

**A CASE STUDY of
PUBLIC-PRIVATE AND PUBLIC-PUBLIC
PARTNERSHIPS IN WATER SUPPLY AND
SEWERAGE SERVICES IN DAR ES SALAAM**

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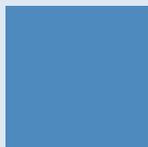
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Editorial Note

When discussing legal and other official documents and terms contained in them, capitalization poses a challenge and might appear to the reader to be arbitrary or inconsistent. The author has adopted the following approach: The titles of specific legal or official documents, and terms that are capitalized in legal or official documents, are capitalized in this report. For

example, lease contract is capitalized when it refers to either the Lease Contract with CWS or the Lease Contract with DAWASCO. Likewise, operator tariff is capitalized when it refers to the Operator Tariff specified in the legal documents. When the terms are used in a generic sense they are not capitalized.



List of Acronyms and Abbreviations

AFD	French Development Agency
AfDB	African Development Bank
BGT	Biwater Gauff Tanzania
CEO	Chief Executive Officer
CWS	City Water Services
DAWASA	Dar es Salaam Water and Sewerage Authority
DAWASCO	Dar es Salaam Water and Sewerage Corporation
DCW	Delegated capital works
DfID	U.K. Department for International Development
DWSSP	Dar es Salaam Water Supply and Sanitation Project
EDAMS	Electronic Data and Asset Management System
EIB	The European Investment Bank
EWURA	The Energy and Water Utility Regulatory Authority of Tanzania
FTNDWSC	First Time New Domestic Water Supply Connection
GOT	Government of the United Republic of Tanzania
ICSID	International Center for the Settlement of Investment Disputes
IDA	International Development Association of the World Bank
IMF	International Monetary Fund
MOF	Ministry of Finance
MOW	Ministry responsible for water, currently the Ministry of Water and Irrigation
NUWA	National Urban Water Authority
NRW	Non-revenue water
NWP	National Water Policy
O&M	Operation and maintenance
POG	Procurement of Goods Contract
PPP	Public-Private Partnership
PSRC	Parastatal Sector Reform Commission
PWP	Priority Works Program
SIPE	Supply and Installation of Plant and Equipment Contract
STM	Super Doll Trailer Manufacture Company Limited
TANESCO	Tanzania Electricity Supply Company Ltd.
TICTS	Tanzania International Container Terminal Services

Tshs	Tanzanian shillings
TTCL	Tanzania Telecommunications Company Ltd.
UFW	Unaccounted-for water
UNCITRAL	United Nations Commission on International Trade Law
WHO	World Health Organization



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Executive Summary

Overview

In 2003, following a long and costly selection process, City Water Services (CWS), a private operator was engaged under a lease contract with the Dar es Salaam Water and Sewerage Authority (DAWASA) to provide water supply and sewerage services in Tanzania's largest city. CWS' performance was disappointing and it encountered serious financial difficulties early. Within two years, the contract collapsed with the dramatic expulsion of its expatriate managers from the country. Two international arbitration tribunals ensued.

Following the departure of the private operator in June 2005, a public corporation, the Dar es Salaam Water and Sewerage Company (DAWASCO) took over operation of the services and encountered many of the same constraints that CWS had. Despite new financial injections and an increase in the Operator's Tariff in 2006/07, its financial performance was unsatisfactory and, during the first two years, operational results were poor. After five years, operational performance had improved but further progress was still needed.

The case raises compelling questions about the preparation of the public-private partnership (PPP), the selection process, the allocation of risks in the contract, expectations regarding financial viability and service improvements, the effectiveness of the public-public partnership that has existed since the private operator departed, and how to structure institutional relationships to ensure accountability. It also provides an opportunity

to evaluate how customers, especially the poor, were affected.

ES.1 Background

Located on the eastern coast of Africa, the United Republic of Tanzania, including the former Tanganyika on the mainland, and the semi-autonomous islands of Pemba and Zanzibar, has a population of 40 million. It is one of the world's poorest countries. During the 1990's the government embarked on a liberalization program that included the restructuring of state-owned enterprises, private participation in infrastructure services and the divestiture of about 350 parastatal entities.

In 1997, the Dar es Salaam Water and Sewerage Authority (DAWASA) was created to develop and operate the water supply and sewerage services in the metropolitan area of Dar es Salaam, Kibaha and Bagamoyo. Funding for maintenance and repairs had been inadequate for some years and the infrastructure that DAWASA took over was in need of rehabilitation. In 2002, because of leaks, non-metered connections and illegal usage, most of the water produced was lost. Service was available for only a few hours and a few days per week in most areas. The water that did reach consumers often was not safe for drinking. A large percentage of households bought water from neighbors, tankers or other vendors, for which they paid rates that were considerably higher than the DAWASA tariff. Low salaries made it difficult for DAWASA to hire and retain qualified staff. Less than 10 percent of the urban population was connected to a sewerage

system. Another 20 percent, mostly in the middle and upper-income brackets, used septic tanks and the remainder depended on pit latrines. Most wastewater treatment facilities were not functioning and pit emptying services were inadequate. The city suffered periodic outbreaks of cholera and other water-borne diseases.

By the late 1990's, driven by chronic water shortages in Dar es Salaam and other parts of the country, the poor and declining quality of services, and the mounting backlog of unserved households, pressure to improve water supply and sanitation services caused the Government to mount a significant effort to reform the policy environment and create an institutional framework that would promote greater accountability.

ES.2 Policy and Institutional Reforms

The National Water Policy (NWP) adopted in 2002 called for the development of an enabling environment and incentives for the delivery of reliable, sustainable and affordable services, and the introduction of full cost recovery and financial autonomy. It laid the foundation for reform and public-private partnerships (PPP) in water and sewerage services, and as a result, DAWASA was authorized to appoint an operator under a concession or lease contract. The policy also endorsed independent, transparent and fair regulation of services and emphasized the need to improve services for low-income households. The Energy and Water Utility Regulation Authority (EWURA) was created (on paper) with the mandate to regulate service quality and tariffs.

The African Development Bank (AfDB), the European Investment Bank (EIB) and the World Bank (IDA) supported GOT's plan to restructure DAWASA and financed investments in infrastructure under the Dar es Salaam Water Supply and Sanitation Project (DWSSP).

The AfDB provided US\$ 48 million; EIB provided US\$ 34 million and the IDA provided US\$ 61.5 million.

ES.3 The Pursuit of a Private Operator

While embarking on a program of reforms in the policy and institutional environment for water supply and sanitation, the Government launched a parallel effort to engage a private operator for water and sewerage services in Dar es Salaam. In 1997 the British company Biwater International Ltd. approached GOT with a proposal for a joint venture with DAWASA in which GOT would have assumed most of the risk. Hoping to attract more private sector investment through a concession, GOT opted to invite Biwater and three other firms, Saur Internationale, Vivendi Environnement (which became Veolia Environnement in 2003), and Northumbrian Water Group PLC, to submit bids. However, the four bidders each proposed a different approach and the bids varied so much, that the Parastatal Sector Reform Commission (PSRC) decided it could not evaluate them in a fair manner and did not award a contract.

PSRC subsequently decided to request bids for a lease contract in which Biwater, Saur and Vivendi expressed interest. However the pre-bid process was marked by controversy and concerns over the riskiness of the undertaking. Ultimately, only Saur and Vivendi submitted bids, and their bids contained qualifications aimed at reducing the operator's risks. In May 2000, the PRSC decided the bids deviated from the requirements set out in the request for bids and declared the bids non-compliant. A third attempt to secure bids for DAWASA led to a formal prequalification process organized by PRSC. Although, Saur and Vivendi fully met the prequalification criteria, Biwater Gauff Tanzania Limited (BGT)—a joint venture of Biwater International and the German engineering firm, HP Gauff Ingenieure GmbH—did

not fully meet the criteria but was nevertheless pre-qualified.

After reviewing the revised bidding documents the pre-qualified bidders, particularly Saur and Vivendi, still had concerns and requested several amendments to deal with risks. These requests were not accommodated and, ultimately, only BGT submitted a proposal—with a bid equal to the minimum allowed Operator’s Tariff. The World Bank project team expressed concern about the soundness of BGT’s proposal, but following a review meeting in which representatives of BGT provided clarifications, the World Bank issued a no-objection to the award of the contract. BGT and a Tanzanian investor, Super Doll Trailer Manufacture Company Limited (STM), subsequently created the operating company, City Water Services Limited (CWS) in which Biwater, the lead professional partner, held only a 41 percent interest, Gauff held 10 percent, and STM, with no experience in water supply services, owned 49 percent.

ES.4 The Lease Contract Framework

The drafting of the lease contract incorporated lessons of experience from Western Africa. For example, the operator would be responsible for implementing a Priority Works Program (PWP) and Delegated Capital Works (DCW) which together included rehabilitation of the production works and the network, procurement of bulk and customer meters, construction of water kiosks in low-income neighborhoods, rehabilitation of thousands of spaghetti connections and the installation of new connections. As is often the case in such undertakings, financial projections showed that the operator would incur losses during the early years of the contract. Its shareholders would therefore be required to contribute sufficient equity to keep the operator solvent. To help bridge the early financial gap, IDA would finance a line of credit of up to US\$5.5

million to be on-lent by DAWASA to the operator—and repaid by the end of the ten-year contract period.

The Lease Contract was signed in February 2003. A transition period ensued and CWS began operations in August, 2003. Under the terms of the contract, DAWASA, as Lessor, remained responsible for financing capital investments and executing most of them. CWS assumed responsibility for operations and maintenance and the PWP and DCW. CWS would collect tariff revenues, retain its share (the Operator Tariff), remit to DAWASA its share (the Lessor Tariff), and deposit the First Time Connection Tariff into a fund that would be used to subsidize connections for low-income households. In addition CWS was required to pay a monthly Rental Fee to DAWASA. The financial projections BGT submitted with its bid showed that CWS would lose Tshs 7.9 billion (about US\$ 7.9 million at the time) over the first two years of operation, and would not reach a break-even point until year seven. The operator would require US\$8.5 million in equity from CWS’s shareholders and the US\$ 5.5 million line of credit from DAWASA to stay afloat in the early years. Targets for some performance indicators were specified in the contract but many (for example, those for water losses and continuity of supply) would be specified only after baseline data were established in the course of the contract.

The lease contract framework included a Development Contract between DAWASA and the Ministry of Finance which (among other provisions) defined the capital works program, provided for its financing and committed GOT to ensuring that DAWASA was adequately funded at all times. When the Lease Contract became effective, most of DAWASA’s staff was transferred to CWS. The CEO of DAWASA (who had also been CEO of DAWASA’s predecessor, NUWA) and all senior managers remained in place. A staff of about 65 was retained to manage the planning and implementation of

investment projects and to oversee the Lease Contract with CWS.

Three mechanisms were designed to improve services for the poor. CWS was expected to construct 250 new water kiosks and use the First Time Connection Fund to connect low-income households to the network. In addition, DAWASA would implement the Community Water Supply and Sanitation Program (CWSSP) which would support the construction of up to 50 small water supply and sanitation schemes in mostly low-income communities not served by the networks.

ES.5 CWS' Performance and Termination of the Lease Contract

Management, Operational and Commercial Performance

When CWS assumed operations in August 2003, it faced a challenging agenda. To meet its targets, it would have to identify and regularize thousands of unregistered connections, introduce a new billing system, reduce water losses from an estimated 70 percent to 44 percent in the first three years, and more than double monthly collections within 12 months. Achieving these targets would require strong leadership and a change in culture on the part of operating staff and many of the customers. Unfortunately, CWS was unable to meet many of its targets and obligations almost from the start. Its shareholders failed to inject their agreed equity contributions; the new billing software system was only completed in March 2005 and turned out to be woefully inadequate; limited progress was made in cleaning up the customer database; values for baseline data were not proposed; and the number of connections rehabilitated with meters installed was less than one quarter of the targets for the first two years of the contract. In addition, CWS' average monthly collections in 2004/05 reached only 52 percent of projections and were 21 percent lower

than DAWASA's had been in 2002/03. By May 2005 Government arrears for water and sewerage services amounted to US \$1.5 million, but CWS could not take advantage of the Government's guarantee to pay, because many bills were disputed and could not be verified. Furthermore, CWS did not pay the Rental Fee to DAWASA regularly, periodically withheld Lessor Tariff collections to pay its own operating costs and failed to deposit First Time Connection Tariff into the account for that program. The number of employees remained excessive because BGT had declined the government's offer that would have enabled the operator to limit staff to the number required. Productivity was further compromised because CWS employees devised few incentives to change culture or improve performance. Within months of its start, CWS was already facing serious cash-flow problems and, by March 2005, its accumulated losses amounting to about US\$ 12.3 million. Initiation of the DCW was delayed and the PWP, which should have been executed within 18 to 24 months, was incomplete when CWS departed.

Termination of the Contract

During June–August 2004, the Minister of Water, DAWASA and CWS discussed these issues but failed to agree on how to move forward. In September 2004, CWS requested an Interim Review of the Operator's Tariff, but an Independent Assessor determined that grounds for a revision of the Operator's Tariff could not be established. In January 2005, CWS formally requested renegotiation of its contract. In February 2005, DAWASA decided to call the performance bond for the amount of unpaid penalties, Lessor Tariff revenues and Rental Fees, but was surprised to learn that the performance bond could not be called for less than its full value. By March 2005, a mediator had been engaged to assist the parties to revise the contract. While GOT and DAWASA were willing to accommodate most of CWS's proposals, they were not willing to extend the Lease

Contract for an additional five years unless CWS's collection performance improved. CWS insisted on the extension but refused to commit to higher collection targets, and a compromise could not be reached. The Expert Panel process which was foreseen in the Lease Contract and which would have bound both parties to its decision was never invoked.

On 12 May 2005, DAWASA called the performance bond in its entirety. After CWS failed to reinstate the performance guarantee as required under the Lease Contract, DAWASA served a notice of termination of the contract on May 25, 2005. Fearing that CWS was financially unable to continue to operate and that interruption of services was imminent, DAWASA asked CWS to cooperate with a speedy transition. However, CWS would not agree to the termination of the contract. The Minister of Water, in the face of declining public support for private participation and impending elections in November 2005, decided to end the stalemate. On 1 June 2005, CWS' three British managers were deported. A few days earlier GOT had created a new public operating company, the Dar es Salaam Water and Sewerage Corporation (DAWASCO), which assumed management of the services that same day.

During the crisis, The World Bank, AfDB and EIB played a neutral but supportive role. The World Bank made DWSSP funds available to pay for the Independent Assessor and for the mediator. After the contract was terminated, the World Bank decided that, in the interest of ensuring the continuation of services, it would not suspend disbursements and would continue to support the project within the new DAWASA-DAWASCO contractual framework.

Two International Arbitration Cases

In 2007, an Arbitration Tribunal convened by the United Nations Commission on International Trade Law (UNCITRAL) ruled that DAWASA was justified in terminating the Lease

Contract and ordered CWS to pay DAWASA damages of Tshs 6,990 million (about US\$ 5.6 million) and one half the cost of the arbitration proceedings. But as of August 2010 DAWASA had been unable to collect from the bankrupt CWS.

In August 2005, BGT initiated a case against the United Republic of Tanzania at the International Center for the Settlement of Investment Disputes (ICSID). BGT claimed that the termination of the contract, deportation of CWS's senior managers and seizure of the company's assets constituted a breach of a trade treaty between the U.K. and the Republic of Tanzania and argued that it should receive compensation of about US\$ 20 million. In July 2008, the Arbitration Tribunal by a vote of 2 to 1 found that, although GOT had violated the treaty, these violations did not cause the losses and damages for which BGT claimed compensation and no damages were awarded.

ES.6 The DAWASA-DAWASCO Arrangement

DAWASCO's Performance

The new public operator, DAWASCO took over operations on 1 June 2005 and the GOT contributed Tshs 2 billion to its equity. A ten-year lease contract with DAWASA was signed on 2 September 2005 and revised on 12 December 2005. The Lease Contract was almost identical to the contract with CWS. However, although it provided for a performance bond, none was required. Likewise, although DAWASA's authority to impose financial penalties for non-compliance with performance targets was asserted in the Lease Contract, in practice DAWASA never imposed them. The lack of reliable base data continued to make it impossible to specify all targets but those that were specified were considered to be realistic.

Like CWS before it DAWASCO failed to meet its targets in the early years but it took some

promising steps. New salary scales based on job level and performance rather than seniority were established in 2007. The number of staff was reduced from 1320 in 2005 to 885 in 2009. By July 2009 all area managers had signed internal delegated management contracts under which they could earn performance bonuses. In 2008/09 DAWASCO's performance with regard to some key performance indicators, such as water quality, was very good. Performance on other indicators lagged but was improving. The installation of new connections picked up significantly in 2009/2010 and the total number of active connections that were being billed reached 100,000 in June 2010—an important benchmark though still well below the project target of 170,000. Because of long delays in the installation of bulk and district meters, the most serious problem remained non-revenue water which, at 53 percent in May 2010, was still unacceptably high. The decentralization of area management in 2007 and 2008 had brought significant improvements in performance. In 2009 the introduction of text message reminders, cell phone bill payments and other innovations by area managers resulted in a noticeable improvement in collection efficiency but, because of the high percentage of non-revenue water, total collections fell far short of projections. DAWASCO hoped that the completion of bulk metering in late 2009, a district metering and water loss reduction program, and the planned completion of the metering and rehabilitation of connections aimed would reduce losses to about 40 percent by late 2010.

The DAWASA-DAWASCO Relationship

In a lease contract arrangement it should be quite clear that the lessor is the principal and the lessee is the agent that is accountable to the principal. Unfortunately, while the Lease Contract designed for CWS was transferred to DAWASCO with few changes, the governance arrangements for DAWASA and DAWASCO resulted in ambiguity regarding the principal-agent relationship. The fact that both entities

were state enterprises with their CEOs and Boards appointed by the Minister of Water undermined the authority of DAWASA (the principal) over DAWASCO (the agent). In the absence of a performance bond or other financial incentives, there was no mechanism to enforce performance targets. In addition, the collection of performance data for this case study revealed that there was a lack of central direction and coordination of data reporting which contributed to DAWASA's inability to effectively monitor performance and enforce the Lease Contract. In an effort to correct this, the Lease Contract was amended in late 2010, but the DAWASA Act and its Regulations also required revisions and, as of January 2011, they had not been amended.

Implementation of Capital Investments

Delays in the completion of capital works and new connections slowed down the pace of operational improvements. The closing date of DWSSP was extended three times to allow for completion of investments, including some that were added in the course of the project. The final closing date was November 2010. The PWP was completed in March 2007. DCW for which CWS was responsible were taken over by DAWASA when CWS left and then delegated again to DAWASCO in 2008. While it was originally conceived as a five-year program to be completed by June 2008, the DCW was completed in June 2010. Similarly, the non-delegated works for which DAWASA was responsible experienced delays. Critical activities, such as the installation of zonal bulk meters were not completed until late 2010.

Financial Viability of DAWASA and DAWASCO

DAWASA's and DAWASCO's financial performance was undermined by several factors, most prominently DAWASCO's failure to achieve billing and collection targets. In every year since DAWASCO began operating, collected Operator Tariff revenues have been

inadequate to cover its core recurrent expenses. To cover the gap between expenses and income, DAWASCO received subsidies of Tshs 7.3 billion (about US\$ 6 million) over 2006/2007–2008/2009 and borrowed from DAWASA.

In 2008/2009, although DAWASA was able to cover its core recurrent expenses with its share of revenues from water and sewerage services, it was unable to fund other obligations, such as counterpart funding, and relied on cash transfers from GOT. DAWASA's financial weakness was cause for concern because in July 2008 it was expected to begin servicing its debt to GOT. DAWASA would also have to repay GOT for the amounts on-lent to the two operators. GOT hoped to recoup at least part of the sub-loan to CWS through bankruptcy proceedings but, given DAWASCO's poor financial performance, it would not be able to repay its sub-loan for some time. In light of this, the Ministry of Finance rescheduled DAWASA's initial debt repayments for two years until July 2010 but in June 2010, when it was clear that DAWASA would be unable to initiate payments, it requested that the interest be reduced to five percent; CWS debt be cancelled; and the initial debt repayment be rescheduled again until July 2013. These results were disappointing since the achievement of financial viability was one of the major objectives of the restructuring of the services and of the DWSSP.

ES.7 Regulation

The Minister of Water served as Interim Regulator during the entire period of the Lease Contract with CWS and the first year of DAWASCO's Lease Contract. While CWS was operator, the Minister approved the tariff indexation for 2004/2005. After DAWASCO became operator in June 2005, the Minister deferred the approval of the tariff indexation for 2005/2006 to EWURA. As a result, there was no indexation for the year 2005/06 because EWURA did not begin to function until a year later, in mid-2006.

After EWURA began to function, DAWASA submitted a tariff proposal that included a real increase in the tariff (as foreseen in the Lease Contract) and the indexation of the tariff for 2006/2007. This was approved by EWURA. However, EWURA subsequently declined to approve the annual indexation of tariffs proposed by DAWASA for both 2007/2008 and 2008/2009, citing DAWASCO's poor performance, DAWASA's failure to enforce performance targets, and their failure to submit an updated basis for calculating flat tariffs for unmetered customers. In fact, DAWASA and DAWASCO were unable to produce a reliable basis for estimating consumption by unmetered customers because of the lack of sufficient bulk and zone metering.

DAWASA appealed its case in Tanzania's Administrative Court, but the latter ruled in favor of EWURA. However, DAWASA's subsequent request for indexation in 2009 was approved and resulted in a 30 percent increase in the customer tariff for 2009/2010. In its decision, EWURA set several standards for improvements in performance prior to the next tariff review. EWURA's decisions were controversial because it did not recognize the concept of routine annual indexation and subjected a request for indexation to the same rules and procedures as a full tariff review. The fact that tariffs were not indexed as projected contributed to DAWASA and DAWASCO's failure to meet financial targets but, on the more positive side, the regulator showed itself to be committed to holding them accountable for their performance and had an positive impact in this regard.

ES.8 Coverage and Access of the Poor to Service

Coverage

A 2009 survey showed that 54 percent of households in the DAWASA service area had access to piped water supply from DAWASCO as their

main source of drinking water—a percentage that was well below the DWSSP end-of-project target of 80 percent. With regard to the location where piped water was accessed, about 17 percent of households had a house connection or yard tap; about 26 percent of households reported they bought piped water from neighbors; eight percent bought piped water from vendors and less than two percent of households bought piped water from a DAWASCO kiosk.

Services for the Poor

Three mechanisms were designed to improve services for the poor: (i) the First Time Connection Fund; (ii) the construction of DAWASCO water kiosks; and (iii) the DAWASA Community Water Supply and Sanitation Program (CWSSP).

Although the First Time Connection Fund was established at the start of the DWSSP, given the nature of settlement in Dar es Salaam, the criteria for its use made it difficult to apply and it was therefore not used during the period under review. Throughout the project period, the Fund remained in a separate account that could be used to make connections for low-income households in the future.

In June 2010 DAWASA reported that, of 294 new kiosks built with DWSSP funds under the DCW, 249 were receiving water and functioning. Assuming an average of 500 people was served by each kiosk, about 124,500 additional people were being served by DAWASCO kiosks by the end of the project. (These numbers exclude those served by kiosks built under the CWSSP, which is considered separately.) DAWASA also reported that although a number of constraints and delays were encountered during the implementation of CWSSP (which created borehole-based schemes with kiosks and connections), it eventually achieved its targets and was considered one of the more successful components of the DWSSP. As CWSSP systems were independent from the network, the target communities were required to form Water

Users Associations (WUAs) and contribute 5 percent of the cost of the schemes. By late 2010, 50 small water supply schemes and ten sanitation facilities were completed. DAWASA estimated that 275,000 people were benefitting. In addition to the DWSSP-funded schemes, DAWASA rehabilitated 35 existing small systems and about 237,000 people benefitted from these.

Once the systems were complete, WUAs operated and maintained them and charged users for their use. In the large majority of cases, CWSSP schemes functioned well. However, on-going training and support was needed because of frequent turnover in management and staff of WUAs and occasional technical issues. DAWASA had created a Community Liaison Unit to manage the organization of WUAs and construction of CWSSP schemes and it continued to function after the project. In 2010, in recognition of the need to step up efforts to serve the poor, DAWASCO established a Pro-Poor Unit that was expected to assume responsibility to supervise kiosk services, promote connections using the First Time Connection Fund, and provide technical support to off-network schemes such as those created by the CWSSP.

Affordability

In 2009, a basic supply of water from a DAWASCO connection, a DAWASCO kiosk or a WUA-managed scheme was quite affordable for a low-income household with two minimum incomes. Unfortunately, the large majority of low-income households without access to adequate supply from one of those sources paid considerably more than the DAWASCO or WUA tariffs. Moreover, while the cost of water from a direct connection was affordable for a very poor household with an income of about three quarters of one minimum wage, the cost of a basic supply of water from a DAWASCO kiosk was more than twice the generally accepted benchmark of four percent of income, with the

result that such households could not consume a desirable volume of water from safe sources. It was clear that a strategy to improve the affordability of water would have to focus on increasing the number of connections and conveniently located kiosks with bulk water from DAWASCO.

ES.9 Lessons

The history of the sector reforms and lease contracts for water supply and sewerage in Dar es Salaam provides a number of lessons that could be useful for policy makers and professionals who are planning such interventions.

Policy Environment

- Preparation of the policy environment for sector reform and PPP should include a strategy for dealing with the failure of the PPP and plans for quickly putting in place a new, if only temporary, arrangement and for developing a longer-term solution.

Consultation with Potential Customers and Services for the Poor

- The effective management of kiosks and the connection of poor households requires special attention during the turnaround of a water utility when the focus of management is on system wide rehabilitation, reduction of water losses and overall commercial performance. Creating a dedicated unit/team to manage the CWSSP worked well in DAWASA and this led to the establishment of a unit in DAWASCO toward the end of the DWSSP.
- Better consultation with low-income households, evaluation of housing conditions and an assessment of willingness to pay might have resulted in the design of a more practical and effective First Time Connection program. Belatedly,

DAWASA revised the criteria for the FTC program and DAWASCO was able to start using the fund.

- When introducing community-managed schemes, planners should anticipate the complexities of working with communities. Strategies need to be developed to avoid or dispel the disruptive behavior of political factions, deal with high turnover of WUAs and manage community disputes.
- On-going training and support for WUAs and kiosk managers after completion of the schemes is required to resolve technical problems, strengthen skills and make up for frequent turnover in the executives and staff.

Vested Interests

- Proven experience in introducing culture change and using performance incentives and other controls to eliminate illicit behaviors and improve efficiency should be a pre-requisite for managers (whether public or private) who are hired to turn around a non-performing water supply and sewerage utility.
- The completion of a comprehensive customer survey and introduction of billing and collection systems that enable management to control rent-seeking behaviors are high-priority elements of a strategy to improve the performance of water utilities and cannot be neglected.

Bidding and Selection Process

- Transaction preparation teams should avoid letting a potential bidder take control of the process and meticulously avoid even the appearance of preferential treatment of any of the bidders.
- Prequalification criteria should be appropriate to the challenge of the undertaking and, once adopted, should be enforced.

- Transaction preparation teams should consult meaningfully with all qualified bidders and take their concerns seriously.

Selection of the Lease Contract Model

- Preparation of a lease contract transaction should be guided by careful consideration of the conditions that have been associated with success elsewhere and adequate attention to sustaining those conditions throughout the contract.
- Lack of adequate prior experience of the lead professional partner and /or its failure to take a predominant share in the operating company may result in a failure to mobilize the managerial and financial resources necessary to ensure the success of a lease contract.
- A lease contract between two public entities is not likely to be successful unless there is an effective principal-agent framework. Examples from other countries seem to indicate that public-public arrangements have been successful when the entities involved were owned by different levels of government or where one was a subsidiary of the other.

Financial Viability and Allocation of Risks

- When preparing a PPP on the basis of unreliable existing data, it is important not only to recognize the need for verification and resetting of performance targets, but also to provide protection against the financial consequences of the operator's not being able to achieve operational and commercial targets that were based on faulty base data.
- In situations where losses will be incurred in the early years, the commitment of the lead professional partner to the long-term objectives needs to be confirmed. An alternative approach that is favored by international private operators but not yet widely tested is to structure

the arrangement in two phases with a less risky management contract for the first 18 to 36 months, during which time the base data are established, and a transition to the riskier lease contract thereafter.

- To protect Lessor Tariff revenues from misappropriation, all revenues should be deposited into a joint lessor/operator account and allocated by a mechanism that protects each party's rights.
- A detail such as the inability to call a performance bond in part can result in delays and the worsening of a dispute to the point that it is irreconcilable and the cost of failure extremely high.
- The feasibility of obtaining parent company guarantees for the performance of an operator needs to be examined.

Tariff Setting Framework

- The regulatory framework and the chosen management model should be mutually consistent. Independent regulation can be consistent with the lease contract model if the regulator recognizes the lease contract as an essential element of the regulatory framework and endorses the tariff adjustment and other regulatory provisions of the contract. Including a pre-specified methodology for revising tariffs that the Regulator endorses might also reduce the regulatory risks.
- Many regulatory and PPP experts believe that in a lease contract framework the regulator should set or approve the overall Customer Tariff but not the Operator Tariff which should be set by agreement between the asset holding company (lessor) and the operator (lessee). This is consistent with the principle of the operator's being subsidiary to the asset holder.

Monitoring the Operator's Performance

- The performance of water and sewerage services is not likely to improve in

the absence of rigorous data reporting and effective information management systems that are used to enforce performance standards and guide management decisions.

- Audits and impact surveys should be designed to produce meaningful data and analysis that can be used by managers and planners. When a national statistics service conducts impact surveys, the participation of an experienced water supply professional would enhance the quality of the results and help to build local capacity.

Mechanisms for Resolving Conflicts

- To the extent practical, steps necessary to initiate a dispute-resolution mechanism (for example, the selection of an Expert Panel) should be completed prior to contract effectiveness so as to enable speedy invocation of the mechanism when needed.
- Political and regulatory authorities should avoid getting involved in disputes

and require parties to use the pre-specified dispute-resolution mechanisms.

- All parties have an interest in acting sooner rather than later to enforce accountability, invoke dispute resolution mechanisms and resolve disputes before they become irreconcilable and extremely costly.

The Role of the World Bank

- The current more balanced approach to promoting the efficiency of both private and public operators needs to be further refined by a better understanding of the conditions that favor positive outcomes for different types of institutional arrangements and more rigorous efforts to ensure that these conditions are created.
- Care needs to be taken by both international lenders and implementing agencies to ensure that monitoring and verifying meaningful indicators of coverage, affordability and service quality are sustained and not overshadowed by the pressing business of project implementation.

1

Introduction

1.1 Geography and Brief History

Located on the eastern coast of Africa, the United Republic of Tanzania, including the former Tanganyika and the semi-autonomous islands of Pemba and Zanzibar, has an area of about 947,000 square kilometers and a population of 40 million. With a per capita Gross National Income of US\$ 410 on the mainland, Tanzania is one of the world's poorest countries. Total population grew at 2.7 percent over the period 1990–2006 but, due to rural-urban migration, urban population grew at 4.4 percent. Twenty-five percent of the population now lives in urban areas.¹ Dar es Salaam, the largest city and the commercial center of the country, and one of the major ports in East Africa, had an estimated population of 3.4 million in 2009.² Dodoma, a centrally located city, was chosen as the new capital in 1973 and the National Assembly moved there in 1996, but many government offices remain in the commercial capital, Dar es Salaam. Survey data show that about 16 percent of the population of Dar es Salaam lives below the poverty line, and it is estimated that more than one half of the urban population lives in unplanned or squatter areas.³

From independence in 1961 until the mid 1980's, Tanzania was a one-party socialist state. Political and economic reforms were introduced after 1985 and the first national multi-party elections were held in 1994. Agriculture dominates the economy and exports include coffee, tea, cotton, cashews, sisal, cloves and pyrethrum. During the 1990's the government embarked on a liberalization program

that included the restructuring of state-owned enterprises, private participation in infrastructure services and the divestiture of about 350 parastatal entities.

1.2 The Government of Tanzania's Privatization Program

At the end of the 1980's, many of the 425 state-owned enterprises in Tanzania were losing money and required subsidies through direct budgetary transfers or soft credit. In response to this unsustainable situation, the Government of Tanzania (GOT) decided to restructure and/or privatize virtually all state-owned enterprises. The Presidential Parastatal Sector Reform Commission (PSRC) was created in 1993 to manage this effort. This was a remarkable decision for a country that until then had followed a socialist model of government. A high degree of consensus about the need for reform was driven by dissatisfaction with the scarcity of goods and inadequacy of services throughout the economy. A study of the impact of the infrastructure privatization program that was carried out in 2005 noted that "By the early 2000's, the privatization

¹ The World Bank, *World Development Indicators, 2008*; and United Republic of Tanzania, National Bureau of Statistics, *Tanzania in Figures 2008*.

² The population of Dar es Salaam was estimated (interpolated) on the basis of the medium population projections presented in DAWASA, Water Supply Improvement Plan, Final Report, by Dr. Ahmed Abdel Warith Consulting Engineers, June 2008.

³ United Republic of Tanzania, Household Budget Survey 2007, Ministry of Finance and Economic Affairs and National Bureau of Statistics Tanzania, 2009.

of manufacturing and commercial parastatal enterprises was virtually complete. The program has been a solid success. It has made a significant contribution to Tanzania's strong macroeconomic performance in the last decade... However, infrastructure enterprises continued to perform poorly... and little headway was made in their reform. Thus, in the early 2000s the Government, through PSRC, has focused its attention on the privatization of infrastructure."⁴

Given the success of the privatization of manufacturing and commercial sectors, it was expected that public private partnerships (PPP) in infrastructure would lead to significant improvements in services. By 2003, some form of PPP had been introduced in five infrastructure enterprises: DAWASA (Dar es Salaam Water Supply and Sewerage Authority), TTCL (telecommunications), TANESCO (power), TICTS (container terminal) and Air Tanzania. In 2005, the above-mentioned study concluded that while two of the transactions (a management contract for TANESCO and the concession of TICTS), could be rated as clear successes, two (the partial divestures of TTCL and of Air Tanzania) had produced mixed results, and the lease contract for water supply and sewerage services was a failure. In fact, it collapsed after less than two years and GOT subsequently created a public operating company, DAWASCO, which assumed responsibility for operations under a similar lease contract with DAWASA.

The objective of the present study is to review the evolution of the institutional framework for water supply and sewerage services in Dar es Salaam from the late 1990s to 2010, assess the performance of the key actors, and extract lessons that might be useful to GOT, DAWASA, the World Bank, other international lenders and sector practitioners. Frequent reference is made to the Dar es Salaam Water Supply and Sanitation Project (DWSSP) which supported the institutional reforms and investments in the services from 2003–2010.

1.3 Methodology

This case study was prepared during June 2009–May 2010. It is based on extensive interviews with the key actors as well as a review of original documents, consultants' reports, beneficiary surveys, and reports and performance data provided by DAWASA and DAWASCO. Sections 2 through 8 focus on the history of the sector reform; the selection of the private operator, City Water Services (CWS); the termination of the contract; the subsequent creation of the public operator, DAWASCO; the performance of the key actors; and impacts on the population, especially the poor, from 2003–2010.

In carrying out the case study, the author attempted to answer the questions listed below which were chosen for their relevance to the case. The findings and lessons associated with each question are summarized in section 9.

- i. Was the policy environment appropriate for successful private participation and for the subsequent public-public partnership?
- ii. Was the design of the reform and the lease contract guided by adequate consultation with existing and potential customers and an assessment of willingness to pay?
- iii. Were appropriate measures for serving the poor incorporated?
- iv. Were vested interests identified and were strategies developed to bring them on-board?
- v. Was the selection process well-managed, fair and transparent? Were potential bidders for the contract with a private operator consulted and their inputs taken into account in designing the transaction?

⁴ United Republic of Tanzania, *Privatization Impact Assessment, Infrastructure*, July 21, 2005, p. 6. In this report, the term privatization referred to any form of public-private partnership from a management contract to complete divestiture.

- vi. Was the lease contract model (first with the private operator and subsequently with the public operator) appropriate to the context?
- vii. Were the financial and operational projections and underlying assumptions realistic and reliable? Were the tariffs, sharing of revenues, financial terms and allocation of risks appropriate and did they allow for both partners to achieve financial equilibrium within a reasonable time?
- viii. Was the tariff-setting framework appropriate for the lease contract framework?
- ix. Did it provide adequate predictability, transparency and credibility?
- ix. Was a rigorous system for monitoring and auditing operational, commercial and financial performance of the operator established and implemented?
- x. Were the legal contracts well-drafted and did they include procedures and conditions necessary to ensure smooth relationships and resolve disputes?
- xi. Could or should the World Bank and other international lenders have managed their support for the transaction differently?

2

Policy and Institutional Reform of the Urban Water Supply and Sewerage Sector

2.1 The Urban Water Supply and Sewerage Sector

In 1981 the National Urban Water Authority (NUWA) was established under the Ministry of Water and Irrigation. It became operational in 1984 and, though it had a mandate to develop and manage urban water supply on the mainland, it focused its efforts primarily in Dar es Salaam.⁵ Until 1997, sewerage and sanitation services were provided by the Sewerage and Sanitation Department of the Dar es Salaam City Commission. Throughout the 1980s and 1990s, as a result of low tariffs, inefficient operations, lack of investment and poor management of billing and collections, NUWA was unable to satisfy demand and the infrastructure deteriorated.

The Waterworks Act, as most recently amended in 1997, ushered in partial decentralization of responsibility for urban water supply and combined the responsibility for water supply and sewerage services through the creation of Water and Sewerage Authorities. Its Regulations endorsed the principles of autonomy and the recovery of O&M costs. Until the Energy and Water Utilities Regulatory Authority (EWURA) was created, the Boards were responsible for setting consumer tariffs.⁶

As part of this reform, the water supply functions of NUWA and the sewerage functions of the City Commission were transferred to the Dar es Salaam Water and Sewerage Authority (DAWASA) which became responsible for piped water supply and sewerage services in the metropolitan area of Dar es Salaam, Bagamoyo and Kibaha. DAWASA took over two water abstraction

and treatment plants on the Upper and Lower Ruvu River and a small surface water scheme in Mtoni Area within Temeke Municipality, for a total installed production capacity of 273,000 m³/day. The production plants were in need of repair; treatment filters had not worked in 20 years; pumps and transformers broke down regularly and there were no bulk meters. Two long, and vulnerable, transmission lines of 50 km and 55 km connected the Upper and Lower Ruvu treatment plants to the distribution network but only a fraction of the total production reached the city because of (often illegal) offtakes, including for agricultural use. The distribution network was thought to include about 100,000 connections but there was no map of the system and the physical address of many connections was unknown since bills went to post office boxes. Many of the accounts in the registry were duplicates—set up by staff to permit customers to avoid paying arrears—and only about 15,000 customers paid bills regularly. Only 1000 connections were metered and most billing was on the basis of estimated consumption.⁷ The sewerage systems consisted of about 140 km of sewers, several stabilization ponds that received septage as well as sewerage and a marine outfall, all at various stages of disrepair.⁸

⁵ DAWASA, Quarterly Progress Report No. 24 (A), May 2009, p.1.

⁶ United Republic of Tanzania, Chapter 272, The Waterworks Act of 1949, as amended most recently by Act. No. 8 of 1997; and The Waterworks Regulations, G.N. No. 371 of 1997.

⁷ Dar es Salaam Water Supply and Sewerage Project (DWSSP), Project Appraisal Document, The World Bank, April 2003, pp. 3–5.

⁸ John Sitton, Emerging Markets Group, Ltd., What Went Wrong with the DAWASA Lease Contract? PowerPoint Presentation, 2006.

Given the dilapidated condition of the assets and the lack of adequate resources for improving operations and management, it is not surprising that performance did not improve after DAWASA was established. Although in 2002 about 73 percent of the households in Dar es Salaam was said to have access to piped water from house connections, yard taps, standpipes and neighbor's taps, service was available for only a few hours and a few days per week in most areas. The water that did reach consumers often was not safe for drinking. About 16 percent of households got water from boreholes, protected wells and springs and 8 percent from unprotected sources. It was estimated that more than 45 percent of households bought water from neighbors, tankers or other vendors, for which they paid rates that were considerably higher than the DAWASA tariff.⁹ The water sold by vendors came from the both the piped system and private boreholes.

Low salaries made it difficult for DAWASA to hire and retain qualified staff. Customer service employees engaged in illicit activities such as accepting bribes for illegal connections, opening duplicate accounts to allow customers to avoid payment of arrears, and retaining collected revenues.¹⁰ They and other vested interests could be expected to resist efforts to control unaccounted-for water, introduce management control systems and expand legitimate access to low-cost piped water services.

As is often the case, sanitation services were less developed than water supply. Less than 10 percent of the urban population was connected to a sewerage system. Another 20 percent, mostly in the middle and upper-income ranks, used septic tanks and the remainder depended on pit latrines. Most wastewater treatment facilities were not functioning and pit emptying services were inadequate. The city suffered periodic outbreaks of cholera and other waterborne diseases.¹¹

2.2 Institutional and Regulatory Reforms

The Dar es Salaam Water Supply and Sewerage Authority Act of 2001

The DAWASA Act reconfirmed DAWASA's legal status as an autonomous corporate body, specified its corporate governance structure and updated DAWASA's functions, powers and privileges to make them consistent with the new regulatory framework (see below). Of particular interest is the provision giving DAWASA the power to appoint an operator under a concession or lease contract, effectively making DAWASA an asset holding company. It is noteworthy that the Act does not require DAWASA to appoint an operator and allows it to continue to operate services.¹² DAWASA is not a decentralized entity though there is local representation on its Board. The Chairman of its Board is appointed by the President of the Republic and the Chief Executive Officer (CEO) is appointed by the Minister of Water, upon the recommendation of the Board. Other Board members include representatives of the Ministry of Water, Ministry of Finance, Dar es Salaam City Council, two large water consumers, the Community Water User Organization, the Coast Region administration and the private sector.

Both DAWASA and any operator appointed by DAWASA are subject to regulation by EWURA and each must obtain a license from EWURA. The DAWASA Act affirms that the regulator has authority to approve tariffs, monitor service quality, performance standards and environmental impacts, and lay down or approve standards and codes of conduct governing the

⁹ United Republic of Tanzania. 2002 Population and Housing Census, as reported in *Baseline Survey on Impact Assessment of the Dar es Salaam Water Supply and Sanitation Project*, Report. National Bureau of Statistics, December 2008.

¹⁰ John Sitton, *op. cit.*

¹¹ DWSSP Project Appraisal Document, *op. cit.*, p. 4.

¹² United Republic of Tanzania, The Dar es Salaam Water Supply and Sewerage Authority Act, No. 20 of 2001.

relationship between the operator and customers. Under the DAWASA Act, disputes of a regulatory nature arising between DAWASA and an operator (e.g., regarding tariffs) are to be submitted to EWURA.

The Energy and Water Utilities Regulatory Authority

Under its 2001 enabling legislation, EWURA is a corporate body responsible for regulation of electricity, petroleum and natural gas pipeline transmission, natural gas distribution, and water and sewerage services. It is independent in that it is funded by license fees and regulation levies of no more than one percent of the gross operating revenues of regulated suppliers. Its mandate is to promote competition and efficiency; protect the interests of consumers; promote the availability of services to all including low-income, rural and disadvantaged populations; protect the financial viability of efficient suppliers; enhance public knowledge and awareness about regulation and customers' responsibilities and rights; and take into account the need to protect and preserve the environment.¹³

Subject to sector legislation, EWURA issues licenses, establishes standards for goods and services, regulates rates and charges and monitors the performance of service providers. It also facilitates resolution of complaints and disputes, disseminates information and consults with customers. Water sector legislation (the DAWASA Act of 2001 and the Water Supply and Sanitation Act of 2009) specify that EWURA regulates Water Authorities and operators engaged by the Authorities (whether public or private), but not community-owned water supply organizations. The DAWASA Act (Article 26) gives EWURA regulatory authority to examine and approve tariffs chargeable for the provision of water supply and sewerage services as submitted by DAWASA.

The Chairman of EWURA's Board is appointed by the President. Other Board members are

appointed by the Minister of Water and Irrigation. Its Director-General/CEO is appointed by the Board upon nomination by a committee that includes the Permanent Secretary of the Ministry and two representatives of the private sector and consumers. EWURA's Consumer Consultative Council is appointed by the Minister to represent the interests of consumers.

Though its enabling legislation was approved in 2001, EWURA was not actually established until 2005 and did not begin to exercise its functions until 2006. During the interim, which included the period during which the lease contract with the private operator for water supply and sewerage services in Dar es Salaam was in effect, the Minister served as Interim Regulator.

EWURA's legislation and its own rules and guidelines allow service providers some flexibility in calculating proposed tariffs and give EWURA a great deal of discretionary authority in reviewing and approving tariffs. EWURA's *Tariff Application Guidelines 2009* include detailed procedural rules for tariff reviews and a formula for calculating revenue requirements. The *Guidelines* do not mention indexation to reflect inflation and foreign exchange movements as a distinct category of tariff adjustment. EWURA's discretionary authority and approach to tariff reviews is somewhat at odds with the lease contract model of private participation in water services that was chosen for Dar es Salaam, an issue that will be discussed later.

The National Water Policy

The National Water Policy (NWP) adopted in 2002 laid the foundation for reform and public-private partnerships (PPP) in water supply and sewerage services. Acknowledging the deteriorated condition of assets and the poor

¹³ United Republic of Tanzania, The Energy and Water Regulatory Authority Act, No. 11 of 2001.

performance of the urban water supply and sewerage services, the NWP specified that GOT's policy objectives for the urban water supply and sewerage sector were to: guide the development and management of efficient, effective and sustainable urban systems; create an enabling environment and incentives for the delivery of reliable, sustainable and affordable services; develop an effective institutional framework; promote full cost recovery; ensure financial autonomy; and enhance water demand management and wastewater disposal. The policy also endorsed independent, transparent and fair regulation of services, emphasized the need to improve services for low-income households, and encouraged private sector participation and the recognition of small-scale service providers.

The Water Supply and Sanitation Act, 2009

This Act, which updates sector legislation to be consistent with the NWP, governs the creation and functions of Water Authorities (other than DAWASA, which is covered by the DAWASA Act of 2001) and community-owned water supply organizations, and decentralizes their governance. It makes Water Authorities subject to regulation by EWURA and allows them to appoint service providers.

Conclusion

At the time of the award of the lease contract to CWS, the legal and regulatory framework was generally supportive of public-private partnerships (PPP). It provided a basic foundation to support efficiency, financial viability, availability of services and accountability. However, the role of the independent regulator in the context of the lease contract had not been clearly worked out. Because EWURA had not yet been established when the private operator was engaged, there was no regulatory history or precedent to provide predictability. In fact, the regulator's discretionary authority created discomfort among some of the bidders for the

lease contract. In addition, as this case study will demonstrate, it would take time for the new institutions to start up and begin functioning, for cultural and historical attitudes and habits to change, and for reliable data to be generated—all of which are important for delivering effective services and creating accountability.

2.3 Support of the Reform by International Development Agencies

In 1999, the African Development Bank (AfDB), the European Investment Bank (EIB), the French Development Agency (AFD) and the World Bank had expressed an interest in funding investments in Dar es Salaam. Ultimately, when the Dar es Salaam Water Supply and Sanitation Project (DWSSP) became effective in 2003, AfDB provided US\$ 48 million; EIB provided US\$ 34 million and the World Bank (IDA) provided US\$ 61.5 million. AFD withdrew from the project in September 2002.

AfDB had initiated project preparation in 1997 under the assumption that DAWASA would continue to operate the services but put it on hold when GOT began to search for a private operator. About that time the World Bank also began discussions with GOT and AfDB about a joint investment program. In May 1998, the World Bank advised DAWASA and the Minister of Water that it would appraise the project only after certain conditions were met, including the selection of a private operator under a lease contract and a commitment by the GOT to set tariffs at levels that would fully cover O&M costs and contribute to capital costs. Private participation in DAWASA was a condition of both the World Bank Adjustment Program and the International Monetary Fund (IMF). The GOT and DAWASA were already committed to private participation, although a consensus on the legal form of the arrangement was not reached until late 1998 when the lease contract model was adopted. At about the same time, the U.K. Department for International

Development (DfID) funded a utility reform advisor, a regulation advisor for PSRC and a public awareness campaign to prepare the public for the changes to come.

DWSSP was conceived as the first phase of a program of investments to improve water supply, sewerage and sanitation services in Dar es Salaam. The rationale behind the project design was that before creating more production capacity, it was essential to improve the efficiency of operations and the effectiveness of the existing infrastructure and put in place mechanisms to ensure that investments led to improvements in services for the poor. Thus, DWSSP was designed to address prolonged under-investment and inadequate maintenance by (a) rehabilitating DAWASA's existing water production, transmission, storage and distribution facilities and wastewater collection and treatment facilities; (b) extending piped water supply service to un-served areas through the construction of primary and

secondary distribution pipes and the adoption of commercial policies that would favor household connections; (c) enhancing financial viability by raising tariffs to levels that would cover operational and maintenance costs, service long-term debt and contribute the capital expenditure program, and eventually approximate the long-run marginal cost of the services. It was anticipated that the private operator would upgrade commercial operations to industry standards, reduce physical and commercial unaccounted for water and increase the collection of bills. The project also included support to construct community water supply systems and on-site sanitation facilities for about 50 low-income communities that would not be served by the DAWASA system in the near future. It was expected that subsequent projects would expand water storage, production, transmission and main distribution to meet growing demand and DWSSP provided funding to begin planning for these future investments.

3

The Pursuit of a Private Operator for Dar es Salaam

3.1 First Bidding Process, 1997–1998

The effort to engage a private operator for water and sewerage services in Dar es Salaam followed a long and costly path that dragged out for six years before a contract was awarded. As the following account reveals, the expectations and objectives of the various interested parties often clashed. The effort began in 1997 when the British company Biwater International Limited approached GOT with a proposal for a joint venture with DAWASA (in which GOT would have assumed most of the risk) to develop the system. Hoping to attract more private sector investment through a concession, GOT invited Biwater and three other firms, Saur Internationale, Vivendi Environnement (which became Veolia Environnement in 2003), and Northumbrian Water Group PLC, to submit bids. However, the four bidders each proposed a different approach, among them (respectively) a joint venture, a concession, a lease contract, and a management contract. At this point, responsibility for the transaction was transferred to PSRC. Since the four bids varied significantly, PSRC decided it could not evaluate them in a fair manner and did not award a contract.

3.2 The Adoption of the Lease Contract Model

In mid-1998, with the assistance of the World Bank, the DAWASA Divestiture Team (with representatives of PSRC, DAWASA, the Ministry of Finance and the Ministry of Water) organized a workshop to examine the options for private sector participation. Consultants were

hired to present the options at the workshop. As mentioned above GOT had hoped to secure significant private investment through a concession. However, citing the lack of baseline data and recent experiences with PPP, the consultants recommended a management contract. They argued that this would allow DAWASA to inventory the system and clean up the customer base and prepare the way for a second phase arrangement in which the private sector would assume greater risks. World Bank staff agreed with the consultants that a long-term concession involving significant private investment was unlikely to attract sufficient interest among bidders but, referencing the successful lease contracts in West Africa, the World Bank team favored a lease contract, in which operational responsibility and commercial risk would be transferred to the private operator. Under a lease contract, the operator would provide equity for working capital while most of the investment capital would be provided by donors. The DAWASA Divestiture Team chose the lease contract option.

At this point it is worth considering the following conditions that favor a successful lease contract and whether they existed in Dar es Salaam or could be incorporated into the lease contract.¹⁴

- Government commitment and a policy environment that are supportive of PPP,
- The support of key stakeholders, including existing and potential customers,

¹⁴ The conditions listed here are those that the author found to be most relevant to this study. The list is not exhaustive.

existing alternative service providers, staff of the water utility,

- Tariffs and demand levels that are likely to result in adequate revenues to cover O&M costs and depreciation in the near term, and gradually contribute to capital costs,
- The availability of capital finance from government and international lenders to rehabilitate and expand infrastructure,
- A competent asset holding company with sufficient authority, funding and staff to manage major capital investments, supervise the operator and enforce the lease contract,
- Periodic (annual or more frequent if warranted) adjustments of the operator's tariff to reflect inflation and changes in exchange rates,
- A transparent, predictable and fair regulatory framework for major tariff revisions and rebalancing the sharing of tariff revenues between the asset holding company and the operator,
- A well-drafted contract that provides adequate protection for both parties (the asset holder and the operator) against risks they cannot control and clearly specifies each party's obligations,
- Mechanisms for resolving conflicts that are used when needed and respected by all parties,
- A requirement that the lead professional partner of each bidder have relevant operational experience in similar environments, that the lead professional partner will own a predominant share (70 to 90 percent) of the operating company and has the capacity to provide significant working capital, especially in the early years when tariff revenues are not likely to be adequate to cover all costs,
- Strategies for serving neighborhoods where piped services are not likely to be available in the near term,
- Effective and sustained consultation and public relations programs aimed at

promoting desirable changes in behavior, assessing customer needs and keeping key stakeholders informed.

Many of these conditions already existed or could have been incorporated into the lease contract framework. Most of them were explicitly addressed during the planning process. However, subsequent events showed that not all the conditions were given adequate attention during preparation or sustained throughout the life of the two lease contracts that ensued.

3.3 Second Bidding Process, 1998–2000

Following a competitive tendering process, PSRC hired a transaction advisor (under an existing World Bank supported Privatization Project) to assist with preparation of bidding documents, including a draft lease contract, and the selection of an operator. It was decided that the four bidders that had participated in the earlier process would be invited to bid on the basis of the share of the customer tariff the operator would retain to cover its costs (the operator tariff). Northumbrian withdrew and the other three firms attended two pre-bid meetings.

The three interested bidders supported the selection of the lease contract model. However a number of problems developed. Biwater, a British company, alleged that the structuring of the lease contract and the bidding process favored the French firms, Saur and Vivendi. During the preparation phase, the bidders attended two pre-bid meetings where all, but particularly Saur and Vivendi, conveyed concerns about the operator's risks and asked for revisions to the bidding documents to alleviate these, but PSRC turned down their requests. In the end, Biwater did not submit a bid. In early 2000, Saur and Vivendi submitted bids, but both contained qualifications that were aimed at reducing the operator's risks and covering situations such as non-payment of bills by government agencies. In the interest of avoiding further delays in the

award of the contract, the World Bank advised GOT to evaluate the qualifications and make a selection. Biwater objected and requested a re-opening of the bidding process. In May 2000, PRSC ruled it would be impossible to conduct a transparent evaluation of the two bids and declared them non-compliant. It decided that the lease should be rebid to ensure fairness and transparency and increase competition.

3.4 Third Bidding Process and Selection of the Operator, 2001–2003

PSRC organized a formal prequalification process in hopes of attracting additional bidders. Only Saur and Vivendi met the prequalification criteria. Biwater International and the German engineering firm, HP Gauff Ingenieure GmbH formed a joint venture, Biwater Gauff Tanzania Limited (BGT), in which Biwater held an 80 percent interest and Gauff held 20 percent. Though both companies had extensive international experience and had executed water supply and sanitation projects and smaller operational contracts satisfactorily, BGT did not fully meet the criteria. It was nevertheless allowed to participate, presumably in the interest of enhancing competition.

There was a delay of several months while PSRC renegotiated the international transaction advisors' contract and the advisors' team remobilized. Preparation of a third set of bidding documents was initiated in January 2001. Experience with lease contracts in other countries showed that delays in completing key rehabilitation and network expansion works by the asset holding company could prevent the operator from achieving its income targets. This had happened in Senegal and, as a result, the asset holding company had to compensate the operator for loss of revenues. In Niger, to mitigate this risk, some of the rehabilitation works were delegated to the operator, allowing it to design and execute a rehabilitation plan that supported its operational priorities

and commercial strategy.¹⁵ Accordingly, it was agreed that during the initial five years of the lease contract, the operator would design, procure and supervise Delegated Capital Works (DCW) aimed at network improvements. The operator would also be awarded two other contracts with DAWASA aimed at the rehabilitation of the two main production units and transmission lines within the first two years of the lease contract, and the supply of about 170,000 customer meters. These two contracts comprised the Priority Works Program (PWP). Altogether, the management of DCW and the two PWP contracts would be worth about US\$ 33 million to the operator. DAWASA would implement Non-delegated Works aimed at major rehabilitation and new investments. AfDB, EIB and IDA would finance the DCW, PWP, Non-delegated Works, and technical assistance and training for DAWASA through the DWSSP. Financial projections carried out as a basis for the lease contract predicted that the operator would incur losses during the early years of the contract. It was therefore agreed that in order to bridge the period of losses, shareholders would be required to provide sufficient equity. In addition, a line of credit of up to US\$ 5.5 million would be on-lent by DAWASA to the operator on concessional terms.¹⁶

Bidding was again based on the operator tariff. In light of experience in other countries where winning bidders had submitted unrealistically low bids only to call for a renegotiation of the operator's fee a year or two into the contract, the minimum bid was set at Tshs 322 per cubic meter in 2002 prices, an amount judged

¹⁵ Matar Fall, Philippe Marin, Alain Locussol and Richard Verspyck, *Reforming Urban Water Utilities in Western and Central Africa: Experiences with Public-Private Partnerships*, The World Bank, Water Sector Board Discussion Paper No. 13, June 2009, pp. 44–45.

¹⁶ Funds for the line of credit were included in IDA's funding for DWSSP. They were included in that part of the DWSSP financing that was structured as a loan to DAWASA from Ministry of Finance and were on-lent by DAWASA to the Operator at an interest rate of 11.5 percent, over a ten-year term with a five-year grace period.

to be adequate to cover the operator's costs within two or three years. The bidding documents also specified the rental fee, amounts to be paid to the operator for the PWP and DCW and the maximum amount of DAWASA's line of credit to the operator. To improve their chances, the bidders could propose an increase in the rental fee to be paid to DAWASA starting in year six of the contract.

The international operator chosen as the preferred bidder would be required to form a local company in which the preferred bidder would own at least 51 percent of shares and Tanzanian shareholders would own at least 20 percent. The minimum subscribed share capital of US\$ 2.5 million would be paid up as of the effective date of the contract, and shareholders were required to contribute additional equity as necessary to keep the operator solvent during the initial years.

The redrafted bid documents were given to the pre-qualified bidders for comment and, following the first pre-bid meeting in March 2002, the bidders submitted 250 comments and requests for clarification. At a second pre-bid meeting in June 2002, Saur and Vivendi still had concerns. They requested several amendments, such as:

- Protection of the lease contract from inappropriate discretionary decisions of the Regulator,
- A partial risk guarantee against non-payment of water and sewerage bills by government agencies (a protection that had been proposed by the World Bank staff but rejected by GOT),
- Clarification of the respective roles of DAWASA and the operator with regard to the financing of repairs (often a point of uncertainty and conflict in lease contracts, but one that can be addressed adequately through detailed specification),
- Revision of the valuation of the PWP to be executed by the operator which the French firms considered too low.

While these requests appeared to be reasonable, many were not incorporated into the final bid documents. Ultimately, World Bank project team members were disappointed with the bid documents and felt that the PSRC and its transaction advisor had not dealt with the bidders' comments in a satisfactory manner. The transaction advisor, for its part, continued to prefer a management contract and told World Bank staff and PSRC that it would be difficult for DAWASA to provide effective oversight of a lease contract that it considered to be very complex. In addition, the transaction advisor could not convince PSRC to agree to the protections that the bidders had requested. In the end, it was PSRC that made the final decisions about the documentation.

In July 2002, against the advice of the Bank, PSRC issued a request for bids. Only Biwater Gauff Tanzania Limited (BGT) submitted a proposal—with a bid equal to the minimum allowed operator's tariff and a commitment that shareholders would contribute US\$ 8.5 million in equity. BGT's bid also offered a substantially increase of the rental fee in years six through ten. The World Bank project team expressed concern about the financial soundness of BGT's proposal and its ability to meet performance expectations. The transaction advisor also had doubts. Nevertheless, following a review meeting in which representatives of BGT provided clarifications, the World Bank issued a no-objection to the award of the contract. BGT and a Tanzanian investor, Super Doll Trailer Manufacture Company Limited (STM), subsequently created the operating company, City Water Services Limited (CWS) in which BGT owned 51 percent (the minimum required of the bidder) and Super Doll, 49 percent. As a partner in BGT, Biwater, the lead professional partner held only a 41 percent interest in CWS. The local investor with no experience in water supply services owned a greater share than Biwater.

4

The Lease Contract Framework

When the lease contract became effective, DAWASA became the asset holder and Lessor and CWS became the Operator. Figure 1 shows the relationship of the parties in the lease contract framework.

4.1 Key Terms of the Lease Contract

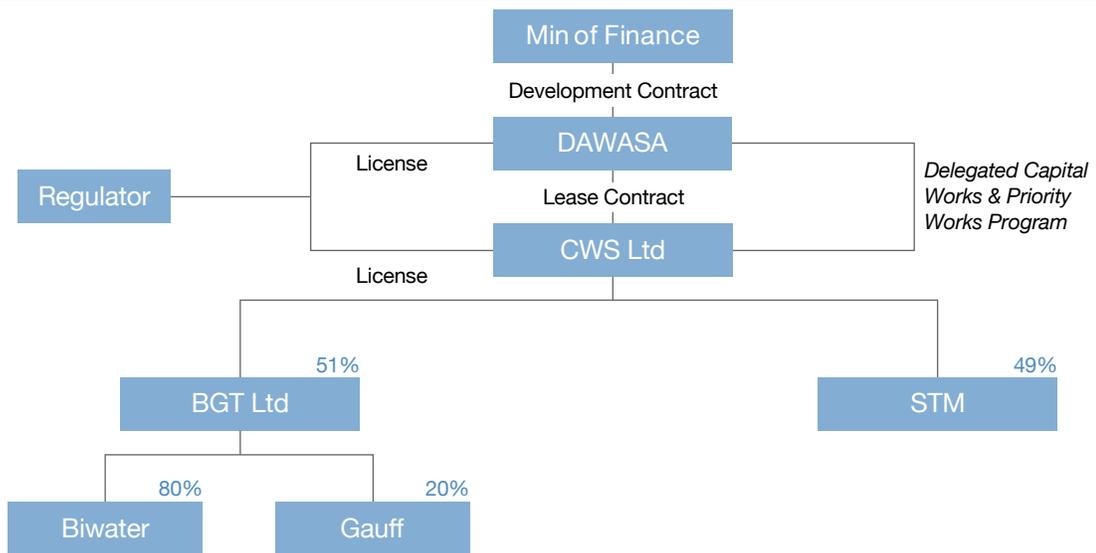
The ten-year lease contract between DAWASA (the Lessor) and CWS (the Operator) was signed in February 2003. A transition period ensued and CWS began operations in August, 2003. The key terms of the contract included:

Organizational Matters

- The total subscribed share capital was set at US\$ 8.5 million.

- The Lessor leased the existing and new assets to the Operator for use and maintenance during the term of the contract, while ownership of all assets including small equipment (i.e., pumps, meters, etc.) remained vested in the Lessor.
- The Lessor’s employees, excluding certain recently appointed directors, were available for employment by the Operator. The Lessor remained responsible for their pension programs and bore the cost of retaining or retrenching any employees that were not hired by the Operator.
- The Operator’s Managing Director would be provided from the staff or officers of the majority shareholder.

Figure 1 Relationship of the Parties in the Lease Contract Framework



Adapted from a Diagram by TRC Global Management Solutions, Ltd., 2005

Obligations of the Operator and the Lessor

- The Operator assumed the exclusive right and obligation to provide water supply and sewerage services and maintain assets within the specified Operator's Area in conformity with the standards and conditions of the contract and relevant legislation.¹⁷ DAWASA remained responsible for funding and implementing capital investments.
- At its expense, the Operator was responsible for maintenance and repair of assets, up to specified limits (e.g., water pipes and mains up to 300 mm in diameter and six meters in length), replacement of small equipment, and purchase and replacement of operating equipment (vehicles, tools, office equipment, etc.).
- The Operator was required to prepare and maintain an asset register and an asset management plan.
- The Lessor was responsible for financing of the capital investment programs (with the assistance of international and bilateral funding institutions) and arranging for implementation. The capital investment program for the first five years had three components:
 - The Priority Works Program (PWP) included works to improve the reliability of production at the major source works, the supply of bulk meters, and the supply and installation of customer meters. (Bulk meters would be *installed* under the DCW.) The PWP would be executed by the Operator under two separate contracts during the first 18 to 24 months of the lease contract period.
 - Delegated Capital Works (DCW) program included rehabilitation of the distribution networks, rehabilitation of connections, construction of new connections and installation of bulk meters. The Operator served as

consulting engineer and was responsible for procurement in accord with lender-approved procurement plans, site supervision and commissioning of works. Neither the Operator nor any associated entity of the Operator was allowed to bid for the works. DCW were to be implemented during the first five years of the contract.

- Non-Delegated Works included major rehabilitation of the water treatment units, reservoirs and mains and new main pipes. It would be procured separately by the Lessor. (Firms affiliated with the Operator would be allowed to compete for these contracts.)

Performance Monitoring and Enforcement

- Key Performance Targets and Other Performance Targets were specified and financial penalties were set for failure of the Operator to comply with Key Performance Targets.
- An Enhanced Monitoring Period of up to 18 months was allowed for ascertaining the base value of and performance targets for parameters for which reliable base values were not available. Performance Targets that were dependent on the implementation of the capital investment program would also be agreed during the Enhanced Monitoring Period.
- The Operator was required to create and maintain records on its performance, create and maintain an asset management plan and records, and submit specified annual and quarterly reports to the Lessor.

¹⁷ The Operator's Area included the Water Supply Area and the Sewerage Area, the latter being smaller than the former since the sewerage system did not cover the entire area. There were some minor exceptions to the Operator's exclusivity including existing private and community wells and boreholes.

- As a condition precedent for commencement, the Operator was required to execute a performance guarantee in the amounts of US\$ 3 million and Tshs 2.147 billion (equal to US\$ 2.15 million) which it was required to maintain throughout the contract period.

Financial Provisions

- The Customer Tariff for water supply, set at Tshs 451 (US\$ 0.45) per cubic meter¹⁸ in year one of the contract, included:
 - The Lessor Tariff (water supply) per cubic meter – Tshs 89 (US\$ 0.09) per cubic meter, which was intended to cover DAWASA’s administrative, planning and oversight costs,¹⁹
 - The Operator Tariff (water supply) per cubic meter – Tshs 337 (equal to about US\$ 0.34) per cubic meter, which was intended to cover CWS’s operating costs, and
 - The First Time New Domestic Water Supply Connection Tariff (First Time Connection Tariff) – Tshs 25 (US\$ 0.02) per cubic meter, which was paid into a fund to cover the cost of new domestic connections with up to three water points.
- Domestic customers paid only the Operator’s Tariff for the first five cubic meters consumed in each month.

When the contract was awarded, non-domestic customers paid a higher tariff of Tshs 725 (US\$ 0.73) per cubic meter. Once the Customer Tariff reached or exceeded that level as a result of indexation and increases, non-domestic customers would pay the same Customer Tariff as domestic customers.
- Sewerage charges, initially set at Tshs 136 (US\$ 0.14) per cubic meter for sewerage, were charged only to those customers with a sewerage connection and

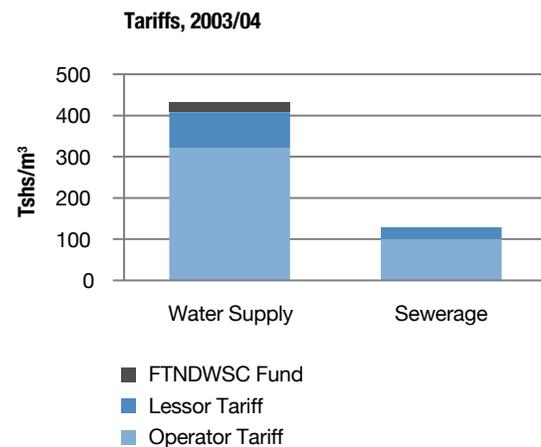
were applied to 80 percent of the volume of water consumed. The Customer Tariff for sewerage included:

- The Lessor Tariff (sewerage) per cubic meter – Tshs 30 (US\$ 0.03) per cubic meter and
- The Operator Tariff (sewerage) per cubic meter – Tshs 106 (US\$ 0.11) per cubic meter.

Figure 2 shows how the Customer Tariffs for water and sewerage were shared among the various components during the first year of the contract.

- The Operator’s revenues included:
 - The Operator Tariff for water supply and the Operator Tariff for sewerage collected from customers,
 - Charges for the provision of ancillary and incidental services (tanker water,

Figure 2 Components of the Customer



¹⁸ The Customer Tariff values shown here are the indexed values that were taken effect in 2003/04, and are about 4.4 percent higher than the 2002-price-based tariffs shown in the Lease Contract.

¹⁹ The Operator also paid a Rental Fee out of its own revenues which, in theory, was intended to fund DAWASA’s contribution to capital costs and debt service on capital investments.

- disposal of liquid or solid waste from sewage tankers, etc.),
- A fee for installing First Time New Domestic Water Supply Connections set at Tshs 145,000 (US\$ 145) in 2002 prices, to be paid to the Operator out of the fund for this purpose,
 - Charges paid by customers for the cost of installing new non-domestic water supply connections, including the cost of the meter, and new sewerage connections,
 - Payments by customers for private extensions.
 - Ten percent of any debt owed to the Lessor that was collected by the Operator;
 - Ten percent of the value of the DCW, for design and supervision;
- The Operator was required to pay to the Lessor on a monthly basis:
 - The Lessor Tariff for water supply and The Lessor Tariff for sewerage collected from customers,
 - The amount by which the water supply tariff for non-domestic customers temporarily exceeded the Customer Tariff,
 - The (fixed) Rental Fee to be paid monthly in advance out of the Operator's own resources (see Table 1),
 - Ninety percent of the value of customer debt owed to the Lessor and collected by the Operator.
 - The Operator was also required to collect and remit to the Regulator the

Regulatory Levy, which would be set by EWURA.

- The Operator Tariffs for water supply and sewerage, the fixed Rental Fee and the Operator Fee for First Time Connections were to be adjusted annually to reflect inflation in accordance with adjustment formulas specified in the lease contract. The Lessor Tariff and First Time Connection Tariff were to be adjusted annually to reflect the index of retail prices.
- During year five of the contract, the Operator Tariff, the indexation formula and performance targets would be reviewed. Revisions would be proposed for contract years six through ten and submitted to the Regulator for approval. In addition, conditions that could result in an Interim Review prior to year five were specified.

Resolution of Disputes

- An Independent Assessor would be appointed in the event of a disagreement over the value of certain data that could demonstrate a material change in circumstances that would warrant an Interim Review of Tariffs.
- Disputes for which an amicable solution could not be found would be referred to an Expert Panel of three members for a determination.
- If a dispute relating to the Tariffs were not resolved amicably or through the Expert Panel mechanism, it would be referred to the Regulator for resolution.
- If a dispute relating to a matter other than the Tariffs were not resolved amicably or through the Expert Panel mechanism, it would be settled by Arbitration in accordance with the UNCITRAL Arbitration Rules and in accord with English Law.

A more comprehensive summary of the contract terms is provided in Appendix B.

Table 1 – Monthly Rental Fee

Contract Year	Rental Fee in Tshs millions
1	50
2	75
3–5	100
6–10	435

4.2 The Restructuring of DAWASA and its Development Contract

When the private Operator was engaged, DAWASA signed a Development Contract with the Ministry of Finance which (*inter alia*):

- Specified the capital works program and provided for its financing;
- Specified DAWASA's responsibility for planning, financing and implementing investments, and monitoring and reporting on its own performance and that of the Operator;
- Provided procedures for the retrenchment of staff not hired by the Operator;
- Committed GOT to ensuring that DAWASA was adequately funded at all times and specified that the Lessor Tariff should allow DAWASA to recover its operating costs, debt service and its counterpart contributions to investment projects;
- Specified that the Customer Tariff would be adjusted in accordance with the lease contract, that adjustments to tariffs would be subject to the approval of the Regulator, and that a major review of the tariffs, indexation formula and performance targets would be carried out in year five of the Lease Contract;
- Committed GOT to budgeting for and paying its water and sewerage bills.²⁰

In August 2003, when the Lease Contract became effective, most of DAWASA's staff was transferred to CWS. The current CEO of DAWASA (who had also been CEO of DAWASA's predecessor, NUWA) and all senior managers remained in place. A staff of about 65 was retained to manage the planning and implementation of investment projects and to oversee the Lease Contract with CWS. Since CWS hired all the staff not required by DAWASA, the latter did not have to implement the retrenchment provisions. DAWASA staff benefitted from a generous training budget funded by the DWSSP.

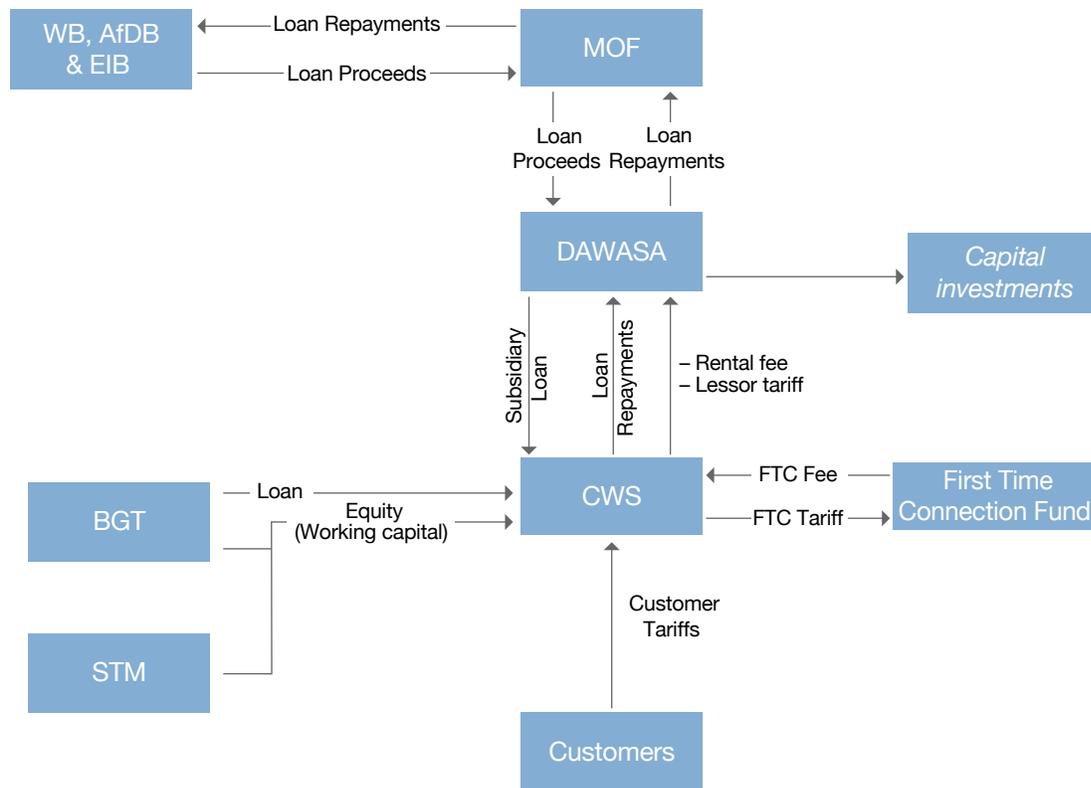
4.3 Financial Projections

Financial modeling carried out in preparation for the transaction identified conditions necessary to ensure the financial viability of DAWASA and the Operator and the two entities' financing requirements. Tariffs had been increased substantially to the equivalent of US\$ 0.43 per cubic meter in 2002. A further real increase of six percent was planned for year two of the contract. This would allow for a substantial increase in the Lessor Tariff but no increase in the Operator Tariff. No further real tariff increases were foreseen until after the Five-Year Review. However, it was assumed that annual adjustments to reflect inflation and exchange rate movements would maintain the real value of tariffs over time.

The model assumed that water losses would be reduced from an estimated 70 percent to 33 percent within five years, and that, during the same period, the customer base would be expanded rapidly through the rehabilitation and regularization of 132,500 existing connections (legal and illegal) and the addition of 35,000 new connections. Uncertainty about the accuracy of some of DAWASA's data, including inconsistencies between available technical and commercial data, was considered a risk. Because of the weakness of the existing data on operational and commercial performance, many performance targets were not specified in advance and some that were specified, such as the targets for water losses, were subject to revision. These targets were to be established on the basis of data to be collected by the Operator during the first 12 to 18 months of the contract.

The reduction of transmission and distribution losses and expansion of the customer base

²⁰ United Republic of Tanzania, Development Contract Between the Government of the United Republic of Tanzania, Represented by the Ministry of Finance, and DAWASA, 2003.

Figure 3 Flow of Funds within the Lease Contract Framework

Adapted from a diagram by TRC Global Management Solutions, Ltd., 2005

were considered essential for the operator's success. Both depended on the timely completion of rehabilitation works. Another critical factor was a significant improvement in billing and collection efficiency. This would require that the Operator rapidly develop an effective commercial system. Even assuming these improvements progressed as planned, cash flow from operations was expected to be negative in the first two years and very weak in year three. Contributions of US\$ 8.5 million to equity by the operator's shareholders and the line of credit from DAWASA would be required to keep the Operator solvent. As for DAWASA, its viability depended on timely remittance of the collected Lessor Tariff revenues and the Rental Fee by the Operator, and disbursements of loans and grants from GOT to finance DWSSP

investments.²¹ Both DAWASA and the Operator were expected to be able to begin servicing their loans in year six. Figure 3 shows the flow of funds within the lease contract framework.

4.4 Arrangements for Serving the Poor

Three mechanisms were designed to improve service for the poor: (i) CWS would construct 250 new water kiosks under the DCW; (ii) First

²¹ Proceeds of the IDA, AfDB and EIB credits that were disbursed by the Ministry of Finance to DAWASA for DWSSP were structured partly as grants and partly as loans to DAWASA at an interest rate of 11.5 percent to be repaid over 15 years (IDA and AfDB) or 25 years (EIB) with five years grace.

Time Connection Tariff revenues would be used to create a Fund to subsidize new connections for domestic customers with up to three water points on the property; and (iii) DAWASA would implement a Community Water Supply and Sanitation Program (CWSSP) which would support the construction of up to 50 small water supply and sanitation schemes in mostly low-income communities not served by the networks.

The lease contract specified that, to the extent possible, standpipes and water kiosks were to be located no more than 200 meters from the people to be served and that the Operator would be responsible for the management, maintenance and repair. Whenever possible, the Operator was expected to subcontract standpipe and kiosk management to local managers and communities. The lease contract also specified that standpipe and kiosk customers would pay the domestic lifeline tariff, the same tariff domestic customers paid for the first five cubic meters.²² The term *customers* as used in the lease contract was intended to mean the local kiosk operators. It was expected that the

standpipe and kiosk operators would cover their costs, including the manager's salary, by selling water to end-users for about Tshs 15 per 20-liter can in 2003/04, about 2.25 times the lifeline rate.

In addition DAWASA also financed the construction of 50 small CWSSP schemes in communities not served by the networks. These schemes were designed in partnership with beneficiary communities which were required to contribute five percent of the cost and form water user associations (WUAs) to manage the schemes. The CWSSP, which was funded by the DWSSP, was to be implemented by DAWASA with the involvement of specialized international non-governmental organizations (NGOs) and their local partners. The NGOs helped each WUA to establish tariffs to be paid by customers of CWSSP schemes at levels adequate to cover operation, maintenance and repairs.

²² United Republic of Tanzania, Water and Sewerage Lease Contract between DAWASA and CWS Ltd., 19 February 2003, Articles 1 and 24 and Appendix K.

5

CWS's Performance

When CWS assumed operations in August 2003, it faced a very challenging situation. To meet its targets, it would have to identify and regularize thousands of unregistered connections, introduce a new billing system, reduce water losses from an estimated 70 percent to 44 percent in the first three years, and increase monthly collections from Tshs 720 million (the amount collected in August 2003) to Tshs 1.8 billion within 12 months. Achieving these targets would require a strong management team and a change in culture on the part of the operating staff and many of the customers. Such changes in payment culture and collections have been brought about successfully in other similar environments. They are more likely to occur when service is improving and the number of connections is increasing. Unfortunately, CWS was unable to create these conditions. In fact, the Operator failed to meet many of its obligations almost from the start and, by December 2003, was already facing serious cash-flow problems.

5.1 CWS' Shareholders

While neither the bid documents nor the MOU signed after the selection of BGT as preferred bidder specified Tanzanian shareholders, during the contract negotiations BGT was encouraged to associate Super Doll Trailer Manufacture (STM) as its local shareholder. The relationship between BGT and STM was somewhat awkward from the beginning. STM had no experience in the water supply sector but nevertheless expected to have a share of the contracts for the PWP and was surprised to learn that the contracts had already been

subcontracted entirely to affiliates of Biwater and Gauff, leaving it with few of the short-term benefits and little say in day-to-day management. STM had difficulty raising its equity contribution and, even more troubling to the BGT transition team leader, STM's expectation of short-term gains was inconsistent with the financial profile of the undertaking. Despite these mismatched expectations, the BGT transition team leader attempted to establish a rapport with STM's owners. However following the end of the transition period, and the appointment of the new CEO, relations soured.²³ STM later complained that the CWS management team was incompetent and refused to pay the full amount of its equity share.²⁴

The financial projections BGT submitted with its bid showed that CWS would lose Tshs 7.9 billion (about US\$ 7.9 million) over the first two years of operation, and would not reach a break-even point until year seven. CWS would require a significant injection of capital to enable it to survive the first two years of operating losses and the four more years it would take to recoup those losses. That capital was to come from two sources: US\$8.5 million in equity from CWS's shareholders, and the line of credit from DAWASA which was conditioned on the equity contributions. By the end of year one, CWS's shareholders should have contributed US\$ 5.5 million in equity and should have

²³ Interview with Cliff Stone, 22 November 2009.

²⁴ International Center for the Settlement of Investment Disputes (ICSID), Case No. ARB/05/22, Biwater Gauff (Tanzania) Ltd., Claimant v. United Republic of Tanzania, Respondent, Award, dispatched to the parties July 24, 2008, p. 45; and Larry Magor Testimony, Hearing Transcript, Day 1, pp. 149–150

borrowed US\$ 4 million from DAWASA, giving the company a total of US\$ 9.5 million of debt and equity capital, but shareholders had contributed only about US\$ 3.1 million and had borrowed only US\$ 2.2 million for a total of US\$ 5.3 million.²⁵ As a result, and because of its failure to achieve collection targets, the company suffered a severe cash shortfall.

While the BGT transition team leader seemed to have a realistic appreciation of the long-term nature of the project, it is not clear that Biwater's marketing team had approached the project with the same commitment. It has been speculated that Biwater and Gauff's marketing teams were more attracted by the PWP contracts and the possibility of winning the large contract for the rehabilitation of the treatment works (which in fact they did not win). That is, they, like STM, were more interested in the construction contracts than in the operational aspects of the lease contract and its long-term financial commitment.

5.2 CWS' Management

The initial CWS management teams were not up to the challenge and there were three turnovers in leadership within the first 13 months. In August 2003, a retired Biwater engineer was appointed to serve as interim CEO. The permanent CEO who arrived three months later had worked for Biwater under contract but had never served as a CEO. An independent observer pointed out that CWS was incredibly slow in getting started and management did not seem to approach the situation as a turn around project. During the first year, the financial director failed to focus on the urgent need to increase cash flow and the commercial director did not seem to have a strategy for dramatically improving billing and collection quickly. Revenues fell in the early months because there were no performance incentives for commercial staff to step up their performance—or remit all the funds they collected. Rehabilitation

and expansion works managed by CWS (i.e., the PWP and DCW programs) did not appear to be driven by operational objectives, reinforcing the impression that Biwater and Gauff might have been more interested in the construction contracts than in operations.²⁶ One year into the contract, the government was clearly disillusioned and the Minister of Water publicly criticized the CEO on television. The leader of BGT's original transition team, an experienced manager, was brought back in as CEO in September 2004.

5.3 Commercial Operations

The data base of customers that CWS inherited included 115,000 registered accounts, but many were moribund or duplicates that had been set up to avoid payment of arrears. It was estimated that only 22,000 to 25,000 were active and potentially billable, and it was well-known that there were thousands of illegal connections that were not in the data base. Installation of a new billing software system that was completed in March 2005 turned out to be woefully inadequate, and subsequently had to be replaced. CWS made limited progress cleaning up the customer database. It focused efforts on regularizing and expanding customers in an area that was hydraulically separate, and therefore relatively controllable, but the lease contract was terminated before CWS was able to realize the benefits of these efforts. In fact, CWS' average monthly collections in 2004/05 reached only 52 percent of projections and were 21 percent lower than DAWASA's had been in 2002/03. (See Table 2) Government arrears for water and sewerage services were a problem and by May 2005 amounted to US\$ 1.5 million, the equivalent

²⁵ ICSID, *op. cit.* pp. 37-38 and 44-45; and Minutes of the meeting of 20 August 2004 between the Interim Regulator and CWS. (Amounts cited in Tanzanian shillings in the ICSID Award have been converted to US dollars at the 2004 average exchange rate.)

²⁶ Interview with John Sitton, 11 September 2009.

Table 2 – Average Monthly Amounts Billed and Collected
(in millions of Tanzanian Shillings)

	DAWASA	CWS	
	2002/03 ^a	2003/04 ^a	2004/05 ^b
Average amount billed	1,537	1,949	1,533
Average amount collected	1,193	1,075	939
Projected average amount to be collected	1,512	1,536	1,817
Ratio: amount collected/projected	0.79	0.70	0.52

^a August–July

^b August–May

Source: DAWASA

of about 40 percent of CWS' total billings.²⁷ While CWS had an agreement with Government that ensured payment, there were many disputed bills (claims of no water, inaccurate volume, etc.) and, because of meter malfunction due to irregular supply and the prevalence of meter vandalism, verification was problematic.

Given the historically poor coverage and quality of piped water services, a thriving tanker industry existed. CWS considered the tanker industry a potential partner and took steps to develop a constructive relationship by promoting self-regulation through membership in a water tanker operators' association and encouraging tankers to move their operations to neighborhoods not slated for immediate piped water supply improvements. To promote the latter, CWS proposed to establish convenient water filling points for registered tankers. The more reputable tanker operators were receptive to this initiative but it had not yet developed to the implementation stage before the lease contract was terminated.

5.4 Compliance with the Terms of the Lease Contract

CWS failed to fulfill several of its contractual obligations. During the first year, payments

of the Rental Fee to DAWASA were irregular and, after June 2004, payments of the Rental Fee ceased altogether. In addition, beginning in December 2003, CWS periodically withheld Lessor Tariff revenues to pay its own operating costs. This created a serious financial crisis for DAWASA. In April 2004, DAWASA imposed a penalty for non-remittance of the Rental Fee—which CWS failed to pay. By June 2005, CWS owed DAWASA Tshs 3.2 billion in Rental Fees and Lessor Tariff revenues (about US\$ 2.9 million). Moreover, CWS made only one deposit to the First Time New Domestic Water Supply Connection Fund—in October 2003—and made no further deposits over the remaining period of the contract.²⁸ Instead it used First Time Connection receipts amounting to Tshs 820 million (about US\$ 726,000) to cover its operational expenses.

Lack of data and reliability issues made it difficult to assess CWS' performance on key indicator targets set in the lease contract. CWS submitted an Annual Report at the end of its first year of operations and several reports in year two. GOT claimed that CWS failed to submit all required reports but it was not possible to verify the facts on this point.

²⁷ ICSID, *op.cit.*, p. 164.

²⁸ *Ibid.*, p. 54.

Table 3 – CWS Performance on Key Indicators

	2003/04		2005/06	
	Target	Actual	Target	Actual
Collection efficiency (collected as percent of billed)	60	55	70	61
Number of connections rehabilitated and metered	16,500	5,237	25,000	4,268

Source: DAWASA

None of the reports could be obtained by the author of this study. Besides collection efficiency, the only other indicator for which data were available was for the number of connections rehabilitated and metered. As Table 3 shows, CWS' performance was well below the target values. Moreover, none of the new connections qualified as First Time Connections (for low-income households) because the limitation on the use of the First Time Connection Fund for connections with no more than three taps within the premises made it difficult to apply.²⁹

Baseline data for several other indicators should have been established no later than 18 months after Commencement, but by May 2005, CWS had not proposed values for any of the missing data. As a result, targets could not be set nor could performance be monitored for important indicators such as water losses and the average number of hours customers received water supply services.³⁰

CWS began to develop an asset recording system and a detailed hydraulic model of the distribution network, but the asset register was not complete and the model had not been validated prior to termination of the contract.³¹ It was subsequently completed by DAWASA.

5.5 Implementation of the Priority Works Program and Delegated Capital Works

The PWP was designed to improve technical operating conditions and create the basis for

expanding connections. The plan was for it to be completed in the first 18 to 24 months of the contract but it ultimately took much longer. Start-up was delayed for six months until January 2004 because CWS wanted to change the advance payment bond language that had been specified in the bid documents and because CWS' bank was unable to receive the contract-specified currencies. Eventually, a total of 104,000 revenue meters were purchased out of an original target of 173,000. It was subsequently determined that the number procured was sufficient for the foreseeable future, given the delay in making new connections. While a World Bank supervision mission reported that satisfactory progress was made on the rehabilitation of production works and transmission lines,³² another observer pointed out that the failure to install bulk meters early in the contract period was an inexplicable strategic mistake that made it impossible to reduce water losses and increase collections.³³

One of the objectives of the DCW program was to lay new mains, eliminate spaghetti connections and install new connections so as to reduce water losses and improve

²⁹ DAWASA, Dar es Salaam Water Supply and Sanitation Project, Mid-Term Review Report, 15 December 2006, pp. 15, 20–21, 48–61.

³⁰ *Ibid.*, p. 15.

³¹ *Ibid.*, p. 61.

³² DWSSP Joint Supervision Mission, Nov. 7–9, 2005, *Aide Memoire*, p. 3; and DWSSP *Aide Memoire and Mid-Term Review Report*, Nov. 2006, p. 4.

³³ Interview with John Sitton, 11 September 2009.

collections.³⁴ Another objective was to extend the distribution system into unserved areas, including some middle- and high-income areas that would provide reliable revenues. Gauff Ingenieure was responsible for the design, procurement and supervision of the program. Disagreements between Gauff and DAWASA over technical standards resulted in delays: Gauff favored steel pipes while DAWASA favored PVC pipes produced in Tanzania. There were allegations of vested interests on both sides.

Consultants hired by DAWASA found that, although the volume and quality of works completed was consistent with expectations, CWS did not appear to have a strategic approach to the DCW program and the works that were completed were not accompanied by complementary actions that were necessary to bring about the expected outcomes.³⁴ It was also observed that the construction contracts were managed separately from operations by affiliates of Biwater and Gauff. As a result construction decisions seemed to favor the components that were most attractive to the contractors, without regard to the impact of the works on commercial performance.³⁵ For example, pipes were extended to districts where there was little or no water supply and, though new mains were laid, little was done to remove and replace old spaghetti connections. However, the CEO of CWS at the time of termination pointed out that this was due to delays in commissioning (final inspection and approval by the supervising engineer) of the pipes, rather than lack of a strategy. When CWS' contract terminated, none of the DCW pipes had been commissioned, and illegal customers could not be regularized until the pipes were commissioned.³⁶

5.6 Impacts on Staff and Productivity

The staff of DAWASA had little preparation for the transition to the private sector and the early CWS management teams seemed to lack

experience in managing changes in the behavior and attitudes of staff. When they tried to introduce a new culture of responsibility, independence and punctuality, some employees adapted, but most did not. Language was a problem and the Tanzanian human resources director often had to serve as translator. Problems were compounded by the fact that BGT had passed up a critical opportunity to improve productivity when, in an effort to strengthen its bid, it committed to employ and retain throughout the contract almost all existing operational staff—even though the bid documents and draft contract would have allowed for significant layoffs. BGT planned to use the excess staff for the DCW but, in fact, the excess employees were never transferred to the DCW sub-contractors. Consequently, at the end of May 2005, there were 1320 employees, resulting in a very high ratio of between 20 to 50 staff per 1000 connections.³⁷ Saddled with the costs of excessive staff that did not have the required skills, CWS lacked the flexibility to hire more qualified staff. Perhaps the biggest failure was that CWS gave staff few incentives to improve their performance and identify with CWS. The former employees of DAWASA did not in fact ever transfer their allegiance from DAWASA to CWS.

5.7 Termination of the Lease Contract

Early in the contract CWS was in serious trouble. Monthly collections were much lower than projected and operational costs were much higher. By March 2005, accumulated losses

³⁴ Spaghetti connections are those with connection pipes longer than 30 meters, sometimes directly into transmission mains. Efficient operation requires shorter connections into secondary or tertiary mains.

³⁵ DAWASA, *Mid-Term Review*, *op. cit.*, p. 26.

³⁶ Interview with John Sitton, 11 September 2009.

³⁷ Interview with Cliff Stone, 22 November 2009.

³⁸ Estimates of the number of connections varied, making it impossible to specify the ratio precisely. CWS had about 60,000 accounts in its data base in 2005, but only about 25,000 were being billed.

amounted to about US\$ 12.3 million. During the pre-bid process, Biwater had asserted that the data presented in the draft bidding documents was acceptable, but, in meetings with MOW during June–August 2004, CWS argued that the collection projections had been based on inaccurate information, collecting from government agencies was more problematic than expected, and a drought had affected water production. It requested an adjustment to the economic terms of the lease contract. In response, GOT promised to make government agencies pay their bills but, otherwise, DAWASA argued that CWS shareholders should contribute equity to cover its cash requirements. After CWS requested an Interim Review of the Operator's Tariff in September 2004, an Independent Assessor appointed by the Minister (in his role as Interim Regulator) determined whether a material change in circumstances that would provide grounds for a revision of the Operator's Tariff in accordance with the lease contract had occurred. The auditor found there were inadequate data to demonstrate a material change in circumstances as defined in the lease contract.

In late 2004, the Chairman of Biwater lobbied MOW to renegotiate the contract. While DAWASA argued that only tariff disputes should be brought to the Minister in his capacity as Interim Regulator, the Minister saw the problems with the Lease Contract as a political problem for him and did not separate his political and regulatory roles as he should have. In January 2005, CWS formally requested renegotiation. Its requests included: an increase in the Operator's Tariff, reduction in the equity requirements, reduction in the Rental Fee, revision of Performance Targets, and the freedom to reduce staff. In addition it later requested an extension of the term of the Lease Contract for an additional five years. In February 2005, when DAWASA tried to call the performance bond for the amount of unpaid penalties, Lessor Tariff revenues and Rental Fees, it was surprised to learn that the performance bond could not

be called for less than its full value. In March 2005, a mediator was engaged to assist the parties to work out a compromise. While GOT and DAWASA were willing to accommodate most of CWS's proposals for revision of the contract, they were not willing to extend the lease contract for an additional five years unless CWS's collection performance improved. CWS insisted on the extension but refused to commit to higher collection targets, and a compromise could not be reached. At that point, or even before, the Expert Panel foreseen in the Lease Contract should have been engaged but it was not—in part because CWS thought it could rely on the Minister to resolve the matter.

On 12 May 2005, DAWASA called the performance bond in its entirety and was paid Tshs 5.5 billion (about US\$ 5 million) by the guaranteeing bank. After CWS failed to reinstate the performance guarantee as required under the Lease Contract, DAWASA served a notice of termination of the contract on May 25, 2005. The Lease Contract provided for a 30-day notice of termination during which period the Operator was required to cooperate with DAWASA to ensure a smooth transition and continued operation of the services. The transition period would have expired on 24 June. DAWASA, fearing that CWS was financially unable to continue to operate and that interruption of services was imminent, requested an early termination and asked CWS to cooperate with a speedy transition. CWS claimed that the notice of termination was invalid and would not agree to an early termination.³⁹ Though the CEO of DAWASA was in favor of continuing to negotiate the termination date with CWS, the Minister of Water, in the face of declining public support for PPP and impending elections in November 2005, ended the negotiations. On 1 June, three

³⁹ The sequence of events presented here is as reported in the report of UNCITRAL Arbitration Case No. UN6761, City Water Services Ltd., Claimant/Counterrespondent v. Dar es Salaam Water and Sewerage Authority, Respondent/Counterclaimant, Award, 31 December 2007, pp. 3–8; and in John Sitton (2006), *op. cit.*

British managers were deported—an act which Biwater labeled an “unlawful... repudiatory breach of contract.”⁴⁰ A few days earlier GOT had quickly created a new public operating company, the Dar es Salaam Water and Sewerage Corporation (DAWASCO), which assumed management of the services that same day.

DAWASA's relations with CWS were strained by the operator's financial problems and its failure to pay the Rental Fee and Lessor Tariff revenues and comply with other contractual commitments. This prevented the development of the cooperative partnership that was essential for success. Some observers thought DAWASA should have responded to CWS's failures earlier in the contract and, in particular, required the shareholders to make their equity contributions and appoint a more effective management team. It is not clear how DAWASA could have done so other than by calling the performance bond, which it attempted to do in February 2004, only six months into the contract. An advisor to DAWASA thought that, had the parties been able to come to an agreement, CWS' performance, which had begun to improve, would have continued to improve and the contract could have been completed successfully, but that political pressures prevented an agreement.

5.8 The Role of the World Bank and International Partners During the Crisis

During the crisis, CWS shareholders asked the World Bank to intervene on their behalf with GOT. However, the World Bank, AfDB and EIB avoided taking sides and played a neutral supportive role. The World Bank team leader based in Dar es Salaam worked to promote communication among all the parties. DWSSP funds were made available to pay for the Independent Assessor and for the mediator. The Minister of Water visited World Bank headquarters in Washington to discuss the issues and potential solutions. A contributing factor to the crisis was the fact that relations among

CWS shareholders were contentious and the shareholders had not even met since early in the company's existence. With the encouragement of the World Bank team leader, CWS shareholders agreed to meet and space for the meeting was provided at the World Bank's London office. Since the DWSSP was conditioned on the engagement of a private operator, the Bank had a strong interest in sustaining the contract but, after the contract was terminated, the World Bank decided that, in the interest of ensuring the continuation of services, it would not suspend disbursements and would work with the new DAWASA-DAWASCO arrangement.

5.9 Results of International Arbitration

Two international arbitration cases ensued, one under the aegis of the UN Commission on International Trade Law and the other in the International Center for the Settlement of Investment Disputes.

United Nations Commission on International Trade Law

After negotiations over the revision of the lease contract broke down in early May 2005, CWS filed a Notice of Arbitration under the rules of United Nations Commission on International Trade Law (UNCITRAL), as provided for in the contract. Following the subsequent early termination of the contract and deportation of CWS's managers, CWS failed to meet the deadline for filing a statement of its claim and filed for liquidation. In the meantime, DAWASA filed a counterclaim against CWS for damages, including: overdue Lessor Tariff revenues, Rental Fees, unpaid First Time Connection Tariff funds, principal and interest for the line of credit sub-loan, penalties for non-compliance and stocks and amounts due for operating

⁴⁰ *Financial Times*, 29 June, 2005, as cited in *Privatization Impact Assessment, op.cit.*, p. 32.

equipment DAWASA had sold to CWS at contract commencement. These were partially offset by the value of the Performance Guarantee which DAWASA had called and amounts owed to CWS by DAWASA. At the end of an arbitration process that lasted two years, the Arbitration Tribunal ruled that DAWASA was justified in terminating the lease contract and ordered CWS to pay DAWASA damages of Tshs 6,990 million (about US\$ 5.6 million) and one half the cost of the arbitration proceedings.⁴¹ But as of June 2011 the ruling in its favor had been a pyrrhic victory; DAWASA had been unable to collect a single shilling from the bankrupt operator. CWS is still in liquidation and the court-appointed liquidator has been notified of DAWASA's award.

International Center for the Settlement of Investment Disputes

In August 2005, BGT initiated a case against the United Republic of Tanzania at the International Center for the Settlement of Investment Disputes (ICSID). BGT claimed that the termination of the contract, deportation

of CWS's senior managers and seizure of the company's assets constituted a breach of the Agreement between the U.K. and the Republic of Tanzania for the Promotion and Protection of Investments of 7 January 1994. BGT argued that it should receive compensation of about US\$ 20 million. In July 2008, the Arbitration Tribunal found that, although GOT had committed an expropriation, its violations of the treaty did not cause the losses and damages for which BGT claimed compensation, and no damages were awarded. Each party was required to pay its share of the cost of the case. One member of the Tribunal filed a Concurring and Dissenting Opinion arguing that even though the violations of the treaty per se did not cause BGT's losses, BGT should have received some compensation on account of the treaty violations.⁴²

⁴¹ UNCITRAL Arbitration Case No. UN6761, City Water Services Ltd., Claimant/Counterrespondent v. Dar es Salaam Water and Sewerage Authority, Respondent/Counterclaimant, Award, 31 December 2007.

⁴² ICSID, *op. cit.*

6

The DAWASA-DAWASCO Arrangement

6.1 DAWASCO

Governance

DAWASCO was created by an Order signed by the President of the Republic on 17 May 2005, gazetted on 20 May 2005, under the Public Corporations Act of 1992. Under the terms of the Order, DAWASCO's Chairman, other Board members, and the CEO are appointed by the Minister responsible for Water. Its share capital was set at Tshs 2 billion (about US\$ 1.8 million) to be held entirely by the Tanzanian Treasury. The Order states that DAWASCO shall have exclusive right...to provide public water supply and sewerage service in the Designated Area. The Order makes no mention of a lease contract to be celebrated with DAWASA.

On 9 November 2005, in his capacity as Interim Regulator, the Minister of Water and Livestock Development granted DAWASCO a license for a period of ten years, which states, inter alia, that the licensee is required to comply with the terms of the lease contract with DAWASA and that the license may be revoked if the licensee is in material breach of the lease contract, or following termination of the lease contract. The license also reiterated the authority of EWURA to assume regulatory authority once EWURA became operational.

Terms of DAWASCO's Lease Contract with DAWASA

DAWASCO took over operations on 1 June 2005. A ten-year lease contract with DAWASA was signed on 2 September 2005 and revised

on 12 December 2005. The terms of DAWASCO's contract were almost identical to those of the contract with CWS. Although the contract provided for a performance bond, none was required. Likewise, although DAWASA's authority to impose financial penalties for non-compliance with performance targets was asserted, in practice DAWASA never imposed them. The Lease Contract gave DAWASA the authority to terminate the Lease Contract under certain conditions, including non-compliance, though it was unlikely DAWASA would exercise this power except with the approval of the Minister.

The lack of reliable base data continued to make it impossible to specify all targets. However, those that were specified were considered to be realistic. DAWASCO was expected to increase average monthly collections from Tshs 946 million to Tshs 1.7 billion in year one and to Tshs 2.3 billion in year two.⁴³ These targets assumed gradual improvements in reducing

Table 4 – DAWASCO's Monthly Rental Fee

Contract Year	Rental Fee in Tshs millions
1	50
2	75
3–5	100
6–10	500

⁴³ It is significant that, instead of the collection ratio (i.e., the ratio of collection to billing values) that was specified as the measure of CWS' collection efficiency, the total value of collected revenue was specified as a performance target for DAWASCO.

water losses, annual tariff indexations and a real increase in tariffs in 2005. The schedule of Rental Fees is shown in Table 4.

GOT contributed Tshs 2 billion to equity in 2006/2007. To assist with the cash shortfalls expected in the early years of the contract, DAWASCO had access to a line of credit of up to US\$ 6 million from DAWASA using funds provided under DWSSP.

A key difference between DAWASCO's contract and that of CWS was that initially DAWASA assumed responsibility for the DCW program. However in early 2008 it was decided that coordination could best be ensured by transferring responsibility for planning and execution of DCW to DAWASCO, though DAWASA remained responsible for procurement.

Management and Staff

While the reform of public utilities is usually accompanied by a change in top management, this was not the case in Dar es Salaam. As was the case in DAWASA, most of the senior managers appointed to DAWASCO in 2005 were all veterans of DAWASA (prior to the lease contract with CWS) and most of them remained in their positions at the end of 2009. The CEO had focused attention on three high priority performance areas: production, reduction of water losses and customer relations. Team work was emphasized and performance incentives were put in place for managers as well as staff. Staff morale appeared to have improved relative to the CWS era and a sense of cohesion was taking hold. Although management's expressed objectives were sound, management control and execution did not always match expectations.

In 2005, DAWASCO took over a staff of 1320 – many of whom lacked appropriate skills and qualifications and/or had not yet adopted a new work culture. In fact, little had changed while the private operator was in place. While the overall number of staff was too high, there

was an insufficient number of qualified middle level managers and supervisors. By 2009, DAWASCO had taken a number of steps to improve the morale and performance of staff. An organizational restructuring resulted in the retrenchment of 432 employees in January 2007, another minor retrenchment later in the year, and the recruitment of qualified middle level managers. In June 2009, the total number of employees was 885; the staffing ratio was 6 per 1000 registered accounts, or 12 per 1000 active connections, and the level of competence had improved.⁴⁴ Management expected the ratio would continue to improve as more connections were added or regularized, and as staff competencies and skills were strengthened.

New salary scales based on job level and performance rather than seniority were established in 2007 and individual performance contracts were put in place for commercial staff. Such changes met with some resistance but were eventually accepted. The Director of Human Resources felt that having a Tanzanian CEO who spoke Swahili helped to promote better communications than had been possible in CWS. In July 2008, four area managers agreed to internal delegated management contracts under which they could earn performance bonuses that could be shared with staff. By July 2009 all 12 area managers had such contracts.

Unfortunately, turnover among the most qualified staff was frequent as salaries were not competitive with the private sector. In addition, DAWASCO's resources for training and technical assistance were very limited. The DWSSP did not originally include funds for training operational staff and managers, as that would have been the responsibility of the private operator, but DAWASCO's tight

⁴⁴ This ratio was obtained using DAWASCO staff only; the ratios are about 6.5/1000 and 13/1000 respectively when 65 DAWASA employees are included. Efficient water utilities in Africa typically employ about 6 persons per 1000 connections.

cash-flow situation did not allow adequate funds for human resources development. It seemed unlikely that much needed improvements in efficiency and customer relations would be realized without an intensive training program. In early 2009, funds from DWSSP were reallocated to fund DAWASCO's training program. By the end of 2009, more than half the staff had received instruction in a variety of topics, including preventive maintenance, laying sewers, audit techniques, customer care, supervision skills and technical operations skills. In addition, the Millennium Challenge Corporation (MCC) Program (funding by the USA) also began to provide funding for capacity building in late 2009.

Operational and Commercial Performance

With the assistance of NWS External Services-Uganda (the consulting affiliate of Uganda's publicly owned National Water and Sewerage Corporation), DAWASCO prepared and executed an Operational Rescue Plan during July through September 2005. The program established short-term quantitative targets for revenue collection, leakage control, customer care, water production and response to sewerage blockages. There were also qualitative objectives for improving staff commitment and managerial autonomy, measuring and using performance data, and improving the cleanliness of the premises. To create incentives for improving performance, results were monitored and tabulated for each of DAWASCO's ten service areas and staff of the areas with best overall performance received cash rewards at the end of the program. The Final Performance Evaluation Report of the Plan claimed that it had been remarkably successful with regard to the achievement of most, though not all targets. In addition, a number of important constraints were identified: an unreliable billing system, lack of customer location maps, inadequate network rationalization, poorly performing water treatment units, lack of skilled staff in some areas, delays in procurement of inputs, etc.⁴⁵

The Operational Rescue Plan was intended to enable DAWASCO to get off to a strong start under very unfavorable conditions. Its focus was justifiably on actions that could be taken within a short period and on creating a new corporate culture. Meeting the longer-term performance targets specified in the Lease Contract would prove to be more elusive, in part because DAWASCO was unable to sustain the high level of effort over the longer term, but also because some of the targets could not be achieved until the fundamental weaknesses of the system were addressed—for example, the lack of an accurate customer registry and a map of the assets. Removing those constraints took longer than hoped. In 2007, DAWASCO requested that several targets be revised to reflect reality. Since the targets had been set as DWSSP objectives as well as in the Lease Contract, changing them would have required a revision of both, but no action was taken by either DAWASA or the DWSSP financing agencies. As a result, the targets became somewhat irrelevant. In addition, the collection of reliable data for some indicators was a challenge. Data provided by DAWASA and DAWASCO did not always agree and it was impossible to determine which, if either, was reliable.

DAWASCO's operational performance with respect to several indicators in 2009/10 is shown in Table 5. Performance on potable water quality standards was very good. The quality of wastewater effluent remained well below standards until 2010 when rehabilitation of the ponds was completed. The reliability of the potable water treatment works gradually improved due to the completion of rehabilitation works, and in 2009/10 capacity utilization of the two large treatment works averaged 99 percent. The most serious problem remained water losses. The target for water losses by the end of year five (June 2010) was 33 percent. On the basis

⁴⁵ DAWASCO, Operational Rescue Plan, Final Performance Evaluation Report (July–September 2005).

Table 5 – DAWASCO's Performance in 2009/10

Indicator	Target^a	Actual
Percentage of water samples meeting standards	100	97
Percentage of effluent samples meeting standards	95	83
Treatment plant output as percent of capacity	95	99
Non-revenue water (not billed as % of production) ^b	33	53
Collection Efficiency (collected as % of billed)	n.s.	79
Cumulative number of new and rehabilitated connections	166,475	112,329
Number of registered water accounts ^c	124,600	161,902
Number of active water accounts (bills sent)	n.s.	97,290
Number of registered sewerage accounts ^d	14,000	20,000
Number of active sewerage accounts (bills sent)	n.s.	17,590
Percentage of metered customers billed on meter readings	95	79
Percentage of customers receiving 24-hour water supply	70	30

^a Targets are those in the Lease Contract and, in some cases, vary from those for the DWSSP.

^b The target reflects separate targets set for transmission and distribution.

^c The number of registered water accounts includes duplicate accounts, large numbers of suppressed accounts and customers in dry zones. The 2010 target in Appendix N of the Lease Contract (used here) is 124,600 but, in the Technical and Financial Assumptions table of the Lease Contract, the value assumed for June, 2010 is 139,500.

^d The number of registered sewerage accounts includes duplicate accounts. There are no inactive sewerage accounts.

Source: DAWASA

of production and billing data (the latter based in part on estimated consumption because of the absence of meters) total non-revenue water amounted to 53 percent in 2009/10. Long delays in the installation of bulk and district meters compromised DAWASCO's ability to measure water losses and reduce non-revenue water. The completion of bulk metering, a district metering and water loss reduction program, replacement of key pumps, and the completion of the metering and rehabilitation of connections were expected to improve this situation.

In the first four years of the contract DAWASCO fell far short of targets for new and rehabilitated connections. In fact, the targets which were cumulative had become irrelevant and should have been revised. It began to catch up in 2010. In May 2010, the commercial department was still trying to clean up the customer data base: though there were 161,902 registered connections in the data base, some were

duplicates and many were moribund or in dry zones. In fact, 97,290 water customers were being billed and counted as active. By December 2010, that number had risen to 110,000. Although its collection ratio was 79 percent in 2009/10, DAWASCO billed customers for only 47 percent of the water it produced. In 2009/10 collected revenues were 58 percent of the target. Only 30 percent of customers received water 24 hours per day, compared to a target of 70 percent set for the DWSSP project.

Decentralization of area management in 2007 and 2008 had brought significant improvements in performance. Training funds were made available to DAWASCO from the DWSSP in 2009, and 60 staff members of the Commercial Department received training in customer care. Energetic and creative area managers promoted team spirit among their staff, improved response time to customer complaints and inquiries. It was reported that theft

of collected funds had been virtually eliminated through better oversight and the introduction of a new electronic billing and collection system. In 2009 the Commercial Department and area managers introduced text message reminders and cell phone bill payments. These and other innovations by area managers resulted in a noticeable improvement in collections.

Comparison of the Performance of CWS and DAWASCO

There are only a few performance indicators for which CWS' performance and that of DAWASCO can be compared and the comparison must be limited to the first two years of the contracts since CWS operated for only two years. Both operators failed to reach the targets set in the DWSSP and their lease contracts. The number of connections that were rehabilitated by the two was very similar. For both operators, the delay in installing bulk, zone and customer metering made it impossible to measure and reduce water losses. In both cases, collections fell far short of projections though DAWASCO's performance exceeded that of CWS and improved steadily while CWS's actually declined in year two. In fact, DAWASCO encountered many of the same challenges CWS had faced in its first two years but, while CWS's shareholders were unwilling to sustain further losses, DAWASCO, as a state enterprise, had a more indulgent shareholder that was willing to inject subsidies. In addition, there was no performance bond that DAWASA could call and no financial penalties. Its performance gradually began to improve in response to pressure from EWURA, the Ministry and the international lending agencies.

6.2 DAWASA

DAWASA's Development Contract and Memorandum of Understanding

In 2005, DAWASA's Development Contract with Ministry of Finance was updated to reflect

the new Lease Contract with DAWASCO. In addition, it signed a Memorandum of Understanding (MOU) with the Ministry of Water and Irrigation that, among other provisions, established specific performance standards and required DAWASA to prepare an annual report including data on its performance.

Oversight of DAWASCO

The collection of performance data for this case study revealed that central direction and coordination of data reporting was lacking. Managers often were unable to retrieve internal and published reports and there did not appear to be a strategic or integrated approach to its verification and analysis for the purpose of improving overall performance. Data differed not only from one report to another, but sometimes there were inconsistencies even within the same document. There appeared to be no single audited set of operational and commercial data that was shared by DAWASA, DAWASCO and EWURA. The dismal performance of CWS with regard to data collection and verification explains the poor quality of information in the early years after DAWASCO took over (2005–2006), but four years later there was still a lack of adequate management control over key performance data. To some extent this could be attributed to the inauguration of new information systems and the lag in the installation and debugging of data management systems in all three entities, but it was clear that more attention needed to be focused on coordination and verification, and the key actors needed to avoid issuing reports with inconsistent data.

The lack of a functioning information management system contributed to DAWASA's inability to monitor the Operator and enforce the Lease Contract. In a lease contract arrangement it should be quite clear that the lessor is the principal and the lessee is the agent, accountable to the principal. Unfortunately, their governance arrangements resulted in ambiguity regarding the principal-agent relationship.

Table 6 – Average Monthly Amounts Billed and Collected by DAWASCO

(in millions of Tanzanian Shillings)

	2005/06 ^a	2006/07 ^a	2007/08 ^a	2008/09 ^a	2009/10 ^a
Average amount billed	2,007	2,322	2,099	2,051	2,763
Average amount collected	1,217	1,525	1,675	1,745	2,180
Projected avg. amount to be collected	1,708	2,299	3,180	3,709	3,750
Ratio: amount collected/projected	0.71	0.66	0.53	0.47	0.58

^a July–June

Source: DAWASA

The fact that both entities were state enterprises; both CEOs were appointed by the Minister of Water; and each had access to political channels undermined the authority of DAWASA over DAWASCO. In the absence of a performance bond or other financial incentives, there were no mechanisms to enforce performance targets. The development of an effective system for monitoring the performance targets of the Lease Contract lagged. DAWASCO was required to report performance data to DAWASA which in turn forwarded it to EWURA, but there appeared to be little follow-up except during the tariff review process. Dynamic collaboration between DAWASA and DAWASCO to develop effective plans for improving operational performance was not evident. As we shall see, the only entity that was able to take a strong stance with regard to the performance of both DAWASA and DAWASCO was the regulator, EWURA. In an effort to correct this, the Lease Contract was amended in late 2010 but the DAWASA Act and its Regulations also required revisions and, as of January 2011, they had not been amended.

Implementation of Capital Investments funded under DWSSP

Overall, DAWASA performed well in implementing the capital works funded by DWSSP for which it was responsible over the period 2003–2010 but there were several delays in completion which had negative impacts on operational and commercial performance—some

of these attributable to CWS and others to DAWASA itself.

The PWP, which included urgent rehabilitation of production works and the procurement of bulk meters was originally supposed to be implemented by CWS but, as mentioned earlier, startup was delayed several months. After the departure of CWS (which caused further delays) DAWASA took over the subcontracts for the incomplete components. PWP was declared complete in March 2007. DCW, which included the rehabilitation and extension of the secondary and tertiary network, installation of bulk meters, replacement of old connections and installation of new connections - originally conceived as a five-year program to be completed by June 2008—was completed in June 2010.

The non-delegated works, for which DAWASA had implementation responsibility, included the rehabilitation of the water production/treatment units, the transmission lines, reservoirs and the primary distribution network; construction of a new reservoir; and rehabilitation, replacement and expansion of sewerage and wastewater components. Delays of up to two years were experienced by several components but all were successfully completed in 2009. The replacement of raw and treated water pumps and rationalization of high voltage power supply at the treatment plants, both of which were added to DWSSP during the course of implementation, were completed in 2010. The CWSSP was also

Table 7 – DAWASCO’s Core Recurrent Revenues and Expenses
(in Tanzanian Shillings)

	FY06/07	FY07/08	FY08/09
Core Recurrent Revenue (Tshs) ^a	17,440,731,140	17,011,716,288	18,498,894,577
Revenue Collected (Tshs) ^b	12,397,978,730	15,003,487,780	15,403,646,629
Core Recurrent Expenses (Tshs) ^c	20,503,364,432	18,448,714,647	22,210,081,095
Core Recurrent Expenses as % of Revenue collected	165%	123%	144%

^a Revenue from Operator’s Tariff component only, billed prior to provisioning for bad debt

^b Operator’s Tariff component only

^c Excluding non-cash expenses such as bad debt and depreciation

Source: DAWASCO’s Audited Financial Statements

delayed and was completed in late 2010. (Implementation of CWSSP is discussed in section 8.3.) To allow for completion of the project, the closing date for DWSSP was extended three times, first until December 2009, then until June 2010 and finally until November 2010.

6.3 Financial Performance and Viability of the Arrangement

DAWASA’s and DAWASCO’s financial performance was undermined by several factors, most prominently the latter’s failure to achieve billing and collection targets. Table 6 shows that while DAWASCO’s collection ratio improved steadily, the amount billed remained stagnant, making it impossible to achieve targets. A three-year delay in the approval of the annual tariff indexation by EWURA was also a significant factor in the revenue shortfall. In 2009 DAWASA and DAWASCO undertook a Joint Financial Recovery Plan but the results were disappointing—billed amounts actually fell slightly (due to the cleaning up of the customer data base and elimination of duplicate accounts) and the increase in amount collected was insignificant. In 2008/09, while DAWASCO collected 85 percent more than CWS had collected in 2004/05, it achieved only 47 percent of the collection target. Collections

continued to improve in 2009/10 but were still far short of what was needed to cover costs.

As Table 7 shows, in every year since DAWASCO began operating, collected Operator Tariff revenues were inadequate to cover its core recurrent expenses. This was despite a temporary decrease in expenses that resulted from staff reductions in 2007/2008. To cover the gap between expenses and income, GOT, which had already contributed Tshs 2 billion in equity, provided subsidies of Tshs 7.3 billion over 2006/2007–2008/2009. In addition, DAWASCO borrowed funds from DAWASA over and above the amounts allowed for in its line of credit.

Although mechanisms were put in place to ensure that DAWASCO paid the Lessor Tariff revenues and the Rental Fee to DAWASA on time, the inadequate growth in collections had a significant negative effect on DAWASA. Table 8 shows that, although DAWASA was able to cover its core recurrent expenses with its share of revenues from water and sewerage services, it was unable to fully fund other obligations. Under the terms of DWSSP, DAWASA was required to contribute a minimum of ten percent of the cost of capital investments. Because of the shortfall in its tariff revenues, it relied on cash transfers from GOT and these were not always paid in a timely manner.

Table 8 – DAWASA's Core Recurrent Revenues and Expenses
(in Tanzanian Shillings)

	FY06/07	FY07/08	FY08/09
Core Recurrent Revenue (Tshs) ^{a, b}	8,247,000,000	7,203,000,000	6,722,548,200
Revenue Collected (Tshs) ^a	4,327,057,012	4,556,998,831	4,633,920,927
Core Recurrent Expenses (Tshs) ^c	3,825,000,000	3,976,000,000	4,555,130,091
Core Recurrent Expenses as % of Revenue collected	88%	87%	98%

^a Lessor Tariff Component plus Rental Fees

^b Revenue billed prior to provisioning for bad debt plus Rental Fees

^c Excluding rescheduled interest payments due to GOT and contribution to CAPEX

Source: DAWASA's audited financial statements

DAWASA's core recurrent revenue actually decreased over the three-year period 2006/2007 to 2008/2009. The main reason for this was that in 2006/2007, the tariff structure was revised and the percentage of the Customer Tariff allocated to the Lessor Tariff decreased from 24 percent to 21 percent. The decision to restructure the tariff was based on a projected significant increase in revenues, which—had it materialized—would have provided adequate revenue for both DAWASA and DAWASCO. Another factor was that, prior to 2007/2008, DAWASA had received the excess collected revenues that resulted from the difference between the historically higher Non-Domestic Tariff and the Customer Tariff. In 2003 the difference had been significant but over time the difference diminished as the Customer Tariff increased. Although the Rental Fee was rising during this period, it was not sufficient to offset the decrease in DAWASA's tariff revenues.

While revenues were declining, DAWASA's core recurrent expenses increased. In addition, in July 2008 it was expected to begin servicing its debt for that part of capital investment funding that had been structured as a loan from GOT. The outstanding sub-loans to CWS and to DAWASCO created a looming burden as DAWASA would also have to repay GOT for the

amounts on-lent to the two operators. There seemed to be little chance of fully recouping the sub-loan to CWS and, given DAWASCO's poor financial performance, it would not be able to repay its sub-loan for some time. To alleviate the burden on DAWASA, the international lenders had suggested that the sub-loans be converted to equity and debt be rescheduled. GOT preferred not to take any action with regard to CWS' sub-loan, as it still hoped to collect the damages awarded by UNCITRAL. The Ministry of Finance agreed to postpone initial repayments for two years until July 2010. In June 2010, DAWASA again requested that the CWS sub-loan be converted to equity. Still unable to service its debt, it also requested that the interest be reduced to five percent and that debt repayments be rescheduled again until July 2013. These results were disappointing since the achievement of financial viability was one of the major objectives of the restructuring of the services and of the DWSSP.

A tariff study that was initiated in 2009 examined the need and justification for tariff increases and for restructuring the sharing of tariff revenues, but it was clear that tariff increases alone would not be sufficient or justifiable. Cost control and improvements in operational efficiency would have to be part of the strategy to improve financial performance.

7

Regulation

7.1 The Interim Regulator

The Minister of Water served as Interim Regulator during the entire period of the Lease Contract with CWS and the first year of DAWASCO's Lease Contract. During that period its key regulatory actions included the approval of the tariff indexation for 2004/2005 and the decision to defer the approval of the tariff indexation for 2005/2006 until EWURA began to function. Though the Lease Contract gave the Regulator a role in resolving disputes over tariffs, the Minister's involvement in the renegotiation and termination of the contract with CWS went beyond its regulatory mandate. Had DAWASA and CWS called upon the Expert Panel as foreseen in the contract, they might have been able to reach a more satisfactory outcome. Instead, rather than invoking the Expert Panel, CWS appealed to the Minister, apparently hoping for a political settlement.

7.2 EWURA's Regulatory Authority

EWURA began to regulate energy and water utilities in mid-2006. Its main role with regard to water supply and sewerage services is to approve—or disallow—changes in tariffs and approve codes governing utility-customer relations. It also educates and consults with customers and resolves customer complaints not resolved by the utilities through its Consumer Consultative Council. EWURA considers service quality and performance in making tariff decisions and may require utilities to improve quality and performance as a condition of tariff revisions. By 2009, EWURA was regulating 20

regional water and sewerage authorities, 101 district and small town water and sewerage authorities and several bulk water suppliers. In 2010, it began to take an active role in the regulation of the retail prices charged by kiosk operators and in the registration of private water tankers.

EWURA Guidelines issued in June 2009 specify rules and procedures for tariff applications and a formula for calculating revenue requirements. There is no provision for routine annual indexation of tariffs, the implication being that indexation is treated like any other tariff revision and is subject to the same application process. The absence of detailed rules for calculating tariffs allows regulated entities some latitude in proposing tariffs, and EWURA enjoys substantial discretionary power in determining whether to approve the proposals.

7.3 EWURA's Tariff Decisions

While the annual indexation of the tariff which was foreseen under the terms of the Lease Contract was implemented as expected in 2004/05 when the Minister was Interim Regulator, it was not routinely permitted after EWURA began to function. EWURA's approach to annual indexation of tariffs was controversial because it was considered by many to be at odds with the terms of DAWASA's Development Contract and DAWASCO's Lease Contract. The latter clearly distinguishes between annual adjustments to reflect changes in price and foreign exchange indices, and periodic revisions of tariffs to reflect changes in economic or technical operating conditions. Appendix K specifies the indexation formulas for the three components

of the tariff and Article 35.2 specifies that the indexation formula shall be applied to the Operator Tariff on the commencement date and annually thereafter. Article 40 outlines the conditions under which a review of the tariff may be undertaken to take into account changes in economic and technical conditions and verified base data. It also specifies that any review of the Operator Tariff is without prejudice to the Operator's right to require the application of the indexation formula adjustment. This seems to imply regulatory discretion in approving real changes in the tariff but very little, if any, discretion in approving the annual indexation—other than to verify that the formulas have been applied correctly.

In June 2005, DAWASA submitted a request to the Interim Regulator for the annual tariff indexation for the year 2005/06 and, in January 2006, applied for a real increase in the tariff that was foreseen under the terms of DAWASCO's Lease Contract. The Minister, anticipating that the newly established EWURA would commence functioning earlier than it actually did, deferred a decision on both. A new application for both the indexation and the tariff increase was submitted to EWURA in May 2006 and was approved in July for 2006/07. For the years 2007/08 and 2008/09, EWURA refused DAWASA's request for tariff indexation, citing the poor performance of the services. In addition, in its 2008/09 application, DAWASA had failed to submit an updated basis for calculating flat tariffs for unmetered customers. In fact, DAWASA and DAWASCO were unable to produce a reliable basis for estimating consumption by unmetered customers because of the lack of sufficient bulk and zone metering.

After the 2008/09 decision, DAWASA and its international lenders argued that an indexation was not, strictly speaking, an increase in the tariff and was intended to be automatic under the terms of the Lease Contract. On this basis DAWASA appealed its case in Tanzania's Administrative Court, but the latter ruled in

favor of EWURA. Since EWURA did not recognize the concept of routine annual indexation of tariffs, each annual request for indexation took on the characteristics of a full tariff review in which the operator's performance became a determining factor. In preparing its application for indexation for 2009/10, DAWASA was diligent in following EWURA's Guidelines and in addressing the inadequacies in its own and DAWASCO's performance. EWURA approved the indexation in July 2009. This resulted in a 30 percent overall increase in the customer tariff that took into account the price indices for previous three years. In its decision, EWURA required DAWASA and DAWASCO to increase the number of metered connections to 104,000, distribute Customer Codes of Practice, develop a plan for reducing unaccounted-for water and initiate a pro-active program of customer outreach. As the discussion of DAWASCO's performance in Section 6 showed, these requirements represented significant but achievable targets. It was agreed that a more complete tariff study would be undertaken as a basis for the 2010/11 tariff proposal.⁴⁶

The advantage of annual indexation is that it allows tariffs to be maintained at their real value without sudden large increases that can be politically difficult. Because tariffs were not indexed during 2007–2010 their real value actually decreased but, while the 30 percent increase only restored customer tariffs to their real 2006 level, it was likely to be perceived by customers as a very large increase. Such a jump in the tariffs could have had a negative effect on demand and collections but that did not in fact appear to happen—perhaps because demand still outstripped DAWASCO's ability to deliver water to customers and tariffs were still far lower than those of alternative suppliers. Appendix A, Table A1 shows the evolution of nominal and real tariffs over the period 2002/03–2009/10.

⁴⁶ EWURA Order No. 09-008, 10 July 2009.

8

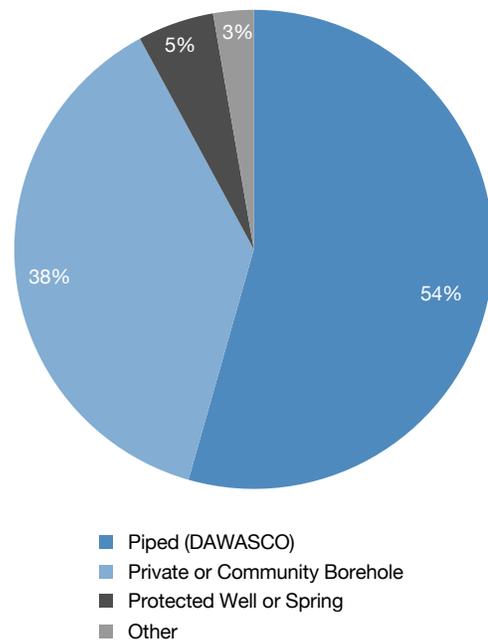
Coverage and Access of the Poor to Service

8.1 Results of the NBS Impact Surveys: Coverage and Availability

The National Bureau of Statistics carried out a baseline survey of the DAWASA service area in February 2006 and a follow-up survey in November 2009. Data were also available from an NBS Household survey in 2002. The stated objectives of the 2006 and 2009 surveys were to determine the sources of water supply used by the population, the locations where they obtained the water, the reliability of supply, quantities of water used, prices paid, existence of sewerage and willingness and ability to pay.⁴⁷ (The surveys distinguished between *sources*, e.g., piped, borehole, well, spring, surface source, etc., and *locations where water was obtained*, e.g., own house or yard, neighbor's house or yard, kiosk, institution, or vendor). Despite the stated objectives, the survey report did not present information on quantities of water used by any of the households, or prices paid for water from kiosks or other alternative suppliers.

With regard to source, the results showed that, in 2009, 54 percent of households in the service area had access to piped water supply from DAWASCO as their main source of drinking water. This percentage represented a significant decrease from 73 percent in 2002, and 60 percent in 2006 and was far below the DWSSP end-of-project target of 80 percent. The decrease was due to the combined effect of population growth, inadequate growth in the number of connections and a deliberate policy on the part of DAWASA to introduce borehole-based water supply for communities that were

Figure 4 Household Access to Water from Different Sources

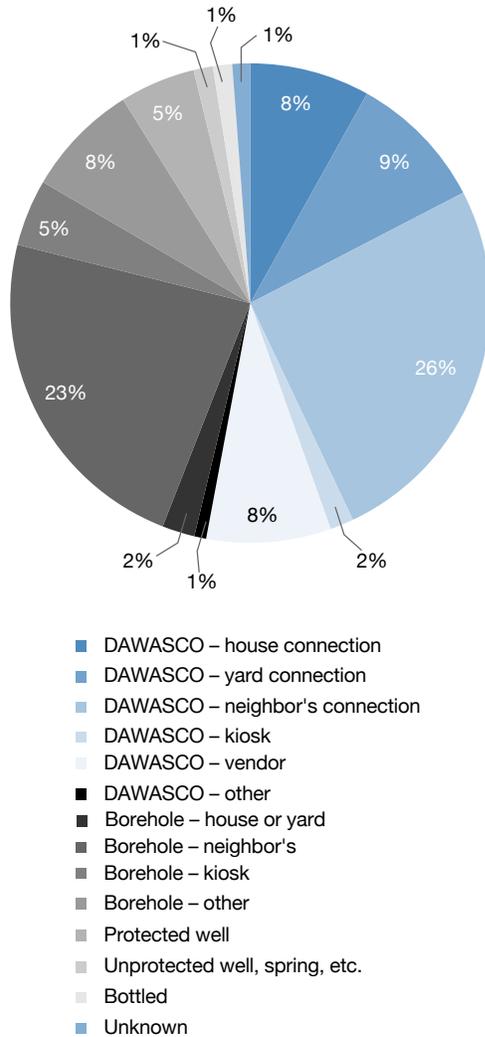


Source: Tanzania, National Bureau of Statistics, Follow-Up Survey on Impact Assessment of the DWSSP, 2009.

not within reach of the network. Borehole-based community schemes were initiated in the late 1990s and were scaled up through the CWSSP.

⁴⁷ National Bureau of Statistics, *Baseline Survey on Impact Assessment of the Dar es Salaam Water Supply and Sanitation Project*, Report, December, 2008; and *Follow-Up Survey on Impact Assessment of the Dar es Salaam Water Supply and Sanitation Project, 2009*, Final Report, May 2010. (Some of the figures presented here have been derived on the basis of data presented in the survey reports.)

Figure 5 Household Access to Water by Source and Location, 2009



Source: Tanzania, National Bureau of Statistics, Follow-Up Survey on Impact Assessment of the DWSSP, 2009.

Most of the remaining 46 percent of households that did not use piped water as their primary source of drinking water got water from boreholes or protected wells. Access to improved water as defined by the World Bank Water and Sanitation Sector Board is relatively high at about 83 percent.⁴⁸

Detailed data on the sources and locations of water used by the surveyed households in

2006 and in 2009 are presented in Appendix A, Tables A2(a) and A2(b).

With regard to the location where piped water was accessed, in 2009 about 17 percent of households had a house connection or yard tap (up from 11 percent in 2006). About 26 percent of households reported they bought piped water from neighbors (down from 35 percent in 2006). Another eight percent bought piped water from vendors (down slightly from 10 percent in 2006). Less than two percent of households got DAWASCO piped water from a kiosk (double the 2006 share of less than one percent) and about one percent got DAWASCO piped water from other locations.

Regarding the reliability and continuity of supply, in 2009, about 67 percent of households that had in-house connections reported that water flowed daily. On days when water was available, 80 percent of households with in-house connections reported that it flowed for six hours or more. This represented a considerable improvement since 2006. However, frequency and duration of supply for yard taps was considerably lower than for house connections. Only 37 percent of households with yard taps reported daily availability and, when water was available, only 59 percent of households with yard taps got water for six hours or more. (See Appendix A, Table A3)

8.2 Kiosks

In November 2010 DAWASA reported that 294 new kiosks had been built with DWSSP funds (other than those built under the CWSSP, which is discussed below) and all were receiving water—though some depended on tanker supply. Assuming an average of 500 people was served

⁴⁸ Improved water includes water from piped service, boreholes and protected wells, which is available in the house or yard, or from a kiosk, but not from mobile vendors. It excludes bottled water.

by each kiosk, about 124,500 people could have been served by these kiosks, but it was impossible to confirm this number or to assess the quality of service at the kiosks because no beneficiary survey was conducted in 2010. In November 2009 DAWASA had reported that 169 kiosks were functioning (potentially serving about 84,500 people) but the NBS survey conducted that month found that only 1.6 percent of households (the equivalent of about 54,000 persons) reported using DAWASCO-supplied kiosks as their primary source of drinking water.⁴⁹ Another 4.5 percent of households (about 152,000 people) used kiosks that sold water from boreholes which could have been either privately-owned or part of CWSSP schemes. For a quarter of of kiosk customers, water was available for up to 9 hours per day. For 60 percent it was available for 10 to 14 hours per day. The NBS survey found that 40 percent of households using kiosks reported that there was no congestion or that it seldom occurred; 49 percent reported that congestion occurred sometimes and 11 percent reported that it was common. The survey report did not distinguish between DAWASCO-supplied kiosks and other kiosks as regards number of hours water was available.⁵⁰

A WaterAid-funded study carried out in 2009 suggested that finding appropriate sites for kiosks was difficult and, as a result, a large percentage of kiosks were located on private property. In such cases, the owner of the property was usually appointed as manager—a situation which the study suggested might make it difficult to replace a poorly performing manager. The study also reported that long lines tended to form at the kiosks that had the most reliable supply.⁵¹

Until 2010, the price of water sold at DAWASCO kiosks was not regulated. DAWASCO sold water to the kiosk operators at the lifeline rate (the equivalent of Tshs 12.74 per cubic meter at the 2009/10 tariff). Kiosk operators typically sold it for about Tshs 30 per 20 liters, covering their own management costs with the

difference. At 2.4 times the lifeline rate, this was in line with the original expectations of project designers. However, when water was not available from DAWASCO, some kiosk operators resorted to buying tanker water which cost considerably more and had to be resold at a considerably higher rate than water bought from DAWASCO. In mid-2010, EWURA issued an order limiting the price of water sold at DAWASCO kiosks to Tshs 20 per 20 liters (1.6 times the lifeline rate). Of this, DAWASCO could retain Tshs 12.74 (i.e., the lifeline rate) and the remaining Tshs 7.26 would be used to construct and maintain kiosks. It appeared that DAWASCO would be required to pay kiosk operators separately from its other revenues.

While the number of functioning kiosks had increased and the availability of water was expected to continue to improve, it was recognized that increasing the number of well-managed kiosks and sustaining good service would require stepped up efforts. In 2010 DAWASCO established a Pro-Poor Unit that, among its other duties, would be responsible for the oversight of kiosk services.

8.3 First Time Connection Fund

Like CWS, DAWASCO found that the criteria for using the First Time Connection Fund made it difficult to apply. The criteria were

⁴⁹ A WaterAid survey conducted in March–July 2008 found that, of 184 kiosks that had been built to date, only 79 were receiving water from DAWASCO, and of those only 26 were operating. John Mfungo and Ben Taylor, *Mapping Public Water Kiosks in Dar es Salaam*, WaterAid Tanzania, September 2008.

⁵⁰ National Bureau of Statistics, 2010, *op. cit.* Tables 4.2 and 4.4.5.

⁵¹ Paula Tibandebage and Festo Maro, *Strengthening Inclusion in Investments in Urban Water and Sanitation Services: A Case Study of the DWSSP*, February 2010, pp. 23–27. (unpublished background study for the WaterAid-funded study, *Strengthening pro-poor targeting of investments by African utilities in urban water and sanitation – the role of the International Development Association of the World Bank*, July 2010.)

relaxed in 2007 to allow all connections in specified (primarily low-income) wards in Dar es Salaam to qualify. However, for all practical purposes, the fund was irrelevant during the period covered by this study, as all new connections made under the DCW were free but not targeted specifically at the poor. At the end of 2009, the Fund remained in a separate account and in mid 2010, DAWASCO began to use it to connect eligible households in a bid to improve commercial performance.

8.4 Community Water Supply and Sanitation Program

The Community Water Supply and Sanitation Program (CWSSP) funded small water supply and on-site sanitation facilities for communities within the DAWASA service area that were not likely to be reached by DAWASA systems in the near future. It was managed by DAWASA's Community Liaison Unit. CWSSP was the most successful pro-poor component of the DWSSP, though it too encountered a number of challenges. Three specialized non-governmental organizations (NGOs), Plan Tanzania, Water Aid and CARE International, were engaged by DAWASA to mobilize low-income communities and assist them to prepare grant requests and develop the capacity to manage the schemes following construction. The targeted communities (with populations ranging from about 2,000 to 20,000) were required to form Water Users Associations (WUAs) and contribute 5 percent of the cost of the schemes.

A number of challenges were encountered by the program. As is often the case, mobilization took longer than planned. The NGOs reported that, particularly during election years, representatives of the opposition tried to block the program, making mobilization of communities more difficult. As a result of this and delays caused by other factors, implementation took five years instead of the projected three years. Though most of the water supply

schemes were based on boreholes, seven depended on bulk water supply from DAWASCO and in a couple of cases start-up was delayed because DAWASCO had not completed the bulk water supply connections. Needless to say, such a situation disappointed the affected communities. In the large majority of cases, once the schemes were completed, they functioned well. However, the implementing NGOs reported that on-going training and support would be needed for WUAs because of frequent turnover in the executives and staff. To meet this need, DAWASCO's Pro-Poor Unit, once it became fully established, was expected to provide technical support to off-network community-based schemes, such as those constructed by CWSSP.

By December 2010, 50 small water supply schemes were completed, and DAWASA reported that all were operational. Ten sanitation facilities were constructed by WUAs with DWSSP funding, including public toilets for local markets and promotional EcoSan latrines. Once the schemes were completed, WUA's operated and maintained them and charged users for their use. CWSSP exceeded the original DWSSP estimate of 170,000 beneficiaries—by December 2010, DAWASA reported that 275,000 people were served by CWSSP water schemes. In addition to the new schemes funded by DWSSP, 35 existing schemes were rehabilitated by DAWASA and an additional 237,000 residents were said to have benefited from them.

8.5 Affordability of Service

Unfortunately the NBS survey did not provide data on the volume of water used and the amount households paid for water from sources other than the DAWASCO piped system. Information on the prices of water from alternative suppliers was reported by WaterAid.⁵²

⁵² *Ibid.* p. 30.

Appendix A, Table A4 compares the monthly cost and affordability of a basic supply of 30 liters per capita per day for a household of five persons from various sources. For a household with two minimum wages, a basic supply of water from a DAWASCO connection was quite affordable and, even for a very poor household with an income of about three quarters of one minimum wage, cost less than four percent of income. Unfortunately, as mentioned above, only about 17 percent of households had connections and the 83 percent that did not have connections paid considerably more than the DAWASCO tariff. For those that bought from DAWASCO kiosks, the basic volume would have been quite affordable for a household with two minimum incomes. A very poor household

would have been able to stay within the affordable limit of four percent of income if it consumed slightly less than half the basic minimum volume. The cost of water obtained from other suppliers was well above the four percent limit and well out of reach of the very poor. It is clear that a strategy to improve the affordability of water should focus on increasing connections and the number of conveniently located kiosks with bulk water from DAWASCO, and improving the availability of water at kiosks. A significant increase in the number of connections and well-managed kiosks would not only give more households access to affordable water supply, but would increase competition with households that sell water.

9

Conclusions and Lessons

The failure of the Lease Contract with CWS and the delays in achieving the objectives of the sector reform and the DWSSP were costly to all concerned, most especially the government and people of Tanzania, so it is appropriate to return to the questions posed at the outset of this case study and draw some lessons from the events and outcomes that have been reviewed. The most relevant findings associated with each question and the lessons that can be drawn are discussed below.

9.1 The Policy Environment

Was the policy environment appropriate for successful private participation and the subsequent public-public partnership?

The Tanzanian policy environment embodied in official policy statements, laws and political actions provided a reasonably good foundation for the sector reform and for the restructuring of institutional arrangements. GOT generally demonstrated a commitment to strengthening the autonomy and financial viability of service providers, although delays in GOT's payment of subsidies and contributions to equity created problems for DAWASA. Policy makers did not interfere in the decisions of EWURA despite pressure from international lenders. (The separate question of whether an independent regulator is appropriate in the context of a lease contract is discussed below.)

A few political actions complicated the situation with CWS, the most notable being the expulsion of the British managers of CWS in 2003. While the termination of the contract

per se was found to be justified, a more graceful departure of the private management would have been in everyone's interest and in keeping with Tanzania's international trade treaty with the U.K. As a result of this highly publicized and dramatic event and the failure of PPPs in other sectors, Tanzania's image as a country that supported private investment was at least temporarily tarnished and reinforced the erosion of public support for PPP.

In contrast to the deliberate preparation of the PPP, the events that followed the collapse of the PPP were not foreseen and suffered from inadequate policy preparation. The most notable problem was that following the replacement of the private operator with the public operator, DAWASCO, the principal-agent relationship between DAWASA and DAWASCO was undermined by the fact that both had the same owner (GOT), a situation that interfered with the channels of accountability that are normally created by a contract between two entities. While this was primarily an institutional issue, its resolution required policy action.

Lessons:

- Preparation of the policy environment for sector reform and PPP should include a strategy for dealing with the failure of the PPP and plans for quickly putting in place a new, if only temporary, arrangement and for developing a longer-term solution.
- Sector reform efforts can be derailed or undermined by a weak accountability framework—particularly when a public-public contractual relationship exists.

9.2 Consultation with Customers

Was the design of the reform and the lease contract guided by adequate consultation with existing and potential customers and an assessment of willingness to pay?

Surveys carried out prior to the transaction showed that, because of DAWASA's dismal performance, there was broad support for PPP, but no willingness-to-pay study was undertaken. A 2002 survey of households reported that 73 percent of the city's population was using piped water but DAWASA was not being paid for most of it and it was not clear whether or how much households were paying. It was assumed that willingness-to-pay and demand for lower-cost piped water would be high among residents who were paying high rates for water from neighbors and vendors. For them the key requirement was that a connection be affordable and that reliable services be available. However, households and other vested interests that were stealing water could be expected to resist a more disciplined commercial approach. DAWASCO has recently made a big push to increase connections and improve reliability of supply but it remains to be seen whether it will pay off. Surveys carried out by the National Bureau of Statistics in 2006 and 2009 to assess the impact of the DWSSP provided information on access to service, but they did not throw much light on attitudes and willingness-to-pay. The fact that all new connections made under the DCW were free also makes it difficult to assess effective demand.

Lessons:

- A more strategic approach that linked expansion and connection programs to household preferences and willingness-to-pay might have paid off.
- Consultations should be conducted when it is certain that services can be provided. If kiosks are established in an environment where there is no water to

sell, consumers are likely to devise coping mechanisms (e.g. illegal connections) which undermine the utility.

9.3 Measures for Serving the Poor

Were appropriate measures for serving the poor incorporated?

Three mechanisms were designed to improve services for low-income households and communities: the First Time Connection Fund, the construction of kiosks, and CWSSP. Of these the most successful was the CWSSP, which supported the construction of 50 small water supply schemes (most based on boreholes) and 10 sanitation facilities in communities that were unlikely to be reached by DAWASA systems in the near future. NGOs invested considerable time in mobilizing communities, organizing WUAs, creating management capacity and providing feedback to DAWASA. In fact, it was found that more time was needed for these activities than had originally been allowed. Political factions that opposed the incumbent government sometimes disrupted progress. It was also found that on-going support was needed after the water and sanitation schemes began to operate because of frequent turnover in the executives and staff of the WUAs. Overall CWSSP was relatively successful. It provided useful lessons and DAWASA hoped to expand the program.

While 294 kiosks were constructed, few if any had water 24 hours per day and some depended on tanker-supplied water. Unfortunately no survey was conducted after the completion of the kiosks and the improvements in the availability of water that occurred in mid-2010 so it is not possible to evaluate the the quality and availability of service. EWURA's recent decision regarding tariffs to be charged kiosk users was an indicator of an increasing awareness of the need to expand affordable services to the poor. However, the significant percentage of

households (26 percent in 2009) that bought water from neighbors would not benefit from this decision. In addition, this action left DAWASCO responsible for the cost of managing kiosks, and it remained to be seen how management would be funded and whether it would be satisfactory. The first priority seemed to be to ensure reliable water supply.

The First Time Connection Fund proved difficult to use and was somewhat irrelevant initially because all new connections made under the DCW were free, though not necessarily targeted at the poor. The collected funds remained available and could be used by DAWASCO's Pro-Poor Unit once it becomes fully functional.

Going forward, improvements in service for the poor will depend on DAWASCO's improving the availability of water generally and on the Pro-Poor Unit's ability to mobilize resources and promote the effective management of kiosks.

Lessons:

- Adequate attention is unlikely to be given to establishing effectively managed kiosks and connecting poor households during the turn-around of a water utility when management must focus on rehabilitation, reducing water losses and overall commercial performance. Creating a dedicated unit to manage the CWSSP worked well in DAWASA and might improve DAWASCO's attention to the poor.
- Better consultation with low-income households, evaluation of housing conditions and an assessment of willingness to pay might have resulted in the design of a more practical and effective First Time Connection program.
- When introducing community-managed schemes, NGOs can play an important role in ensuring adequate consultations and appropriate designs. Sufficient lead

time for the mobilization of communities should be allowed and strategies to avoid or dispel the disruptive behavior of political factions are needed.

- Completion of community-managed schemes should be coordinated with complementary components, such as electricity service or the supply of bulk water to those that depend on it. Alternatively, communities should be informed in advance that there may be a delay in delivery of essential components.
- On-going training and support for WUAs after completion of the schemes is required to resolve technical problems, strengthen skills and make up for frequent turnover in the executives and staff of Water User Associations. In urban communities with high rates of turnover and weak community cohesion other management models may be needed.

9.4 Strategies for Dealing with Vested Interests

Were vested interests identified and were strategies developed to bring them onboard?

During preparation and implementation, more attention could have been paid to motivating changes in the behavior of vested interests and/or bringing them onboard. Eventually the illicit behavior of staff, the unregulated water tanker industry and large-scale theft of water had to be addressed. In lease contract arrangements, private operators typically attach a high priority to culture change among staff. They usually create controls and performance incentives soon after taking over operations, but CWS did not take effective action early in its contract. Once DAWASCO assumed operations, it reduced the excess staff, introduced performance incentives and eventually installed commercial management systems that practically eliminated illicit activities among staff. Other vested interests

received less attention until much later. In the last year of its tenure, CWS had begun to develop a constructive relationship with tankers, but this initiative was not continued by DAWASCO. In 2010, in response to high level political pressure, EWURA, DAWASA and DAWASCO were looking into ways of regulating tankers and promoting a collaborative relationship with them. The unexplained delay in the completion of bulk metering and initiation of an effective water loss reduction program, particularly along the transmission lines, allowed illegal use of large volumes of water to thrive for many years. In 2009 DAWASCO began to make some progress in identifying and closing down large-scale offtakes.

Lessons:

- Vested interests need to be assessed early in the reform. Explicit strategies should be developed and supportive actions to be taken by each of the key players (policy makers, asset holder, operator, regulator, police, etc.) should be identified.
- Proven experience in introducing culture change and using performance incentives and other controls to eliminate illicit behaviors and improve efficiency should be a pre-requisite for managers (whether public or private) who are hired to turn around a non-performing water supply and sewerage utility.
- The completion of a comprehensive customer survey and introduction of billing and collection systems that enable management to control rent-seeking behaviors are high-priority elements of a strategy to improve the performance of water utilities and cannot be neglected.
- Identifying and eliminating large-scale illegal water use are also essential elements of a turn-around strategy and require the cooperation of political authorities, regulators, police and the utility.
- Working with tankers and other private alternative water service providers to

develop light-handed or self-regulation and constructive relationships is eventually necessary for both political and operational reasons.

9.5 Selection Process and Consultation with Bidders

Was the selection process well-managed, fair and transparent? Were potential bidders for the contract with a private operator consulted and their inputs taken into account in designing the transaction?

During preparation, potential bidders were consulted several times but the outcome was not particularly beneficial. Perceptions of unfair treatment were raised by all the bidders. Saur and Vivendi had the impression that PSRC and GOT were responsive to one bidder while ignoring the concerns of others, while Biwater claimed that the World Bank favored the French. The latter allegation was damaging and contributed to the Divestiture Committee's resistance to visit successful lease contract cases in francophone Western Africa. Whether valid or not, these allegations and the behaviors that prompted them undermined the quality, transparency and competitiveness of the process and significantly raised the cost of the transaction. In hindsight, the contentious selection process seemed to presage the difficulties that followed. PSRC's failure to take seriously the requests for risk mitigation by two highly experienced potential bidders resulted in their not submitting bids. As a result, in the final round only one bid was received – from the least experienced bidder, BGT. Subsequent events showed that the other bidders' concerns were valid.

BGT made several mistakes in its bid. Its bid was overly optimistic. It did not take advantage of GOT's offer to fund retrenchment of staff. Finally, the assumptions underlying its bid were worse than those used by DAWASA, making its overly optimistic projections less credible and

also making it difficult for CWS to subsequently justify a material change in circumstances.

Lessons:

- Transaction preparation teams should avoid letting a potential bidder take control of the process and meticulously avoid even the appearance of preferential treatment of any of the bidders.
- Prequalification criteria should be appropriate to the challenge of the undertaking and, once adopted, should be enforced.
- Transaction preparation teams should consult meaningfully with all qualified bidders and take their concerns into account.
- The link between a bidder's assumptions and a Material Change in Circumstances should be clearly stated.

9.6 Appropriateness of the Lease Contract Model

Was a lease contract, first with the private operator and subsequently with the public operator, appropriate to the context?

Many of the conditions that favor a successful lease contract already existed in Dar es Salaam in the late 1990s and others could have been incorporated into the lease contract with the private operator. While some observers have argued that the lease contract should have been preceded by contracts to clean up the customer data base and create an asset registry, others cite the successful implementation of lease contracts in similar situations where base data was equally unreliable. One thing is clear: not all the pre-conditions listed in Section 3.2 of this report were addressed adequately or sustained. The failure of the Lease Contract with CWS might have been avoided had the drafting of the lease contract and the selection process been managed better. In particular, some of the

bidders complained that the draft contract did not protect the operator from risks over which it had little or no control. Another condition that was neglected was the requirement that a lead professional partner own a predominant share (70 to 80 percent) of the operating company and be able and willing to contribute the necessary equity/working capital. The Lease Contract with CWS failed in part because the lead professional partner did not seem to be fully committed to the operational aspects of the contract and failed to appoint a management team that was capable of dealing with the operational challenges. A key mechanism for enforcing the contract and controlling DAWASA's risks, the performance bond, proved inadequate because it could not be called in part. A key mechanism for resolving disputes, the Expert Panel, was not invoked because CWS and the Interim Regulator circumvented them.

In the current public-public context, the Lease Contract is dysfunctional because the asset holder is not able to hold the Operator accountable. DAWASCO was created as an emergency response to the collapse of the contract with CWS. In that context, there was little time to consider whether the DAWASA-DAWASCO arrangement would be optimal. In fact it was considered to be a temporary arrangement by many of the stakeholders. The lack of a principal-agent framework undermines the emergence of effective strategic corporate direction, management incentives and accountability. This brings the current separation of asset management from operations into question. At the very least, repair of the principal-agent framework is needed.

Lessons:

- Preparation of a lease contract transaction should be guided by careful consideration of the conditions that have been associated with success elsewhere and adequate attention to sustaining those conditions throughout the contract.

- The lead professional partner's lack of adequate prior experience and/or its failure to take a predominant share in the operating company may result in a failure to mobilize the managerial and financial resources necessary to ensure the success of a lease contract.
- A lease contract between two public entities is not likely to be successful unless there is an effective principal-agent framework. Examples from other countries seem to indicate that public-public arrangements have been successful when the entities involved were owned by different levels of government or where one was a subsidiary of the other. This subsidiary relationship should be respected by political and regulatory authorities.

9.7 Financial Viability and Allocation of Risks

Were the financial and operational projections and underlying assumptions realistic and reliable? Were the tariff level, sharing of revenues, financial terms and allocation of risks appropriate and did they allow for both partners to achieve financial equilibrium within a reasonable time?

The financial modeling carried out in preparation for the PPP was based on best estimates and existing data of questionable reliability. In fact, because of the weakness of the existing data on operational and commercial performance, many performance targets were not specified in the Lease Contract and some that were specified, such as the targets for water losses, were subject to revision after reliable base data had been collected. Even assuming that significant improvements in operational and commercial performance would be achieved during the first five years of the contract, cash flow from operations was expected to be negative in the early years and the

Operator's shareholders would have to contribute equity sufficient to keep the company solvent. In hindsight, it appeared that Biwater and Gauff's marketing personnel were not committed to the long-term operational objectives of the contract but were more interested in the short-term income from the PWP and the possibility of winning the large contract for rehabilitation of treatment works.

Though the conditions that could justify a tariff review were specified, the methodology to be applied to determine the change in tariffs was not specified. However, it was assumed that annual indexations would be made to reflect inflation and exchange rates and the annual indexation and the formulas to be used were also specified in the Lease Contract. Given the acknowledged weakness of the baseline data and the lack of a specified method for resetting tariffs to protect the financial equilibrium, it was a fairly risky undertaking. This was confirmed by the fact that two of the pre-qualified bidders found it too risky and did not bid. In addition, the financial soundness of BGT's bid was questioned by the World Bank team. In hindsight, it is not possible to determine to what extent the failure of the Lease Contract with CWS was due to misjudgments in the preparation process and to what extent it was due to CWS' management errors. Both undoubtedly played a role.

Risks to the Lessor were also not adequately addressed. When CWS encountered financial difficulties, it failed to remit Lessor Tariff revenues and to deposit First Time Connection Tariffs into the fund for that purpose. A major flaw in the arrangement was that the performance guarantee could not be called in part. As a result, DAWASA had to wait until CWS owed it the full amount of the guarantee. This delay in enforcing accountability contributed to the collapse of the contract. In addition, the fact that BGT was a joint venture of Biwater and Gauff shielded the two parent companies from risk. Although a World Bank review of the draft

lease contract had recommended making the bidders' parent companies responsible for the performance guarantee, that advice was not heeded.

Lessons:

- When preparing a PPP on the basis of unreliable existing data, it is important not only to recognize the need for verification and resetting of performance targets, but also to provide protection against the financial consequences of the Operator's not being able to achieve operational and commercial targets that were based on faulty base data.
- In situations where losses will be incurred in the early years, the commitment of the lead professional partner to the long-term objectives needs to be confirmed.
- An alternative approach that is favored by the international private operators but not yet widely tested is to structure PPP in two phases with a less risky management contract for the first 18 to 36 months, during which time the base data are established, and a transition to the riskier lease contract thereafter.
- To protect Lessor Tariff revenues from misappropriation, all revenues should be deposited into a joint lessor/operator account and allocated by a mechanism that protects each party's rights.
- Special purpose revenues (such as the First Time Connection Tariff) should be placed in a trust with clear disbursement rules.
- A detail such as the inability to call a performance bond in part can result in delays and the worsening of a dispute to the point that it is irreconcilable and the cost of failure extremely high.
- The feasibility of obtaining parent company guarantees for the performance of an operator needs to be examined.
- Likewise, sovereign guarantees to protect the operator from regulatory failure

or political action that undermines the sustainability of a contract may also be used to balance risks.

9.8 Tariff Setting Framework

Was the tariff setting framework appropriate for the lease contract framework? Did it provide predictability, transparency and credibility?

Private operators who seek predictability and protection from political interference and regulatory failure are likely to be wary of regulators with a high degree of discretion. Two of the potential bidders for the lease contract in Dar es Salaam were concerned that the new regulator, EWURA, would have the authority to make tariff decisions that were inconsistent with the terms of the Lease Contract, thus rendering tariff-related clauses of the Lease Contract meaningless. Because of these concerns and others, those firms did not submit bids. In fact, EWURA, did not begin to function during the two-year period when CWS was the Operator. The Minister of Water, acting as Interim Regulator, honored the terms of CWS's Lease Contract. However, after DAWASCO became the Operator and EWURA assumed its functions, it did indeed make tariff decisions that seemed to be at odds with the intent of the Lease Contract. EWURA argued, exactly as the two non-bidders had feared, that the Lease Contract was part of a larger legal context in which EWURA had the authority to disallow tariff adjustments, even the annual indexation.

EWURA claimed that its decisions motivated DAWASA and DAWASCO to improve their performance, and there was some evidence that is true. It is a positive development when a national institution takes the lead in forcing service providers to be accountable—despite complaints from influential institutions such as the World Bank. This demonstrates that the institutional framework is maturing. On the

other hand, EWURA's decisions revealed the inconsistency between the lease contract model and the regulatory model.⁵³ This inconsistency is certain to be a barrier to attracting private operators for a future lease contract unless it could be alleviated in some way. In fact, the existence of a regulatory body does not preclude a lease contract. There are independent regulators in developing countries that function in a manner that is consistent with regulation by contract. The Water Regulatory Council in Mozambique is an example.

Since EWURA has broader authority to promote competition and efficiency and promote the interests of consumers, it could get more involved in addressing vested interests that impede the effectiveness of the utilities. Evidence from elsewhere (e.g. tanker associations in Ghana) shows that certain vendors can be recognized as a legitimate and necessary component of service delivery and brought into the formal sector through contracts with the utility or light-handed regulation.

Lessons:

- The regulatory framework and the chosen management model should be mutually consistent. Independent regulation can be consistent with the lease contract model if the regulator recognizes the lease contract as an essential element of the regulatory framework and endorses the tariff adjustment and other regulatory provisions of the contract. Including a pre-specified methodology for revising tariffs that the regulator endorses might also reduce the regulatory risks.
- Many regulatory and PPP experts believe that in a lease contract framework the regulator should set or approve the overall Customer Tariff but not the Operator Tariff which should be set by agreement between the asset holding company (lessor) and the operator (lessee). This is consistent with the principle of the

operator's being subsidiary to the asset holder.

- Other mechanisms to alleviate regulatory risk can also be used, for example, a guarantee mechanism through which the operator would be compensated for any loss of revenue due to a regulatory decision that is inconsistent with the terms of its contract.

9.9 System for Monitoring Operator's Performance

Was a rigorous system for monitoring the performance of the operator established?

While CWS was required to submit a number of reports to DAWASA and the Regulator at specified intervals, the reporting regime reportedly broke down early in the contract. One of the most serious lapses was CWS' failure to determine values for the baseline data. In addition, DAWASA did not appear to have established a rigorous system for recording and verifying performance data during the period of CWS' contract and could not provide complete data for the purpose of this case study. In fact, the weakness of the reporting and data management systems persisted throughout the period under review. Four years after the departure of CWS, management control over the reporting and verification of key performance data was lacking. This contributed to DAWASA's inability to hold DAWASCO accountable and to the overall weakness of management and strategic planning. However there was hope for improvement. A shared system for reporting and monitoring data among EWURA, DAWASA and DAWASCO was supposed to become functional in 2010.

⁵³ It is noteworthy that those who designed the lease contract model seemed to think that the role of the regulator would be to *review and advise* on the adjustment and revisions of the tariffs. See World Bank, Proposed DWSSP Preparation Mission, September–October, 1998, *Aide Memoire*, pp. 4, 8.

Improvements were needed in other contributions to the database as well. The impact surveys carried out by NBS on behalf of DA-WASA were not well-designed and the data collected were not presented and analyzed in a meaningful way. Independent auditors frequently reported that the operational data reported by the Operator were unreliable, but failed to provide more reliable estimates. In short, the audits and surveys seemed to have been carried out in a perfunctory manner to comply with laws or with international lenders' requirements rather than to produce useful information.

Lessons:

- The performance of water and sewerage services is not likely to improve in the absence of rigorous data reporting and management systems that are used to enforce performance standards and guide management decisions.
- Audits and impact surveys should be designed to produce meaningful data and analysis that can be used by managers and planners. While there are good arguments for allowing the national statistics entity to carry out impact surveys, a water sector professional should be engaged to participate in the design of surveys and analysis of the data.

9.10 Conflict Resolution Mechanisms

Did the legal contracts include procedures and conditions necessary to ensure smooth relationships and resolve disputes?

The Lease Contract with CWS contained several mechanisms for resolving disputes, reviewing tariffs and performance targets and for the termination of the contract. However, CWS tended to ignore the mechanisms and, instead, appealed to the Minister of Water in hopes of a political solution. The fact that the Minister

of Water was acting as Interim Regulator with regard to Tariffs seemed to encourage this approach and the Minister did not limit his intervention to tariff issues. This undermined the use of the conflict resolution mechanisms provided in the Lease Contract. In fact, the Expert Panel should have been used for all disputes short of Arbitration (including disputes over the Operator Tariff). Selection of the panel prior to the effectiveness of the contract might have expedited the process.

Unfortunately, the parties were not able to resolve their differences in a timely manner and the Operator's performance worsened to the point that, ultimately, political authorities became impatient and intervened, citing the need to ensure the provision of essential services. The disputes then were taken to two international arbitration bodies, UNCIT and ICSID. Though these proceedings brought a certain degree of closure, and minor moral victories for both parties, they were extremely costly to both sides and neither collected any monetary damages. CWS was not awarded any and GOT has been unable to collect the amounts owed by the bankrupt CWS.

Lessons:

- To the extent practical, steps necessary to initiate a dispute-resolution mechanism, such as the selection of an Expert Panel, should be completed in advance of contract effectiveness.
- Political and regulatory authorities should avoid getting involved in disputes and require parties to use the pre-specified dispute-resolution mechanisms.
- All parties have an interest in acting sooner rather than later to enforce accountability, invoke dispute resolution mechanisms and resolve disputes before they become irreconcilable and extremely costly.

9.11 The Role of the World Bank

Could or should the World Bank have managed its support for the transaction differently?

The role of the World Bank is to promote the success of the investment operations and associated transactions that it supports. It does this by (for example) working with implementing agencies to design and execute cost-effective and sustainable operations that promote economic development and benefit the poor, ensuring that principles of fair competition and transparency are honored, and bringing to bear its extensive experience to reduce the risks of failure. At the time the Dar es Salaam transaction was being prepared, the policies of GOT's international development partners led by the World Bank strongly favored PPPs. Several successful cases, including those in Western Africa, had created confidence that PPP could lead to significant improvements in the financial viability and quality of services everywhere. The Bank's preparation team tried to bring the experience of the successful cases to bear on the transaction and advised PSRC to address certain operator risks but, in the end, the team still had some misgivings about the viability of the Lease Contract with CWS. Despite these issues, World Bank no objections allowed the transaction to move forward. Since that time, the World Bank's enthusiasm for PPP has evolved in light of experience. The failure of several PPPs, examples of highly effective public operators and a growing appreciation for the role of small local service providers have led to the adoption of a more balanced policy of promoting the efficiency and financial viability of public operators while promoting a wide variety of forms of PPP where feasible.

Because of the difficulties that arose, the resources of World Bank teams were absorbed by the more highly visible matters such as the mediation of the dispute between DAWASA and CWS and, after that failed, the sustainability of

the DAWASA-DAWASCO institutional framework and the completion of DWSSP before the closing date. While significant attention was given to tracking the financial performance of DAWASA and DAWASCO and compliance with World Bank-mandated environmental and social safeguards, this case study showed that the measurement and verification of operational performance indicators, and service quality was somewhat neglected until close to the end of the DWSSP. Not only is this type of information essential for strategic management and sustainability but, in addition, accurate data on access to services is necessary for tracking the achievement of the Millennium Development Goals. In recognition of this, the World Bank Water and Sanitation Sector Board recently focused more attention on establishing consistent definitions of indicators and on the collection and analysis of data on access and service quality.

Lessons

- The World Bank should consider abandoning an operation to support PPP when the preparation process is marred by allegations of favoritism and controversial decisions such as the pre-qualification of bidders who do not meet the specified pre-qualification criteria.
- The current more balanced approach to promoting the efficiency of both private and public operators needs to be further refined by a better understanding of the conditions that favor positive outcomes for different types of institutional arrangements and more rigorous efforts to ensure that these conditions are created.
- Both international lenders and implementing agencies need to devote more sustained attention to monitoring and verifying meaningful indicators of coverage, affordability and service quality. This includes monitoring the design and validity of beneficiary surveys and using the results as a guide in planning.



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Appendix A

Detailed Tables on Tariffs, Access to Service and Affordability

Table A1 - Water Supply and Sewerage Tariffs in Dar es Salaam, 2002/03 to 2009/10

Water Supply Tariff for Metered Connections (Tshs per cubic meter) ^{1,2}										
	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10		
Operator Tariff	322	337	359	359	488	488	488	637		
Lessor Tariff	86	89	121	121	137	137	137	176		
FTDWSCF Tariff	24	25	26	26	29	29	29	37		
DOMESTIC TARIFF (up to 5m ³ and at kiosks)	322	337	359	359	488	488	488	637		
TOTAL DOMESTIC WATER TARIFF (over 5m ³)	432	451	506	506	654	654	654	850		
NON-DOMESTIC WATER TARIFF	725	725	725	725	725	725	725	850		
Sewerage Tariff (Tshs per cubic meter)³										
	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10		
Operator Tariff	100	106	111	111	133	133	133	174		
Lessor Tariff	29	30	36	36	41	41	41	53		
TOTAL SEWERAGE TARIFF	129	136	147	147	174	174	174	227		
Price Index and Exchange Rate with US Dollar										
CPI Inflation Rate ⁴	2003	2004	2005	2006	2007	2008	2009	2002-2009		
Exchange rate of Tshs/US\$1.00	3.5	4.7	5.0	7.3	7.0	10.3	12.1	63.1		
		999	1089	1029	1251	1255	1178	1293		

¹ Tariff rates were obtained from DAWASA and from EVI/URA Order No. 09-008.

² For non-metered connections the tariffs are applied to an assessed water consumption that varies from 20 m³ to 45 m³ per month depending on the service zone.

³ The sewerage tariff is applied to 80 percent of the water supply consumption.

⁴ United Republic of Tanzania, National Bureau of Statistics, Tanzania in Figures 2005 and Tanzania in Figures 2008; and Bank of Tanzania Monthly Economic Report January 2010.

Table A2 (a) – Percentage of Population Using Water from Selected Sources and at Selected Locations in Dar es Salaam, 2006

Type of Water Source	Location of Access to Water							Total using each source
	In own house	In own yard	Neighbor's house/yard	Kiosk	Institution	Mobile vendor	Other	
Piped (DAWASCO or Community)	5.4	5.3	34.8	0.7	3.0	9.9	0.3	59.6
Borehole	0.6	1.8	14.2	5.1	1.7	2.7	0.1	26.2
Protected Well	0.1	1.5	3.4	1.0	0.5	0.6	0.0	7.1
Unprotected Well	0.0	0.3	1.2	0.0	0.0	0.0	0.1	1.6
Protected Spring	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
Unprotected Spring	0.0	0.1	0.2	0.0	0.0	0.0	0.8	1.0
Surface Source	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3
Covered Rainwater Tank	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1
Bottled Water	0.0	0.0	0.0	0.0	0.0	0.6	0.1	0.7
Unknown	0.1	0.0	0.0	0.0	0.0	3.4	0.0	3.4
Total with access at each location	6.2	9.0	53.9	6.9	5.1	17.2	1.7	100.0

Source: United Republic of Tanzania, National Bureau of Statistics, Baseline Survey on Impact Assessment of the DWSSP (2006), Report, December 2008.

Table A2 (b) – Percentage of Population Using Water from Selected Sources and at Selected Locations in Dar es Salaam, 2009

Type of Water Source	Location of Access to Water							Total using each source
	In own house	In own yard	Neighbor's house/yard	Kiosk	Institution	Mobile vendor	Other	
Piped (DA-WASCO or Community)	8.1	9.3	25.6	1.6	0.7	8.4	0.1	53.8
Borehole	0.7	1.5	23.0	4.5	3.4	3.0	1.3	37.3
Protected Well	0.0	0.4	2.0	0.6	1.4	0.4	0.3	5.1
Unprotected Well	0.0	0.0	0.5	0.0	0.1	0.2	0.3	1.1
Protected Spring	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Unprotected Spring	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
Surface Source	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
Covered Rain-water Tank	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Uncovered Rainwater Tank	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bottled Water	0.0	0.0	0.0	0.0	0.0	0.4	0.9	1.3
Unknown	0.0	0.0	0.0	0.3	0.0	0.9	0.1	1.2
Total with access at each location	8.8	11.3	51.1	6.9	5.7	13.2	3.2	100.0

Source: United Republic of Tanzania, National Bureau of Statistics, Survey on Impact Assessment of the DWSSP, 2009, Draft: Report, January 2010.

Table A3 - Reliability and Duration of Piped Water Supply Service in Dar es Salaam, 2006 and 2009

Frequency of Water Availability	Percentage of Households With Each Type of Connection			
	In House Connection		Yard Tap	
	2006	2009	2006	2009
Daily	39.5	66.9	44.9	37.3
Every 2–3 days	32.6	9.3	24.4	21.3
More than once a week	1.2	10.2	10.3	14.7
Once a week	3.5	0.8	9.0	4.7
Atleastonce or twice a month	1.2	0.0	2.6	5.3
Unpredictable	20.9	11.9	9.0	16.7
Never	1.2	0.0	0.0	0.0
Total	100.0	100.0	100.0	100.0
	In House Connection		Yard Tap	
	2006	2009	2006	2009
Duration of Water Flow When Available				
24 hours	n.a.	n.a.	32.5	32.0
6 or more hours	60.5	79.7	24.7	26.7
4–5 hours	11.6	5.1	10.4	14.0
Less than 4 hours	12.8	10.1	26.0	17.3
Unpredictable	15.1	5.1	6.5	10.0
Total	100.0	100.0	100.0	100.0

Source: NBS, DWSSP Impact Assessment Surveys, 2006 and 2009

Table A4 – Hypothetical Monthly Cost and Affordability of Basic Water Supply From Various Sources in 2009/2010

(Assuring 30 Liters per Capita per Day by Household of Five Persons)

	DAWASCO Connection	DAWASCO Kiosk	Tanker-supplied Kiosk	Neighbor	Vendor	Tanker (bulk)
Monthly Cost(Tshs)	2,914	6,862	22,875	11,438–30,875	57,187	16,013
Monthly Cost as Percent of Two Minimum						
Wages	1.4	3.3	10.9	5.4–14.7	27.2	7.6
Monthly Cost as Percent of Very Poor Household Income	3.9	9.2	30.5	15.3–41.2	76.2	21.4
Percentage of Households that get water primarily from this location	17.4	1.6	n.a.	51.1	13.2	n.a.

Notes and Sources:

Prices for water bought from vendors, neighbors and tankers are indicative, as no comprehensive survey has been carried out

Domestic water supply tariff of Tshs 637/m³ for the first 5 cubic meters.

DAWASCO kiosk price of Tshs 30 per 20 liters, or Tshs 1,500/m³ (DAWASCO)

Tanker-supplied kiosk price of Tshs 100 per 20 liters, or Tshs 5,000/m³. (WaterAid, 2010)

Water bought from neighbors price of Tshs 50 to 130 per 20 liters, or Tshs 2,500 to 6,500/m³. (Author's estimate)

Vendor water price of Tshs 250 per 20 liters, or Tshs 12,500/m³. (WaterAid, 2010)

Tanker water price of Tshs 22,000 to 45,000/10m³. (WaterAid, 2010). An average of Tshs 35,000 was used.

At 30 liters per day per capita, a household of 5 persons would consume 4.575 cubic meters of water per month.

The minimum wage in 2008 was Tshs 100,000/month (NBS, Tanzania in Figures, 2008). Assumed minimum wage of 105,000 in 2009

The average household income in poor districts is assumed to be Tshs 75,000/month, based on the Dar es Salaam Community. Upgrading Infrastructure Program reports and others.

The average month has 30.5 days (365 + 12).

Average household size is 4.5 persons (NBS, DWSSP Impact Assessment Survey, 2006)

Source of data on percentage of households that get water from each source is NBS DWSSP Impact Assessment Survey, 2009

n.a.: not available



Appendix B

Summary of the Key Provisions of the Lease Contract
with City Water Services

The Lease Contract for Water Supply and Sewerage in Dar es Salaam Summary of Key Provisions¹

Topic	Contract Terms	Reference ²
Duration/ Termination	Duration of the contract is ten years from the Commencement Date and it is renewable for ten additional years. At termination, Operator shall cooperate with the Lessor to ensure smooth continuation of services, provide specified information, and return assets as required under the contract.	Art. 3
Licenses	As a Condition Precedent for Commencement, the Lessor and the Operator are each required to obtain a license from the Regulator. The Lessor and the Operator must each also obtain other consents and permits as required by law.	Art. 1.7(m), 5.3(b), (j)
Performance Bond	As a Condition Precedent for Commencement, the Operator is required to execute the Performance Guarantee providing for payment of up to US\$ 3 million in respect of the non-performance of the Operator or failure of the Operator's majority shareholder to hold at least 51% of the shares of the Operator.	Art. 1.7(e); 47; Sch. 4
Service Area	The Operator's Area including the Water Supply Area and the Sewerage Area is specified and distinguished from the DAWAWA Designated Area	Art. 7.1 Appendix A
Exclusivity and Obligations	Operator has the exclusive right (subject to exceptions such as existing private and community wells and boreholes) and the obligation to provide piped potable water and sewerage services within the specified Operator's Area in conformity with the terms of the contract. The Operator's specific obligations with regard to the operation and management of services, maintenance and repairs, connections and revenue meters are listed.	Art. 1.6(b); 6.1; 7.2 Art. 15, 16, 17
Obligation to Supply Service	Subject to the terms of the contract and provided it is reasonably possible and in accord with good practice, the Operator is required to supply water and sewerage services to any customer in the Operator's Area who applies for such service within the times specified, and subject to specified conditions. The Operator is not required to accept the disposal of any waste conveyed by tankers or other vehicles at any location except as designated by the Operator and agreed by the Lessor and on terms agreed by the Operator and the person wishing to discharge waste.	Art. 12.3; Art. 6.3, 6.4, 6.5
Ownership and transfer of Assets and Access to Land	Lessor leases the existing Assets and new Assets after they have been created and makes them available to the Operator for use and maintenance. Ownership of the Assets, including Small Equipment (such as small pumps, valves, standpipes), remains vested in the Lessor and shall be returned to the Lessor in conditions consistent with good industry practice at the termination of the contract. The Lessor ensures the Operator will have access to all necessary land, property and water sources within the Operator's Area.	Art. 8; 9
Physical Asset Register and Asset Management Plan	Within 12 months of Commencement the Parties shall establish the Agreed Physical Asset Register and the Operator shall maintain an up to date comprehensive version of the Asset Register. The Operator is required to survey and quantify Assets in order to prepare and implement a maintenance and replacement schedule (Asset Management Plan) to be updated annually.	Art. 8.2 (b), (c); 8.3 Art. 15.2(f)

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The Lease Contract for Water Supply and Sewerage in Dar es Salaam Summary of Key Provisions¹
(continued)

Topic	Contract Terms	Reference²
Transferred Personnel	Lessor's employees (not including certain recently appointed directors) will be available for transfer to the Operator [for employment by the Operator]. Lessor will continue to provide for statutory or voluntary pension programs of all transferred employees. Employment of Transferred Employees is subject to the DAWASA Act.	Art. 1.7, 14.1; App. D; DC 3
Human Resources Development	The Operator is required to train persons employed by it or its agents or contractors for the purposes of providing services within the [Operator's] Area and ensure that only qualified and certified personnel are employed for tasks of potential risk to the health or safety of the person.	Art. 14.3(a), (b)
Management Personnel and Technical Assistance	As a Condition Precedent, the Operator must complete the Mobilization which includes the appointment of specified management personnel. The Operator's Managing Director must be provided from the staff or officers of the majority shareholder. The Operator may enter into technical assistance or sub contracts as required.	Art. 1.7(a); App E; Art. 4.1(d), 4.5(b)
Customer Contracts	Within 12 months of Commencement, as agreed with the Lessor, following consultation with the Regulator and Customers and with the consent of the Regulator, the Operator shall publish a standard Customer Contract (model form in Appendix G) and issue Customer Contracts to all Customers. The deadline may be extended if required to obtain the consent of the Regulator.	Art. 12.1
First Time New Domestic Water Supply Connections	First Time New Domestic Water Supply Connections on properties with up to three water points and no farther than twenty meters from the water main will be funded by the Fund for that purpose and the Operator will be paid the amount specified in Appendix K (Tshs 145,000 at a July 2002 price base).	Art. 17.3
Codes of Practice	Within 12 months of Commencement (unless otherwise agreed and authorized) the Operator is required to publish Codes of Practice for Customers, Customer Service Standards, Leakage Control, Disconnections, Customer Complaints Procedures, Entry into Land and Pollution Prevention, with certain contents as specified.	Art. 13
Maintenance and Repairs	At its own expense, the Operator is responsible for maintenance and repair of Assets, up to specified limits (see below) as required, in accordance with Approved Technical Standards, Good Industry Practice and Good Industry Practice, to ensure their reliability and performance. The responsibility of each Customer for maintenance and repair of water service pipes and sewerage drains within his property is specified. The Lessor is responsible for major repairs and replacements (e.g., water mains over 300 mm in diameter and over 6 meters in length, sewers over 450 mm in diameter and 4 meters in length and structural failures) and, in case the cost of any repair or replacement exceeds Tsh 10 million, the Lessor is responsible for the amount over Tsh 10 million. The Operator is responsible for the maintenance and repair of the Ocean Outfall after it has been rehabilitated as part of the Non-delegated Works.	Art. 4.2(a), (b); 15.1; 16.3; 16.4; 16/5

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The Lease Contract for Water Supply and Sewerage in Dar es Salaam Summary of Key Provisions¹
(continued)

Topic	Contract Terms	Reference²
Investment Planning	The Immediate Capital Investment Program and a summary of the proposed Medium Term Capital Investment Program are shown in Appendix J. The Operator is responsible for preparing the Medium Term Capital Investment Program, including programs for rehabilitation and renewal of Assets, strategic business plans, network modeling, and annual investment programs, for agreement with the Lessor. The Lessor is responsible for undertaking surveys to determine demand and willingness to pay for the purposes of investment planning, demand forecasts, studies of the expansion of the water supply system, environmental assessments, and a strategic sanitation plan. Reporting: The Operator shall prepare an Annual Business Plan including an annual capital investment plan and the Immediate Capital Investment Program [including the Priority Works Program, Delegated Capital Works and Non-Delegated Works to be carried out within the first five years of the contract] detailing assets to be replaced or rehabilitated and areas for expansion of service.	App. J Art. 18.2; 20.1 Art. 61.1, 61.2
Responsibility for Financing, Procurement and Implementation of Capital Investments	The Lessor is responsible for all works concerning the extension and rehabilitation of the system, except as otherwise specified. (Art. 5.2) The Operator shall review and provide written comments on the preliminary or detailed designs for new assets to be created under the Capital Works Program. (Art. 8.2) The Lessor is financially responsible for the procurement of works for the Immediate Capital Investment Program included in Appendix J, including Non-Delegated Works (financed and implemented by the Lessor), Delegated Capital Works (financed by the Lessor and implemented by the Operator), and the Priority Works Program (financed by the Lessor and constructed by the Operator). (Art. 18.1, 18.4) However, the Operator is responsible for financing operating equipment; leak detection equipment; and cleansing equipment and safety devices for the sewerage network. (18.3) The Lessor shall endeavor to secure external finance to fund the Medium Term Capital Investment Program.	Art. 5.2; 8.2; 18.1; 18.3; 20
Non-Delegated Works (NDW)	The NDW program includes major rehabilitation and new works (excepting those in the PWP – see below) that are financed and procured by the Lessor in accord with the procurement rules of the respective international or bilateral funding institutions. The Operator is not eligible to bid but affiliated companies or shareholders are eligible to bid (subject to conditions). The Lessor and the Operator consult and cooperate regarding design, implementation and commissioning.	Art. 18.4, 18.6
Delegated Capital Works (DCW)	The DCW program includes components of the distribution networks and connections and is financed by the Lessor. The Operator serves as consulting engineer and is responsible for procurement in accord with lender-approved procurement plans (including preparation of preliminary designs, detailed design and preparation of bid documents, bid evaluation and signing of contracts), site supervision and commissioning of works. Neither the Operator nor any associated entity of the Operator is permitted to bid for the works.	Art. 18.4, 18.5; 20.2

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The Lease Contract for Water Supply and Sewerage in Dar es Salaam Summary of Key Provisions¹
(continued)

Topic	Contract Terms	Reference²
	The Lessor has the right to review and approve or reject bidding documents prepared by the Operator and the Operator's recommendations for the award of contracts under the DCW. The Lessor arranges for payment of contractors.	
Priority Works Program (PWP)	PWP includes high priority rehabilitation works and equipment, rehabilitation of connections, and supply and installation of bulk and customer meters. It is implemented by the Operator under the Supply and Installation of Plant and Equipment Contract (SIPE) and Procurement of Goods Contract (POG) contracts entered into by DAWASA and the Operator as a condition precedent.	Art. 1.7, 18.4, 18.7; 20.3;
Replacement of Small Equipment	Operator is responsible for replacement of Small Equipment (e.g., small pumps, valves, bulk and zonal meters, standpipes).	Art. 4.2(b)
Installation or Replacement of Connections and Revenue Meters	Lessor funds and Operator procures and installs revenue meters under the POG contract. Operator funds all other required materials and the installation or replacement of meters on existing, registered, sound connections. Lessor funds and Operator procures/provides pipes, accessories and installation required for rationalizing existing legal and illegal connections under the SIPE contract or the DCW program. For new domestic connections, all materials (excluding meters) and the cost of installation are funded by the First Time New Domestic Water Supply Connection Fund. All materials for and installation of new non-domestic connections are funded entirely by the customer.	Art. 17; Appendix C
Operating Equipment	Operator is responsible for provision and replacement of Operating Equipment (e.g., vehicles, tools, office equipment, and information technology hardware and software), and for the provision, maintenance and routine upgrading of any proprietary software or systems.	Art. 4.2(b)
Extensions to the Network	Extension funded by Customers shall be implemented by the Operator. Developers may build extensions at their own expense, subject to the prior approval of the Operator. The Lessor is responsible for funding extensions and reinforcements to meet urban demand or population growth.	Art. 19
Standpipes	The Operator is responsible for the management, maintenance and repair of standpipes and kiosks and whenever possible, shall subcontract management to standpipe agents and communities. There is no obligation to provide water free of charge, except for fire fighting.	
Service and Quality Obligations and Performance Targets	The Operator's obligations are comprehensive, clearly defined and specified in detail. Water and sewage quality standards and monitoring requirements are specified in Appendix H. Performance targets during the first five years of the Contract for 11 key performance parameters (such as drinking water quality, effluent quality, number of meters installed, new connections, water losses, repair times, data collection and pressure) and for 16 other parameters (such as volume of water produced, continuity of service, number of active accounts, response times, billing based on meter reading), and penalties for non-compliance with the Key Performance Targets are specified in Appendix N.	Art. 25 – 33; App H; App N;

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The Lease Contract for Water Supply and Sewerage in Dar es Salaam Summary of Key Provisions¹
(continued)

Topic	Contract Terms	Reference ²
Customer Tariff	<p>In cases where the base value for a parameter is not reliable, transition values are specified. The base values will be ascertained by the Operator and agreed with the Lessor during an Enhanced Monitoring Period and target values will be agreed between the two Parties. Targets that are dependent on the implementation of the Immediate Capital Investment Program will also be agreed during the Enhanced Monitoring Period.</p> <p>The Customer Tariff (Water Supply) includes the Operator Tariff (Water Supply), the First Time New Domestic Water Supply Connection Tariff (to be paid into a fund for that purpose) and the Lessor Tariff (Water Supply). The Customer Tariff (Sewerage) includes the Operator Tariff (Sewerage) and the Lessor Tariff (Sewerage). The (average) Customer Tariffs per cubic meter for Water Supply and Sewerage for the first five contract years are specified. These tariffs are set at July 2002 prices. The three components will be adjusted annually: the Operator Tariff by the specified Indexation Adjustment Formula and the Lessor Tariff and the First Time Connection Tariff by a retail price index. The tariff structure (differentiated tariffs paid by different categories of customers) is established by the Lessor in accord with the Development Contract between GOT and the Lessor. All customers pay the full Operator Tariff on all volumes consumed. Domestic customers with household connections who consume more than 5 cubic meters per month pay the Operator Tariff, Lessor Tariff and First Time Connection Tariff on consumption above 5 cubic meters. Non-domestic customers pay all three components on all volumes consumed.</p>	Art. 34, 35; App. K
Regulatory Levy	The Operator levies and collects the Regulatory Levy from customers and pays all collected amounts to the Regulator. [not enforced until EWURA was established]	Art. 39
Operator's Revenues ³	<p>The Operator's revenues include:</p> <ul style="list-style-type: none"> – The Operator Tariff for water supply and sewerage collected from customers (from which the fixed monthly Rental Fee must be paid to Lessor); – Charges for the provision of ancillary and incidental services (tanker water, disposal of liquid or solid waste from sewage tankers, etc.); – Operator Fee for First Time New Domestic Water Supply Connections as specified in Appendix K and indexed annually; (This fee is withdrawn by the Operator from a Fund into which all FTNDWSC Tariff revenues are deposited by the Operator.) – 10% of any debt owed to the Lessor and collected by the Operator; – For design and supervision of the DCW program, a total of 10 % of the value of the DCW; – Payments by Customers for private extensions under agreement with the Operator. 	Art. 36; 39; 43; 45; App. K; App. P;

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The Lease Contract for Water Supply and Sewerage in Dar es Salaam Summary of Key Provisions¹
(continued)

Topic	Contract Terms	Reference²
Payments to the Lessor	<p>The Operator pays the Lessor:</p> <ul style="list-style-type: none"> – The Lessor Tariff for water supply and sewerage collected from customers; – The amount by which any water supply tariff (for non-domestic customers) temporarily exceeds the specified Customer Tariff; – The (fixed) Rental Fee as specified, and annually indexed, to be paid monthly in advance. – Financial penalties (if applicable), subject to specified limits; – Customer debt owed to the Lessor and collected by the Operator, minus 10%; – Any Customer security deposits held by the Operator at the termination of the contract; 	Art. 39; 43; 48; 49 App. K; App. N
Review of the Operator Tariff	<p>The Lessor shall review the Operator Tariff and the Indexation Formula to take account of changes in relevant conditions and recommend any changes to the Regulator for approval.</p> <ul style="list-style-type: none"> – The Major Review will be undertaken to set the Operator Tariff and Performance Targets for Contract Years six to ten. – An Interim Review may be undertaken at the request of either the Lessor or the Operator, in the event of a Material Change of Circumstances. – An Annual Review may be requested if either Party believes the percentage weightings of the Indexation Formula need revision, as a result of a change in Base Values and Performance Targets during the Enhanced Monitoring Period. 	Art. 41
Billing and collection		
Customer relations, customer contracts and customer rights	Customers must pay a deposit which will be held by the Operator and returned to the Customer at termination of the Customer contract after any outstanding charges have been deducted.	App. G
Reporting, record keeping and audits	The Operator is required to: create records of information as required for facilitating efficient management and supervision of services and for informing the Lessor and Consumers; maintain financial, technical and commercial information in formats that permit regular audits; create and develop an Asset Management Plan and a Schedule [record] of Assets; submit reports as required by the Lessor; and have its records audited [in addition to audits that may be undertaken by the Lessor].	Art. 58; 59; 60;

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The Lease Contract for Water Supply and Sewerage in Dar es Salaam Summary of Key Provisions¹
(continued)

Topic	Contract Terms	Reference²
Regulator	<p>The Regulator: (Until EWURA was established, the Minister of Water served as Interim Regulator.)</p> <ul style="list-style-type: none"> – Approves Customer Contracts and codes of practice relevant to customers; – Approves any adjustments to the Customer Tariffs and the Operator's charges for other services; – Approves any changes in the Operator Tariff that result from the Major Review, an Interim Review or an Annual Review; – Is involved in the Major Review and may direct the Parties to undertake an Interim Review; – Receives monthly raw, potable and effluent water quality monitoring reports and reports of any major failure in quality standards from the Operator; – Resolves disputes between the Lessor and the Operator relating to the Tariff, if the Parties cannot resolve it through amicable means or through submission to the Expert Panel. 	DC: 11; Art. 12, 13, 29, 30, 34.4, 41.1(b), 41.3(b), 41.4(b), 66.3;
Resolution of disputes	<p>The Parties will endeavor to settle disputes or differences amicably. Failing that, a dispute will be referred to an Expert Panel. If the Parties fail to agree on the recommendation of the Expert Panel, a dispute which relates to a matter other than the Tariff may be referred to arbitration. An unresolved dispute that relates to the Tariff will be referred to the Regulator.</p>	Art. 66

¹ This summary is not exhaustive, nor does it include all exceptions and conditions that may apply to the contractual provisions that are covered. In some instances, the contractual language has been shortened and summarized and American English spelling has been applied.

² References refer to articles (Art.) of the Lease Contract and its Schedules, Appendices (App.) and Annexes. References to articles of Annex 1, the Development Contract, are indicated by the abbreviation DC.

³ The Operator's Revenues are those specified in the Lease Contract. Revenues for implementation of the POG and the SIPE are specified in those contracts.

