Guarantee Corporation (LGUGC) in the Philippines

In the Philippines, outside metro Manila, water is a local government responsibility which may be discharged by the Local Government Units (LGUs) directly or by water districts (corporatised entities whose boards are appointed by the LGU heads). In the 1990s, even creditworthy LGUs had difficulties accessing sufficient capital to meet their infrastructure investment needs mainly because commercial lenders were unfamiliar with the risks involved in lending to LGUs. LGUGC was set up in 1998 to help LGUs access financing by offering guarantees on LGU loans and bonds. It is owned by private and public owners including the Bankers Association of the Philippines (38%), the Development Bank of the Philippines (37%) and the Asian Development Bank (25%). Over the past decade, LGUGC has helped LGUs mobilize capital from a range of banks and bond investors for all types of infrastructure projects. The small but growing LGU bond market in the Philippines, a rarity in an emerging economy, can largely be credited to LGUGC's contribution.

LGUGC offers two main services:

- A *guarantee mechanism* to reduce the risk of an LGU (or any other eligible entity, such as a water district) default on loans and bonds. LGUGC only guarantees projects that generate revenue. If the guaranteed entity defaults, LGUGC can intercept the tax revenues remitted from the central government to the LGU. As part of its guarantee program, LGUGC also offers technical assistance to LGUs with preparing projects for financing. The guarantee fee ranges from 0.5% to 1.25% per annum of the face value of the outstanding principal. The guarantee is irrevocable and immediately payable in event of default.
- *Credit rating services*. In the absence of an entity specialized in LGU risk evaluation, the LGUGC has established an internal LGU credit screening and rating system. This system evaluates the LGU's capacity to pay and willingness to honour contractual obligations.

Out of the 26 projects that LGUGC has guaranteed so far, nine have been water projects. LGUGC supports investment in water with credit enhancements for LGUs and water districts borrowing. Some examples of guarantees for water projects include guarantees to Indag Water District for a Php15 million loan (about USD 315 000) and to Laguna Water District for a Php100 million loan (USD 2.1 million) for expansion of the water supply system. Most of the municipal bonds floated in the Philippine market since 1998 have had an LGUGC bond guarantee. As of January 2009, closed deals represented Php2.9 billion (USD 60.4 million). LGUGC has not experienced any default so far. The LGUGC is willing to provide these services because it understands better than traditional lenders the risks related to LGUs.

*Sources:* Kehew, R., T. Matsukawa and J. Petersen (2005); LGUGC's website, [www.lgugc.com/](http://www.lgugc.com/).

According to Baietti and Raymond (2005), in the simplest terms, a devaluation backstopping facility would consist of a fund or a contingent commitment of funds provided by an international financial institution that could be drawn upon in the event of significant currency devaluation. In this case, rather than triggering an unsustainable tariff increase, the funds would be used to offset temporary shortfalls in meeting debt-service payment obligations (and possibly dividend payments) concurrent with gradual tariff increases. These tariff increases would be previously agreed on and expected to be sufficient over time to recoup funds drawn down from the facility.

Despite initial interest following the Camdessus report, such facility has not been established in the water sector (and this type of mechanism appears to have been used only once for a power project in Brazil) and foreign exchange risk remains notoriously difficult to mitigate. However, the relevance of creating such a facility has been greatly reduced by the withdrawal of most international private operators from the water sector (Section 1.5). A more direct way of addressing this risk would therefore be through the provision of local currency financing, particularly to sub-sovereign borrowers (Section 3.5).

***Provision of local currency guarantees and creation of domestic guarantee facilities.*** Lending in local currency, combined with guarantees for local currency instruments, can be a powerful way of expanding lending to local water projects, especially for those projects that are too small to attract the attention of international lending institutions. At the international level, the World Bank, in partnership with the IFC, created a Municipal Fund for development of guarantee instruments targeted at promoting sub-sovereign lending (Section 3.5). As with other international facilities, this has had limited activities in the water sector, however. More promising is the experience of domestic guarantee facilities, such as the LGUGC (Box 3.6). Donors could seek to replicate this example by providing seed financing to domestic guarantee facilities which can then provide guarantees for domestic currency loans at the local level.

Finally, it appears that the providers of risk mitigation instruments to support infrastructure financing in developing countries have to pursue their efforts in improving these instruments. They have to make them more effective at catalysing diverse types of transactions and to increase available infrastructure financing. It seems necessary to expand and facilitate the use of these instruments in multilateral and bilateral official agencies and promote collaboration with private financiers and insurers in lieu of direct lending. However, maximising the potential effect of guarantees would depend on a suitable enabling environment being in place, as guarantees can only support the financing of otherwise good projects and not redress existing problems such as unclear financial sources or an undefined institutional framework.

### 3.5. Creating grouped financing vehicles to increase access to finance

#### *What are grouped financing vehicles?*

A series of instruments have been used in order to increase access to repayable finance (including market-based repayable finance) for small water and sanitation providers. Given the relatively high transaction costs of organising finance and the need for a strong credit history, setting up grouped financing vehicles (such as revolving funds, pooled funds or bond banks, each of them with specific characteristics) can help finance a large number of small projects and facilitate access to a number of credit enhancement mechanisms. The main objectives of establishing such vehicles are to achieve scale so as to leverage additional finance as a group, reduce transaction costs (particularly from the point of view of the borrowers) and, from the lenders' point of view, spread risks through adopting a portfolio approach. These common characteristics justify dealing with these types of grouped financing vehicles in conjunction. Those vehicles are usually used to raise finance as a group but would usually provide financing on a project by project basis to the entities that have joined up under the grouped structure.

The ways in which these grouped financing vehicles are referred to reflects differences in emphasis with respect to the distinguishing features of each financing vehicle:

- The basic principle behind a **revolving fund** is that the funds initially brought in as seed capital can be revolved several times. If the revolving fund is providing loans, for examples, loan repayments made into the fund can be used to make new loans, without any time limitation. For water and sanitation investments, these have been pioneered in the United States to finance investments generated by the Clean Water Act adopted in 1972. In its simplest form, the revolving funds have enabled the provision of revolving Federal and State grants to the sector so that these funds can benefit more than one project (Boxes 3.7 and 3.2).
- A more sophisticated version of a revolving fund is when government grants are used to leverage additional market-based repayable finance, usually through issuing bonds purchased by private investors. The proceeds can then be on-lent in order to finance projects in the water sector. Such extension of the revolving fund principle may also be referred to as a **bond bank** (Boxes 3.7 and Box 3.8).
- **Pooled financing** is a method of overcoming the high credit risks and transactions costs of individual small municipalities by grouping them together with others, to produce a collective bond issue of a minimum threshold size. Each municipality is required to make

a deposit into a collective reserve fund (which may or may not be a revolving fund), which acts as a guarantee for the issue. The bond may receive further credit enhancement with the aid of external guarantees for the reserve fund, as used by the USAID's Development Credit Authority (DCA) in Tamil Nadu State in India (Box 3.9).

*What role can grouped financing vehicles play in the water and sanitation sector?*

Grouped financing vehicles have been used fairly extensively in the water sector, particularly in the United States, England and Wales (through the Artesian loan facility, as described in Box 1.2) and some middle-income countries such as Mexico (Box 3.8) or India (Box 3.9). A revolving fund has also been created successfully in the Philippines with support from USAID and JBIC. As this instrument also blends ODA with commercial lending, it is discussed in more detail in Section 3.7. They are particularly well suited to the sector as most WSS providers tend to operate at the local level and to be relatively small. For example, the United States have a long experience of using revolving funds to finance water and wastewater projects at the local level, through the Clean Water State Revolving Fund and the Drinking Water State Revolving Fund, as described in Box 3.7.<sup>24</sup>

In the United States, the pooled financing model has successfully raised capital for municipal and communal infrastructure. In a capital market as broad and well-developed as the one in the US, the bonds issued by such funds are generally considered by credit rating agencies and investors to be relatively secure investments. In the US, the relatively lower rate of interest on these bonds compared to other comparably risky investments of similar duration (for example, corporate bonds) is compensated by the fact that the interest on the bonds paid to the investors is exempt from federal, and sometimes state, income taxation. However, this system of tax exempt interest is uncommon in other countries.

Over recent years, USAID has actively promoted the use of pooled financing mechanisms for infrastructure sectors (based on the country's own experiences with such mechanisms) as a way to leverage financing for the water sector in developing countries, followed more recently by the Japan Bank for International Cooperation (JBIC) and the UK's Department for International Development (DfID). In particular, USAID has promoted the creation of bond banks to act as a financial intermediary that accesses the private capital market, sells its own securities and on-lends the proceeds to participating local governments.

A bond bank's primary goal is to improve access to financial markets for small, frequently rural, local-government borrowers. It can lower the cost of

### Box 3.7. US State Water Revolving Funds

Revolving funds have been successful at promoting investment and providing an affordable source of financing for water and wastewater projects in the US. The Federal Government capitalizes these state-owned funds and the state government must match the contribution. Where appropriate, states have also leveraged additional funds through issuing tax-exempt bonds to retail investors and investment management institutions. Revolving funds typically provide loans and, once repaid, the capital is available for new loans. The funds would also provide various forms of direct and indirect assistance to the borrowers.

The Clean Water State Revolving Fund (CWSRF) was created in 1987 to finance municipal wastewater facilities and pollution control mechanisms in the United States. Each state operates its own CWSRF program. A range of different entities (including communities, individuals, businesses and non-profit organisations) can apply for CWSRF funding for eligible projects. Funding may be in the form of grants or loans at below-market interest rates (with repayment terms of up to 20 years) or as a combination of the two. The funds target small and disadvantaged communities. The Drinking Water State Revolving Fund (DWSRF) was established in 1996 to finance water supply projects. Its structure and processes mirror those of the CWSRF program. When loan recipients make repayments to the state program, the funding is “revolved” and made available for further projects.

The funds have been very successful at lending significant amounts to a large variety of projects, allowing small municipalities to access financing despite their small size and annual budgets. Over the past 20 years, the CWSRFs have lent USD 63 billion for 20 711 projects in communities of all sizes (of which 96% went to wastewater treatment projects). They have lent USD 2.31 for every dollar the federal government had initially allocated. The DWSRFs have lent USD 12.6 billion to 5 555 projects over 10 years.

As of 2006, 27 states had leveraged their state revolving funds by issuing state bonds, doubling the amount of such funds. However, this might end up causing excessive leverage. Furthermore, because of their success in disbursing funds, there is a risk that revolving funds might crowd out commercial sources from serving water and wastewater providers, especially since the volume of funds made available through this mechanism has recently been increased by the US stimulus package (Chapter 4).

*Sources:* Lloyd-Owen, D. (2005); United States Environmental Protection Agency (2006).

capital and improve the lending terms for municipalities by incorporating various forms of credit enhancement. Bond banks also have the capacity to prioritise development projects according to their financial profitability. Developing the more profitable projects first can secure the initial capital and generate new sources of revenues, which can be used to mobilise new financing for developing a second generation of projects. This process can be repeated several times, so as to increase the number of projects financed in such a way. Bond banks usually administer the funds in an output-based way, *i.e.* by disbursing the funds gradually as progress is achieved rather than as an initial lump-sum.

### Box 3.8. Bond bank financing for water and sanitation in the State of Quintana Roo (Mexico)

The State of Quintana Roo, with the support of the USAID/EDI Global Development Alliance Program, created a bond bank in 2006, the Quintana Roo (QR)-Bond Bank. The QR-Bond Bank is a pooled financing vehicle which intercepts different revenue streams and pledges them to pay for debt obligations, so as to increase the credit rating of the borrowing entity.

In October 2007, the QR-Bond Bank helped the State Commission for Water and Sanitation (*Comisión de Agua Potable y Alcantarillado*, CAPA) to access an amount – in local currency-equivalent to USD 30 million dollars – from the domestic capital markets USD. Terms and conditions were unprecedented in Mexico for a water entity. The bank loan from Citibank had a 15-year term and was provided at inter-banking rate plus 19 basis points on the back of a transactional rating of AA.mx, when other water utilities in Mexico were hardly obtaining any financing or only through short term loans (approximately 3 to 6 years) at 400 to 600 basis points over inter-banking rate. The Federal Government matched this financing by providing another USD 30 million. The overall USD 60 million dollars helped build new drinking water infrastructure to benefit 77 000 people and new water and sanitation infrastructure to benefit 150 000 people.

The bond bank helped overcome a number of constraints that had been preventing the State of Quintana Roo from building an effective and consistent financing framework in water and sanitation sector. Water utilities are not considered as federative entities and therefore receive no national tax transfers. Water bill collection rates are relatively low, as the Federal Constitution of Mexico guarantees water supply to citizens, even if they do not pay for it and the culture of non-payment for infrastructure services is widespread. In spite of the continued focus and improved management of payment levels, this means that revenue streams are not perceived as secure by potential investors. Finally, the Mexican municipal bond market in general lacks enough credit insurance products for potential municipal issuers. In an arena where municipal credit ratings are low compared to domestic investment grade standards, credit enhancement becomes a key necessity.

*Source:* State of Quintana Roo (2008). See also: [www.makingcitieswork.org/toolsAndResources/implementation/SIF](http://www.makingcitieswork.org/toolsAndResources/implementation/SIF) on USAID-GDA.

USAID, in association with Evensen Dodge International (EDI), has developed a program referred to as the Global Development Alliance (GDA) to promote the use of innovative instruments such as bond banks or revolving funds. Amongst others, this program helped establish a bond bank for water sector financing in the State of Quintana Roo in Mexico (Box 3.8).

Another landmark project developed by USAID was the Tamil Nadu Urban Development Fund (TNUDF), as part of the Tamil Nadu Urban Development Project that aimed to develop municipal infrastructure financing in the late 1980s. This initially state-sponsored municipal development fund was transformed in 2002 into a public-private funding and loan pooling scheme that led to the setting up of a special vehicle particularly addressing small local bodies, the Water and Sanitation Pooled Fund (Box 3.9). Building on the principle of credit aggregation, the WSFP was the first successful pooled market financing outside the US.

### **Box 3.9. The Tamil Nadu Water and Sanitation Pooled Fund (WSPF) in India**

In 1996, the Tamil Nadu Urban Development Fund (TNUDF) was set up as a public-private partnership, with the aim of providing sustainable financing for infrastructure investment. The Government of Tamil Nadu (GoTN) owns 72% of the capital and 28% is held by three Indian private financial institutions which have a majority stake in the asset management company that manages the fund, the Tamil Nadu Urban Infrastructure Financial Services Limited (TNUIFSL). This has given credibility to the fund to attract private capital flows into development projects. By 2004, the majority of the portfolio consisted of sewerage and water supply projects.

#### **A fund dedicated to small local bodies: The Water and Sanitation Pooled Fund (WSPF)**

The TNUDF approach tended to be used for municipalities with large and predictable revenue streams. However, a majority of the local bodies in Tamil Nadu with large neglected infrastructure needs are small and medium sized municipalities. Bond issuance fees and credit rating charges involved in accessing capital market often generate transaction costs that are too high for the smaller Urban Local Bodies (ULBs). In order to ensure the inclusion of weaker ULBs and relatively small but essential projects, GoTN (Government of Tamil Nadu) and TNUDF instituted a special purpose vehicle called the Water and Sanitation Pooled Fund (WSPF) in August 2002. This fully owned Government Trust was set up to finance essential services like water and sanitation for small and medium towns and raising resources on a pooled basis through a market driven approach. TNUIFSL was also entrusted with managing this fund.

### Box 3.9. The Tamil Nadu Water and Sanitation Pooled Fund (WSPF) in India (continued)

Pooling the water and sanitation requirements of thirteen municipalities and town panchayats, WSPF mobilized capital market finances through an unsecured Structured Debt Obligations for Rs.304.1 (USD 6.2 million) in December 2002. The bond had a coupon of 9.20% p.a., a tenor of 15 years with a put and call option at the end of a ten year period. Key mechanisms which helped reduce financing costs included:

- Pooling a number of projects reduced the bond issue's transaction and rating costs and made the issue more attractive to investors;
- The bond's repayment was supported by a portfolio of loans on-lent to the municipalities;
- The bond was issued in Indian Rupees preventing foreign currency risk;
- The credit rating of the project pool was enhanced through structuring the debt to provide a series of credit guarantees. This allowed creating an investment grade product (AA rating from two agencies) and reducing significantly the debt's coupon.

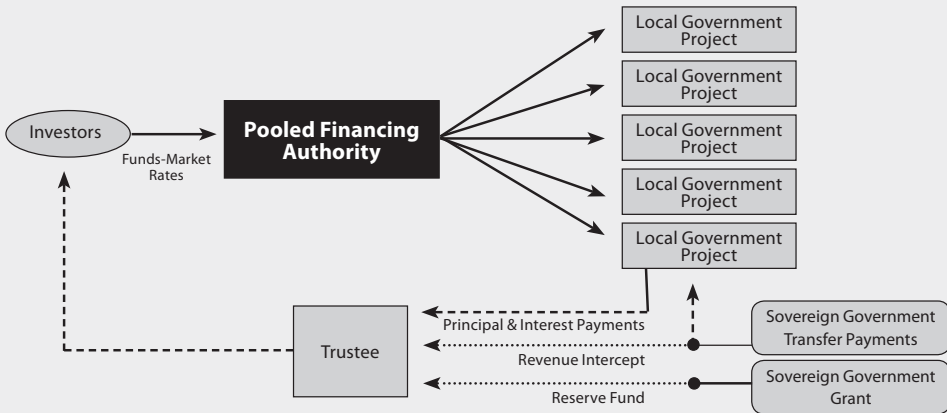
To strengthen market's confidence in the bond, three different levels of credit enhancements were used:

- The first level was a *no-lien escrow account set up by the thirteen ULBs on all their revenues* including property and other tax collections, non-tax receipts and state devolutions. In order to avoid maturity mismatches in revenue and repayment profiles, each ULB had to transfer 1/10<sup>th</sup> of its annual debt service to a separate fixed deposit account, with precedence over other commitments. The cumulative deposits were then transferred to the WSPF account to service bond holders.
- A *Debt Service Reserve Fund*, named the Bond Service Reserve Fund (BSF), was set up by the government of Tamil Nadu with liquid investments of Rs. 69m (about USD 1.42 million) which was equal to one full year of debt service. The reserve fund is sufficient to ensure that the fund can continue to pay its creditors (that is, the purchasers of its bonds or its lenders) even when one or more of the fund's municipal borrowers fail to make repayments to the fund for interest on, or principal of, their loans. This additional security for the fund's investors makes it possible for the fund to issue its bonds on the capital markets, or to borrow from institutional lenders, at rates and on terms that allow it to make loans to municipal borrowers on attractive interest rates and other terms.
- A *partial credit guarantee (PCG) was issued by USAID* for 50% of the principal amount, with the balance covered by an undertaking by the Government of Tamil Nadu, in the form of a government order that the shortfall would be replenished by the GoTN to the BSF deducting their respective share of State Finance Commission (SFC) funds accruing to the municipalities involved.



### Box 3.9. The Tamil Nadu Water and Sanitation Pooled Fund (WSPF) in India (continued)

The overall financial structure is summarised in the following flowchart:



Source: World Bank, “Local Financing for Sub Sovereign Infrastructure in Developing Countries”

The successful track record of the Tamil Nadu Water and Sanitation Pooled Fund (WSPF) pooled financing in 2002 inspired the state of Karnataka, which decided to develop a similar scheme, and later the Government of India which scaled up the approach at national level to support urban reforms.

Sources: Mehta, M. (2003); OECD (2009c), Venkatachalam, P. (2005).

### *What role can ODA play to develop the use of grouped financing tools?*

Grouped financing vehicles can play a significant role to attract repayable finance (including market-based repayable finance) to small and medium sized WSS providers. To date, they have mostly been used as a basis for issuing bonds in countries with fairly mature financial markets but intensive marketing and dissemination efforts are ongoing (through USAID GDA) to promote the adoption of these approaches in countries as diverse as Guatemala, Ecuador, Ghana, Indonesia, Ukraine or Vietnam. Such structures can be fairly time and resource intensive to setup, however, which is partly a reason why they have not been more widely adopted for financing water and sanitation investments. In part, this is due to a lack of familiarity with this

type of financing instruments, to legal obstacles to their establishment (a key innovation such as the ability to issue tax-exempt bonds may not sit well in all constituencies for example) and to difficulties in getting local governments to act together towards a common goal.

Other donors have expressed interest in grouped financing approaches<sup>25</sup> or have adopted this type of approaches in their projects (such as the EIB in Turkey and Romania). Basic principles of grouped financing approaches may be used by donors and governments to set up facilities to mobilise market-based repayable finance for decentralised providers. These include pooling resources from various sources into a single financing entity and using guarantees to enhance the credit-worthiness of such pooled financing entities.

### **3.6. Increasing lending to sub-sovereigns via innovation**

*What innovations can be used to increase lending to sub-sovereigns?*

Making financing available to sub-sovereigns (*i.e.* local governments below the central government level and decentralised water and sanitation utilities) is critical to ensure investment in decentralised WSS. The critical innovation in this area is when IFIs and bilateral donors agree to lend to sub-sovereigns without a counter guarantee from the central government but would instead rely on a variety of “securities” or agreements with the ultimate recipients of finance. Such direct lending can contribute to building the borrower’s credit history and catalyse market-based repayable finance either simultaneously or at a later stage. Financial support at local level can therefore strengthen those borrowers’ credit-worthiness (by imposing discipline) and attract a much broader range of financiers and investors by giving them comfort to step in.

*How have such innovations been applied in the water sector?*

International financial institutions have sought to adapt their financing policies and practices to provide financial support to sub-sovereigns, either in the form of loans or guarantees, with a view to catalyse additional market-based repayable financing. Although these initiatives are not specifically targeted at the water and sanitation sector, they have benefited water and sanitation investments to varying degrees. This section reviews the experience of the European Bank for Reconstruction and Development (EBRD) and of the World Bank’s Municipal Fund, set up in partnership with the International Finance Corporation (IFC) in this area. Other IFIs, such as the European Investment Bank (EIB), the Inter-American Development Bank (IADB), the Asian Development Bank (ADB) and the African Development Bank (AfDB) have taken steps to increase their sub-sovereign operations, although this has remained somewhat limited in scale.

Finally, some bilateral donors have also been lending to sub-sovereigns without requesting a central government counter guarantee. For example, the Agence Française de Développement (AFD) has started to provide direct financing to water utilities without central government guarantee, such as to SONES (in Senegal), CAMWATER (in Cameroon) or PPWSA (in Cambodia). For such transactions, they would require a rating, a specific financial analysis and certain assurances relative to revenues. Such loans are provided on a concessionary basis but are intended to form the basis for commercial banking finance at a later stage.

***The EBRD has been leading the way for sub-sovereign financing.*** The EBRD has been lending directly to sub-sovereign governments for more than a decade in former socialist countries in central and Eastern Europe and was the first of the regional development banks to set up a dedicated team focused on municipal finance, the Municipal and Environmental Infrastructure (MEI) team, which lends either to municipalities or to municipal utilities.<sup>26</sup> EBRD loans to sub-sovereigns were worth EUR 1 628 million as of end 2008 and accounted for 48% of total EBRD lending, up from 30% when they were first introduced in 1997.<sup>27</sup> Water and sewerage is one of the key sectors for the MEI team, as it accounted for the highest volume of lending in 2008 (EUR 898 million or 56% of total lending by the MEI team). Interest rates are set on a commercial basis for local currency loans (where possible) with maturities between 10 and 18 years.

The EBRD was the first development bank to extend loans to sub-sovereign entities without requesting a sovereign counter guarantee. For example, between 2005 and 2006, the EBRD made 28 loans to sub-sovereign entities without such a guarantee for a total volume of more than EUR 350 million. The EBRD also provides direct financing to municipally-owned or partially municipally-owned companies without a municipal guarantee. The Bank has been able to support this kind of risk thanks to a very deliberate approach to risk mitigation. They carefully select partner cities with an initial focus on revenue generating projects. They combine financial assistance (through loans priced at a commercial rate but sized conservatively) with technical assistance to support the reform process.

A key tool for risk mitigation is the signing of a “project support agreement” with municipalities, in which municipalities agree to certain tariff increases to allow debt repayment. Although this does not eliminate the political risk (as what mayors sign today could be reversed following an election), the EBRD has been willing to take on that type of risks as they feel that it is politically very difficult for a municipality to allow its municipal utility to default. Such agreements may include provisions similar to “revenue intercept” provisions, whereby the lender can intercept funds from the central government to the local government to secure its loan repayment. For

example, in the case of a loan to St. Petersburg Vodokanal, the EBRD signed a project support agreement that gave the bank access to bills owed to the Vodokanal by entities owned by the Federal government (such as the navy or the army) in the event of default on loan repayment. In that case, the Federal government did not have direct obligations towards the EBRD so it could not be described as a guarantee as such.

The provision of such support can contribute to building a credit history for the borrower, which in turn enables mobilising market-based repayable finance at later stages. For example, the EBRD has been providing financial support to Tallinn Water (Estonia) at various stages of its reform process (Box 3.10), culminating in raising equity from domestic investors in an IPO.

World Bank's Municipal Fund. In 2003, the World Bank Group created a Municipal Fund, in partnership with the International Finance Corporation (its private sector branch) to finance essential infrastructure investments at sub-sovereign level. The program aims to help build the capacity and credit-worthiness of subnational borrowers and develop local markets for municipal financing. The involvement of the IFC can give comfort to local banks, enabling them to lengthen the maturity of local-currency loans they can provide, consistent with the long-term nature of the investment. The objective of the Municipal Fund was to provide financing and credit enhancement to sub-national public sector entities and to enhance their capacity and their credit-worthiness without the use of central government guarantees. The Municipal Fund can use the full range of IFC financial instruments on the back of the

### Box 3.10. Strengthening the financial viability of Tallinna Vesi (Estonia)

The EBRD has co-operated with Tallinna Vesi since 1994, moving along all stages of reform in the water sector, starting from a sovereign guaranteed loan to the municipality, through a corporate loan, to the privatisation to a strategic investor and assistance in the IPO of Tallinn Water, achieving overall a very significant transition impact. In 1994, the EBRD provided a EUR 22.5 million loan (with a sovereign guarantee) to finance the rehabilitation of water and wastewater treatment plants, groundwater wells and wastewater networks. In 2001, the municipality sold a 50.4% stake in the company to International Water and United Utilities for USD 75 million. The company borrowed EUR 15 million from the EBRD to finance post-privatisation investment and optimise the capital structure in 2002. In 2003, the EBRD made an equity commitment by buying out International Water Ltd. In 2005, the EBRD helped initiate an IPO to float the company on the Tallinn Stock Exchange. EBRD's involvement led to an increasing corporatisation and involvement of the private sector, culminating in an IPO. The latter helped in broadening the shareholding in the company and devolving corporate activities to the local level, with UU's stake falling from 38% to 26.5%.

*Source:* Pinsent Masons (2008); *Global Water Intelligence* (various articles).

IFC's AAA balance sheet, including loans, guarantees and equity investments, to broaden a sub-sovereign client's access to capital markets. These instruments are provided at commercial rates in a broad range of currencies, including local currencies. The fund can also help local government entities access technical assistance for capacity building.

In the water sector, one of the key Municipal Fund transactions was the Tlalnepantla Municipal Water Conservation Project in Mexico (Box 3.11). Activity in the water sector beyond that landmark transaction has been rather limited, however.

Key limitations with sub-sovereign lending are linked to the requirement of a good financial track-record and preferably a credit rating for sub-sovereign entities, which are frequently not available. In addition, national governments are often reluctant to let sub-sovereign entities borrow as it may put the overall financing standing of the nation at risk in the event of uncontrolled borrowing.

### Box 3.11. Tlalnepantla Municipal Water Conservation Project (TMWC) in Mexico

IFC (together with Dexia Crédit Local) provided a partial credit guarantee in local currency to a 10-year bond denominated in Mexican Pesos (USD 9.2 million equivalent) and issued by a private Mexican Trust. The Trust was established to raise funds and on-lend to the Tlalnepantla Municipal Water Company (OPDM) and the Tlalnepantla Municipality as joint obligors to finance a water conservation project of USD 8.8 million equivalent. The bond achieved a local scale rating of AAA.mx, three notches above the Municipality's stand-alone rating at issue, and was sold to eight local institutions.

The Municipality's financing objectives were twofold: (i) to extend the maturity of the debt to better match the long-term nature of the investments and (ii) to diversify the funding sources for long-term infrastructure projects. The bond, backed by OPDM's water revenues, matures in 2013.

IFC (together with Dexia Credit local) provided a partial credit guarantee (PCG) of 89% of the principal outstanding, which could be used to pay bondholders if there were insufficient funds in the Trust. The PCG from IFC and Dexia allowed the bond issue to achieve a local rating of AAA.mx, which was required by long-term institutional investors in Mexico. This was the first municipal bond issue in Mexico to finance essential infrastructure investments that was to be serviced from OPDM's own revenues and not using directly federal transfers. The project was completed successfully in 2006, with technical assistance provided by IFC. The bond was subsequently refinanced to take advantage of declining spreads in Mexico.

*Source: [www.ifc.org/ifcext/subnationalfinance.nsf/Content/sampleproject2](http://www.ifc.org/ifcext/subnationalfinance.nsf/Content/sampleproject2).*

### *What role can ODA play to catalyse lending to sub-sovereigns?*

Direct lending to sub-sovereigns, without the need for a central government guarantee has been practised with success for some time by some IFIs and donors, such as the EBRD or the AFD. For example, the continuous involvement of the EBRD in a defined geographical area has allowed supporting the financial development of sub-sovereign borrowers in a gradual manner, as it has been the case with Tallinn Water for example.

However, many other donors and IFIs have not been able to lend at the sub-sovereign level, either because their internal rules do not allow them to do so or because they are not willing to take on a risk that they cannot manage adequately. Besides, sub-sovereign entities in many countries are either too weak financially to borrow or lack the capacity to put together a bankable project eligible for donor financing. Central governments themselves may not be willing to let sub-sovereign governments borrow directly, particularly when they are not able to keep control over the overall debt burden that is being accumulated at the national level (which they may have to cover ultimately in the event of bankruptcy, even if they have not provided an explicit guarantee).

Donors may wish to evaluate how they can relax guarantee requirements at the sub-sovereign level, so as to pave the way for commercial lending to those borrowers. Reliance on revenue agreements with the sub-sovereign borrowers to either increase tariffs or intercept central government transfers can provide enough security to lenders without the need for central government guarantees. These types of agreements can help introduce financial discipline and support the implementation of reforms at the level of borrowers, as long as donors and IFIs can also provide adequate resources to support reform processes at the local level. Lending in local currency can also be a key tool to make such loans more attractive to local governments and water utilities.

Finally, donors can combine these lending instruments with guarantees to commercial lenders so as to broaden the pool of financiers and investors interested in investing in water and sanitation at the local level. Direct lending to entities at the sub-sovereign level, such as municipalities or municipal utilities, can help those borrowers build a credit history and give them access to a broader range of investors, including commercial banks and equity investors.

## **3.7. Strengthening the balance sheet via equity injections**

### *How can equity injections help mobilize market-based repayable financing?*

Raising equity can help strengthen the balance sheet of a water service provider. This in turn can improve its credit-worthiness and its ability to raise debt and bond finance at a cheaper cost. As described in Section 2.2.4

above, equity can come from a variety of sources. If equity is provided by private investors either directly or via financial markets, it can bring with it market discipline, *i.e.* high expectations in terms of information disclosure and financial returns. If equity is provided by the public sector, return expectations are much lower (if any). Public equity investors are mostly concerned by ensuring the long-term sustainability of the business and having some control over key management decisions. Some donors have agreed to swap outstanding debt for equity, so as to strengthen the balance sheet by increasing the equity-debt ratio and raise its credit standing.

### *What role have equity injections played in the water sector?*

Water sector providers have mobilised equity financing under a variety of models in order to support the development of their activities and leverage other forms of financing.

In OECD countries, some water sector providers have been bought out by private equity investors who sought to extract rapid returns before selling them on to other investors. The private equity model has been on the rise in the water sector in developed countries in the last ten years. Private equity investors have been attracted by the opportunities to refinance water companies, although they were mostly concerned with lowering financing costs for operations rather than financing capital investments. According to Lloyd-Owen (2006), fourteen deals took place in five countries between 2001 and 2005. By 2007, it was estimated that 16 companies were held by what are essentially financial investors, one in France, two in the US, five in Chile and eight in the UK. The private equity market has been particularly active in the United Kingdom in recent years, with 19 major private equity deals between 2001 and 2007.<sup>28</sup> A number of water companies were bought by banks and investment funds at premiums of up to 30% above their regulatory asset base (RCV) such as Southern Water's takeover by Greensands Holdings in 2007 and the acquisition of Kelda Group by a consortium led by Citigroup and HSBC in early 2008. Thames Water, the company that serves 8 million people with water and 13 million with wastewater services in and around London, was acquired by the Australian group Macquarie in December 2006, which resulted in the company being taken private and delisted from the London Stock Exchange. The development of the private equity market has ground to a halt in the wake of the financial crisis, however (Section 4.1.4), which means that such a model for developed and developing countries is likely to be limited. Besides, institutional investors in the private equity model have tended to be focused on realising quick returns through financial engineering rather than investing in the long-term development of companies.

Such financial innovation did not bring clear benefits for the companies concerned and has proven a risky investment when the financial crisis has

shattered return prospects for these equity investors. By contrast, in some middle income countries such as Singapore or the Philippines, equity has been raised in a way that has been more conducive to financing capital investments and business development. For example, Hyflux, a Singapore-based water company, has developed an interesting model to develop its activities on the Chinese market by ring-fencing its own balance sheet and leveraging private funds via the equity market to finance new projects (Box 3.12).

In the Philippines, the struggling Maynilad concession received a sizeable cash injection via a private equity investment, which was to be used to reduce the debt and finance new investments (Box 3.13).<sup>29</sup>

Although equity comes from very different sources (the financial markets in the case of the Hyflux Water Trust and private investors in the case of Maynilad), both companies have been able to use such equity stakes to leverage other forms of finance so as to fund substantial capital expenditure programmes. In both cases, equity investors appear to be committed over the long-term rather than to make quick returns over the short-term.

### Box 3.12. The Hyflux Water Trust in China

One of the most interesting financing models employed in China's water sector is the Hyflux Water Trust. The trust's parent company, Hyflux, is a private company listed on the Singapore stock exchange since 2001. Hyflux's business was built around its membrane filtration technology. Its main activities are the development, manufacturing and sale of filtration equipment of water treatment and desalination; installation and commission of treatment systems, turnkey engineering services and installation of industrial equipment.

The Hyflux Water Trust was launched on the Singapore stock exchange in 2007. As of March 2009, it had a market capitalisation of approximately USD 58 million. The Trust is 31.5% owned by Hyflux, with the rest of the shares publicly traded. The Trust is responsible for operating and managing all of Hyflux's BOT contracts and has right of first offer and right of first refusal for any new projects. This allows the parent company to pursue an "asset light" capital structure, freeing up the capital invested in plants so that Hyflux can develop new projects, which is where its managers see Hyflux's greatest value added.

When it was established, the Trust owned a portfolio of 11 plants, including 3 water treatment, 6 wastewater treatment and 2 wastewater treatment and recycling plants in China. It has concessions to operate these under 20-30 year contracts, with minimum off-take agreements for 45% of total output. Since its establishment, it has acquired stakes in four further project companies, including both water and wastewater treatment. HWT assets are all currently located in mainland China but it actively considers opportunities in India, the MENA region and other "high-growth" global markets.

*Source: [www.hyfluxwatertrust.com/index.php](http://www.hyfluxwatertrust.com/index.php).*



### *What role can ODA play in this area?*

Donors can play a significant role in emphasising the importance of equity as a source of long-term market-based repayable finance. On the one hand, donors and IFIs can take equity stakes themselves, as they have done in the case of SONES in Senegal via debt-equity swaps to strengthen the balance sheet (Box 3.14). SONES is a public asset-holder in charge of investing in the rehabilitation and expansion of the system throughout the national territory. This company was created following sector reform in 1996 and has since been able to establish a firm financial standing, which has enabled it to raise financing from a variety of sources, including commercial sources.

The IFC, the private arm of the World Bank, also takes equity stakes in the companies it supports. For example, it has recently taken a USD 15 million equity stake in Manila Water to which it has also provided two corporate loans worth USD 60 million.<sup>30</sup> A largely unanswered question for IFIs and donors remains when it may be most appropriate to provide equity financing in such a way. Such equity injections need to be treated as an investment with expectations of earning a return on this investment. Given its nature and

#### **Box 3.13. Equity investments in struggling Maynilad Concession**

In 1997, Maynilad was awarded a 25-year concession for the management of water and wastewater systems in western Manila. The Asian financial crisis raised the cost of debt and affected the financial viability of the concessionaire, which stopped paying its concession fees in 2001. The outstanding debt was passed to the state-owned Metropolitan Waterworks and Sewerage System (MWSS) and converted into equity in 2005. The Government did not want to take over operations and sought to sell an equity stake to a private investor.

In December 2006, the Philippines unit of investment group First Pacific and local group DMCI partnered and won the bid to buy the shares in Maynilad for USD 503 million (including USD 447.23 million for 84% of the shares and USD 56.67 as a concession fee). This was almost 10 times the minimum bid of USD 56 million. Manila Water, which runs the system in the east of the capital, made the only other offer (USD 456 million). The bulk of the USD 503 million is to be used to fund capital expenditure to upgrade distribution and pay off debt. The new shareholders have planned a large capital expenditure program to rehabilitate the pipe network throughout the western zone and reduce system losses. Maynilad had budgeted around USD 105 million in 2007 and USD 168 million in 2008 for capital expenditures. Maynilad's five-year capital expenditure program up to 2012 is worth about USD 840 million at current exchange rates.

*Sources:* Asian Development Bank, *Maynilad, On the Mend, Rebidding Process Infuses New Life to a Struggling Concessionaire*, 2008; Maynilad Water website: [www.mayniladwater.com.ph](http://www.mayniladwater.com.ph); *Financial Times*, December 2006, *Deal on Maynilad bid*, [www.ft.com/cms/s/0/f8be8274-84e0-11db-87e0-0000779e2340.html?nclink\\_check=1](http://www.ft.com/cms/s/0/f8be8274-84e0-11db-87e0-0000779e2340.html?nclink_check=1).

constitution, the IFC is able to apply such private sector discipline but other IFIs and donors may have difficulties justifying earning a return on their investment.

In other cases, IFIs have supported the development of private sector participation models with substantial requirements for equity contributions from

### Box 3.14. Innovative financial instruments for SONES in Senegal, including donor equity contributions

In 1995, the Government of Senegal initiated major reforms in the urban water sector, which have yielded substantial results in terms of increased water availability, performance improvements and extension of coverage within the service area. The existing national utility, SONEES was split into three entities: an asset-holding company SONES owning the water service assets, a private company (SDE) operating the system and providing water services under a 10-year affermage contract with SONES, and a state-owned company ONAS owning and operating the wastewater assets. SONES built up a significant cash requirement over the construction period of the Water Sector Project, which peaked in 1998 with a total cash shortfall of USD 21 million. The Government had agreed to a clear path for increasing tariffs over time but this still left the need to cover the temporary short-fall. SONES used three instruments to achieve this objective, including:

- A **commercial bank loan** was obtained as a credit line where Citibank and *Compagnie Bancaire de l’Afrique Occidentale (CBAO)* provided a maximum amount of USD 21.4 million over 6 years at a 10% interest rate. This facility was made contingent on a SONES deposit of remittances from SDE into a special account from which debt service payments would be made. Furthermore the banks required a letter of comfort from the Government of Senegal and made the line of credit available only after the World Bank credit for the water sector project was effective. The decision to obtain a commercial line of credit was an innovative departure from usual government practice in Senegal. While it resulted in some delay to disbursement of the water sector project credit, it became one of the key components of the reform. SONES’s ability to successfully attract and negotiate private finance was an important indicator of its new status as an autonomous, credible, and bankable entity.
- **Structuring some of the World Bank and KfW financing as equity instead of loan.** In order to reduce the impact of the investments on the water tariffs, IDA (member of the World Bank) and KfW funds were reassigned by the State to SONES with approximately 50% in the form of equity and 50% in the form of a loan. As a result, 60% of WB and 50% of KfW financing were transferred as equity. This had the obvious advantage that no debt service should be provided on this capital but required the willingness from the two donors. However, it raises questions for the future as to whether the company should pay an annual dividend on the money invested this way. This kind of “debt for equity” swap has been instrumental in the balance sheet restructuring of SONES.

Source: COWI (2005).

private operators. This is in process in Saint Lucia, where the Government (with transaction support from IFC) is looking to award a PPP contract requiring a substantial equity investment from the private operator at bidding stage (Box 3.15).

**Box 3.15. St Lucia water concession: seeking to mobilize equity capital via a water concession**

WASCO is the dominant service provider of water and sewerage services for the Caribbean island of Saint Lucia (180 000 inhabitants). Current water demand on the island is not totally met and is expected to rise due to natural population growth and demand generated by the tourism industry. With transaction advice from the IFC, the Government of Saint Lucia sought investors to recapitalize and operate WASCO. The water and sewerage concession in St Lucia that had been put together was innovative as it requires bidders to commit to fund a portion of the equity of the new service provider and it opened equity ownership to institutional investors.

The contract was to be awarded through the valuation of the quality of the business plan (80%) and the value of the bid price (20%). Two financial bids (from Suez and Cascal) were submitted in October 2008 and opened in December. At the time of writing, however, contract award had been suspended, however, as the losing bidder had pointed to irregularities in the process.

Key elements of the transaction included:

- The Government was to maintain ownership of the existing infrastructure assets through WASCO, and will assume all of WASCO's existing liabilities. The Government was to create a "NewCo", into which it would transfer WASCO's operating assets. NewCo would receive a 25-year renewable non-onerous lease on the infrastructure assets of WASCO, and a license to provide WSS. The winning bidder was to manage NewCo's operations.
- The winning bidder was to inject cash as equity in NewCo, in exchange for 40% of NewCo's shares. The National Insurance Corporation, a Government owned pension fund, was supposed to contribute cash (*pari-passu* with the winning bidder) in exchange for a 20% shareholding in NewCo. An institutional investor was also to contribute cash in exchange for a 20% shareholding (with the objective of disposing of the shares to the public as soon as feasible). The Government wanted to retain the remaining 20%. The minimum equity of NewCo was to be set during the bidding process.
- In addition to injecting equity, the winning bidder also had to pay a "bid price" to the Government of St Lucia. The Government was to use the receipts of the bid price payment to serve part of the WASCO liabilities it retained. As this was not going to be sufficient to service all liabilities, the Government was to cover the remainder.

*Source:* IFC.

### 3.8. Increasing transparency in the sector via credit ratings

*What are credit ratings and what role can they play to increase market-based financing?*

Credit ratings are grades attributed to individuals, public or private corporations or even countries reflecting an assessment of their credit worthiness and their ability to pay back a loan or debt obligation in the future. As a rule of thumb, a poor credit rating indicates a high risk of defaulting on a loan, and thus leads to high interest rates or potentially the refusal of a loan. Credit rating agencies are responsible for attributing credit ratings and all have their own rating scales. The largest credit rating agencies, which tend to operate in most OECD and middle-income countries, include Moody's, Standard & Poor's and FitchRating. Credit rating agencies have also been set up in established financial markets throughout the world, such as in India (CRISIL) or in Mexico (HR Ratings de Mexico), where they have developed national rating scales. As of March 2008, there were 64 credit rating agencies worldwide.<sup>31</sup> On the African continent, however, the only credit rating agencies are located in South Africa and Nigeria, the two largest markets in the region. The other national markets are too small to develop a national rating scale.

The attribution of a rating to a corporation, a municipality, a special purpose vehicle or a particular bond issue can greatly enhance investors' confidence in the investment, as it demonstrates that the borrowing entity has complied with a number of transparency and good book-keeping requirements. The credibility of rating agencies has been negatively affected by the financial crisis, however, as many criticised those agencies for not having adequately appraised the risks of sophisticated securities, such as mortgage-backed securities, and thereby contributing to the financial bubble.

*How have credit ratings been developed in the water sector?*

Domestic rating agencies have made a substantial contribution to increasing the use of ratings for water utilities and sub-sovereign entities. In India, for example, credit ratings awarded to utilities and Urban Local Bodies by leading international and domestic credit rating agencies (such as Fitch, CARE or CRISIL) have made a positive contribution to the development of a market for municipal bond financing.<sup>32</sup> As a result, 35 urban local bodies have obtained a local currency credit ratings in India and 10 have accessed capital markets to help expand and finance infrastructure services.<sup>33</sup>

In other countries, such as the Philippines, the Government itself has supported the development of a credit rating system for local water utilities.<sup>34</sup> Executive Order 279 (adopted in February 2004) laid the ground for reforming financing policies for the water supply sector. The Executive Order set

out that all Water Services Providers, including Water Districts and Local Government Units, would be categorized into four groups ranging from creditworthy (CW) providers to non-creditworthy providers (NWC). The most credit-worthy providers would tap into loans from government (Municipal Development Fund Office or the Development Bank of the Philippines) and private financial institutions with their resources derived from cost-recovering tariffs. The less credit-worthy providers would rely on concessional debt and grants from the government and financing from NGOs.

In less developed markets, particularly in Sub-Saharan Africa, credit ratings for water utilities are virtually non-existent, which reduces transparency and constrains opportunities for diversifying financing to the sector.

### *How can ODA support the development of credit ratings?*

The Camdessus report suggested that Governments should encourage and facilitate the entry of rating agencies and bond insurance/ financial guarantee companies into their domestic capital markets, as this has been done in the Philippines to some extent (although the ratings were attributed by a government institution rather than by an independent institution).

IFIs and donors can also play a role in supporting the development of domestic credit rating agencies and getting them to focus more actively on the sector. In doing so, they could follow the lead of the Public Private Infrastructure Advisory Facility (PPIAF) and the Water and Sanitation Program (WSP) which have recently financed the development of a credit worthiness assessment/diagnostic process for seven water utilities in order to better understand their credit worthiness.<sup>35</sup>

As part of this exercise, a South African based credit rating agency, Global Credit Rating (GCR) assigned investment grade domestic currency credit rating to all seven companies, which should improve these companies' confidence in approaching domestic markets for funding (these ratings were only "shadow credit ratings" as part of a one-off exercise rather than ratings being consistently monitored and updated on an ongoing basis). In some countries, the report noted that "these ratings compare favourably to the ratings accorded by GCR to various large entities operating across other key sectors (within the same countries as those of the participating water utilities)". However, the assessment noted that these ratings were lower than what would be expected given their quasi-monopoly situation. They attributed such relative weakness to high debt levels, poor liquidity and insufficient internally generated cash flows. They noted that such ratings had great potential to improve but that major constraints on credit worthiness mostly revolved around socio economic, structural, administrative and financial issues.

An important side benefit of this activity was to familiarise local domestic financial institutions to the needs of the water sector, as they have traditionally perceived the sector to be a very high risk one. The report recommended that water utilities should engage more directly with credit rating agencies in order to improve their rating and attractiveness to local investors, which indicates that water utilities themselves need to be more pro-active in this area, with or without donor support.

Going forward, the use of credit rating should be considered with caution. The use of such ratings has remained limited, particularly in markets that are too small to develop a national rating scale and where the costs of maintaining credit ratings cannot be warranted. Such barriers can mostly be alleviated through capital markets development rather than via water sector reforms. In addition, the financial crisis has significantly affected the credibility of rating agencies and more generally the reliability of ratings has been questioned in the light of time gaps with regard to information and a potential lack of independence of rating agencies (principal-agency problem).

As a result, government agencies and donors may have to provide ongoing support for the development of shadow rating agencies so as to enhance the availability of information on the sector and overall transparency. International benchmarking initiatives, such as IBNet managed by the World Bank,<sup>36</sup> may also play a role in this area, provided the coverage and reliability of such instruments can continuously be enhanced.

### **3.9. Developing “bankable” projects through project preparation facilities**

#### *What are project preparation facilities?*

Preparing bankable water projects is not an easy task, especially if innovative financial instruments are required in order to improve their bankability. Many governments or water utilities are struggling to mobilise financing and are not necessarily aware of the best ways to reduce interest costs, lengthen tenor or pool small and medium sized towns together in order to access finance. A common phrase in Africa is that “too much money is chasing too few projects”, given that a lack of bankable, packaged projects often seems to be the most critical limiting factor for infrastructure investments and particularly in the water and sanitation sector.<sup>37</sup>

To address this issue, project preparation facilities can be set up to support project identification, appraisal and due diligence, and they can even extend to piloting projects and subsequent scaling up. Project preparation and development facilities can help getting a grip on potential earnings streams so as to attract repayable finance of all types.

*How have they been used in the water sector?*

In recent years, IFIs and donor organisations have created a substantial number of ad-hoc project preparation facilities, which are usually focused on a particular region or sector. A number of these facilities have been used to assist with the preparation of water and wastewater projects. The European institutions have been particularly active in this area in order to accelerate the preparation of projects in former socialist countries in Eastern and Central Europe, the Mediterranean or, more recently, Sub-Saharan Africa.

One of the first such initiatives was the Project Preparation Committee (PPC), which was set up in 1993 under the “Environment for Europe” process to facilitate environmental investment projects in eastern and south-eastern Europe, the Caucasus and Central Asia. The PPC was initially set up as a network of bi-lateral donors, IFIs and partner countries, with a secretariat based at the EBRD. In recognition of the important contribution it had made in the area of environmental financing, the PPC was internalised in 2007 within the EBRD to form the core of a dedicated sustainability initiatives team inside the Bank’s Environment and Sustainability Department.<sup>38</sup>

The European Union has later created a number of such facilities to channel financing in former socialist countries, such as the Joint Environment Programme I and II, the Black Sea Investment Facility (BSIF) (which ran from May 2004 to October 2006), the Danube Investment Support Facility (DISF), the Water Investment Support Facility (WISF) (which ran from June 2005 to December 2007) or the Environmental Project Preparation Facility.<sup>39</sup> A review of these facilities managed by the PPC found that such vehicles had made important contributions to promoting IFI investment in environmental infrastructure, particularly through fast and high quality project preparation support activities. Although several of these facilities had initially been set up with a broader remit (including agriculture or solid waste), they have placed a heavy emphasis on water and wastewater services as well as water resource management.

The European Investment Bank has also led on the establishment and management of project preparation facilities which have been active in the water sector. For example, the EIB is managing the Facility for Euro-Mediterranean Investment and Partnership (FEMIP) to support the modernization and opening-up of Mediterranean countries, which has become a key instrument of EU policy in the region in the framework of the Euro-Mediterranean Partnership.

The FEMIP makes accessible the whole range of EIB instruments, including the financing of up-stream technical assistance or local currency loans to companies and projects that generate no export income. Between 2002 and 2008, the EIB/FEMIP provided EUR 714 millions to the water /

environment sector and EUR 35 million in technical assistance (over 35% of funds available through FEMIP). An appropriate combination of external sources of finance (loans, grants) and donor co-ordination is a prerequisite for obtaining financing under FEMIP.

In addition, with support from the ACP-EU Water Facility (Section 3.1), the ACP-EIB Water Project Preparation Facility (WPPF) was set up to fund technical assistance for project preparation activities in the ACP region. The WPPF has been established for an initial period from 2008 to 2010 with funds of EUR 3 million, of which EUR 2.25 million have been provided by the European Commission (EC) through the ACP-EU Water Facility and EUR 0.75 million by the EIB. The intent is to finance the preparation of at least eight projects in countries with limited project preparation capacities, such as Congo-Brazzaville, Burundi or Niger.

At a more global level, the Technical Assistance Facility (TAF) has been set up under PIDG (Section 3.1) to provide grants to help governments, quasi-governments and private sector entities to access PIDG Facilities, investment vehicles and affiliated programs and has supported the development of a few projects in the water sector.

### *How can ODA support the development of bankable projects?*

Project preparation facilities, on the whole, have enabled the preparation of bankable projects in an accelerated manner and improved the effectiveness of donors' contribution by pooling funds together for support to project preparation. They have been particularly useful in regions where they have been set up to accompany well-defined policies, such as in to support the upgrading of infrastructure in countries candidate for accession into the European Union. In Sub-Saharan Africa, they can be particularly useful to assist countries with limited project preparation capacities to develop projects that can only attract repayable finance if they are combined with innovative approaches to financing, such as blending grants and loans or using guarantees to reduce the risk perception.

Some aspects of their activities have been criticised, however. Grant finance channelled through these facilities has usually been focused on the first step of project preparation, without necessarily providing support for upstream institutional reforms or downstream implementation activities. These facilities are also seen by some as a channel for helping IFIs prepare projects, which should be one of their core activities and therefore amounts to an implicit subsidy for those IFIs. In some cases, their operating timeframe is also too short and would need to be extended to last 3-5 years so as to reflect a typical project cycle.



In future, donors and international organisations can help finance the establishment of more such efforts to prepare projects that they are either willing to finance themselves or to attract market-based repayable financing to (provided projects prepared in such a way can receive funding from a diversity of sources). The establishment of such facilities at the national level could also be encouraged, as it can reduce transaction costs and tie more easily into domestic financial mechanisms, some of which have been outlined in previous sections.

### 3.10. Summary evaluation

The innovative financial mechanisms that have been outlined in this section are very diverse in terms of objectives and level of complexity. As such, they are not necessarily applicable nor are they suitable to any kind of circumstances. Table 3.3 sets out the contexts in which they would be most applicable and potential limitations on their use.

Table 3.3. **Summary of innovative financial mechanisms: applicability and potential limitations**

Innovative financing instrument	Applicability	Potential limitations
<p><b>Blending grants and repayable financing</b> can be done:</p> <ul style="list-style-type: none"> <li>At project level: a donor takes the lead to define the overall financing package for all sources of finance. ODA grants are provided as interest rate subsidies, seed financing for revolving funds, contribution to setting up project preparation facilities...</li> <li>Via dedicated institutions in charge of attracting repayable financing by blending funds (which can be set up at international or national levels).</li> </ul>	<ul style="list-style-type: none"> <li>Applicable in all contexts where an element of subsidy is required to maintain tariffs at an affordable level.</li> </ul>	<ul style="list-style-type: none"> <li>At project level: requires a donor willing to take the lead to identify financing requirements beyond what it is likely to finance itself</li> <li>At institutional level: dedicated institutions may be difficult and costly to set-up. It requires strong institution-building capacities and a conducive legal and political system at country level.</li> </ul>
<p><b>Microfinance:</b> loans for water and sanitation investment, either to households, small and medium enterprises or for urban upgrading and shared facilities</p>	<ul style="list-style-type: none"> <li>Well-suited to small investments, where the commercial banking sector is weak or underdeveloped (i.e. rural areas).</li> </ul>	<ul style="list-style-type: none"> <li>Not well-suited to support large investments with long payback period</li> <li>Need for strong MFIs already in place which are willing to diversify into water and sanitation</li> </ul>

**Table 3.3. Summary of innovative financial mechanisms: applicability and potential limitations** (*continued*)

Innovative financing instrument	Applicability	Potential limitations
<b>Output-based aid (OBA):</b> the provision of subsidies after the output has been provided, as a way to leverage repayable finance	<ul style="list-style-type: none"> <li>• Well-suited in countries where water sector entrepreneurs are willing and able to take the pre-financing risk</li> <li>• High transaction costs for pilot transaction; can partly be overcome by setting up dedicated facilities at national level</li> </ul>	<ul style="list-style-type: none"> <li>• Does not overcome the need for pre-financing for SSWSP; it may be better combined with other forms of finance to assist with pre-financing needs</li> <li>• Setting up dedicated institutions may be a lengthy and costly exercise</li> </ul>
<b>Guarantees and insurance products</b> can be used to improve the terms of commercial debt (extending tenor and reducing interest rates) or attracting equity investors.	<ul style="list-style-type: none"> <li>• May be most beneficial for borrowers that are just below credit-worthiness to help them access capital markets for the first time</li> <li>• Creation of domestic guarantee facilities can reduce transaction costs (as opposed to IFIs providing guarantees on a case-by-case basis)</li> </ul>	<ul style="list-style-type: none"> <li>• Only applicable in countries with functioning capital markets</li> <li>• Underlying projects must be bankable or entities receiving finance must be creditworthy in the eyes of their guarantors</li> <li>• Sovereign guarantees may still be required (and may be difficult to obtain)</li> <li>• Domestic institutions providing local-currency guarantees may be difficult and costly to set up.</li> </ul>
<b>Grouped financing vehicles</b> can help finance a large number of small projects and facilitate access to credit enhancement mechanisms, such as guarantees, for the group as a whole	<ul style="list-style-type: none"> <li>• Well-suited for financing decentralised water providers operating at a small scale</li> </ul>	<ul style="list-style-type: none"> <li>• Mostly applicable to countries with fairly well-developed capital markets</li> <li>• Legal system needs to allow some of their attractive features (such as tax-exemptions and bond “wrapping”)</li> </ul>
<b>Direct lending to sub-sovereigns,</b> when multilaterals agree to lend to sub-sovereigns without the need for a counter-guarantee	<ul style="list-style-type: none"> <li>• Well-suited to financing decentralised water providers</li> <li>• Can help build a sound credit history for local borrowers, who can then tap sources of repayable finance (loans and equity)</li> </ul>	<ul style="list-style-type: none"> <li>• Many donors are not currently allowed to lend at sub-sovereign level without a sovereign guarantee</li> <li>• Domestic governments may be reluctant to allow their sub-sovereigns to borrow to avoid breaking overall credit limits</li> </ul>

**Table 3.3. Summary of innovative financial mechanisms: applicability and potential limitations** *(continued)*

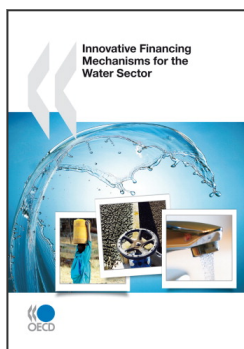
Innovative financing instrument	Applicability	Potential limitations
<b>Raising equity</b> via financial markets, from the public sector or directly via private equity	<ul style="list-style-type: none"> <li>• Can help strengthen the balance sheet of water service providers that are already in relatively good financial health.</li> <li>• Can increase transparency and help build a sound track-record to mobilise other financing</li> </ul>	<ul style="list-style-type: none"> <li>• Requires fairly developed capital markets and clear accountancy rules that are consistently applied</li> </ul>
<b>Credit ratings</b> assigned to a borrower or to a particular bond issue	<ul style="list-style-type: none"> <li>• Can enhance investors' confidence in the investment, as it demonstrates that the borrowing entity has complied with good book-keeping and transparency requirements</li> </ul>	<ul style="list-style-type: none"> <li>• Requires existing credit rating agencies willing to assign ratings to the issues</li> <li>• The credibility of credit rating systems has been affected by the financial crisis</li> </ul>
<b>Project preparation facilities</b> can support project identification, appraisal and due diligence as well as pilot projects and subsequent scaling-up	<ul style="list-style-type: none"> <li>• Can be useful to support specific processes, such as upgrading of infrastructure in preparation for accession to the EU</li> <li>• Can be useful to assist countries with limited project preparation capacities</li> </ul>	<ul style="list-style-type: none"> <li>• Does not guarantee access to repayable financing for the project (and is more likely to lead to concessionary financing rather than market-based repayable financing)</li> </ul>

## Notes

1. Winpenny, J. (2003).
2. Interview with José Frade, Head of Water and Sanitation Division, European Investment Bank, January 2009.
3. See: [www.flag-bg.com/?l=2](http://www.flag-bg.com/?l=2).
4. OECD (2009a). The fund was launched in October 2008, i.e. in the midst of the financial crisis. Revolving funds are discussed in more details in Section 3.5.
5. Gruppo SOGES.
6. See: [www.pidg.org/](http://www.pidg.org/).
7. CEPA (2008).
8. Mehta, M. (2008). This section draws heavily on the findings of this study, which is the first detailed review of the prevalence of micro-finance in the water and sanitation sectors.
9. Note that the revolving fund concept has also been used at a broader scale in the water sector, as described in Section 3.4.
10. This innovative mechanism was introduced by the World Bank in 2002 and led to the establishment of the Global Partnership on Output-Based Aid (GPOBA) in January 2003. GPOBA is a donor-funded pilot program to test the approach with a view to mainstreaming it within IDA as well as with other development partners.
11. Marin, P. (2002).
12. GPOBA/IDA-IFC Secretariat (2009).
13. By contrast, the review found that the OBA approach had become “mainstreamed” as one of the key modus operandi for interventions in the telecommunication and road sectors.
14. Trémolet, S. with Perez, E. and Koslky, P. (2010).
15. Trémolet, S., (2006).
16. GPOBA/IDA-IFC Secretariat (2009).

17. Mandri-Perrott, C., M. Schiffler and A. Aguilera (2009).
18. Matsukawa, T. and O. Habeck, (2007).
19. Box 1.2. on the role that monoline insurers played in enabling access to a broader class of bond investors by a broader class of water companies in England and Wales. Their capacity to provide insurance has been greatly reduced following the financial crisis, however, as described in Chapter 4.
20. See: [www.usaid.gov/our\\_work/economic\\_growth\\_and\\_trade/development\\_credit/](http://www.usaid.gov/our_work/economic_growth_and_trade/development_credit/) for more information.
21. Based on interview with World Bank Treasury staff. Additional information can be found on: [http://siteresources.worldbank.org/INTGUARANTEES/Resources/Overview\\_of\\_the\\_World\\_Bank\\_Guarantee\\_Program.pdf](http://siteresources.worldbank.org/INTGUARANTEES/Resources/Overview_of_the_World_Bank_Guarantee_Program.pdf).
22. Based on an interview with Judith Pearce and Elena Palei at MIGA.
23. A global guarantee facility, GuarantCo, has been set up under the Project Infrastructure Development Group (PIDG) to enhance local currency debt issuance by private, municipal and parastatal entities for infrastructure projects in lower income countries around the world and help match the demand for local medium and long-term funding. Although the water sector is potentially targeted, however, so far this facility has only provided guarantees in the transport, telecommunications and industrial infrastructure sectors. See: [www.guarantco.com](http://www.guarantco.com) and Section 3.9.
24. The revolving fund structure is used in other sectors in the United States, such as to finance small preservation projects for historical monuments or neighbourhoods.
25. For example, the AFD (Agence Française de Développement) has identified a gap in financing for small towns which cannot mobilise local commercial bank financing or international funds due to the foreign exchange risk.
26. Global Water Intelligence (2006).
27. EBRD and the Financing of the Municipal Sector, CS-EBRD Roundtable Seminar, 10 February 2009.
28. Pinsent Masons (2007).
29. Although the company was initially intending to release issue shares for the first time on the local stock market via an IPO, they have indefinitely postponed it due to the ongoing financial crisis (Section 4.1.4).
30. See: [www.ifc.org/ifcext/infrastructure.nsf/Content/WaterGas](http://www.ifc.org/ifcext/infrastructure.nsf/Content/WaterGas).
31. See: [www.defaultrisk.com/rating\\_agencies.htm](http://www.defaultrisk.com/rating_agencies.htm).
32. Global Water Intelligence (2008a).
33. CEPA (2008).

34. Trémolet, S. (2009).
35. Global Credit Rating Co. (2008). The seven utilities included 5 service providers (NCWSC in Kenya, NWSC in Uganda, ONEA in Burkina Faso, SDE in Senegal and SONEDE in Tunisia) and 2 asset holding companies (AWSB in Kenya and SONES in Senegal).
36. See: [www.ib-net.org](http://www.ib-net.org).
37. Winpenny, J. (2008).
38. See: [www.ebrd.org](http://www.ebrd.org).
39. See: [www.rec.org/REC/Programs/REREP/PEIP/docs/4th\\_regional\\_meeting/14\\_davies\\_ebrd\\_ppc.ppt](http://www.rec.org/REC/Programs/REREP/PEIP/docs/4th_regional_meeting/14_davies_ebrd_ppc.ppt).



**From:**  
**Innovative Financing Mechanisms for the Water Sector**

**Access the complete publication at:**  
<https://doi.org/10.1787/9789264083660-en>

**Please cite this chapter as:**

OECD (2010), "Pushing the boundaries of innovative finance", in *Innovative Financing Mechanisms for the Water Sector*, OECD Publishing, Paris.

DOI: <https://doi.org/10.1787/9789264083660-7-en>

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