

# Achieving Universal Access to Water and Sanitation by 2030

## The Role of Blended Finance

James Leigland, Sophie Trémolet, and John Ikeda

August 2016





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**WORLD BANK GROUP**

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The paper was authored by James Leigland, Sophie Trémolet, and John Ikeda, with support and input from William Kingdom, Joel Kolker, and Meredith Kummings.

## Contact Us

For further information please contact Joel Kolker ([jkolker@worldbank.org](mailto:jkolker@worldbank.org)) or Sophie Trémolet ([stremolet@worldbank.org](mailto:stremolet@worldbank.org))

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# Achieving Universal Access to Water and Sanitation by 2030

## The Role of Blended Finance

The Millennium Development Goals helped rally the world around the challenge of providing access to improved water supply and sanitation (WSS). By 2015 hundreds of millions of people had gained access to improved water sources and better sanitation. Despite this, with hundreds of millions more still lacking access, much remains to be done. Sustainable Development Goal 6 (SDG 6) significantly raises the level of ambition for the water sector, calling for universal access to safe water and sanitation while addressing issues of water quality and scarcity to balance the needs of households, agriculture, industry, energy, and the environment over the next 15 years.

A substantial increase in sector financing will be necessary to achieve SDG 6. Recent estimates by the World Bank's Water and Sanitation Program (WSP) indicate that the present value of the additional investment in WSS alone needed through 2030 will exceed US\$1.7 trillion (Hutton & Varughese 2016). Existing funding falls far short of this amount; countries may have to increase their investment in the water and sanitation sectors by up to four times in order to meet the SDGs.

### Where is Financing for the Water SDG Going to Come From?

To cover costs, funding for the water sector ultimately comes from three main sources: from households (via tariff revenues or direct investments into self-provided infrastructure), from domestic taxpayers (in the form of government subsidies) or from voluntary transfers (from external donors or philanthropic foundations, in the form of grants). The water sector is very capital intensive, however, and it is therefore necessary for water sector actors to mobilize financing, which they can then repay over time, once the infrastructure has been built, delivers services, and generates a revenue stream to repay the financiers.

At present, most water sector actors in developing countries rely on government lending and concessional financing from bilateral and multilateral development banks (MDBs) to mobilize financing for capital investment. These financial sources alone will not be sufficient to finance investments on the scale that is called for by the SDGs. It is therefore essential to mobilize up-front financing from private, or "commercial" sources as well. In particular, mobilizing domestic commercial finance (i.e. from domestic investors in local currency) would eliminate foreign exchange risk and help reduce transaction costs.

Commercial finance can come in various forms, including:

- **Commercial bank loans** When a bank provides a loan at market-based lending terms. These differ from "concessional loans," i.e. loans provided by development banks at conditions that are more advantageous to the borrower than market conditions.
- **Bonds** A debt instrument bought by investors. When buying a bond, an investor lends money to the borrowing entity (which can be a government, a municipality or a corporate) for a defined period of time at a variable or a fixed interest rate.
- **Equity** An ownership interest in a company. Buyers of equity shares provide capital in exchange for expected returns in the form of dividends and increases in share value, both of which would depend on the company's financial performance. Equity shares can be publicly traded on a stock exchange or privately held.

However, there are good reasons why commercial finance has been limited for the water sector up to this point. "Blended finance," defined by the OECD as "the strategic use of development finance and philanthropic funds to mobilize private capital flows to emerging and frontier markets" can help in mobilizing such private financing.

### **BOX 1** Exploring the potential to improve utility efficiency and create opportunities for commercial borrowing in the WSS sector

Based on data from 605 developing country utilities in the IBNET database (2013), just 17 percent of these utilities cover their Operation and Maintenance costs and create a surplus (assumed as having cash revenues exceeding costs by at least 20 percent) that could potentially be used to mobilize commercial borrowing to help them move towards achieving the SDGs. This means that 83 percent of utilities would have difficulties mobilizing such financing, unless they implement significant reforms to improve cost recovery.

Using this same dataset, the average level of reported Non-Revenue Water (NRW) was 35 percent. However, there are significant variations in performance: the top quartile performers achieve NRW levels of 15 percent, while the levels in the lowest quartile was 67 percent. In terms of collection efficiency, the average from the dataset was 92 percent, whereas the average in the top quartile was 100 percent and the lowest quartile collected only about 50 percent of the amount billed.

Assuming that: (i) utilities could achieve the performance of utilities in the top quartile in terms of NRW and collection efficiency; (ii) that water saved from leaks can be sold at the prevailing average tariff, and (iii) that modest energy efficiency gains of 15 percent can be made, then 66 percent of utilities in the IBNET sample could create sufficient surplus to mobilize commercial borrowing. This means that such efficiency improvements could almost quadruple the number of utilities that could access these sources of investment funds. At the same time, such performance improvements would result in 83 percent of the utilities fully covering their operating costs. In this simplified model, the financial improvements are achieved without mobilising additional revenues from tariffs adjustments.

Mobilizing funds up front to deliver such efficiency gains would be needed, as would capacity building. But, if these cash surpluses can be maintained or increased over the long term through good policies, governance, and incentives then the ability to mobilize additional sources of investment towards meeting the SDGs starts to look like a possibility.

Given existing structural issues in the water sector, blended finance approaches need to be applied strategically as part of a package of reforms to improve sector efficiency and governance and to increase sector funding sources on a sustainable basis, so that sufficient revenues can be mobilized to repay commercial financing over time. When these conditions are in place, different blended finance strategies can be used to help mobilize commercial financing depending on local financial market conditions, as discussed in this paper.

## Constraints Limiting Private Financing to the Water Sector

Serious structural constraints have so far limited private financing flows to the water sector in low-income countries and many middle-income countries. While many of these constraints are not unique to the water sector, commercial financing to the sector has historically been very modest, for reasons set out below.

WSS service providers can only access commercial finance if they have a reliable cash surplus that can be used to repay commercial financing—in other words, if they are deemed “creditworthy.” The normal modus operandi in the sector is to make investments with public funds and to simply stop investing once those funds have been used, thus locking the sector into the current low levels of service. Fortunately, however, the sector has many opportunities for generating efficiency gains, which could help generate financial surpluses, access new sources of investment, and break out of its low-level equilibrium. Most utilities in developing countries are technically and commercially inefficient. Addressing those inefficiencies can move many utilities to a cash positive situation—thus opening up the possibility of borrowing funds. Given their monopoly in the provision of a product which is essential for life, water utilities could, and should, provide a sound, reliable long-term source of cash surplus that attracts private financing. The simple calculation in Box 1 illustrates the amount of funding that could be released for the sector if utilities in developing countries could match the service performance of best performers.

Generating such efficiency gains, with the creation of improved incentive regimes and better sector



governance, would require a change in mindset at the level of policy makers and utility operators.

Private investors tend to view the water sector in emerging markets as not creditworthy. Banks or bond investors who lend money for infrastructure investment assess the credit strength of the intended borrower, including the willingness and ability of the borrower to pay back the money. In developed economies, such investors are usually willing to lend to water service providers as these are viewed as low risk with reliable, reasonable returns. In developing economies, because water sector actors have been constrained in their ability to increase tariffs to cost-covering levels and are supported by a mix of domestic subsidies and international concessional financing, they are typically not deemed to be creditworthy. Service providers are often unable to provide accurate, detailed information about their operations. Audit or disclosure rules may not be strictly enforced and credit rating agencies may not exist or be familiar with the operations of the water sector. Also the water providers themselves may not have sufficient strength of leadership, management skills or corporate structure to enable them to prepare properly to access commercial finance.

Returns on water sector investments tend to be relatively low, and can only be attractive to commercial investors if such investments are also deemed to be low-risk. Returns on water sector loans must compete with those earned from other kinds of investments. The returns on loans or bonds in developed markets are relatively low, but risks are also low and returns are stable over long periods of time, so the risk-adjusted profitability of the sector could be attractive. The water sector could offer very good investment opportunities for long-term investors, such as pension funds or insurance companies, who need to match the profile of their long-term liabilities. Water sector actors in developing countries, however, are unable to generate adequate revenues, especially due to the policy uncertainties they face and the other kinds of risks involved, such as tariffs that are frequently not set at or near cost-reflective levels or poor management practices. This creates a high-risk environment that either demands higher returns for investors (meaning higher interest rates, which the sector cannot afford) or simply kills the market.

Relatively small transactions are less attractive to commercial investors. Many small-scale water service providers, even in developed markets, have difficulties

accessing commercial debt finance. Their individual investment needs are often not large enough to attract private banks, except at high interest rates, and are too small for borrowing on capital markets to be cost-effective. In OECD countries, governments have developed programs to assist small-scale borrowers, like small water service providers, with accessing private finance through instruments like pooled bond funds. In developing countries where responsibilities for water and sanitation service provision have been decentralized, water service providers are typically small and not used to borrowing from private sources. Many of the smallest providers do not have audited financial statements and are unable to deal with the complexities of loan applications, much less meet basic borrowing requirements. Where regional, national, or a pool of service providers are in place, size may be less of an issue but lack of familiarity with borrowing procedures remains a key concern.

There might be restrictions in place limiting commercial investment in the water sector. Many markets place restrictions on the actions of both lenders and borrowers. For example, pension funds may be prohibited from purchasing securities that have not been listed on public exchanges for certain minimum periods of time and are thus prohibited from investing in initial sales of bonds. Banks may be allowed to invest only up to a certain percentage of their capital in securities sold by utilities. Utilities may be prohibited from issuing corporate bonds and limited to borrowing from government sources like intergovernmental loan funds or development banks, rather than from the private sector. In some countries, banks are required to lend a certain percentage of their overall portfolio to local infrastructure projects in targeted sectors or regions. This makes credit analysis less necessary and keeps these lenders from developing knowledge of their customers' business models and creditworthiness.

Private financiers and service providers have different objectives. Investors want to be able to adjust their investment strategies over time and look for the ability to adjust these strategies. In contrast water sector actors' need long-term investment stability. Banks want to maintain their ability to shift quickly into different investments by keeping maturities on bank loans short, particularly if they are uncertain about the creditworthiness of their borrowers. They may also insist on strong security measures to ensure timely repayment and dedicated revenue streams to enhance collateral requirements.

Such short-term lending gives banks the opportunity to adjust interest rates to respond to changing market conditions or increased familiarity with their borrowers. By contrast, water utility borrowers have the opposite priority. Borrowers look to mitigate the initial costs of borrowing by obtaining long maturities on their debt, so as to spread out payments to match the useful life of the infrastructure and reduce the size of annual debt service costs.

## Addressing the Financing Gap with Blended Finance

In OECD countries and some middle-income countries, commercial lenders are providing substantial amounts of liquidity to the water sector for investments and working capital. In those countries, private financiers see the water sector as a low-risk and low-return investment resulting from transparent regulation, ring-fenced revenues, independent management, and cost reflective tariffs. These factors contribute to the perception that water is a good opportunity for long-term safe investments. In other middle-income countries and most low-income countries, financiers are much less at ease with the water sector, which they may regard as politically influenced and non-transparent. They are not willing to provide long-term financing to the sector and would usually charge a price to reflect their perception of high risks. In all developing countries, private sector financing accounts for a meager 7 percent of total spending on water and sanitation (WHO and UN Water 2012) and in Sub-Saharan Africa, the figure is less than half of 1 percent (Foster & Briceno-Garmendia 2010). This is in sharp contrast to countries like the U.S., France, or the United Kingdom, where commercial finance, along with effective regulation, has been instrumental in achieving high levels of water service coverage and quality.

In middle-income and low-income countries, increasing the level of commercial financing for the sector will allow service providers to borrow and invest in service expansion and quality improvement, without having to wait for scarce public resources to be made available. However, given that the starting point, today, is limited or no commercial financing, there needs to be a gradual move towards mobilizing such funds. This means improving the financial performance of utilities through a mix of improved technical/commercial efficiency (as illustrated in

Box 1) and through revisions of tariff levels and/or structures when this is politically feasible. This will generate the financial surplus that provides the opportunity to borrow funds through commercial channels, thus complementing the limited public funds currently available.

Blended finance can help leverage additional funds into the sector and reduce borrowing costs compared to a fully commercial arrangement—thus accommodating affordability and/or political constraints that set a ceiling on tariff levels. The use of blended finance can initiate steps towards the long-term goal of increased commercial financing, which will begin to create new understandings, relationships, and potential new opportunities between the water and the financial sectors.

Apart from the mobilization of additional investment funds, the use of commercial borrowing in blended financing has three additional and powerful benefits:

- Commercial finance brings requirements for greater investment discipline and transparency, which in turn supports improved efficiency in the sector, an objective for most water sector reform efforts around the world.
- Private sector financing for creditworthy or close to creditworthy investments would allow reallocating public funds to other areas where public subsidies are likely to be needed.
- Commercial financing can change sector dynamics by introducing increased accountability towards lenders, which in turn can act as a stabilizing force for the sector.

To date, blended finance in developing economies has not been widely used at scale in the water sector. A few isolated experiences have been supported by international donors, but these have mostly been in middle-income countries and they have so far failed to be replicated at scale. Repayable financing remains at very low levels in the water sector, particularly when compared to other infrastructure sectors such as energy or telecommunications, which have been much more successful in mobilizing such financing.

The limited role of blended finance in the water sector is due to the way that this tool has typically been used in development, in addition to the constraints identified previously. Earlier subsidy programs distorted local markets

and failed to address the genuine “market failures” that occurred when resources were not allocated efficiently. For example, a classic market failure occurs when banks deny credit to an early market entrant simply because the business area is new and unfamiliar to them as lenders. Blended finance can help correct this failure by giving an initial impetus to a new business candidate that becomes commercially successful, thereby demonstrating the viability of the general business endeavor to later entrants and financiers.

Some cases do exist in the water sector where blended finance could be used in this conventional manner to correct genuine market failures. Blended finance tools can be used in these countries as one-off support to initiate self-sustaining, cost recovering projects and utilities, with the potential for significant demonstration effects. But for most cases in the water sector in least-developed countries, fully commercial enterprises or projects will not result from the application of subsidies, because of the severe constraints in the sector. In these countries, supply/demand mismatches do not result from market failures. The market is in fact functioning correctly by denying credit and investment to local water and sanitation projects because the projects are not creditworthy or are incapable of generating competitive investment returns.

To address the critical need for increased commercial investment in water and sanitation infrastructure across a broad range of developing countries, donors need a flexible and pragmatic approach to the use of blended finance—one that adapts to the state of financial market development and sector investment needs in target countries. A conventional approach to blending could be used in more advanced countries with nascent capital markets and utilities with the potential to be commercially sustainable. However, in countries facing severe constraints to commercial investment in the water sector, the gradual introduction of private finance with blending would be a legitimate objective. This would involve improvements to commercial viability, using instruments such as grants, grant-funded technical assistance, and guarantees. In most cases, however, these projects would not be expected to initially achieve full financial viability through tariff revenues alone.

Partial private financing of water projects would realize several objectives:

- Assist borrowers in generating efficiency gains, reduce costs, and boost revenues so as to develop a better credit profile.
- Assist borrowers in establishing credit track records, thereby helping them become more familiar with lender requirements and expectations.
- Help lenders to better understand the water sector in the target country.
- Help borrowers and lenders understand the mechanics of project finance, in which loans are secured by revenue flows.
- Demonstrate to governments (and development partners) that partial commercial finance can and should become a normal complementary component when financing the water sector.
- Introduce a measure of financial discipline and reduce already-existing market distortions created by the dominance of indiscriminate, highly subsidized donor or MDB financing.
- Incentivize governments to improve regulation.
- Commence the process of moving away from the dominance of development assistance and public finance in the sector.
- Introduce the discipline of governance, reporting, and transparency required by commercial lenders.
- Begin the process of increasing the transparency of subsidies, which are often hidden and almost never quantified.

## Tailoring Blended Finance Options

Approaches to using development finance to mobilize private capital flows in a strategic manner will need to be tailored depending on the level of capital market development and on the way in which water sector actors currently access repayable financing.

Before defining a blended finance strategy it is essential to identify the origin of current financing and know what is preventing water sector actors from scaling up these investments in line with their investment needs. The nature and extent of private commercial market development in a particular country would determine

**TABLE 1** Current access to finance for water sector actors and the role of blended finance

Potential and current lenders to the water sector	Commonly observed shortcomings	How blended finance could help?	
		Developmental Objectives	Examples of what can be done
<b>Commercial Banks</b>	<ul style="list-style-type: none"> <li>• Short-term debt only</li> <li>• Poor understanding of water sector</li> <li>• High interest rates</li> <li>• Heavy collateral requirements</li> <li>• Lack of understanding of the water sector</li> <li>• Regulatory constraints-Asset Liability Management</li> </ul>	<ul style="list-style-type: none"> <li>• Educate banks on opportunities in the water sector</li> <li>• Reduce perceived risks</li> <li>• Leverage finance</li> <li>• Improve service providers technical and financial performance</li> </ul>	<ul style="list-style-type: none"> <li>• Help national officials deal with contingent liabilities from borrowing at sub-national level</li> <li>• Facilitate pilot loans</li> <li>• Concessional finance linked to commercial interest rates</li> <li>• Lines of credit to commercial banks</li> <li>• Guarantees to mitigate bank risks</li> </ul>
<b>Intergovernmental Loan Funds</b>	<ul style="list-style-type: none"> <li>• No credit analysis</li> <li>• Subsidized interest rates</li> <li>• Poor collection rates</li> <li>• No penalties for defaults</li> <li>• Potential interference and competing objectives</li> <li>• Repayment via inter-governmental aid offsets</li> </ul>	<ul style="list-style-type: none"> <li>• Encourage inter-governmental loan funds to act more like a bank</li> <li>• Release strongest borrowers to private sector</li> </ul>	<ul style="list-style-type: none"> <li>• Incentivize graduation of best borrowers to commercial market</li> <li>• Move from subsidy offsets to project revenues for repayment</li> </ul>
<b>National Development Finance Institutions (DFIs)</b>	<ul style="list-style-type: none"> <li>• Minimal credit analysis</li> <li>• Below market interest rates</li> <li>• Lending is part of bundled service packages</li> </ul>	<ul style="list-style-type: none"> <li>• Use DFI strengths to help build private market</li> <li>• Help DFIs benefit from market development</li> </ul>	<ul style="list-style-type: none"> <li>• Provide lines of credit for commercial-type loans</li> <li>• Help DFIs add market-building services to their product lines (e.g. guarantees)</li> </ul>
<b>Nascent Bond Markets</b>	<ul style="list-style-type: none"> <li>• Only corporate bonds sold</li> <li>• Limited government securities</li> <li>• No secondary market</li> <li>• Weak disclosure rules</li> <li>• High initial issuance and debt service costs</li> </ul>	<ul style="list-style-type: none"> <li>• Facilitate pilot water bond issues</li> <li>• Build issuer/investor confidence in market</li> <li>• Expand investors into the water sector</li> <li>• Familiarize financial regulators with the water sector</li> </ul>	<ul style="list-style-type: none"> <li>• Finance shadow ratings and management improvements</li> <li>• Facilitate initial water bond issuance costs</li> <li>• Use guarantees to mitigate risks and extend tenors</li> </ul>
<b>Deepening Bond Market</b>	<ul style="list-style-type: none"> <li>• Limited secondary market activity</li> <li>• Lengthening tenors</li> <li>• Limited institutional investors</li> <li>• Some rating agency activity</li> </ul>	<ul style="list-style-type: none"> <li>• Help investors become more familiar with water bonds</li> <li>• Facilitate credit ratings and secondary trading</li> </ul>	<ul style="list-style-type: none"> <li>• Facilitate credit ratings</li> <li>• Tighten disclosure rules</li> <li>• Liberalize investment rules for institutional investors</li> </ul>
<b>Maturing Financial Markets</b>	<ul style="list-style-type: none"> <li>• Bonds &amp; bank loans available for water sector, but not yet extensively used</li> <li>• Rating agencies trusted</li> <li>• Disclosure rules in place</li> </ul>	<ul style="list-style-type: none"> <li>• Diversify the pool of financing options to the water sector</li> <li>• Foster more engagement by institutional investors</li> <li>• Institutionalize commercial finance in the water sector</li> </ul>	<ul style="list-style-type: none"> <li>• Subsidize structuring advice</li> <li>• Facilitate pooled bond issues</li> <li>• Support ratings and guarantees, as necessary</li> <li>• Facilitate involvement by institutional investors</li> </ul>

how blended finance could be used most productively to catalyze more commercial finance for water and sanitation infrastructure.

Table 1 sets out six main types of situations to characterize different ways in which financial markets and commercial sector finance opportunities might be structured in different countries. These situations are defined based on how water sector actors can expect to mobilize

repayable financing. They are not necessarily sequential, mutually exclusive, or exhaustive but they provide a way to think about what blended finance can achieve in these different circumstances and how solutions need to be tailored to conditions in the local financial markets.

The text that follows provides additional discussion on how providers of concessional finance, which include MDBs, donors, or philanthropic organizations, can best

use their grant funding (either as pure grants, or as part of a concessional loan) to catalyze commercial sector financing through blending.

**Situation 1 – Commercial banks are the main potential providers of repayable finance outside MDBs.**

Some water sector actors can borrow from commercial banks. While banks may be willing to consider such loans, they tend to treat utilities and other water service providers as a subset of normal commercial lending, and to offer only expensive, short-term loans (1–3 years) with requirements that loans be secured with real property or other forms of collateral. Because the borrowing period does not match the useful life of the assets being constructed, efficient service pricing is difficult, and borrowers must constantly refinance short-term debt borrowed for long-term assets. A longer-term debt capital market does not exist (or water sector actors are unable or not allowed to access it). This is a situation that is very common in most low-income and middle-income countries, where commercial banks exist but, on the whole, do not tend to be actively lending to the water sector, and where few other alternatives exist in terms of government-supported development finance.

*How blended finance can work.* Blended finance can help unlock private financing from commercial banks for water investments. The ultimate objective is to help banks understand how a project finance approach can work in this sector, meaning that lending will be done on the basis that revenues generated by the assets built or rehabilitated with the loan proceeds will play a significant role in repaying the debt. Some kinds of water infrastructure Investments have relatively short payback periods and are better able to take advantage of the short-term loans offered by such banks. These investments could include non-revenue water reduction, leak detection, improvements to billing and collection systems, energy efficiency improvements, etc.

Grants and grant elements in MDB loans can be blended in various ways:

- Support for institutional strengthening of the water utility and associated institutions.
- Expert input in order to assist with diagnostic and information management. Technical assistance at the central government level can help officials understand

and develop systems to manage contingent liabilities arising from borrowing by subnational utilities.

- Parallel capital grants can help reduce the effective interest rates on commercial bank loans in order to reduce capital repayments and ease debt service burdens, extend tenors, or support repayment grace periods.
- Guarantees can back long-term repayment commitments and can be structured on an individual or portfolio basis. Technical assistance and road shows can help local banks better understand water sector projects, their risks, and their opportunities.
- Concessional finance can be provided as lines of credit to commercial banks, so as to provide them with liquidity to extend loans to the water sector.

**Situation 2 – An Intergovernmental Loan Fund is in place, which can be accessed by water sector actors.**

In this scenario, a debt capital market does not exist, but local governments can borrow from a donor-capitalized fund. Such a fund may be a dedicated water fund or a municipal development fund (MDF). This kind of fund exists in a number of countries, such as Bangladesh, Sri Lanka, Indonesia, Kenya, Colombia and India. These are usually set up as financial accounts, rather than banks, and they are managed by administrators rather than professional bankers. They can be hosted by the Ministry of Finance or lodged in a water sector institution if they are specialized. Long-term money may be available from the fund, but all borrowers tend to be charged the same price for debt and the money is often repaid via offsets against intergovernmental aid flows, so a credit analysis is rarely carried out. Borrowing rates are often subsidized; defaulting borrowers may be allowed to continue borrowing from the fund without penalties.

Although such funds can provide useful investment opportunities for water sector investments, they may actually delay the development of private finance markets because these markets typically try to lend to borrowers who are best able to repay their debts. The latter tend to be precisely those who would be best able to graduate to normal commercial finance relatively quickly. These funds also often resist efforts to end their monopoly position as the only active lenders to sub-national service providers (including water service providers), while they

tend to be heavily dependent for their continued existence on support from donors and MDBs.

*How blended finance can work.* MDBs can use their funding and convening powers to begin forcing some degree of commercialization into the operations of the inter-governmental loan fund in the following ways:

- Funding can be provided to an inter-governmental loan fund on the condition that a certain percentage of borrowers are “graduated” every year and borrow from commercial lenders.
- A percentage of donor funding may be required to be lent at market rates.
- Technical assistance (TA) grants can be used to build the capacity of the Intergovernmental Loan Fund to assess creditworthiness, grade borrower performance, and penalize non-performance.
- Donors or MDBs can use their convening power to encourage governments to loosen rules requiring utilities to borrow only from intergovernmental loan funds of this kind.
- Access to this funding for utilities comes with the requirement to develop governance, transparency, and reporting requirements.

**Situation 3—Government-owned development finance institutions (DFIs) are dominant on the market and water sector actors tend to be obliged to borrow from them.**

In this case local governments or water service providers can borrow from government-owned development finance institutions (DFIs) that may also engage in relationship banking by bundling lending services with support for local government budgeting, planning, cash management, etc. Minimal credit analysis is carried out and borrowing rates vary depending on the analysis, but are generally below market rates. Long-term money is available. To some extent the development banks depend on the access they have to local government financial information, as a result of bundled service provision, to identify potential repayment problems and implement remedial support. Debt capital markets are either very limited or local governments are unable or not allowed to access it. Such conditions prevail in countries such as Mozambique, Angola, Tanzania, South Africa, or the Philippines.

*How blended finance can work.* Blended finance could be focused on helping DFIs work more strategically with private commercial lenders so as to diversify the sources of finance for the sector:

- Technical assistance grants could be used to build DFI capacity to structure guarantees for borrowers who are willing to sell bonds or access commercial bank loans.
- Concessional funding could also be used to capitalize guarantee programs, thus reducing risks associated with lending to water service providers and encouraging DFIs to move towards lending on commercial terms.
- Technical assistance grants could be used to help access DFI skills in bond underwriting or credit ratings.
- Tranches of donor or MDB funds could be channeled through DFIs on condition that they are on-lent on commercial terms, or the money could be on-lent through selected commercial banks.
- Donor grants could be used as equity to facilitate commercial lending.
- Technical assistance grants could be used to build the capacity of utilities to access commercial loans from private banks.

**Situation 4—Bond markets are nascent but have yet to be tapped by water sector actors.**

In this situation, water service providers can borrow from commercial banks and a nascent bond market also exists, primarily for corporate issuers. A secondary trading market typically does not exist, which means that bond maturities tend to be short, much like maturities on commercial bank loans. Commercial banks are the principal bond investors because few institutional investors (pension funds, insurance companies, or mutual funds) are active in the market and virtually no individual retail investors participate. Disclosure rules are often weak, credit rating agencies exist, but their sector expertise, independence, and objectivity are either underutilized or not appreciated.

*How blended finance can work.* The opportunity here would be to help bond market development achieve some momentum in terms of becoming more familiar to and trusted by investors, particularly institutional

investors like pension funds and insurance companies that need long-term investment assets. This can be done in the following ways:

- Technical assistance grants can help with listing bonds on stock exchanges to facilitate trading.
- Deal structures can allow investors sell securities back to issuers prior to maturity, thus facilitating lengthened maturities.
- Grant-funded road shows can help potential bond investors (especially institutional investors) understand water service provider operations.
- Guarantees can back loan terms and payback commitments.
- Grants can reduce the size of borrowing needs.
- Technical assistance grants can help with setting up appropriate disclosure rules to enhance transparency and increase market confidence.

**Situation 5—Bond markets are deepening but are yet to be fully accessible for water sector investments.** In this situation, basic elements of both a primary and secondary bond market may exist alongside commercial banking activities. But the secondary market still needs improved liquidity. Some government entities as well as private corporations issue bonds. Maturities are beginning to extend to medium to long terms (7–10 years). Debt instruments are increasingly standardized and institutional investors are beginning to enter the market, sometimes because of reforms to public pension administration. Disclosure rules are tightening and rating agencies are developing reputations for discipline and expertise.

*How blended finance can work.* Most of the effort can focus on helping water service providers understand when and how bonds make more sense than bank loans, as well as how to structure and sell bonds, with a view to support a bond issuance by a water operator to fund an investment program or to fund a specific project with clearly identified returns. Concessional finance can be used in the following ways:

- Grants can support shadow credit ratings (to identify potential credit weaknesses and provide the basis for addressing such weaknesses) or normal published ratings.

- Technical assistance grants can help with institution strengthening and addressing credit weaknesses (by improving planning and budgeting, billing and collections, reducing non-revenue water, etc.).
- Technical assistance grants can help design and establish bond banks or pool facilities to assist smaller borrowers.
- Grants can be utilized to reduce the size of borrowing needs and effectively reduce debt service.
- Technical assistance and capacity building grants can be used to build the skills of pension regulators and securities commissions, so that they will better understand investments in the water sector to match their long-term liabilities.

**Situation 6—Financial markets, including for commercial lending and bond issuance, are maturing but need to be further supported.** In this case primary and secondary bond markets are liquid and functioning. Rating agencies are trusted and adequate disclosure rules are in place. Market players are engaged in developing and using sophisticated financial instruments. The bond market competes effectively with private bank lending, providing longer maturities, larger transactions, and lower interest rates. Commercial bank loans and bonds can also be combined to finance long-term infrastructure. The flexibility of bank lending can see projects through the more risky construction phases, whereas the advantages of bonds can be realized when they are used to refinance bank loans once construction is complete and project operations begin to generate revenues.

*How blended finance can work.* Concessional funding can be used to help with structuring pioneering transactions for the water sector, in which bank loans and bonds are used for the same project so as to complement their respective characteristics and help attract institutional investors. Such pioneering transactions could, for example, include pooled bond issues (whereby a pooled structure is established to facilitate access to finance for small or medium-sized borrowers who agree to join forces) or large, complex projects with a particular social agenda. Technical assistance grants can help structure the transaction, support credit ratings and guarantees, and particularly facilitate the involvement of institutional investors.

## Going Forward: Scaling-Up Blended Finance Approaches

The use of blended finance is unlikely to distort market development, particularly in situations where development assistance pays for nearly all of the current investment in the water sector in most emerging markets. This does not mean that subsidies will not sometimes result in wasted or misapplied resources, or will never generate excess profits for private lenders or operators. However, these risks are secondary to the problems of insufficient water sector investment in developing countries (Carter 2015). The benefits of crowding in commercial finance far outweigh the risks of solely relying on grants and public resources in the sector.

Scaling up blended finance will require collaboration between governments, service providers, and donors on several key points:

- **All parties must raise awareness of the potential benefits of commercial finance.** Catalyzing a market for commercial financing would reduce the need for public sector funds and sovereign borrowing, reduce the foreign exchange risk exposure of the water sector, and help build a dynamic financing climate in which investments are undertaken by a variety of actors who can access financing directly at the domestic level. These long-term benefits would most likely dwarf the short-term financial costs associated with leveraging higher-cost commercial sector financing.
- **Governments must support adequate governance arrangements and transparent financial information for the water sector.** These basic foundation requirements are key ingredients for well-run and sustainable service providers. Sector enabling institutions, such as ministries and regulators, must continue to push for progress in these areas, in parallel with using blended finance in order to mobilize commercial finance in a sustainable fashion. In essence, good governance and financial transparency support commercial finance and, in turn, leveraging of private finance enhances the governance structure and the financial discipline and creditworthiness of service providers, thereby starting a virtuous cycle.
- **Service providers must work towards commercial and technical efficiency and need cost-reflective tariffs.** In most emerging markets, tariffs are indeed set well below affordability levels. Blended finance in the water sector will have minimal viability unless local governments and utilities are able to secure revenues to back borrowings from private sources, and to maintain the systems being financed, so that debt service obligations can be met.
- **Water and finance ministries must work together to develop financing and sector policies that support the development of well-run utilities.** One aspect of such policies would be based on the recognition that different types of water investments may be more or less attractive to private financiers. This means that public funds should be allocated to those areas that are least attractive from an investment perspective, such as sanitation or rural water supply; and subsidies should be decreased for sub-sectors that are relatively more attractive for private sector financing, primarily urban water supply. Donors should also start to abide by such policies. Poorly designed grant funding can actually be counterproductive in attracting commercial finance and improving service delivery.
- **Donors must use their concessional funds to catalyze, not crowd out, private financing for water.** Donors are the source of much of the below-market concessional financing that is currently available to the sector. A critical element going forward will be to examine how a portion of the available concessional financing may be used to stimulate commercial financing and avoid crowding out such private financing.
- **Donors and governments must support project preparation to build a pipeline of viable commercial investments.** At present, there is more money available than there are viable projects attractive for commercial finance. Project preparation should ideally include economic cost-benefit analysis, the use of competitive bidding whenever possible to determine the size of needed subsidies to make private sector financing viable, and fully transparent assessments regarding subsidy size, policy objectives, types of beneficiaries, payment mechanisms, etc. (Kingdom, Baeumler, & Guzman 2012).



## Conclusions

The Sustainable Development Goals provide an ambitious vision for the water sector. Achieving access to safe, affordable water and adequate sanitation for every person on earth in less than 15 years will require a dramatic increase in investment.

Public and donor money is far from sufficient to fill this gap. Commercial financing is an important financing source for the water sector in many developed and middle-income countries. However, there has been minimal commercial financing in most of the countries where it is needed most. Blended finance has traditionally been used as a tool to stimulate interest from the commercial financial sector, with the use of concessional finance then tapering off to avoid distorting markets. Given the embedded distortions in the WSS sector in

developing countries where financing is predominantly based on subsidized public funds, a new long-term solution is needed. This solution will have to help the sector move towards mobilizing more commercial funds over time: blended finance can be a stepping-stone in that transition. It is a necessary step given that the risk of underinvestment vastly outweighs the risk of distorting non-existent markets.

National governments and donors must use their funds in a catalytic manner, as part of broader financing strategies that mobilize funding from sector efficiency gains, tariffs, domestic taxes, and transfers to crowd in domestic commercial finance. If they are able to do so, countries will be much more likely to access the resources they need to improve and expand the infrastructure needed to deliver and sustain universal coverage of water and sanitation services.

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