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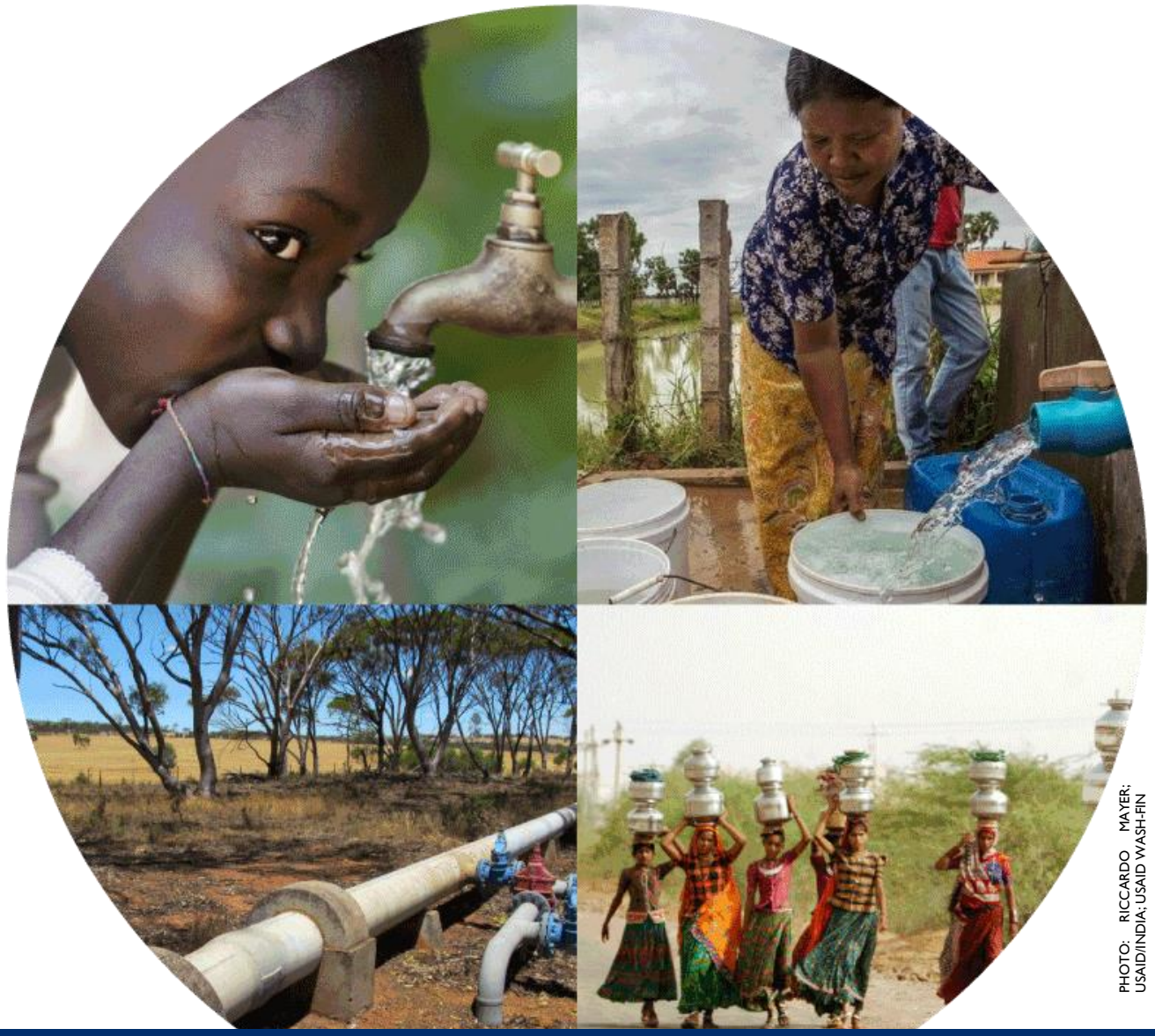
USAID'S WATER, SANITATION, AND HYGIENE FINANCE (WASH-FIN)

Financing Facility Landscape Assessment Report

WASH-FIN Working Paper No.1



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NOVEMBER 2018

This publication was produced for review by the United States Agency for International Development. It was prepared by Tetra Tech.

This report was produced for review by the United States Agency for International Development (USAID) by Tetra Tech through the Water, Sanitation, and Hygiene Finance (WASH-FIN) program Task Order under the Making Cities Work (MCW) Indefinite Quantity Contract (USAID Contract No. AID-OAA-I-14-00059, Task Order No. AID-OAA-TO-16-00021).

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ACRONYMS AND ABBREVIATIONS

ACP	African-Caribbean-Pacific
AfDB	African Development Bank
AIF	Asian Investment Facility or African Investment Facility
AWF	African Water Facility
BOAD	*Banque Ouest Africaine de Développement Infrastructure*
CIF	Caribbean Investment Facility
CWSRF	Clean Water State Revolving Fund
DBLF	Devaluation Backstopping Liquidity Facility
DBSA	Development Bank of Southern Africa
DCA	Development Credit Authority
DFI	Development Finance Institution
EAIF	Emerging Africa Infrastructure Fund
EIB	European Investment Bank
EU	European Union
FINDETER	*La Financiera del Desarrollo Territorial S.A.*
FX	Foreign Exchange
GAVI	The Vaccine Alliance
GEEREF	Global Energy Efficiency and Renewable Energy Fund
GIFFW	Global Investment Facility for Water
IBNET	International Benchmarking Network for Water and Sanitation Utilities
ICA	Infrastructure Consortium for Africa
IDA	International Development Association
IFC	International Financial Corporation
IFCA	Investment Facility for Central Asia
IFFIm	International Finance Facility for Immunization
IFI	International Finance Institution
IFP	Investment Facility for the Pacific
IIPDF	India Infrastructure Project Development Fund
INCA	Infrastructure Finance Corporation Limited
JICA	Japanese International Cooperation Agency
KPWF	Kenya Pooled Water Fund
LAIF	Latin America Investment Facility
LGU	Local Government Unit
LGUGC	Local Government Unit Guarantee Corporation
MDB	Multilateral Development Bank

MDF	Municipal Development Fund
MDG	Millennium Development Goal
MIGA	Multilateral Investment Guarantee Agency
MIIU	Municipal Infrastructure Investment Unit
MUFIS	Municipal Finance Company of the Czech Republic
NEPAD	New Partnership for Africa's Development
NGO	Nongovernmental Organization
NIF	Neighborhood Investment Facility
ODA	Official Development Assistance
OECD	Organization for Economic Cooperation and Development
OPIC	Overseas Private Investment Corporation
PAIDF	Pan-African Infrastructure Development Fund
PIDG	Private Infrastructure Development Group
PINAI	Philippine Investment Alliance for Infrastructure
PPF	Project Development Facility
PPP	Public-Private Partnership
PWRF	Philippine Water Revolving Fund
QRBB	Quintana Roo Bond Bank
SIF	Strategic Investment Fund
SRF	State Revolving Fund
TAF	Technical Assistance Facility
TNUDF	Tamil Nadu Urban Development Fund
USAID	United States Agency for International Development
WASH	Water Supply, Sanitation, and Hygiene
WASH-FIN	Water, Sanitation, and Hygiene Finance
WBIF	Western Balkan Investment Framework
WHO	World Health Organization
WSP	Water and Sanitation Program
WSPF	Tamil Nadu Water and Sanitation Pooled Fund
WSS	Water Supply and Sanitation
WWFF	World Water Financing Facility

1.0 EXECUTIVE SUMMARY

1.1 CONTEXT: DEMAND FOR NEW SOURCES AND METHODS OF FINANCING WASH

Achieving the goal of universal access to water and sanitation demands monumental and unprecedented mobilization of resources. Government resources, donor contributions, and international financial institution (IFI) funds in the form of grants and concessional loans are scarce, resulting in a significant financing gap. Financing gap projections sit at over US$100 billion per year for capital investment required to meet the target (Hutton and Varughese, 2016). Recent studies point at official development finance for water rounding out at under US$20 billion per year (Trémolet, 2017). Key stakeholders are uncertain as to how the quantum of finance needed is going to be sourced and deployed, and have moved finance to the forefront as they work to establish new policies, practices, and sources of finance designed to crowd-in additional sources of finance including private capital.

As these efforts build momentum, pressure for water supply, sanitation, and hygiene (WASH) policymakers and practitioners has increased to better coordinate, develop, promote, institutionalize, and support leveraging of additional private finance. The development of financing facilities in the past for WASH and other sectors hold promise to expand opportunities to address the financing gap. Prior finance facility efforts have achieved gains in mobilizing resources including market-based repayable finance. Complementary facilities, such as project preparation and credit enhancement facilities, have also contributed to increased access to sources of private finance.

Government policymakers, development partners, private sector, and nongovernmental organizations (NGOs) alike increasingly seek to bring in additional sources to leverage and blend with scarce traditional sources to meet country development targets. Infrastructure sectors that are often less institutionally complex and more amenable to commercially viable operating models (e.g., energy, telecoms, and transportation) have fared much better than WASH in terms of accessing market-based finance—including through financing facilities. This reality reinforces and amplifies the attractiveness of WASH-specific finance facilities that aggregate projects for investment and sources of investment capital with risk and reward structures that work for both the demand and supply.

Appealing as these facilities may be, there are many instances where sponsors underestimated the complexity, challenges, and costs of designing, launching, and operating a facility—or policies and actions taken by government adversely impacted their relevance—and these facilities have reduced or ceased operations. Others may still operate over the long term, but with limited deal flow and marginal impact in service delivery improvements. Governments, development partners, and the private sector must fully consider the resources, expertise, and staying power required to realize the benefits of financing facilities.

1.2 REPORT OBJECTIVES

Within this context, USAID requested that the Water, Sanitation, and Hygiene Finance (WASH-FIN) Project conduct an assessment to better understand the prevailing landscape of financing facilities. The primary audience for this report is internal: for use by WASH-FIN in its portfolio countries, and by USAID to inform future WASH finance efforts, and non-finance activities. The report's objective is to assess and consolidate a range of facilities and showcase the relevant information. This report collates available information on experiences of various facilities, noting individual features, advantages, and challenges as they relate to financing WASH providers and other subsectors at the global, regional, and national levels. As such, policy makers and development practitioners are a secondary audience. While the water sector is the focus of this report, the assessment intentionally takes a wider scope as the basis for learning from other sectors, resulting in many infrastructure finance-related facilities including those with a multi-

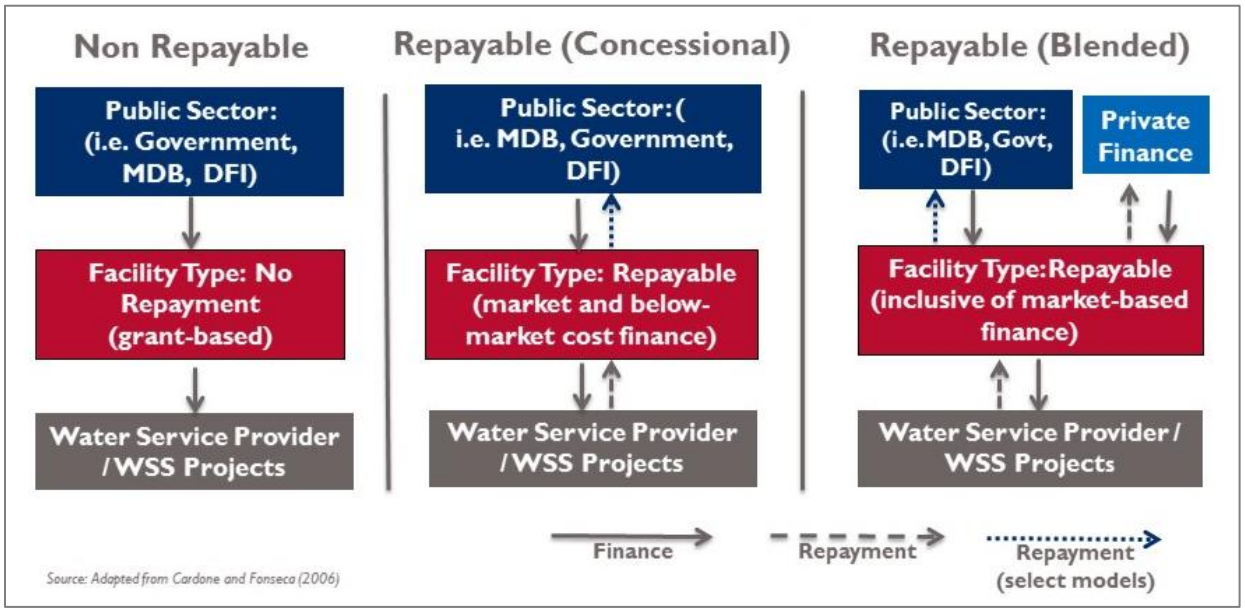
sectoral orientation. The examples and lessons learned herein are limited to select facilities, and the document is intended to serve as an initial light touch or launch pad for future research and discussion around creation of financing facilities that are appropriately designed and sustainable. Additional information on the examples will be made available as a separate companion Annex; references remain in this main document.

1.3 FACILITY MANDATES, STRUCTURES, AND TYPOLOGIES

The assessment identified and reviewed a range of sector-specific, multi-sectoral, and other financing facilities with varying levels of impact, longevity, and degrees of success. A multitude of related facilities were also identified and reviewed, including project preparation facilities that ensure development of a sufficient pipeline of viable opportunities, as well as risk mitigation facilities (e.g., partial credit guarantees) which play a role in facilitating access to market finance. The facilities have a variety of mandates and scopes, and operate at national, subnational, regional, and global levels. The form that facilities take can be public, private, or hybrid to conform to local enabling environments that encompass the legal, regulatory, and institutional set-up; level of financial sector; degree of decentralization; governance; and the political arena, among others. The facility type also stems from the impetus for a facility, the sponsor, ownership, management and institutional arrangement, capitalization, and the overall mandate.

In terms of the approach to finance, the facilities can take a concessional or commercial approach, or a mix of both, and can involve deployment of finance through a range of instruments (i.e., grants, bank loans, bonds, equity, credit enhancements, etc.). From a flow-of-funds perspective, the facilities were found to generally follow three modalities once capitalized by public or private sources: no repayment (grant), repayment (typically below market price), and repayment that crowds-in commercial finance.[1] The figure below provides a simplified view of how funds flow through various models.

Figure 1: Facility Flow of Funds Examples

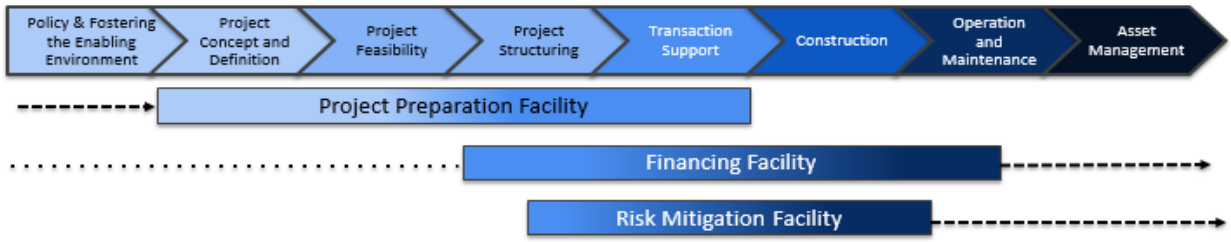


[1] Cardone and Fonseca (2006) provide a similar overview on these three structural perspectives.

1.3.1 TYPOLOGIES OF FACILITIES AND THE PROJECT CYCLE

The study addresses three types of facilities: 1) project preparation facilities (PPFs), 2) financing facilities, and 3) risk mitigation facilities in the context of the project development cycle (see figure below). The project development life cycle is a useful reference to illustrate where each facility type is most relevant and active. Facilities that integrate the three types are covered under financing facilities.

Figure 2: Facilities along the Project Development Cycle



Source: Adapted from PIDG (2017) project development cycle; ICA, 2012

1.3.2 PROJECT PREPARATION FACILITIES

Situated at the front of the project cycle, project preparation is vital to facilitate increased investment by overcoming the lack of bankable or commercially viable projects—a major constraint to all sources of finance, and the viability of financing facilities in particular. The importance of overcoming this constraint notwithstanding, the assessment found that the PPF landscape is one of modest impact, limited accessibility, and considerable overlap among PPFs, resulting in few facilities meeting what is considered best practice. The importance of solving this critical stage in the cycle has prompted increased interest in exploring where commercial models or the private sector can have a role to increase success rates and effectiveness of PPFs. Several studies have been produced on the PPF landscape, and successful features highlighted include: 1) clear objectives and a focused strategy; 2) a self-sustaining financing model; 3) a strong portfolio management approach with flexibility; 4) cost-efficient and value-added technical assistance; 5) a good governance model with strict accountability; and 6) a commercial operating model that balances development additionality, cost efficiency, and effectiveness (WEF, 2016; ICA, 2015).

1.3.3 FINANCING FACILITIES

Financing facilities supply or channel finance from one or more sources to projects or sectors. These facilities often leverage and combine complementary products and services, with a range of instruments (i.e., credit enhancements), depending on their objectives and target projects or recipients. Along the project development cycle, finance facilities pick up later in the project preparation phase, and their role is to ensure appropriate capital provision for a project. A range of financing facilities were reviewed, and examples profiled, including:

- **Public facilities using concessional debt and grants:** Facilities source finance from public financial institutions, governments, and donor agencies, and disburse it through grants or concessional loans. They can be capitalized with blended sources of finance including grants and both concessional and market-based external repayable public debt.
- **Debt finance facilities operating on repayable terms:** Public, private, and public-private owned or managed facilities provide and channel finance mobilized from loans or bonds on commercial terms at the "retail" level. This includes facilities where concessional debt or grants are used to leverage commercial debt.

- **Commercial equity investment funds:** Funds covered include those with public and private participation in management and equity investment, that follow commercial practices to ensure desirable returns are achieved for investors.

1.3.4 RISK MITIGATION FACILITIES

Credit enhancements and risk mitigation instruments help mobilize repayable finance by transferring risk from lenders or investors. Both public and private sectors commonly use credit enhancements (i.e., guarantees, insurance, etc.) to improve financial terms, but the overall use of these instruments in the WASH sector has been limited. A select number of risk mitigation facilities were covered under this report, with a focus on guarantee facilities that transfer direct and indirect lender risks, and a foreign exchange (FX) risk facility meant to reduce risk of currency depreciation when capital is sourced in one currency for an investment which generates cash flows in a different denomination.

1.4 LESSONS LEARNED

The broad range of project preparation, financing, and risk mitigation facilities assessed here provides a rich landscape from which to explore lessons learned. Depending on levels of economic development and sophistication of the WASH sector, some lessons may not be applicable or relevant for every country and service provider. Moreover, this landscape assessment is intended to be an initial dive into a broad range of facilities to capture the high-level contours. As such, select lessons are put forth with the expectation that they will be further analyzed and built upon. USAID's WASH-FIN is already using this high-level assessment to inform its country activities, and to delve deeper into how different structures could work in different contexts. It is expected that others will see similar opportunities to apply and add to this research with more detailed and specific analysis, and this is indeed welcomed.

For the purposes of this assessment, lessons learned are demarcated into three categories: 1) facility management and governance, 2) external environment and market context, and 3) facility model approaches and techniques. Below is a high-level summary for each group, expanded upon in Section 6.0, Lessons Learned:

1. **Management and governance**: It is important to have highly capable and professional staff capacity, as well as strong management and governance practices in place to ensure effectiveness and to boost investor confidence. It was noted that increased attention to commercial orientation and private sector participation within facilities could help improve models; albeit, challenges surround balancing commercial objectives with development priorities when it comes to targeted projects.
2. **Enabling environment and market context:** Political will, level of market development, and ability to weather shocks are crucial factors for facility success. Further, willingness to borrow from a facility depends on the country context and volume and types of existing flows of funds and other resources available to the water service providers. Discipline in application and sequencing of policies, incentives, and instruments, and close donor coordination are crucial to avoid crowding out repayable finance with grants, or commercial debt with concessionary debt or grants, thereby reducing leverage and the amount of finance available. Moreover, incentives should be coupled with enforcement of economic regulations, particularly targets for service expansion and performance targets.
3. **Facility models, approaches, and practices:** In terms of models, integrated facilities that function across the project cycle appeared to be newer in form and hold more promise, in part because they can strengthen the pipeline of projects. A number of the financing facilities covered demonstrated the ability to blend concessional and commercial finance, access market-based repayable finance effectively, and reach borrowers that otherwise would not be able to access sufficient finance at favorable terms. However, this was not without its challenges. For instance, some revolving funds

struggled with actually recovering and recycling funds. Credit enhancement facilities can be effective in reducing risk to sources of market finance for infrastructure (bonds or commercial loans) but have not been widely used in WASH. This is primarily due to the fact that WASH has traditionally been seen as a social sector, and compared to other infrastructure sectors, garners a lower proportion of bankable projects seeking finance, and a perception of higher risk that reduces pipeline and limits deal flow. Enhancements may also establish a precedent in the market that might be hard to sustain or reverse as appropriate.

PPFs have had modest impact according to various studies, but as a major challenge for financing is the lack of bankable projects, PPFs have potential. For facility practices, robust credit assessment and risk management are critical and are important even after financial close when borrowers can still benefit from continued support. It is important to note that while some structures or models may be seen as "innovative" in one context, in another, they could be standard. Often, what is innovative is the use of the model or structure for WASH investments, in the country, or the unique combination of instruments.

2.0 INTRODUCTION

2.1 FINANCING UNIVERSAL ACCESS TO WATER AND ADEQUATE SANITATION

2.1.1 BACKGROUND

Governments, donors, IFIs, foundations, and their development partners have long sought ways to identify and implement sustainable solutions for expanding the pool of funding to the water and sanitation sector. The Millennium Development Goals (MDGs) first provided a basis to quantify the investment requirements and set concrete targets for closing the funding gap between need and available resources. Consequential meetings, including the 2002 Monterrey Finance for Development meeting and the 2003 World Panel on Financing Water Infrastructure (Camdessus Panel), identified ways to increase financial flows to the sector.

While there has been progress, there is still much to accomplish. Globally, 660 million people do not have access to safe drinking water and 2.4 billion people lack access to improved sanitation (WHO/UNICEF, 2015). Governments have set ambitious targets for universal access to water and sanitation, requiring an unprecedented mobilization of funding. The World Bank estimates that over US$100 billion per year of capital investment is required to meet universal access to safely managed water and sanitation services by 2030, for a total of approximately US$1.7 trillion (Hutton and Varughese, 2016). Population growth, urbanization, and climate change will likely require increases or a reprogramming of these baseline investment requirements. Demonstrating the gap in terms of the prevailing supply of donor finance for the sector, the World Bank estimates that in 2014, total official development finance for water, including grants and concessional loans, reached a mere US$18 billion per year (Trémolet, 2017).

Public sources of finance alone cannot close this gap between the needs in WASH investment and available resources. Government resources, donor contributions, and IFI funds in the form of grants and concessional loans are scarce and, in many cases, declining. In short, there is extreme uncertainty as to how to source and deploy the quantum of finance needed.

Key stakeholders are moving financing to the fore and working to establish new policies, practices, and facilities to crowd-in private sources of finance. The International Finance Corporation (IFC) has recognized that the private sector represents the largest potential source of capital to "transform development finance" to get from "billions to trillions." The World Bank is redoubling its efforts to leverage private finance as part of its "cascade" approach to optimize the use of scarce public resources. As these efforts build momentum, pressure on WASH policymakers and practitioners will increase to better coordinate, develop, promote, institutionalize, and support private finance. This means not only in terms of financially sustainable and creditworthy WASH service providers, but also an enabling environment with policies, regulations, and institutions that fosters commercial viability, provides the right incentives, minimizes political influence, and mitigates risk to private capital effectively.

2.2 PURPOSE AND SCOPE

The primary purpose of this landscape assessment is to serve as an internal USAID resource that provides a broad overview of existing and nascent financing facilities, including PPFs and credit enhancement facilities. Secondary to that, USAID hopes that other stakeholders will find this a valuable resource to better understand financing facilities and their potential to close the financing gap. The document is intended to be used as a knowledge base and launch pad for further thinking on topics related to WASH facilities through discussions with USAID to identify specific areas of interest. The assessment collates available information on experiences of various facilities, noting individual features, advantages, and

challenges as they relate to financing WASH providers and other subsectors at the global, regional, and national levels. Emphasis is placed on how these facilities can leverage market-based finance for development and the role the public sector can play to facilitate practices which crowd-in private capital.

2.3 METHODOLOGY

This assessment is primarily based on secondary research. Given the extensive number of facilities in existence and their broad nature, this inventory does not pretend to be comprehensive. Challenges arose from both the diverse nature of the facilities and the limitations on information due to the preponderance of desk research, and the lack of primary research with facilities.[2] A rapid search and review of existing facilities was completed to establish an initial long list of options to consider, which was refined based on client input, and the initial criteria set out below (the long list will be shared as a companion to this report). Selection of vehicles was largely opportunistic. USAID had already been approached regarding nascent or soon-to-be developed facilities, and there was interest for this study to include these pre-identified facilities. Over the course of the research, additional facilities were added.

To ensure a relevant and diverse range of facilities, the following criteria were used to identify facilities for analysis and inclusion:

1. **Geography**: A mix of global, regional and national facilities;
2. **Facility type**: Financing facilities that employ different types of commercial finance instruments through varied models, guarantee and risk mitigation facilities, and project preparation facilities;
3. **Sector focus**: Priority given to WASH and other infrastructure sectors;
4. **Donor involvement**: Facilities where there was a donor role;
5. **Mobilization of private capital**: Leveraging of market-based finance through the facility or as a strategic objective;
6. **Success factors and challenges**: Notable success factors or challenges to highlight;
7. **Model**: Range of structures or financing approaches; and
8. **Information Availability**: Sufficient information on the facilities was available.

The research approach involved two components: (1) the majority of the effort focused on desk research, including a review of existing and recent literature; and (2) interviews. Limited interviews took place, and their primary objectives were to complement the desk research with expert practitioners' opinions on facilities, what works, and to gauge challenges, which proved to be more difficult to identify through desk study. The WASH-FIN team also conducted informal interviews during conferences and field visits to project countries. Overall, the approach was flexible to manage the challenges of obtaining sufficient detail and comparable information on the selected facilities to relate across facilities.

[2] Limited information was often an issue when it came to identifying facility challenges, as there was less information publicly available documenting failed facilities or problems faced.

3.0 FINANCING IN THE WATER AND SANITATION SECTOR

3.1 OVERVIEW OF THE WATER SECTOR

This section provides an overview of funding in the WASH sector and looks at how the defining features of WASH impact financing needs and options, including for private finance.

The WASH sector is funded with public and private sources of capital, with the majority covered by public sources. The three main funding streams, commonly referred to as the "3Ts," include tariff revenues or direct household investment in infrastructure; taxes, provided through government subsidies; and transfers, typically in the form of grants from external entities (international donors, philanthropic foundations, NGOs, etc.) (OECD, 2010). Tariffs are the most reliable revenue stream and are an important criteria benchmark for creditworthiness assessments and bankability.

Concessional finance—finance typically at below market/lower cost, and often with longer maturities—has been the main method of financing WASH investment. Concessional finance is most often provided by international and domestic development banks, and certain bilateral donors. Yet it is far from significant in terms of what is required to achieve universal access targets, as it makes up only 10 percent of investment costs, and its efficiency has been questioned in some cases (World Bank, 2017a). Commercial (market-based) finance includes vendor finance, debt (commercial bank loans and bonds), microfinance, and equity.

3.2 DEFINING FEATURES OF THE WASH SECTOR THAT CONTRIBUTE TO CHALLENGES FOR ATTRACTING FINANCE

Like other infrastructure sectors, WASH assets are capital-intensive, and their construction requires upfront finance mobilization. As noted, financing can be obtained through borrowing, either on concessional and commercial terms that require repayment. The "3T" flows can be leveraged for this purpose. By financing high up-front costs of constructing assets over long periods, "intergenerational equity" is tapped, which means that financing costs are shared among users over the life of the asset, such that future beneficiaries contribute to paying for assets built today (Bender, 2017; PPIAF/World Bank, 2017).

WASH differs from other infrastructure sectors in that water is valued as a social good to which people have a universal human right; the sector lacks competition, and thus incentives to perform efficiently; and utilities are often public entities, which makes them prone to political influence (see Box 1). Furthermore, most water utility assets are underground, making it impossible to pledge them as collateral for commercial debt, reducing recourse options for lenders in the case of default.

Box 1: Critical differentiating factors of WASH that constrain access to finance:

- **The social dimension of water access rights:** Valuing water as a human right applies pressure to control tariffs, such that they do not allow for sufficient and reliable revenue collection. The resulting cost recovery challenges are particularly prohibitive for capital investment for expansion of the network.
- **Monopolistic tendencies of water infrastructure:** Water systems are natural monopolies lacking appropriate incentives to perform efficiently and effectively, thereby making them less likely to be creditworthy and attractive for financing.
- **Political complexities of water:** WSPs are often subject to political influence as they tend to be operated and funded by public entities. A related challenge is that many WSPs do not legally own assets, which limits their collateral offering options when applying for finance.

Source: Bender, 2017

As a result, commercial financing of WSPs requires a strong balance sheet and positive cash flows that demonstrate ability to make debt service (World Bank, 2017b). This means the borrowers must be creditworthy and able to develop bankable projects that meet risk return requirements of financiers. Credit enhancements and project structures can improve the situation to a certain degree, but it is imperative that borrowers have a strong foundation of good operational and financial performance that leads to creditworthiness.

Financial sectors and capital markets in lower-income countries are underdeveloped, often lack liquidity, and are typically unfamiliar with the WASH sector. Increasingly, the sector has become decentralized globally, with local governments responsible for service delivery. Lack of experience and capacity to access private finance are challenges they face. Sub-nationals and parastatals bring new risks, stemming from weak governance, incomplete institutional arrangements, and unreliable regulatory frameworks that further detract from financing feasibility.

Currency mismatch between revenues and financing sources can be a major limitation for accessing lower-cost finance from international sources. FX risk puts the service provider at serious jeopardy if they assume a loan in hard currency while their revenue stream remains in local currency. This is because a devaluation of the local currency, which is not uncommon, could make the financing more expensive for the borrower, putting them at significant risk of default. This in turn causes apprehension on the side of the lender. FX risk mitigation options exist, but have their own challenges, and come at a cost that must be borne by the borrower or investor. Local currency lending is increasingly emphasized as a solution; albeit, there are often limitations as described above.

3.3 THE FINANCING GAP

To achieve global objectives for universal access for water and sanitation, a significant increase in financial flows is required. Estimates suggest the costs will be around US $112 billion per year through 2030 (World Bank/UNICEF, 2017). In terms of regional divides, sub-Saharan Africa constitutes approximately the largest portion of global cost, followed by South Asia and East Asia (Hutton and Varughese, 2016).

3.4 WHY THE TURN TOWARD CROWDING-IN COMMERCIAL FINANCE?

Public sources of funding are insufficient to meet the needs of the WASH sector and close the financing gap. Commercial finance can help bridge the gap, but historically, the sector has faced constraints in access to finance, attributable to the challenges discussed above. While concessional finance is an attractive option with its lower rates, it should be used strategically, and require prudent analysis of associated costs. Research and modeling by the World Bank suggests that time delays in disbursement and FX risk for concessional loans (the majority are in hard currency) could result in them being more costly than domestic market-based financing (World Bank, 2017a).[3]

Often it is observed that available financing for WASH is for small amounts, and rarely offers terms that make sense for the infrastructure. Commercial finance is often viewed as an attractive option because some types offer access to larger amounts of finance in a shorter period of time, or match financing of an asset to its useful life by spreading out the repayment period for the up-front costs. Commercial finance can contribute a more sustainable source of capital that enhances the opportunities for service providers in terms of improving access and service. Furthermore, private sector involvement has been credited with instilling discipline through market-based incentives, increased scrutiny, and associated accountability that improves efficiency and effectiveness. Domestic commercial finance in local currency is attractive because it eliminates FX risk and contributes to local financial sector deepening.

[3] See Appendix in World Bank, 2017a; http://blogs.worldbank.org/water/leveraging-commercial-finance-water-will-it-hurt-poor

Blended finance is increasingly promoted to crowd-in commercial finance. Blending is a process through which public funds, concessional finance, and other sources are combined with private finance to reduce overall cost of capital and improve terms through de-risking. Blending leverages and extends the reach of public and development funds and frees up scarce public resources for other social projects.

3.5 OVERVIEW OF THE FINANCIAL STATE OF WATER SERVICE PROVIDERS

The water supply and sanitation (WSS) sector in low-income economies is characterized by a low state of financial sustainability, and even lower creditworthy status due to sector-specific challenges. Often service providers are not able to provide accurate or sufficient information on their operations and maintenance efforts, and there is serious need for improving financial management. In many cases, managerial leadership, staff capacity, as well as policies, regulations, and statutes implicitly or explicitly prohibit the pursuit of commercial finance.

According to a sample of utilities within the World Bank's International Benchmarking Network for Water and Sanitation Utilities (IBNET) database, creditworthy service providers in developing countries comprise less than 4 percent of the total (with the majority not even able to cover operating costs), indicating that a low number of utilities would be able to attract commercial finance without major reforms to improve cost recovery (World Bank, 2017b). Efforts are needed to bring poorly performing service providers to financial viability, and to help those that are close to achieve creditworthiness. Support to regulators and WSPs themselves through training, improved organizational processes and planning, and creditworthiness assessments can help develop management capacity of the WSPs. Benchmarking can foster competition that incentivizes the sector to increase capacity and efficiency. Improving the enabling environment (i.e., overcoming issues surrounding the legal ability to borrow and related barriers) and ensuring appropriate regulatory framework development can be supported at the government level.

3.6 THE LENDER PERSPECTIVE

Most commercial lenders possess little knowledge of the sector and tend not to see it as creditworthy. This is largely due to low cost-recovery charges, and dependence on subsidies and concessional financing. WASH is often viewed as a high risk and low return sector, which is less attractive in comparison to other investment options perceived to be less risky, and better understood.

Information development and sharing needs to take place for lenders to assess the risks of WASH projects and access mechanisms to help them manage potential risk. The creation of "market intelligence" and risk assessment tools for the sector, such as credit ratings, creditworthiness indices, and benchmarking instruments can help improve lender understanding on the financial and technical health of WSPs and enhance comfort (Bender, 2017; WASREB and WSP, 2015). The regulator's capacity in producing regular reports, and overseeing water providers, their tariffs, and performance can signal confidence to lenders. Further, sound and clearly written strategic business plans are also important sources of information for the credit review.

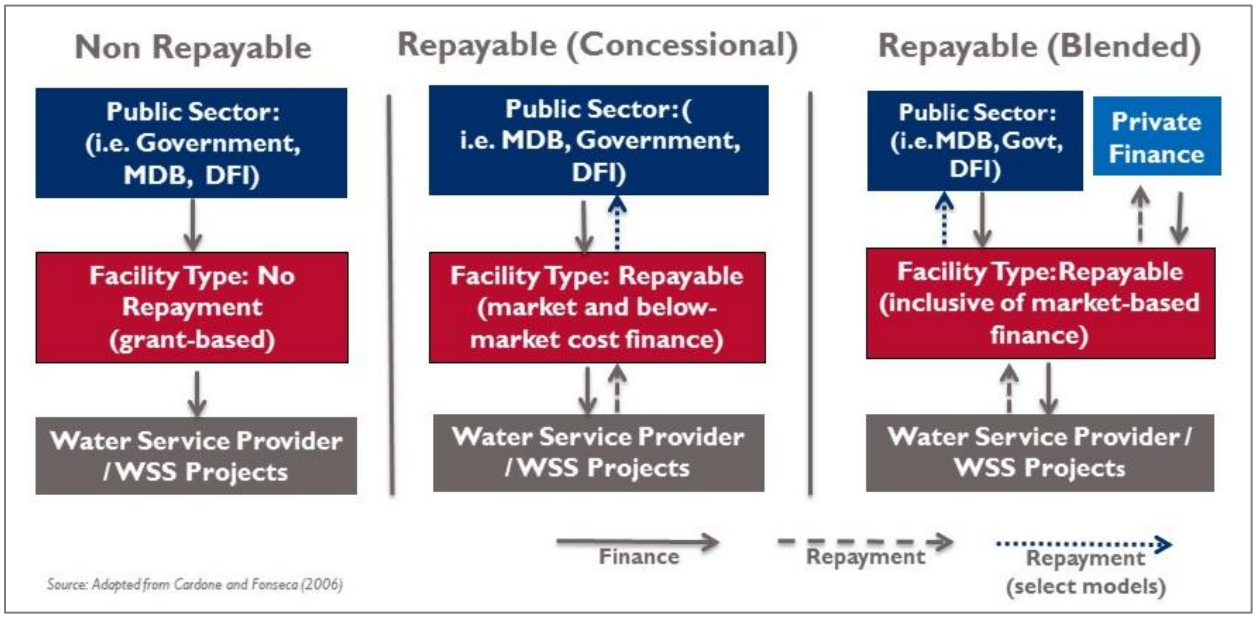
3.7 A SPACE FOR FINANCING FACILITIES?

Financing facilities with a mandate to mobilize resources, particularly market-based repayable finance for the water sector, have generated increased attention among sector and government stakeholders. This has been particularly relevant for infrastructure where private investment is increasingly looked to as a means of meeting country development targets. The WASH sector has not fared as well as other infrastructure sectors, such as transport and power, in attracting market-based finance, making the concept of a financing facility attractive as a potential modality to help mobilize finance.

A range of sector-specific and multi-sectoral financing facilities have been designed with varying levels of impact, and degrees of success. In addition, there are a multitude of PPFs as well as risk mitigation facilities, which can contribute to the financing process. These facilities have a variety of mandates and scopes, and operate at subnational, country, regional, and global levels to support all scales of projects. The form these facilities take can be public, private, or public-private depending on the sponsor, ownership, management, hosting arrangements, capitalization, and overall mission.

The nature of financial support is subject to the facility, stakeholders and beneficiaries, and situational context. This includes the countries' legal and institutional arrangements, financial sector's level of development, degree of decentralization, governance, and the political arena, among others. The financial approach can be of a concessional or commercial nature, or a mix of both, and can involve deployment of a range of instruments (i.e., grants, bank loans, bonds, equity, credit enhancements, etc.). From a flow of funds perspective, the facilities generally follow three modalities: no repayment (grant), repayment (typically below market price), and repayment that crowds-in commercial finance.[4] Figure 3 provides a simplified view of how funds flow through various models.

Figure 3: Facility Flow of Funds Examples

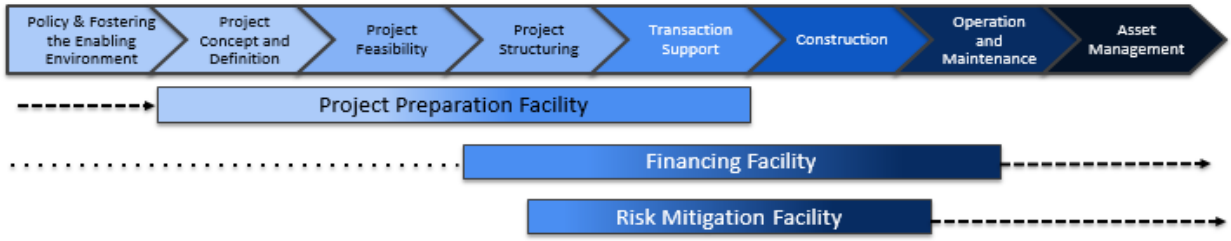


3.7.1 THE ROLE OF FACILITIES IN THE PROJECT CYCLE

An overview of the different facility types, organized broadly, is provided in the subsequent sections with reference to stages in the project cycle to illustrate where their roles are most pertinent. There are three key types addressed in this assessment 1) PPFs, 2) financing facilities, and 3) risk mitigation facilities. The project life cycle graphic below (Figure 4) illustrates where a facility is active in the cycle, and serves as a reference tool. There is a strong connection between PPFs and financing facilities, for example, as the former provides a pipeline of projects for the latter to consider as investment targets. Many financing facilities include a project preparation or technical assistance window, and a number have access to credit enhancement and risk mitigation instruments such as guarantees. Facilities that integrate the three types also exist and are primarily covered under Section 5.4.

[4] Cardone and Fonseca (2006) provide a similar overview on these three structural perspectives.

Figure 4: Facilities along the Project Development Cycle



Source: Adapted from PIDG (2017) project development cycle; ICA, 2012

3.7.2 A NOTE ABOUT SCOPE AND TERMINOLOGY

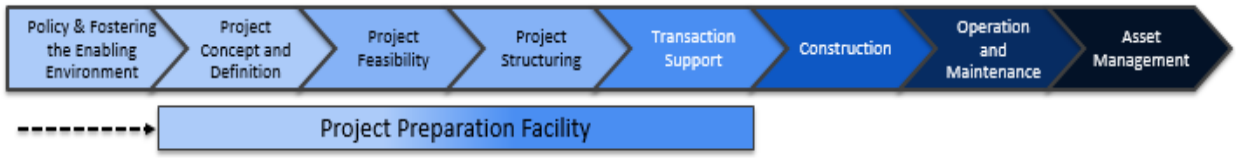
While the water sector is the focus of this report, the assessment intentionally takes a wider scope as the basis for learning from other sectors, resulting in many infrastructure facilities characterized by multi-sectoral orientation. Because of the expansive scope of research, differing terminology concerns arose, such as use of the terms "facility" and "fund," which, for the purposes of this document, are both taken broadly and used interchangeably.

4.0 PROJECT PREPARATION FACILITIES

The lack of bankable or commercially viable projects is a significant challenge to increasing private capital for WASH projects.[5] For this reason, project preparation is a vital part of the project cycle, typically covering administrative, financial, and technical components required to develop a viable project and contribute to a pipeline of projects (Cardone and Fonseca, 2006).[6] Project preparation can represent 5-10 percent of total project costs but at a higher risk than the later stages of the project cycle (see Figure 5). PPFs often provide technical and financial support through the provision of grants, and rarely require repayment. They are useful in contexts where project sponsors have limited technical or financial capacity to develop bankable projects. Even in developed markets with highly capable technical and finance capacity residing inside of sponsoring entities, aspects of project preparation are often outsourced to specialists.

Early stage project preparation work typically focuses on refinement of an identified project, technical appropriateness, and feasibility and risk analysis. Later stages involve more in-depth design, including procurement of specialists that support design, financial analysis, and structuring, and take the project up through financial close. Good practice includes securing independent assessments of critical technical, socioeconomic, and financial aspects of the project during feasibility and structuring phases. Some project preparation work may transition into technical assistance, spilling over into post-construction stages where monitoring to ensure continued financial health of the borrower is important.

Figure 5: Project Preparation Facility Activity in the Project Development Cycle



Source: Adapted from PIDG (2017) project development cycle; and ICA, 2012.

4.1 A NOTE ON THE PPF RESEARCH APPROACH

The review is focused on and benefitted from earlier PPF assessments and reports (e.g. the Infrastructure Consortium for Africa [ICA]), with relevant findings on the overall utility of PPFs. The diversity of PPFs and limitations on available information made it challenging to provide a comprehensive assessment that makes direct comparisons between facilities. Instead facilities are grouped around their institutional arrangement, cost recovery methods, and geographical scope. As with other facility types described in later sections, WASH-FIN tried to include facilities that leverage private sector expertise and/or are commercially oriented.

4.2 LANDSCAPE OF PROJECT PREPARATION FACILITIES

The PPF landscape reality is indicative of modest impact with few facilities meeting what is considered best practice (ICA, 2015; WEF, 2016). ICA (2015) looked at 19 PPFs and concluded that the majority did not fulfill their mandate, and the average ratio of projects that reached implementation was 53.5 percent among the top six facilities. This is representative of the challenges faced in developing a reliable pipeline

[5] A project is considered "bankable" when it meets the risk and return requirements of the owners of capital. Commercially viable is also used and is interchangeable with bankable.

[6] Project preparation and project development are regularly used as interchangeable terms; however, delineations can be made, and tends to place project preparation along the earlier side of the entire project development cycle (as shown in Figure 5). To simplify the discussion, this assessment will use the term project preparation facility or PPF.

of bankable projects for investors, and the limited effectiveness of PPFs to overcome these challenges. Common challenges include unfocused and broad mandates, limited financial resources, constraints in the management and institutional arrangements, and low financial sustainability and accessibility (ICA, 2015). Project sponsors have faced difficulties identifying PPFs that provide the type of support they need.

4.3.1 INSTITUTIONAL ARRANGEMENT AND MANAGEMENT

A multitude of PPFs have been set up at the international, regional, and national levels, and are often situated at or closely associated with a public financial institution, commonly a multilateral development bank (MDB); albeit, some have outsourced management arrangements. The benefits of institutional housing come from the ability to leverage resources from the institutions. These institutions offer high fiduciary standards, existing in-house legal support and technical capacity, and linkages to their in-house lending and other activities that aid with disbursement (ICA, 2012). The trade-off is that projects can be delayed and restrained by the bureaucratic processes and policies of these large institutions. ICA (2012) notes different types of institutional arrangements: some PPFs are more formally integrated in the operations of the institution, and in this case are more supply driven; others are hosted, and maintain a level of separation, tending to pursue a demand-driven approach, requiring significant implementation capabilities and human resources which can be a challenge for the entity. Table 1 shares information on a grouping of PPFs with different governance and management structures.[7]

Facility Snapshot: African Water Facility (AWF)

- Hosting arrangement provides sound management and operating system support.
- AWF credited with a fast response process.
- African base allows strong links with the water sector in individual African countries.
- Facility is not suited for larger projects due to limited grant size.
- AWF's broad mandate contributes to weak prioritization and specialization.
- The facility has limited staff capacity.
- There is no cost recovery.

(AWF, 2010; ICA, 2012; AFRODAD, 2013)

DevCo is an example of an MDB-integrated PPF that is considered a strong performer. It benefits from inclusion in the Private Infrastructure Development Group (PIDG) with a clear mandate and set planning objectives, as well as a commercial angle, which is not regularly seen among integrated PPFs. New Partnership for Africa's Development (NEPAD) and the African Water Facility (AWF) are examples of MDB-hosting arrangements, and both have limited resource capabilities (ICA, 2012).

The few PPFs hosted outside of an MDB or development finance institution (DFI) leverage the flexibility of not being tied down and offer more opportunity to work with the private sector for both technical support and financial resources (ICA, 2012). InfraCo is a PIDG facility that outsources management to a private company and follows commercial practices including performance incentives.

Project preparation activities at the national level can be advantageous through the reduction of transaction costs and linkage with domestic financial mechanisms. National facilities also offer an opportunity to strengthen local expertise at different stages of the project cycle. Two examples of national-level facilities include the India Infrastructure Project Development Fund (IIPDF), housed in the Department of Economic Affairs of the Ministry of Finance, and the Municipal Infrastructure Investment Unit (MIIU) in South Africa, which was hosted outside the government as a stand-alone entity but with full government support (USAID, 2006).

[7] Table 1 loosely follows the structure put forth under ICA (2012) with some additions. The regional economic community grouping is not considered in this review, but government-hosted PPFs are included.

Table 1: Project Preparation Facility Summary and Institutional Setup Overview

Name	Scope	Management	Hosting	Facility Details
Technical Assistance Facility (TAF)	Global	Outsourced	Facility of PIDG (Trust)	TAF is a PIDG company primarily intended to assist other PIDG companies with projects they develop and finance with a private sector focus. It provides grants for technical support on PIDG projects and Viability Gap Funding (grants) to guide economically viable projects to bankability.
DevCo	Global	MDB Integrated	IFC Advisory Services - Facility of PIDG	DevCo is setup as a multi-donor facility within PIDG managed by the IFC. It helps cover costs of advisory services to support IFC transactions for country governments.
Infraventures	Global	MDB Hosted	IFC	Provides early-stage risk capital and assistance for project development. It recovers costs through an equity investment at financial close.
Public Private Infrastructure Advisory Facility (PPIAF)	Global	MDB Hosted	World Bank	A multi-donor technical assistance facility financed by 11 multilateral and bilateral donors. It provides technical assistance and knowledge related grants to governments to support development of the enabling environment for the provision of infrastructure services by the private sector.
ACP-EU Water Project Preparation Facility	Global	DFI Integrated	European Investment Bank (EIB)	The facility was setup for a three-year timespan (2008-2010) to fund technical assistance for preparation of water and sanitation projects. It targeted support at developing bankable projects and actively sought co-financing.
India Infrastructure Project Development Fund (IIPDF) *	National: India	Government	National government departments	IIPDF was created as a revolving fund with a primary objective to provide funding for PPP project development to increase the stream of viable projects that can attract financing. The IIPDF supports "Sponsoring Authorities" by covering the cost for specific projects for the feasibility–transaction structuring stages of project preparation.
Municipal Infrastructure Investment Unit (MIIU)*	National: South Africa	Outsourced	N/A	MIIU was formed to help municipalities with technical assistance on public-private partnerships for local service provision.
NEPAD Infrastructure Project Preparation Facility	Region: Africa	MDB Hosted	Regional MDB (AfDB)	NEPAD-IPPF is a grant provision financing mechanism managed and hosted by the African Development Bank but with independent legal status.
Africa Water Facility*	Region: Africa	MDB Hosted	Regional MDB (AfDB)	AWF's focus surrounds three main pillars: Project preparation, water governance and water knowledge with the overall objective to create an enabling framework that will facilitate sustainable projects in Africa. The project preparation arm supports stakeholders to create bankable projects and covers pre-feasibility studies up to financial close. AWF also provides technical expertise to support beneficiaries through project completion.
InfraCo Africa*	Region: Africa	Outsourced	Facility of PIDG	InfraCo Africa is a PIDG facility that offers support for the concept through advanced project preparation stages, through provision of technical expertise to help originate, develop and structure infrastructure projects in sub-Saharan Africa. A unique feature is that it can invest at financial close.
Africa50 Project Development*	Region: Africa	Outsourced	N/A	Africa50 Platform constitutes two business lines that take a commercial approach. The Africa50 Project Development facility is an equity investment facility for project development and early risk capital investment for infrastructure. The A50PD goal is to minimize the number of failed projects and reduce the project development average timespan from 7-10 years to 3-4 (WEF, 2016).

Sources: ICA, 2012; Adam Smith, 2014; PPIAF, 2017; and WEF, 2016. * Indicates existing profile in Annex A.

4.3.2 FINANCIAL RESOURCES

Out of the 19 PPFs assessed by ICA (2015), total funding was US$2.4 billion at the close of 2014, with cumulative commitments of US$1.59 billion. This was concentrated in three PPFs, and the remaining 16 had limited resources. The implications are that those projects supported by the majority of PPFs will likely be small to medium-sized projects. Moreover, the apparently large amount of uncommitted funding suggests possible inefficiencies in resource utilization.

4.3.3 SUSTAINABILITY AND COST RECOVERY

The majority of PPFs are not financially sustainable, and therefore rely on grants and public funds, with some making no effort to recover costs. However, three types of costing models (Table 2) were identified for select facilities: no-cost recovery; simple at-cost recovery; and recovery-plus-return model, where the PPF has an equity stake in the project (WEF, 2016). Table 3 provides additional information on the three types of PPFs classified according to the costing models outlined. The different models affect the use of funds, and quantity and quality of activities a PPF can undertake. Moral hazard risk is cited as a concern for facilities that do not require repayment of any type, as "free" resources can be treated with less care than repayable.

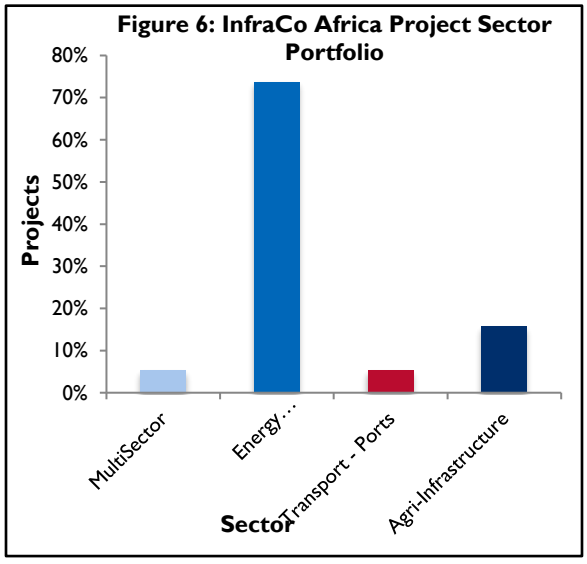
Table 2: PPF Costing Structures

Facility Name	Model
Aid-based (Pure grant)	No recovery of grant
Social Business	Simple at-cost recovery - preparation cost (in some cases plus a margin)
Venture Capital	Cost recovery plus variable margin or equity plus interest and investment

Source: WEF, 2016; ICA, 2012.

The ICA (2012) assessment substantiates the low level of cost recovery but highlights facilities that seek to recover costs, including NEPAD, DevCo, InfraCo, InfraVentures, and Sustainable Energy Fund for Africa (SEFA). IIPDF is an example of a PPF that recovers costs through success fees. It has different success fee scales based on the type of project supported. Africa50 Project Development, InfraCo Africa, and InfraVentures follow the "recovery-plus-return" model by making an equity investment in the project to recover costs made in the development phase. The success of this model is still being tested.

Balancing commercial approaches with development goals can be a challenge. InfraCo Africa (Facility Profile Annex A) outsources management to Investec Asset Management, an asset manager with over $141 billion in assets under management. The incentives in this commercial approach have posed problems however, as the drive for projects with high development value carry high costs and fees that sometimes go beyond potential for income from projects. This can result in losses for InfraCo Africa. (PIDG, 2010).



Source: Developed from PIDG, 2017.

Figure 6 shows how, as of 2007 out of approximately 20 projects InfraCo Africa supports, over 70 percent are energy and power and only one multisector project contained a WSS component. This raises questions over how WASH can be better positioned for viable commercial approaches.

Table 3: PPF Costing Structures

	Name	Scope	Financial Instrument	Financing Model - Cost Structure
1	Technical Assistance Facility (TAF - PIDG)	Global	Grant	No Cost-Recovery
2	PPIAF	Global	Grant	No Cost-Recovery
3	ACP-EU Water	Global	Grant	No Cost-Recovery
4	Africa Water Facility*	Region: Africa	Grant	No Cost-Recovery
5	MIIU*	National: South Africa	Grant	No Cost-Recovery (cost-sharing structure existed with municipalities to help foster municipal project ownership and project sustainability).
6	DevCo (PIDG)	Global	Grant + Repayable	Cost-Recovery - Social Business: There is a retainer fee dependent on individual projects and the success fee is intended to cover the remaining amount.
7	IIPDF*	National: India	Interest free loans - revolving fund	Cost-Recovery: Success fees charged with rates dependent on the type of project.
8	NEPAD-IPPF	Region: Africa	Grant + Repayable	Cost-Recovery: Borrowers contribute a minimum of 5 % of total cost.
9	Infraventures	Global	Repayable grant + success fee - Equity	Venture Capital - Equity: Early-stage risk capital and active development phase support to foster private infrastructure projects. Invests equity in the project at financial close.
10	InfraCo Africa*	Region: Africa	Repayable grant + success fee - Equity	Venture Capital - Equity: Receives compensation for its investments in development costs by selling its equity options to incoming private sector sponsors.
11	Africa50PD*	Region: Africa	Repayable grant + success fee - Equity	Venture Capital - Equity: Reimbursement is either through a success fee or compensation by the conversion of the investment into shares in the project company.

*Source: Adapted from ICA, 2012; * Indicates existing profile in Annex A.*

4.3.4 IMPACT OF MANDATE ON OPERATIONS

The nature of a PPF's mandate not only serves to define the nature of its operations, but often can also create operational constraints that may have a tangible impact on the PPF's effectiveness. Geographic focus and commercial orientation are identified as two of the most defining features of PPF mandates, and discussion follows on the operational impact incurred as these features vary among mandates.

Regional/international mandates: PPFs with broad mandates have found it difficult to focus, plan strategically, prioritize work streams, allocate resource efficiently, and develop specializations and standards, resulting in inefficient use of scarce resources and challenges to achieve economies of scale (ICA, 2015). Many face human resource challenges to identify and keep skilled staff. For example, NEPAD-Infrastructure Project Preparation Facility (IPPF) has a sound approach to planning but a mandate that is stretched (i.e., to source projects across the African continent), and limited human resource constraints to achieve it (ICA, 2012).

Facility Snapshot: Municipal Infrastructure Investment Unit (MIIU), South Africa

- Government support for facility from outset;
- Political influence with management structure avoided;
- Ability to garner strong credibility in both the private and public sectors;
- Benefited from ability to leverage skilled international and local technical specialists;
- Strong technical assistance helped develop processes and tools for municipalities; and
- Unsustainable on its own with no cost-recovery, but later transitioned into government operations.

(USAID, 2006)

National mandates: National PPFs have inherently more focused mandates due to the specific country context. Country-based PPFs benefit from a sustained local staff presence which facilitates networking with a range of stakeholders and a better understanding of the situation in-country. The MIIU in South Africa had a clear mandate and strategy, enabling it to effectively target viable project opportunities and bring them to fruition.

Commercially oriented mandates: The PIDG facilities (Technical Assistance Facility [TAF], DevCo, and InfraCo) are examples of facilities with clear commercially driven and strategically oriented mandates that help guide them in their operations. All PIDG facilities follow agreed-upon standards for success to ensure sustainable development. InfraCo Africa follows a business model that revolves funds from successful investments, which inevitably directs its strategic planning in terms of incentives for maximization of competition in the services it provides, and benefits from an advisor team that pursues projects based on additionality (ICA, 2012). The likely implications of this focus on the commercial sustainability of its operations are that the fund is not able to explore very early-stage opportunities where significant support may still be required to strengthen local regulatory environments to enable viable project development, nor can it support projects that are far from being commercially viable even within a well-developed regulatory environment.

4.3.5 MEETING THE DEMAND IN DOMESTIC MARKETS

It is important to correctly gauge market demand and government policies regarding grants when designing a PPF. Changing circumstances in South Africa resulted in MIIU running into issues of low demand for private finance. A subsequent decline in the number of completed projects was attributed to more restrictive legislation stemming from opposition to private sector participation, and substantial grant funds also made borrowing less attractive and reduced demand for project preparation support for private sector involvement (USAID, 2006).

4.3.6 PROJECT PREPARATION FACILITY SUMMARY

The abundance of PPFs unfortunately struggles with continued inaccessibility and overlap among facilities. The need for coordination and potential consolidation of PPF activities to improve overall performance is only beginning to be assessed. Dialogue has started to include increased interest in the different roles the private sector can play to facilitate increased success rates and effectiveness in the PPF landscape.

ICA (2015) shares the alarming realization that there are few success stories among PPFs from which lessons can be drawn. It points toward the PIDG facilities, from which success factors can be identified (See Box 2 for success factors).

Box 2: PIDG Facility Success Factors

- Good governance principles with management and operational freedom;
- Facility management outsourced to private company supervised by a board;
- Existing resources and capacity enhanced by private sector funding support; and
- Operation guided by commercial practices based on additionality, cost efficiency, and effectiveness.

Source: ICA, 2015

More recently, WEF (2016) produced the following five principles of success for improving PPFs:

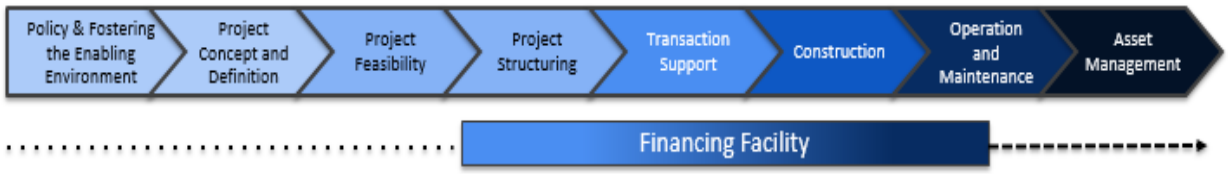
1. Clear objectives and a focused strategy,
2. Self-sustaining financing model,
3. Strong portfolio management,
4. Cost-efficient and value-adding advisory services, and
5. Strict governance and accountability.

5.0 FINANCING FACILITIES

"Financing facilities" supply or channel finance from what can be a variety of sources to projects or sectors through a range of instruments. Institutionally, these facilities can be public, private, or public-private, defined by their models, the type of financing sourced, as well as their management structure. They often leverage and combine complementary products, services, and instruments (i.e., credit enhancements), depending on their objectives and target project. Similar to project preparation facilities, many are hosted at or supported by multilateral finance institutions and have been supported and/or capitalized with donor funding. Increasingly, commercial practices are integrated into their approaches.

Along the project development cycle, finance facilities are generally engaged later in the project preparation phase, with their central focus being to ensure capital provision for the project (Figure 7). Following what is typically the financial closure and construction phase these facilities have a less pronounced role, primarily geared toward ensuring timely repayment, and supporting the operator to maintain healthy financial management to avoid default, which is critical and why many facilities provide technical assistance and risk management oversight (Cardone and Fonseca, 2006). Some financing facilities perform a dual function, incorporating project preparation and technical assistance components before and after implementation.

Figure 7: Financing Facility Activity in the Project Cycle



Source: Adapted from PIDG (2017) project development cycle; and ICA, 2012.

The following section takes a closer look at financing facilities, breaking them down by the type of financing and distribution modality. Many financing facility types are explained in more depth in the profiles in Annex B. Table 4 on the following page provides a high-level overview of the key facilities assessed.

Table 4: Finance Facility Entity and Instrument Type Breakdown

Name	Scope	Sector	Entity	Finance Orientation	Funding / Capitalization Source	Instrument Tapped by Borrower
EU-Africa Infrastructure Trust Fund (EU-AITF)	Regional	Multisector Infrastructure	Public	Concessional	Grant	Grant; Grant blended with concessional debt
African-Caribbean-Pacific (ACP)-European Union (EU) Water Facility (ACP-EU Water Facility)*	Regional	WSS	Public	Concessional	Grant	Grant; Grant blended with concessional debt
US State Revolving Funds*	Country: US	WSS	Public	Concessional & Commercial	Grant used to leverage commercial debt in some cases	Concessional debt; Commercial debt
International Finance Facility for Immunization (IFFIm)*	Global	Health	Public	Concessional & Commercial	Grant leverages commercial debt	Grant

Name	Scope	Sector	Entity	Finance Orientation	Funding / Capitalization Source	Instrument Tapped by Borrower
Global Investment Facility for Water (GIFFW)*	Global	WSS	Public	Concessional & Commercial	Grant from bottled water tax	N/A
US Bond Bank	Country: US	Multisector Infrastructure	Public	Commercial	Commercial Debt	Commercial Debt
Quintana Roo Bond Bank	Country: Mexico	Multisector Infrastructure	Public	Commercial	Commercial Debt	Commercial Debt
FINDETER*	Country: Colombia	Multisector Infrastructure	Public	Commercial	Grant Equity, Concessional Debt, and Commercial Debt	Commercial Debt
Sanitation Revolving Fund	Country: Vietnam	Sanitation	Public	Concessional & Commercial: Microfinance	Grant	Concessional Debt (leverages private household investment)
Philippine Water Revolving Fund (PWRF)	Country: Philippines	WSS	Public	Concessional & Commercial	Concessional debt	Concessional debt blended with commercial debt or private equity
Tamil Nadu Water and Sanitation Pooled Fund (WSPF)	Country: India	WSS	Public-private	Commercial	Government Grant and Commercial Debt (bond)	Commercial Debt
Kenya Pooled Water Fund (KPWF)	Country: Kenya	WSS	Public-private	Commercial	Commercial Debt	Commercial Debt
Emerging Africa Infrastructure Fund (EAIF)*	Regional: Africa	Multisector Infrastructure	Public-private	Commercial	Debt	Commercial Debt
Philippine Investment Alliance for Infrastructure (PINAI)	Country: Philippines	Multisector Infrastructure	Public-private	Commercial	Equity	Equity
Pan-African Infrastructure Development Fund (PAIDF)	Regional: Africa	Multisector Infrastructure	Public-private	Commercial	Equity	Equity
Marguerite Fund*	Regional: Europe	Climate Change	Public-private	Commercial	Equity	Equity
Global Energy Efficiency and Renewable Energy Fund (GEEREF)*	Global	Climate Change	Public-private	Commercial	Equity	Equity
Africa50 Platform*	Regional: Africa	Infrastructure	Public-private	Commercial	Equity	Equity
Climate Investor One*	Global	Climate Change	Public-private	Commercial	Mix	Mix (Grant, debt and equity)
Infrastructure Finance Corporation Limited (INCA)*	Country: South Africa	Multisector Infrastructure	Private	Commercial	Commercial Debt and Equity: DFI	Commercial debt

** Profile in Annex B.*

5.1 PUBLIC FACILITIES USING CONCESSIONAL DEBT AND GRANTS

The financing facilities profiled are funded with concessional debt and grants and are publicly owned and operated. They source finance from public financial institutions, governments and donor agencies, and disburse it through grants or concessional loans. Some facilities will blend grants with external repayable public loans, both concessional and market-based.

5.1.1 REGIONAL FACILITIES SPONSORED BY THE EUROPEAN UNION

These facilities are funded by the European Union and disburse grants and concessionary loans that at times leverage additional repayable finance in multiple sectors including WASH. Two well-established examples described below are the African-Caribbean-Pacific (ACP)-European Union (EU) Water Facility (ACP-EU Water Facility) and European Union - Africa Infrastructure Trust Fund (EU-AITF). The leveraging of private finance has been limited however, and research suggests these facilities have instead mobilized additional public finance, including blending of market-based finance from DFIs.

ACP-EU Water Facility: The ACP-EU Water Facility is an EU grant funded facility. It proved able to mobilize additional sources of finance, although loans contributed less than 15% of total funds and market-based finance leveraging was nominal (OECD, 2010). Capital was sourced in hard currency and disbursed in the same denomination.

EU-Africa Infrastructure Trust Fund (EU-AITF): The EU-AITF is one of eight facilities the EU set up from 2007 to 2013[8] designed to blend donor grants with long-term hard currency debt from participating DFIs. Grant support covers technical assistance, investment grants, and interest rate subsidies (reducing total debt service), and were well received by recipients and considered effective as noted in reviews (EIB 2012). An EIB (2012) mid-term evaluation suggested that EU-AITF performed well in terms of leveraging additional sources, but highlighted the need to further explore involvement of the private sector. The 2015 decision to transition AITF (AITF was winding down activities) into the Africa Investment Facility (AIF) follows a private sector focus, maintaining the blending activities while seeking to increase leverage of private finance (Bilal and Große-Puppendahl, 2016).

5.2 DEBT FINANCE FACILITIES OPERATING ON COMMERCIAL TERMS

This section covers public, private, and public-private owned or managed facilities that provide and channel finance mobilized from loans or bonds on commercial terms at the "retail" level. It includes facilities where concessional debt or grants are used to leverage commercial debt. This can take a range of forms as shown through the examples below.

[8] Others included the Neighborhood Investment Facility (NIF), Latin America Investment Facility (LAIF), Investment Facility for Central Asia (IFCA), Asian Investment Facility (AIF), Caribbean Investment Facility (CIF) and Investment Facility for the Pacific (IFP) and the Western Balkan Investment Framework (WBIF).

5.2.1 FRONTLOADING FACILITY

The International Financing Facility for Immunization (IFFIm) takes future Official Development Assistance (ODA) pledges from donors or other public sources, and structures these flows as a security to attract larger sources of commercial finance that can be accessed in less time. [9] The commitments are securitized through issuance of "vaccine bonds" in international capital markets to pay for vaccines in low-income countries.

The bond proceeds are channeled through GAVI (the Vaccine Alliance) and disbursed as grants to health programs. The bonds are in hard currency and have sold well and attract a range of investors. IFFIm has no staff and outsources responsibilities to GAVI (a public-private global health partnership), which provides administrative support, and to the World Bank, the Treasury Manager.

Facility Snapshot: International Financing Facility for Immunization (IFFIm)

- Frontloading technique offers immediate access to larger amounts of funding for critical health needs.
- Strong financial and risk management practices have been integral to facility success.
- IFFIm is dependent on World Bank treasury management hosting for model to work.
- Earlier evaluation notes potential issues with cost-effectiveness depending on alignment of market prices of vaccines and medicine and bond issue timing/terms.
- Complicated management and governance resulted in initial lack of clarity on roles of supporting entities at inception.

Source: Pearson et al., 2011

5.2.2 REVOLVING FUNDS

Revolving funds allow for an initial seed capital injection in a facility (typically in the form of a grant) to be on lent, and then recycled (repaid), and subsequently loaned out again for new projects. Under this structure scarce public funds can be stretched by blending the public seed capital with commercial sources of finance. The US State Revolving Funds (SRFs) and the Philippines Water Revolving Fund (PWRF) are two different types of revolving fund examples that crowd-in commercial finance for sub-national entities. The Vietnam Sanitation Revolving Fund blends concessional funds with microfinance for households. The three are described below.

United States Clean Water State Revolving Fund (CWSRF) and Drinking Water State Revolving Fund (DWSRF): The CWSRF is a traditional revolving fund model that can leverage commercial finance. Present in every state, it is capitalized with federal and state grants—as is the latter DWSRF—and both have long offered low and at times zero-interest loans to local authorities following a concessional approach. Individual state revolving funds are capitalized by a direct federal grant conditional upon a minimum of 20 percent match from the state. The model is flexible in that states can use the grant to leverage commercial finance through issuance of bonds. The strong federal and state capitalization enables SRFs to achieve a good credit rating and access financing at acceptable rates. Similar to pooled funds discussed below, the diversity of projects and

Revolving Fund Snapshot: General Model

- Some revolving funds offer a concessional element that improves affordability and can allow flexibility for the borrower in terms of repayment.
- Recycling of funds allows scarce resources to have an extended impact.
- Opportunities exist to leverage revolving funds to crowd-in private finance through different instruments (bond issues, commercial loans, microfinance, etc.).
- Long-term infrastructure loan payback periods can limit replenishment and consistent recycling of funds.
- Attrition of capitalization when prices are not adjusted appropriately.
- There can be repayment challenges due to poor oversight of borrowing entity and security of government bailout.

[9] More information can be found at http://www.iffim.org/

sponsors lowers risk and increases attractiveness of the bond to investors. These funds have benefited significantly from a mature market as well as the ability to issue tax-exempt bonds (which is uncommon in other markets).

Philippines Water Revolving Fund (PWRF): PWRF is a blended loan revolving fund model which received seed funding from the Japanese International Cooperation Agency (JICA) and technical assistance from USAID as well as a Development Credit Authority (DCA) partial guarantee. The seed capital was disbursed through the Development Bank of the Philippines as concessional loans and blended with domestic commercial bank loans for lending to water service providers. The blending contributed to lower borrowing rates, and more importantly longer tenors, which the utilities put greater importance on compared to the interest rate. Credit enhancements further improved terms and reduced risks for investors. These included a standby credit line provided by the Development Bank of the Philippines, a guarantee from the Local Government Unit Guarantee Corporation (LGUGC) and a USAID DCA co-guarantee. Comprehensive technical assistance from USAID to both investors and water service providers helped them assess risk and improve performance. PWRF is thought to have helped open commercial banks up to direct lending to service providers.

Vietnam Sanitation Revolving Fund: This facility serves households through subsidized microfinance loans for latrine construction nationwide. Households lacked collateral to borrow, but through this model they join a savings and credit group, which provides a "community collateral" process to qualify them for the microloans. The process involves group members carrying out creditworthiness assessments before recommending co-members for a loan. Demand for the product has been high and it is offered countrywide (Trémolet, Kolsky, and Perez, 2010). The subsidized microfinance revolving fund model allowed households' access to finance for sanitation investments.

5.2.3 SECOND-TIER LENDERS

Second-tier financing facilities are financial intermediaries that on-lend funds to first-tier lenders (typically commercial banks) that lend to "retail" borrowers, such as local governments. Second-tier lending facilities can be influential in development of sub-national finance through credit risk reduction for local creditors. Notable examples include Colombia and the Czech Republic, where local development finance companies and municipal development funds (MDFs)—*La Financiera del Desarrollo Territorial S.A.* (FINDETER) and Municipal Finance Company of the Czech Republic (MUFIS)—were established to serve as second-tier lenders for commercial banks to lend to municipalities.

La Financiera del Desarrollo Territorial (FINDETER), Colombia (See Profile Annex B): FINDETER was capitalized by the Government of Colombia and MDBs to channel public financing to commercial banks lowering the borrowing costs through rediscounting of loans. The commercial banks then on-lend to local government to support infrastructure project investment. Under this model the first-tier lender (the bank) assumes the credit risk and is responsible for repayment separate from the local borrower. A key credit enhancement utilized to protect against default risk is an intercept held by the commercial bank and through which intergovernmental transfers are made into an account established by the local government borrower, thereby lowering the risk and helping to improve borrowing terms. Another FINDETER advantage is the technical assistance offered to the borrower during project preparation, and later through oversight. A challenge was that the discounting prolonged capitalization commitments for a timeframe longer than originally anticipated.

Municipal Finance Company of the Czech Republic (MUFIS): The MUFIS model was similar to FINDETER, but funding was through long-term, fixed-rate borrowing in the U.S. and this was achieved

with a Czech government guarantee as well as a U.S. Agency guarantee (Peterson 1996).[10] MUFIS on-lent to local governments absent any discounting. As in the case of FINDETER, the first-tier lender takes on the credit risk and is responsible for repayment. MUFIS faced challenges surrounding reduced market demand due in part to government efforts to control rising public debt through restrictions on debt service maximums (Kehew, Matsukawa, and Petersen, 2005).

5.2.5 BOND BANKS AND POOLED FUNDS

Pooled financing facilities, such as bond banks and pooled funds are standalone financial intermediaries that bundle assets of multiple entities seeking to borrow from the financial markets. The borrowings are often accompanied by a variety of enhancements, which may include reserves, intercept provisions, guarantees, among others to make the transaction more attractive and lower risk (Kehew, Matsukawa, and Petersen, 2005). These pooled facilities can be advantageous for small and medium sub-national entities and service providers with comparatively small investment needs and limited or poor credit history. Pooling borrowers can diversify risk for lenders (this has been noted to lead to lower interest rate requirements by lenders), yield investment grade credit ratings, and contribute to scale that reduces transaction costs per borrower by spreading the expenses (legal, advisory, investment, management, monitoring, etc.) across the pool.[11] The process of establishing a pooled financing facility in developing countries can prompt serious reforms and improve credit market development and increase utilization of in-country finance sector capacity (PPIAF, 2017).

BOND BANKS

US Bond Banks: US Bond Banks have been successful in leveraging financing from the capital markets and channeling it to small municipalities to address local infrastructure projects. Unlike SRFs discussed above, US Bond Banks do not use federal or state funding to capitalize a loan portfolio, but rely on the pooling mechanism, credit strength of borrowers, and credit enhancements to lower the cost of borrowing (PPIAF, 2017). Credit enhancements include debt service reserve funds, intercepts, and moral and general obligation pledges. Some bond banks utilize bond insurance. Another critical activity is advisory services, which include regular surveillance and monitoring of borrowers' financial management of the debt, and contribute to the low default rate for municipal bond banks (PPIAF, 2017). Management policies, independent operations and a strong governance structure add to good credit ratings that attract investors. An additional benefit for US bond banks is the mature and efficient capital market and regulatory framework. A unique feature in the US is the ability to issue tax-exempt bonds for public capital projects, which eliminate taxes on interest earned by investors. This helps compensate for relatively low interest rates that would otherwise make this debt less attractive.[12]

Mexico Bond Banks: In Mexico, the Quintana Roo Bond Bank (QRBB) and Hidalgo Bond Bank were developed to conduct pooled financing transactions. The first QRBB transaction facilitated access to funding through the local markets (commercial bank loan) for the State Commission for Water and Sanitation. A unique advantage was the ability to access a central government revenue stream, allowing it to leverage the sovereign rating, thereby exchanging the lower credit rated state revenue streams for the higher rated national ones to improve borrowing terms (Evensen Dodge and USAID 2014). The Hidalgo Bond Bank leveraged bond issues and long-term commercial bank loans. Of particular note are

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[10] Foreign exchange risk was protected against through charging of a loan fee within the on-lending rate and in part by a Ministry of Finance agreement to reimburse MUFIS for larger-than-projected losses due to FX (Peterson, 1996). The US agency was likely a USAID Housing Guarantee which was a predecessor to the USAID DCA Guarantee.

[11] Kehew, Matsukawa, and Petersen (2005) provides additional information behind the portfolio diversification benefits.

[12] India also has tax-exempt bond issuances: in 2002, the Indian city of Ahmedabad issued the first tax-exempt municipal bond extending WASH services to all of its 4.5 million residents. FIRE Project Notes Compilation, USAID Indo-US Financial Institutions Reform and Expansion Project - Debt Market Component FIRE(D), 2004.

transactions that pooled very small and poor municipalities with no prior borrowing experience, demonstrating the model's ability to extend repayable finance options to municipalities disadvantaged not only by size, but also finance limitations.

Bond Bank and Pooled Fund Snapshot: Select Advantages and Challenges	
Advantages	**Challenges**
• Typically (not always) better lending terms; • Lower transaction costs; • Improved access to capital market finance through bundling; • Well suited for smaller issuers with low or no credit rating; • Typically strong technical oversight and risk management for borrowers; • Ability to secure credit enhancements (i.e., Quintana Roo national revenue stream improved rating); • US Bond Bank leverages tax-exemption.	• Complex nature of pooled issue process; limited flexibility for borrowers; • Strict terms enforced to maintain quality of credit; • Often of less interest for larger high rated issuers that are needed to diversify risk; • Sensitive to regional/global shocks;[13] • Tend to work best in more developed markets; • Sector governance concerns impact investor confidence; • Limited voice on financing advisor selection (Petersen 1997) • Weak pipeline impacts later issuance ability and sustainability of entity.
Source: Adapted from Council on Infrastructure Financing Authorities/Government Finance Group, 1997.	

POOLED BOND FUNDS

Tamil Nadu Water and Sanitation Pooled Fund (WSPF): The WSPF was specifically designed as a credit pooling mechanism of the Indian state of Tamil Nadu Urban Development Fund (TNUDF) to support small urban local bodies (ULB) in Tamil Nadu to access capital markets through a bond issuance. WSPF has utilized a multi-layered credit enhancement structure to extend maturities and position the bond to appeal to investors. This included an escrow account for each ULB to service debt from own source tariffs and taxes, a debt service reserve fund capitalized by state government, a local debt service reserve fund, a state government intercept, and a partial credit guarantee from USAID. The enhancements proved critical and increased investor assurance on repayment of debt, improved the credit rating of the pooled bond and reduced the cost of borrowing. WSPF credit enhancements also benefited from being able to leverage a favorable country enabling environment (Kehew, Matsukawa, and Petersen, 2005 and World Bank, 2016). WSPF was the first pooled finance facility outside of the U.S. and is still a viable facility.

Kenya Pooled Water Fund (KPWF): KPWF was also established to support creditworthy water service providers (WSPs) of various sizes through a pooled bond to access a larger overall amount of investment at more favorable terms. As an alternative to traditional sources of public finance, KPWF is a pilot for the global World Water Financing Facility (WWFF)[14] which aims to channel donor seed-funding from the global WWFF to national facilities like KPWF for technical support and project pipeline development to facilitate a local currency domestic bond issue, thereby avoiding FX risk.

[13] For example, activity of Mexican bond banks slowed with the 2008 financial crisis; TNUDF in India experienced challenges in the early 2000s with a decline in market interest rates in India, which reduced competitiveness of the entity (Kehew, Matsukawa, and Petersen, 2005)

[14] The WWFF is established as an umbrella agency to facilitate the setup of eight national level facilities. The national facilities (i.e., KPWF) will mobilize domestic private investment from institutional investors for the water sector.

5.2.6 PRIVATE DEBT INTERMEDIARY LEVERAGING DONOR SUPPORT

Facility Snapshot: Emerging Africa Infrastructure Fund (EAIF)

- One of the few debt providers in the market offering longer tenors and willing to work in lending environments that are less secure with higher risk;
- Ability to access additional support for projects through other PIDG initiatives;
- Successful management and governance structure;
- Strong credit policy and risk assessment approach;
- Local currency lending option;
- WASH portfolio is small;
- Lending is only to private sector.

Source: EAIF Website, 2017.

Infrastructure Finance Corporation Limited (INCA), South Africa: INCA was a privately-owned financing intermediary, which began operations in 1996, and has since gone through transitions. INCA's establishment was spurred by, and tailored for, the conditions arising from the end of apartheid. It demonstrated that market-rate borrowing for infrastructure could be viable as a private sector activity, bringing in a high return on equity for shareholders. INCA was capitalized with equity from private investors and DFIs and borrowed wholesale from the local and international capital markets (bond issues and loans), on-lending the proceeds at retail rates in the form of long-term loans to sub-national entities. Its AA- credit rating, based off its initial equity capitalization, strong and systematic risk management system, and commitment to lend only to statutory bodies, allowed it to access longer-term financing at better rates (Kehew, Matsukawa, and Petersen, 2005; Peterson and Annez, 2007). The facility's independence from government and mission enabled it to prioritize profitability, which in turn impacted the capital structure and the financial instruments employed, as well as the selection of entities targeted for financing.

Facility Snapshot: Infrastructure Finance Corporation Limited (INCA), South Africa

- Credited with client responsive nature and fast processing;
- Leveraged credit enhancements, including guarantees, insurance and subordinated debt from donors to improve borrowing terms;
- Equity capitalization helped achieve strong credit rating and borrowing at affordable rates;
- Known for very strong risk management and monitoring system;
- Capital adequacy requirements limited it from lending to the private sector; and
- Focus restricted to larger creditworthy municipalities.

Source: Kehew, Matsukawa, and Petersen, 2005; Peterson and Annez, 2007.

Funds sourced from international debt issues were immediately hedged to avoid interest rate and FX risk. Two vital components of the structure were the subsidiaries it hosted: (1) a capacity building fund; and (2) a distressed debt company. The distressed debt company, which was highly capitalized and supported by USAID, protected INCA in the case of borrowers experiencing financial stress with the capacity building arm conducting turn arounds.

5.2.7 INTERNATIONAL LONG-TERM DEBT FACILITY

International hard and local currency long-term debt facilities provide commercial debt finance (loans or bond issue) at competitive rates that enable borrowers to better match project revenues to debt service. In certain cases, local currency debt can be provided, avoiding foreign exchange risk on the side of borrowers, although, this risk must be managed instead on the facility side.

Emerging Africa Infrastructure Fund (EAIF) (See Profile Annex B): EAIF is a public-private fund that provides largely long-term commercial debt and mezzanine finance. It is one of the earliest initiatives under the PIDG, and was established with equity from donors, private banks and DFIs for lending to private businesses.

Over the past decade and a half, the EAIF portfolio has steadily increased its annual number of projects completed. Of EAIF's more than 65 projects to date, according to the World Bank, as of 2018 one large-scale water treatment facility in Rwanda is due for completion in 2020,[15] and only one multisector project included a WASH component. EAIF may be representative of the challenge for WASH growth in infrastructure finance facilities; while it has a mandate for development impact, its commercial drive and private sector orientation appear to prioritize more commercially viable sectors.

5.3 COMMERCIAL EQUITY INVESTMENT FUNDS

Commercial equity investment funds covered here are facilities with public and private participation in management and equity investment following commercial practices to ensure desirable returns are achieved for investors.

5.3.1 PUBLIC-PRIVATE INSTITUTIONAL INVESTMENT THROUGH EQUITY (STRATEGIC INVESTMENT FUNDS)

Several new public-private facilities have emerged that operate under a market-oriented equity investment model, providing longer-term finance for larger scale projects. Of specific interest are those that are government-led or sponsored funds. OECD (2014) discussed three examples of government-led initiatives supporting institutional investment through equity funds capitalized with public seed funds, including: the Marguerite fund and Pan-African Infrastructure Development Fund (PAIDF) at the regional level, and Philippine Investment Alliance for Infrastructure (PINAI) at the national level. On the global level Global Energy Efficiency and Renewable Energy Fund (GEEREF) leverages private equity under a fund-of-fund model. These funds also fall in the Strategic Investment Fund (SIF) category with an aim to crowd-in private capital.[16] Table 5 below provides an overview of these investment funds and highlights the leverage factor that can be generated by public investment bringing in additional capital (i.e., the capital multiplier).[17]

Many of these more recent (within the past 10 to 15 years) funds are unique in that while they may be public sector driven there is increasingly a robust institutional investor participation in the setup of such entities, which diverges from the traditional approach to this type of vehicle formation, where investor engagement came in later stages (OECD, 2014). The impetus for these facilities and the early investor participation is the so-called "governance gap" stemming from concerns voiced by investors with prior infrastructure investment experience, specifically as it relates to the asset manager, where the institutional investors felt their long-term interests were not well-represented (OECD, 2014).

[15] https://blogs.worldbank.org/ppps/kigali-water-lessons-one-sub-saharan-africa-s-first-water-ppps

[16] Following the definitions put forth in a World Bank study (Halland, Noel, Tordo, and Kloper-Owens, 2016) a SIF maintains the following features: "sponsored and/or fully capitalized by government, by several governments or by government-owned global or regional finance institutions; invests to achieve both financial and economic returns; follows target of crowding in private capital by co-investing at the fund and/or project level; utilizes expertise to operate on behalf of their sponsors; and provides long-term patient capital, mainly in equity form, but open to quasi-equity and debt; and are created as investment funds or investment corporations.

[17] Halland, Noel, Tordo, and Kloper-Owens (2016) notes the value of multipliers being the ability to crowd-in external capital but cautions that it should not be viewed as an indicator for SIF investment efficiency or impact.

Table 5: Overview of Public-Private Institutional Investment through Equity Facility

Facility Name	Year	Fund Size	Investment Size (avg.)	IRR	Fund Life (yrs)	Fund Multiplier	Investment Multiplier	Capital Multiplier*
Global Energy Efficiency and Renewable Energy Fund (GEEREF)	2008	€112 million	€10 million	N/A	15	2x	35.8x	71x
Pan-African Infrastructure Development Fund (PAIDF)	2007	$625 million	N/A	15%	15	4.2x	4x	16.7x
Philippine Investment Alliance for Infrastructure (PINAI)	2012	$625 million	N/A	N/A	10	25x	N/A	25x
Marguerite Fund	2010	€710 million	€10 - €50 million	10 - 14%	20	1x	11.8x	11.8x

Sources: Adapted from Halland, Noel, Tordo, and Kloper-Owens, 2016; OECD, 2014 and World Bank estimates.
**Public Capital Multiplier is the ratio of total investment to public investment. It is based on the fund multiplier (ratio of total fund size to public capital) combined with the project investment multiplier (ratio of total project investment to size of fund).*

Regional and National Equity Facilities-Marguerite Fund, Pan-African Infrastructure Development Fund (PAIDF) and Philippine Investment Alliance for Infrastructure (PINAI): The funds leverage public seed capital to attract private institutional investment in infrastructure for the public and private sector. A benefit under this model is the pooling of institutional investor resources, which offers a risk mitigation element through diversification, and also opens opportunities for smaller sized investors to participate (OECD 2014).[18] The funds target large-scale projects in need of sizeable long-term equity investments. They have a double bottom line following a market-based approach to ensuring returns to investors while maintaining a public policy mission. The PAIDF and Marguerite Funds both have regional focuses, with the PAIDF focused in emerging market economies in Africa and the Marguerite Fund focused in Europe. At the national level, PINAI is a 10-year closed private equity-like fund under private management, backed by a combination of public and private capital, including a domestic and foreign pension fund as two of the bigger shareholders (Halland, Noel, Tordo, and Kloper-Owens, 2016). It provides equity and quasi-equity finance.

Global Equity Fund-of-Funds (GEEREF): GEEREF is a global public-private fund established by the European Investment Bank (EIB) and European governments. It differs from the preceding funds in its fund-of-funds model, which takes an equity stake in multiple local private equity funds to be reinvested in local projects. As such, GEEREF can target smaller enterprises and projects, and is well-suited for these size targets through the multiple fund model. Further, the multi-layered fund facilitates opportunities to crowd-in private finance at various levels,

Regional and National Equity Investment Fund Snapshot: Select Advantages and Disadvantages

- Investment pooling diversifies portfolio and lowers risk for investors, and allows smaller investors to participate;
- Longer-term fund falls in line with institutional investor long-term liabilities;
- DFI participation can increases attractiveness to other investors; participation of credible investors makes investment more attractive;
- Large mobilization size allows it to directly attract deal flow;
- May not be typically amenable to small and medium investment projects;
- Challenge to balance the double bottom line.

Source: OECD, 2014; Halland, 2016.

[18] The pooling here differs from a bond bank or pooled bond fund, as those structures bundle projects or municipal assets.

resulting in a higher capital multiplier (Table 5). Challenges stem from the multiple tiers of investment resulting in layers of transaction costs, and the potential "lock-up period" when investors are unable to withdraw their investment (Provaggi and Monk, n.d.).

5.4 COMBINATION FACILITY

This section covers facilities that combine a full range of windows and/or financing instruments from a concessional capitalization grant through debt and equity on commercial terms to target and support all stages of the project cycle.

5.5.1 LIFECYCLE PACKAGING: AN INTEGRATED APPROACH

There are an increasing number of facilities trying to leverage an integrated approach that involves packaging multiple funds or initiatives under one facility, to together address different stages of the project cycle and offer a range of instruments to achieve this. Climate Investor One and the Africa50 Platform[19] are two examples.

Climate Investor One (See Profile in Annex B): Climate Investor One is an emerging (2015) public-private facility with a project lifecycle approach that mobilizes blended financing to invest in private sector renewable energy projects. It is under private management, but balances a commercial and development mission. Climate Investor One design combines three facilities—project development, construction, and refinancing—into one, and relies on a range of instruments—grants, debt, and equity—disbursed throughout the project lifecycle. Particularly unique is the ability to offer equity or mezzanine debt finance for construction, as it creates a cost-effective project finance approach to bridge construction and operation phases (Padraig and Stadelmann, 2014; Kundi, 2014). By sequencing and targeting all project stages in a streamlined fashion it is expected that access by project sponsors will increase, and there will be a reduction in delays transitioning between phases. Although issues outside of the developer's control are not as easily addressed.

Combination Equity and Project Preparation Facility Africa50 Platform: Africa50 is a recently formed equity and project development facility focused on infrastructure in Africa. It is composed of two separate legal companies: Africa50 Project Development aims to increase the number of bankable projects through recoverable finance; and Africa50 Project Finance invests equity in projects and offers mezzanine debt. With an emphasis on energy and transport sectors, it offers a full package to address project needs with early pipeline and bankability support through construction finance.

Facility Snapshot: Africa50 Platform

- Strong facilitation of transactions is an anticipated benefit of a platform that spans the project life cycle.
- African shareholder base is predicted to help confront supply side challenges and catalyze private investment.
- Legally independent entity, which should free it from political interference and associated delays.
- Balancing policy and commercial missions is not easy.
- FX risk management is unclear.
- Small and medium projects are not as attractive under this model.

Source: Facility Profile Africa50 (Annex B)

[19] Africa50 Project Development Facility and InfraCo Africa also make equity investments at financial close for a project to recoup development expenses.

5.5.2 GLOBAL INVESTMENT FUND FOR WATER (GIFFW)

GIFFW proposes to mobilize funds through a micro-levy on bottled water sales to create an investment fund for water and sanitation (see profile Annex B). The proposed fund would be capitalized by taxes levied on the sale of bottled water. The concept includes three windows or components:

1. Systems Change: activities aiming to support the government in the creation of a supportive regulatory environment, increase awareness of WASH issues and prioritize WASH on the political agenda, and support the development of local processes for ongoing service provision.

2. Market Support: initiatives to expand the use of commercial capital, both local and international, to support sustainable WASH services; and

3. Transaction Support: the provision of capital with a high-risk tolerance and long time horizon for both public and private entities to pilot models for sustainable WASH services at scale." [20]

The GIFFW is still in the feasibility assessment phase. Potential challenges could surround the broad mandate, and numerous logistical and administrative questions around collection of resources and overall organization. In 2017, two pieces of GIFFW documentation were produced further assessing facility potential and analyzing options.[21]

[20] Lion's Head Global / Rockefeller. 2017. Final Report Assessing The Financing Need In The Global Wash Sector And Identify The Most Efficient Structure For Disbursement.

[21] Reference documentation is listed under the GIFFW profile in Annex B.

6.0 RISK MITIGATION FACILITIES

Credit enhancements and risk mitigation instruments help mobilize repayable-finance by reducing or transferring risk from lenders or investors. Credit enhancements (i.e., guarantees, insurance, etc.) have been used for a number of different transactions but the overall use of these instruments in the WASH sector has been limited. Findings from the WEF's 2016 risk mitigation report indicate there is a diverse offering of risk mitigation products and a need for standardization and complementarity across products offered by IFIs. One recommendation is the creation of a global or regional facility (WEF, 2016).

Figure 8: Guarantee Facility Activity in the Project Development Cycle

Source: Adapted from PIDG (2017) project development cycle; and ICA, 2012.

6.1 GUARANTEE FACILITIES

Guarantees are used to expand access to market investment by transferring direct and indirect lender risk including, credit, project, political, regulatory or sovereign risk. They increase security for investors allowing for investments to take place that would otherwise be unbankable due to high risk (Baietti and Raymond, 2005). Guarantees can augment creditworthiness of the borrower and improve loan terms through extended tenors and lower borrowing costs. The use of guarantees to help projects secure financing under affordable local currency terms can help facilitate domestic finance mobilization. Different donor agencies and national governments have supported the set-up of guarantee facilities through provision of technical assistance, seed capital and other forms of credit.

Local Government Unit Guarantee Corporation (LGUGC), Philippines (See Profile in Annex C): LGUGC was an example of a private national guarantee facility, where the majority private ownership was credited for facility success (Kehew et al., 2005). The facility was created to help local government units (LGUs) access capital for infrastructure by reducing credit risk through the provision of guarantees. It also provided guarantees for water districts. USAID's DCA offered a co-guarantee on LGUGC's guarantees for local infrastructure financing.[22] LGUGC has helped mobilize private sector financing for

Facility Snapshot: Local Government Unit Guarantee Corporation (LGUGC), Philippines

- Allows projects to secure financing by enhancing credit quality;
- Model includes an intercept on local revenue transfers in the case of borrower default; this functions as a payment security lever for the facility;
- Offers technical assistance and oversight to ensure financial stability of borrowers;
- Internal credit assessment systems help gauge borrower financial health and risk of default;
- Earlier identified risk surrounded competing with concessionary products that could serve to undermine LGUGC by crowding-out opportunities for private finance; and
- LGUGC success in attracting private finance to new sectors could result in reduced need for LGUGC.

Source: Kehew et al., 2005; Facility Profile: LGUGC (Annex C).

[22] During the drafting of this document, LGUGC principals decided to close the facility; more details provided in Annex C under LGUGC Profile.

local infrastructure projects, adding assurances to lenders unfamiliar with the risks of investing in a decentralized context.

Banque Ouest Africaine de Développement Infrastructure (BOAD): BOAD is a West Africa regional infrastructure guarantee facility set up through donor support (World Bank/International Development Association (IDA), Multilateral Investment Guarantee Facility (MIGA), and the African Development Bank), with the objective of promoting small and medium infrastructure in West Africa.

GuarantCo (See Profile in Annex C): GuarantCo is a global guarantee facility created in 2006 as part of the PIDG to provide partial guarantees on local currency debt issues by private sector infrastructure projects, municipalities, and parastatals among others. It operates by partnering with lending institutions to support on the evaluation of projects and providing a guarantee that transfers financial risk. Uniquely, GuarantCo operates only in local currencies; albeit, this can make the facility itself susceptible to currency risk. GuarantCo has also partnered with other development guarantee agencies, including USAID, to provide joint or co-guarantees. One example is Kalangala infrastructure services in Uganda in 2011. This is the only water related project in the portfolio, which points to a limitation for the model in the WASH sector. In 2016 GuarantCo helped develop InfraCredit, an infrastructure credit enhancement facility in Nigeria, which will provide guarantees of local currency debt issues (PIDG, 2016).

6.2 FOREIGN EXCHANGE RISK FACILITY CONCEPT

Foreign exchange (or FX) risk emerges when capital is sourced in one currency for an investment which generates cash flows in a different currency. A local currency depreciation against a more stable foreign currency can quickly erode debt service capacity and increase risk of default. While FX risk is difficult to mitigate, there are instruments which are used to mitigate the risk; albeit, they can be costly. The specific circumstances of the project and country will determine whether a potential FX risk hedging mechanism is appropriate.

Proposed Devaluation Backstopping Liquidity Facility (DBLF): Apprehension over FX risk was a major concern cited by investors following the Asian financial crises of the late 90s and early 2000s. The event had global repercussions and served as the impetus for the 2003 "Financing Water for All" Camdessus report recommending creation of a DBLF to expand the market for water finance (Winpenny, 2005). It proposed to fund such a facility through a separate escrow account, or on a contingent basis from a third party in the form of standby credit, with the understanding that it would be accessed under specific circumstances (Matsukawa, Sheppard, and Wright, 2003). To date such a facility in the water sector has not been established, and there is limited experience outside of the sector.[23] Increased decentralization and changes in the global financial landscape make a global facility less relevant (and not as effective in reaching smaller projects), and attention has increasingly focused on domestic finance for infrastructure. Notwithstanding, some leaders within the sector, including the World Bank CFO Joaquim Levy, have acknowledged the potential of the concept.[24]

[23] The first use of an FX exchange liquidity facility was under the 2001 AES Tietê power transaction for which the Overseas Private Investment Corporation (OPIC) set up devaluation coverage in the form of a stand-by credit facility, US$30 million was provided in devaluation coverage.

[24] https://blogs.worldbank.org/voices/foreign-exchange-risk-how-liquidity-facility-could-help

7.0 SELECT LESSONS LEARNED

The wide range of project development facilities, financing facilities and risk mitigation facilities provides a rich landscape from which to explore lessons learned. While many facilities included in this assessment are relatively new, they nonetheless offer insights. Depending on level of economic development and sophistication of the WASH sector, lessons may not be applicable or relevant for every country and service provider. Moreover, this landscape assessment is intended to be an initial dive into a broad range of facilities to capture the high-level contours. As such, select lessons are put forth with the expectation that they will be further analyzed and built on.

7.1 FACILITY MANAGEMENT AND GOVERNANCE

Strong management and governance are important for facility effectiveness and investor confidence. Investors look for good governance when appraising options to invest. A strong corporate governance structure leads to thorough follow through on objectives, aligns incentives and contributes to effective monitoring and oversight of operations. Investors in the Marguerite Fund indicated that clear governance and transparency was key for their participation. Considerable upfront time and effort was spent reconciling management and governance issues which delayed its launch (OECD, 2014).

Strong operational leadership and staff capacity should not be underestimated.[25] Daily facility operation requires leaders that can engage with all stakeholders to promote facility services and build investor confidence. For instance, an equity fund manager's role in fund governance and management strongly impacts investor perceptions and ultimate participation. In South Africa, the MIIU housed a blend of international and local experts, which provided a well-rounded and complementary set of skills and capabilities, and allowed for skill transfer. Corporate structures promoting independence and personnel incentive systems within a facility can contribute to fostering quality leadership (Kehew, Matsukawa, and Petersen, 2005).

Balancing of commercial objectives with development priorities is a challenge. Commercial orientation of facilities can lead to investment decision trade-offs with regards to social and development impact. Ensuring a balance requires clear policies, appropriate incentives, viable supporting facilities and mechanisms to manage risk across the project cycle, and a strong management and governance position from the start. At the same time, indications are that commercially oriented facilities or those trying to balance commercial and development mandates have smaller WASH portfolios.

7.2 EXTERNAL ENVIRONMENT AND MARKET CONTEXT

Willingness to borrow from a facility is influenced by the country context, flows of concessional finance and other resources. This was observed in South Africa, where the municipal market demand for private finance was "a derived, residual demand," selected after all other options were exhausted, including those offered by below-market providers like the Development Bank of Southern Africa (DBSA) and/or domestic or international sources of grants (Petersen and Kruger, 2007). Although there is a greater effort by MDBs and donors to use public funds more strategically, this shift is nascent and crowding out remains an obstacle to market-based finance that could undermine facilities aiming to leverage the private sector involvement.

Political will, level of market development, regulatory enforcement, and ability to weather shocks are crucial factors. In the Philippines, a strong government push for private sector involvement in infrastructure investment contributed to the establishment of a range of facilities from PWRF to

[25] Kehew, Matsukawa, and Petersen, 2005

LGUGC. The experience of PWRF demonstrated that incentives should be coupled with enforcement of economic regulations, particularly targets for service expansion and performance targets. In India, high economic growth and decentralization shifted growing service delivery responsibilities to state and local governments providing the impetus for new financial institutions such as the Tamil Nadu Urban Development Fund (TNUDF) and WSPF. In Mexico, the [2007/2008] financial crisis dried up the pool of institutional investors, resulting in the QRBB having to change financing instruments.

7.3 FACILITY MODEL APPROACHES AND TECHNIQUES

Facilities that integrate activities across the project cycle are thought to hold promise to both increase and improve the pipeline of bankable projects. Climate Investor One and the Africa50 Platform are two examples of integrated facility approaches. They link multiple windows and funds by housing them under one facility platform, allowing for the provision of appropriate sources of capital at the different project cycle stages, thereby reducing access barriers and ensuring availability and a connected pipeline (FMO, 2014; Kundi, 2014; Rouse, 2014). For equity funds like Climate Investor One, when fund managers are able to engage early in the project cycle, the conversion rate of projects that reach financial close are estimated to climb from 25 percent up to 80 percent (Kundi, 2014).

Revolving structures allow for blending but face limitations in their core objective of recycling funds. The revolving fund structure can be appropriate for working capital, but for infrastructure projects with long payback periods, the fund may not be replenished frequently enough to "revolve" and provide new loans, nor cover operating costs. There can be issues of slow attrition if repayments are not adjusted in accordance with relending rates, inflation and maturities. Further, moral hazard is a risk, as subnational borrowing entities may seek to avoid repayment knowing the government will bail them out.

Effective credit assessment and risk management matter—even after financial close. The ability and dedication to conduct thorough risk assessments on both an organizational and market plane is critical for attracting investment. A well-run facility will watch out for the borrowers and make sure they don't get into financial trouble by exercising sound management practices. Many of the bond banks and pooled funds offer technical assistance and monitoring of existing loans, as their portfolio directly impacts their credit rating. INCA leveraged a sophisticated risk and credit assessment system that was instrumental. LGUGC created an internal credit rating system to gauge creditworthiness and an appropriate guarantee fee. Strong governance is required to avoid short-termism, and associated costs and value of post transaction support must be factored into the business and financial model.

While credit enhancements can reduce risk and improve financing terms; guarantees have been underused for water. Credit enhancements can help crowd-in commercial finance. Guarantees can improve commercial terms through extension of tenor and improved lending rates. Interviews and desk research emphasized the value of guarantees to catalyze access to finance but indicate they have not been used most effectively. The creation of domestic guarantee facilities such as the successful LGUGC has helped reduce transaction costs and facilitate increased guarantee use.

Identification of a secure source of revenue for debt service is critical for certain models. Several facilities rely on an intercept to ensure repayment, reducing risks for lenders/investors. Intercepts have been employed widely where policies and regulations allow, typically in countries with robust decentralization programs with targeted transfers. For example, they were used in Colombia through FINDETER the second-tier lender, in India under the WSPF pooled bond fund model, and in the Philippines by LGUGC, among others.

Pooled finance facilities have effectively channeled affordable market-based repayable finance to small and medium-sized local governments and service providers. However, the development of these facilities can take time and are resource intensive. Such facilities tend to be limited to countries where there are robust enabling environments and a higher level of market development. A sound pipeline of borrowers is typically also needed.

The lack of bankable project structures is a persistent obstacle; but the project preparation facility landscape is characterized by limited effectiveness. The small pipeline of bankable projects and insufficient preparation support puts pressure on a need to reevaluate appropriate structuring of PPFs and looking beyond the scope of PPFs to address the challenges.

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