Governments Don’t Have to Go It Alone
Leveraging public funds to attract commercial finance for improved water services

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INTRODUCTION
Public sector funds alone are often insufficient to provide access to water for all. The Water and Sanitation Program (WSP) of the World Bank’s Water Global Practice estimates that in Sub-Saharan Africa alone there is an annual shortfall of US$14.3 billion in the sector (see Figure 1). This brief demonstrates how governments can increase the overall funding available to the water sector by strategically using their limited public funds to attract additional financing from commercial lenders. Innovative public financing structures can even attract commercial finance into projects that target the poor, a historically underserved population segment.

Many countries suffering from inadequate water budgets to meet infrastructure needs have commercial financing institutions able to help cover some of the budget shortfall. However, water supply projects are often unable to secure commercial loans on their own. Governments, who can identify the common barriers between water service provider borrowers and commercial lenders, can play a key role in facilitating commercial financing in the sector.

This brief highlights the roles that governments can play and the mechanisms they can use to attract commercial finance into the water sector. This note also illustrates successful cases where water service providers have accessed commercial financing to expand coverage, often to serve poor areas. The brief summarizes the common constraints to commercial finance in the water sector and offers several financial structuring and risk mitigation strategies to overcome these constraints.

COMMERCIAL FINANCE IN THE WATER SECTOR
Safe and reliable drinking water yields significant economic and social benefits. It has been estimated that meeting the Millennium Development Goals for water supply and sanitation could have a 7:1 benefit-cost ratio and generate US$84 billion in time efficiency and health related savings per year.1 Every dollar invested in increasing access to improved water supply can return US$3 to US$34 dollars to a nation’s economy.2

This high benefit to cost ratio is due to the multiplier effect that improved access to water supply has on a household’s daily life. Yet, the task and costs of meeting the water service and supply needs are daunting. Increasingly, governments are unable to meet infrastructure development demand solely through public sector funds and must draw on commercial sources of financing to help meet sector needs.

This brief includes several examples where commercial finance has been mobilized for water sector infrastructure projects, including for poor customers, when:

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1 Meeting the Challenge of Financing Water and Sanitation; Organization for Economic Cooperation and Development; Oct 2011; Available at: http://www.oecd.org/env/resources/48923826.pdf
2 Costs and benefits of water and sanitation improvements at the global level (Evaluation of the); World Health Organization; 2004; Available at: http://www.who.int/water_sanitation_health/wsh0404summary/en/
1. utilities are able to identify, design, and manage bankable projects, and
2. financial institutions are able to assess the risks of water supply projects and have access to tools to help mitigate unacceptable risks, and
3. governments or donors play an active role to financially connect utilities and commercial lenders with supportive legislation, financial assistance and/or risk mitigation.

Governments must proactively step in to incentivize financial institutions to lend to the water sector and identify existing hurdles impeding lending. Water service providers often face multiple constraints in attracting commercial finance, due to:
• Perception of water as a social good with low ability to generate commercial returns.
• Enabling environment (regulatory, legal, policy frameworks) is unsupportive of commercial lending.
• Utilities with limited borrowing experience lack financial management capacity to structure commercially viable projects and obtain loans.
• Utility assets of insufficient value to meet collateral requirements of lenders.
• Infrastructure project life and asset depreciation beyond bank lending tenors.
• Low market intelligence resulting in project risk misperception.

In sub-Saharan Africa, there is an estimated annual shortfall of US$14.3 billion: governments, donors, non-governmental organizations, and households are anticipated to provide about US$7.6 billion annually in financing for improved water supply, while the estimated annual need is US$21.9 billion for water and sanitation.

**BOX 1: “MAJI NI MAISHA” COMMUNITY LOANS**

In Kenya, K-Rep Bank Limited, introduced “Maji ni Maisha” a financing product that provides loans to communities for water infrastructure. This program demonstrated that a combination of technical assistance, output-based grants, and partial loan-guarantees can overcome perceived credit risks and other barriers to financing water projects. Today, K-Rep Bank has made 35 loans valued at over US$3 million to water projects across Kenya’s rural communities, providing water to about 190,000 people from networks they financed themselves. Products like these can easily be replicated by national governments to leverage commercial financing of water projects.

From 2006, WSP worked with K-Rep Bank, a commercial bank with microfinance origins in Kenya, to pilot a small program to finance community-managed piped water systems. Through “Maji ni Maisha”, K-Rep Bank provided loan financing for community water projects under the general terms below.

- **Loan Value:** KSH 5 to 10 million (approximately US$60,000 to US$115,000)
- **Borrower:** Legally registered community associations, self-help groups and trusts
- **Equity Requirement:** 20% of project cost in cash
- **Interest Charged:** Fixed at market rates, at that time between 16% and 18% per annum
- **Maximum Loan Tenor:** Maximum 1 year grace period + 5 year term loan
- **Subsidy:** Up to 40% of eligible project costs based on achievement of the pre-set connection and revenue targets

K-Rep Bank successfully lent to projects with an average loan size of US$110,000. Following the successful construction of the project and achievement of targets, an output-based aid subsidy of up to 40% of the total project cost was paid to the community—significantly reducing the payback burden and lowering the debt service risk.

To address the perceived credit risk of water projects, K-Rep Bank provided technical assistance to make projects more viable. The program offered a small (US$9,000) grant to co-finance with communities consultants and other costs necessary to support the development of a bankable project proposal. If K-Rep agrees to finance a project, it offers a subsequent grant of up to US$12,600 for consultancy services to oversee project construction and set up management systems.

The Global Partnership on Output-Based Aid (GPOBA) provided an initial grant for this project of US$1.15 million. Since that grant was issued, K-Rep Bank has made 35 loans valued at over US$3 million to water projects servicing more than 140,000 people in rural communities.

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3. Africa’s Infrastructure: A Time for Transition. Vivian Foster and Cecilia Briceno-Garmendia, editors; 2010; World Bank; Available at: http://www.infrastructureafrica.org/system/files/Africa%27s%20Infrastructure%20A%20Time%20for%20Transformation%20FULL%20TEXT.pdf


COMMERCIAL FINANCING AVENUES
The commercial financial sector offers multiple avenues for financing projects of varying size. This section describes the typical commercial financing avenues available for water infrastructure projects, outlines major barriers to introducing investment, highlights examples of successful financing mechanisms, and clarifies the role that governments can play in order to introduce commercial finance to the sector.

Microfinance Institutions
Microfinance institutions (MFIs) are often intimately tied to a community and focused on lending to the poor. As such, they are a natural fit to provide financing for water supply projects. Yet, many MFIs have limited capital and lack the technical resources to correctly evaluate water projects. As a result, many projects are unable to secure loans from MFIs regardless of their ability and willingness to repay.

One fundamental problem is that MFIs cannot provide loans with long enough maturities to meet the needs of many water projects. Most MFIs provide small loans for income-generating investments, usually without collateral. With the added revenue borrowers can reliably pay back their debt over a shorter repayment cycle, typically 12 to 18 months, but the lack of collateral is a concern. As such, MFIs prefer short tenors, particularly for new clients, as it helps reduce default risk.

In contrast, water service providers need loans for activities that, while income generating, have longer repayment needs. For instance, a water service provider may seek a loan to increase its production capability in order to expand service coverage; however, such an infrastructure installation would likely require multiple years to repay, well beyond the typical microfinance cycle.

What can governments do to help?
Governments can leverage public funds by creating partial output-based subsidies for MFIs that lend to water service providers (see Output Based Aid in the Tools section below). The subsidy acts as an additional cash stream for the MFI and reduces payback risk. As smaller infrastructure construction projects often reach completion within one to two years, water service providers can use the output-based subsidy to pay down the loan, shortening the average life of the loans. Donor subsidy programs like the Global Partnership on Output-Based Aid (GPOBA) can assist governments with initial pilot subsidy programs.

Governments can also fund MFIs directly by matching investment capital funds (equity) or offering subsidized dedicated credit lines (debt) for MFIs committed to lending to the water sector. Increasing the capitalization funding of these MFIs should increase lending to the water sector, thus leveraging public funds by attracting increased commercial financing and extending tenors of average loans.

FIGURE 2: GOVERNMENTS CAN BRIDGE THE GAP BETWEEN LENDERS AND BORROWERS

<table>
<thead>
<tr>
<th>Finance Source</th>
<th>Microfinance</th>
<th>Commercial Banks</th>
<th>Pension Funds</th>
</tr>
</thead>
<tbody>
<tr>
<td>What do borrowers need?</td>
<td>Water suppliers need long-term loan tenors that match the depreciation of their assets</td>
<td>Borrowers need loans with reasonable collateral requirements and interest rates</td>
<td>Projects need large, long-term loans for income-generating infrastructure projects</td>
</tr>
<tr>
<td>What do lenders need?</td>
<td>MFIs need short-term returns that match the expectations of investors as well as the capital necessary to lend</td>
<td>Commercial banks need to structure loans to account for loan risk accurately</td>
<td>Pension funds need an incentive to invest and need to be able to assess project risk</td>
</tr>
<tr>
<td>What can governments do to close the gap?</td>
<td>Provide output-based subsidies that match the needed returns of MFIs; offer or match dedicated lending lines to MFIs</td>
<td>Help banks understand risk; offer subsidies to help households pay for water; lend directly to banks</td>
<td>Create favorable regulatory incentives for investment</td>
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Commercial Banks
Water suppliers also experience difficulty in securing loans from traditional commercial banks. Most commercial lenders are generally unfamiliar with the water projects as a whole and are unfamiliar with credit analysis of water utilities and structuring project- or cash flow-based loans. As a result, they are unable to correctly appraise the risk of water providers, and often overestimate the actual risks involved, particularly when low-income customers are involved—who are often incorrectly viewed as having a low willingness and ability to pay for water. These factors lead lenders to require collateral levels that are often above the value of the loan and discourage lenders from lending long term.

BOX 2: COMMERCIAL BANK LOAN IN UGANDA
The Government of Uganda sought the support of donors and NGOs to review the financing conditions and constraints faced by water operators in Uganda and offer technical assistance trainings to local banks to understand their ability to finance water suppliers. As a result, Tradint, a private water operator, was able to receive a US$100,000 loan from DFCU Bank, a Ugandan commercial bank, to expand piped water services. The provider agreed to install 400 new water connections during the first two years of the contract, expanding service to 13,000 people.
**What can governments do to help?**

Governments, often with assistance from donors, can create facilities to help commercial banks overcome their reluctance in lending to the sector. Governments need to ensure that the legal and regulatory environment is conducive to commercial borrowing by the water sector. For example, in Kenya, water service providers are established as independent entities under the Companies Act and the regulatory board allows for the inclusion of commercial financing costs in setting cost-recovery tariffs.

Sector-specific partial credit guarantees for loans can lower or even remove collateral requirements. Technical assistance programs can train banks to analyze credit and sector risks and train service providers to understand commercial lending requirements. Output-based aid subsidies can reduce default risk and the average life of loans. Dedicated lending lines from governments to banks can allow banks to offer longer loan tenors often at fixed interest rates.

**Pension Funds**

Pension funds can be a major source of long term finance, especially when incentivized by the government to allocate a certain portion of portfolios to infrastructure projects. The long horizon and relatively stable return of most water utility projects generally fit very well with the asset class investment needs of pension funds. Pension funds often have less stringent collateral requirements and are more comfortable with cash flow based lending; however, pension funds have many of the same reservations about investing in these projects as commercial banks.6

**What can governments do to help?**

Governments can create favorable conditions, through both legislation and regulatory oversight, for pension funds to invest in infrastructure projects. For example, regulators can set requirements on the type of projects that pension funds can finance. Governments can also offer incentives like partial guarantees on bonds or bond facilities that create favorable risk dynamics for long-term investors. These are often backed by guarantees and supported by equity positions of donors and/or governments. This facility allows pension funds to invest in products that have partial risk protection and diversifies investor risk into multiple projects and counterparties. However, bond issues are usually substantial investments and require large institutional investors as well as a highly developed capital market.

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6 Tuesta, David; Pension fund as an investor in infrastructure projects in Latin America; Presentation hosted by the United Nations, The World Bank, The Asian Development Bank; Feb 2012; Available at: http://www.oecd.org/site/iops/research/47846215.pdf

For Governments: Enabling Environment Constraints
Without a supportive policy, legal, and regulatory environment, extending commercial financing to water utilities will fail. Often, laws preclude lending to or borrowing by water service providers. There is no magic formula for an optimal regulatory environment—both too much and too little centralization can hamper decision making. Tariffs that are too high or too low can reduce water revenues; while, overly stringent or relaxed standards can negatively impact consumers and utilities. The key imperative for governments is to help align the incentives of financial institutions with the needs of water suppliers, either directly through policy mechanisms and/or by convening partnerships with organizations that can help.

Many utilities and lenders cite the lack of a cost-recovery tariff as a major barrier not only to securing commercial loans but also to providing water services to poorer consumers. Political pressure and bureaucratic inertia frequently result in tariffs that remain unchanged for years, despite operating costs rising with inflation. Slowly, utilities lose their ability to maintain high levels of service and make infrastructure improvements. When utilities are unable to meet current obligations or capitalize infrastructure expansions, they are unlikely to extend piped water to poor households. As a result, the poor must buy water from informal vendors, who often do not adhere to regulator set cost recovery tariffs and charge higher-than-market rates. Without a supportive policy, legal, and regulatory environment extending commercial financing to water utilities will fail. Often, laws preclude lending to or borrowing by water service providers. There is no magic formula for an optimal regulatory environment—both too much and too little centralization can hamper decision making. Tariffs that are too high or too low can reduce water revenues; while, overly stringent or relaxed standards can negatively impact consumers and utilities. The key imperative for governments is to help align the incentives of financial institutions with the needs of water suppliers, either directly through policy mechanisms and/or by convening partnerships with organizations that can help.
For Borrowers: Capacity Constraints
Many water service providers lack the size, internal processes and controls, and technical capabilities to approach financiers and manage loans. Lenders are often hesitant to extend loans to small water service providers because transaction costs can be high relative to the loan. Utilities may be unable to demonstrate water tariff revenues are sufficient to support loan repayment and lack the expertise to identify bankable projects, model financial outcomes, and approach lenders.

TOOLS FOR CATALYZING COMMERCIAL FINANCE
Governments can use a number of mechanisms to overcome stakeholder constraints and obstacles to introducing commercial finance for water supply projects. These mechanisms include output-based aid subsidies, partial credit guarantees, dedicated credit lines, credit ratings, legal and regulatory policy, and technical assistance.

Partial Credit Guarantees
Partial credit guarantees are designed to encourage lending by reducing the loss a creditor experiences during a borrower default or by reducing the risk of default on a loan. Guarantees usually require a fee, a deed on receivables and certain project requirements. Partial credit guarantees are designed to give commercial lenders greater comfort in lending to new sectors and can encourage more lending, extend loan tenors, and reduce collateral requirements.

There are many variations of partial credit guarantees. Some are designed to simply cover a percentage of the loan in the event of default while others are structured to reduce the probability of default, increase the recovery if default occurs, and/or extend loan maturity. In general, the objective should be to target specific risk local lenders will not cover and offer the minimum guarantee to facilitate a transaction.

BOX 6: KARAWETI WATER TRUST PROJECT IN KENYA
Karaweti Water Trust is a small piped water provider that sought to increase membership and revenue collection by providing more reliable water service. The Trust developed a project that installed a new borehole to supplement its existing supplies and customer-level meters. The project was financed with equity from the community, a loan of US$54,000 from K-Rep Bank, a grant of US$26,000 from GPOBA and technical support from WSP. The Trust was able to increase its number of connections by 38%, average monthly revenue by 90%, and 7 day/week water service from 8% to 87%.

Partial Credit Guarantees
In 2011, PROPARCO provided an eight year, US$5 million credit line to Hattha Kaksekar Limited (HKL), a Cambodian microfinance institution that plays an active role in lending to remote and underserved rural areas. The credit line helped HKL expand its portfolio of loans to small and medium enterprises in low-income Cambodian communities. In 2014, Agence Française de Développement announced a US$15 million concessional loan to the Foreign Trade Bank of Cambodia to make loans available to small private water and electricity companies in rural and peri-rural areas in Cambodia. The loan was provided in conjunction with a US$15 million portfolio guarantee that helps the Foreign Trade Bank reduce collateral requirements for small operators seeking loans.

However, many governments are increasingly concerned about the impact of these contingent liabilities on the nation’s fiscal health. Therefore, governments should closely track the issuance of credit guarantees and play an active role in limiting contingent liabilities.

Output-Based Aid
Output-based aid (OBA) is an incentive-based approach to catalyzing commercial finance. In an OBA model, a government or development partner provides a subsidy payment to the borrower if a project achieves a pre-specified level of output (e.g., connections made, water supplied). These subsidies can also target efficiency gains such as a reduction in non-revenue water. OBA gives lenders greater confidence in the cash flow of operators, enabling reductions in collateral and can significantly reduce default risk and shorten the average life of loans.

BOX 8: CREDIT ASSESSMENT OF 43 UTILITIES IN KENYA
In 2011, Kenya Water Services Regulatory Board (WASREB) conducted a credit assessment of 43 Kenya utilities. This resulted in thirteen utilities receiving an A or BBB rating (creditworthy), sixteen receiving a BB rating (potentially creditworthy) and fourteen utilities receiving “no rating.” In May 2014 the Kenya Embu Water and Sanitation Company received an 87 million shilling (US$1 million) loan from Housing Finance Company of Kenya (HFCK) to construct a water pipeline. This is the first commercial loan issued by HFCK and will expand connectivity to 6,000 households.

12 Jamora, Lorenzo H. Local water Utilities Administrator, Quezon City, Philippines; Credit Rating System to Enhance Credit Flow for Water Supply Projects in the Philippines; Technical Matters; 2008; Available at: http://www.lwua.gov.ph/tech_mattrs_08/credit_rating_jamora.htm

Governments have a tremendous opportunity to provide direct technical assistance and/or to bring lenders and water service providers together with organizations that can provide technical assistance to overcome capacity constraints. Many water service providers do not have the capacity to identify bankable projects, design and implement internal controls to be considered creditworthy, apply for loans, or manage projects once funded. Likewise, many financial institutions, especially MFIs with small staffs, lack the knowledge to assess the technical merits of a project proposal. There are a number of examples of technical assistance partnerships that expanded access to finance. Moreover, technical assistance would likely be required to support the introduction and use of all market catalyzing tools covered in this section. Technical assistance can also help both water service providers and potential financiers understand the willingness to pay of poor households for piped water. Many stakeholders do not realize that the poor often pay dramatically more for water from informal private vendors than the prevailing tariff rate. For example, in Tanzania, UNDP found that one private water vendor was charging almost 30 times the local water tariff for a jerry can of water. Understanding willingness to pay will give commercial lenders greater confidence in the revenue-generating potential of a project, and encourage reduced collateral requirements and/or lower cost of borrowing.

Dedicated Credit Lines
Governments and donors can encourage financial institutions to increase lending to the water sector by providing dedicated credit lines to financial institutions under the condition that funds be used for water and sanitation infrastructure projects. This conditionality can restrict financial institutions to make loans to water service providers or to projects designed specifically to increase water service to the poor. Governments can either provide funds directly to commercial banks or collaborate with donors to secure lending commitments.

Credit Rating Assessments
Many commercial lenders have little to no exposure to water supply projects, and utilities often have no financial track record of having secured and successfully paid off commercial loans. Without a standard approach to rating water utilities, lenders have limited inputs and ability to assess the relative risk of water supply projects. Governments can develop a uniform set of creditworthiness standards for water utilities by facilitating partnerships with credit rating organizations. For example, the Government of the Philippines established a Water District Credit Rating System, which classifies districts as either creditworthy, semi-creditworthy, pre-creditworthy, or non-creditworthy. Creditworthy water districts are ready for investment, whereas less creditworthy districts provide opportunities for technical assistance targeted to address their weaknesses.

Providing credit ratings helps water service providers establish credit histories, improves their visibility and bankability with development institutions and private lenders, and aids in benchmarking water service providers with corporate entities.14

Technical Assistance
Governments have a tremendous opportunity to provide direct technical assistance and/or to bring lenders and water service providers together with organizations that can provide technical assistance to overcome capacity constraints. Many water service providers do not have the capacity to identify bankable projects, design and implement internal controls to be considered creditworthy, apply for loans, or manage projects once funded. Likewise, many financial institutions, especially MFIs with small staffs, lack the knowledge to assess the technical merits of a project proposal. There are a number of examples of technical assistance partnerships that expanded access to finance. Moreover, technical assistance would likely be required to support the introduction and use of all market catalyzing tools covered in this section. Technical assistance can also help both water service providers and potential financiers understand the willingness to pay of poor households for piped water. Many stakeholders do not realize that the poor often pay dramatically more for water from informal private vendors than the prevailing tariff rate. For example, in Tanzania, UNDP found that one private water vendor was charging almost 30 times the local water tariff for a jerry can of water. Understanding willingness to pay will give commercial lenders greater confidence in the revenue-generating potential of a project, and encourage reduced collateral requirements and/or lower cost of borrowing.15

Creating Sustainable Water and Sanitation Services through Domestic Private Sector Participation  

Why Governments Shouldn’t Go It Alone

In 2011, the Government of the Philippines launched the Salintubig Project, which provides technical assistance to water supply systems for the 455 waterless areas in the country. Technical assistance included workshops on planning and engineering design, construction supervision, and local water governance, and focused on enhancing the capacity of local government units to implement best accounting practices. Since the launch of Salintubig, the project has transitioned 47 public water utilities to a ring-fencing system, enabling those utilities to more effectively set cost-reflective water tariffs.

There is a considerable gap between the water supply needs, especially in poor communities, and the financial ability of governments to meet those needs. It is unlikely that governments will be able to close this gap by relying solely on public funding and direct donor funding. Governments should strategically stretch public and donor funding to leverage commercial finance into the water sector. However, water service providers and lenders often require government assistance to clear the multiple barriers to introducing commercial financing into the water sector.

There are many examples where governments and donors have worked together to develop and scale efforts to overcome these barriers and catalyze commercial financing in the water sector. WSP has successfully assisted governments, water service providers and commercial financiers in several countries to develop innovative financing to facilitate lending to the water and sanitation sector.

CONCLUSION

The findings, interpretations, and conclusions expressed herein are entirely those of the author and should not be attributed to the World Bank or its affiliated organizations, or to members of the Board of Executive Directors of the World Bank or the governments they represent.