African Water Utilities

Regional Comparative Utility Creditworthiness Assessment Report

Individual credit assessment reports for seven African water utilities by Global Credit Rating Co.

wsp water and sanitation program

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African Water Utilities Regional Comparative Utility Creditworthiness Assessment Report

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Foreword

The gap between funds available to water utilities and the demand for water infrastructure has grown. There is therefore a need to facilitate the process of mobilizing additional funding for developing the water sector and ensuring that these investments result in sustainable service delivery. One of the key actions taken in this regard has been to conduct credit ratings so as to develop a better understanding of the credit worthiness water utilities in Africa. The findings from a sample study are presented in this regional report.

The analysis is based on data sourced from seven participating water utilities across five African countries – Burkina Faso, Kenya, Senegal, Tunisia and Uganda. The data is then used to calculate proxies for industry statistics.

The bulletin's three main sections are:

- **An economic and regulatory overview of water utilities.**
- **A comparative water utility analysis** - this compares the relative position of the water utilities included in the analysis in terms of their size, efficiency, debt and liquidity measures, and detailed credit protection measures.
- **Individual water utility ratings and reports** - a summary of rating reports undertaken by Global Credit Ratings (GCR).

The seven participating water utilities for the credit assessment exercise are:

1. Athi Water Service Board (Kenya)
2. Nairobi City Water and Sewerage Company (Kenya)
3. National Water and Sewerage Corporation (Uganda)
4. Office National de L'eau et de L'assainissement (Burkina Faso)
5. Sènègalaise des Eaux (Senegal)
6. Sociètè Nationale des Eaux du Sènègal (Senegal)
7. Société Nationale d'Exploitation et de Distribution des Eaux (Tunisia)

It is expected that the ratings process will be extended to include additional water utilities across the continent, with a view to improving each entity's financial viability. This is a very important step that we hope will ultimately result in an extension of water and sanitation services to all.

Sylvain Usher

Secretary General
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This African Water Utilities Regional Comparative Utility Creditworthiness Assessment report was commissioned by the Water and Sanitation Program (WSP) on request by the African Water Association (AfWA), and co-funded by the Private-Public Infrastructure Advisory Facility (PPIAF) and the African Development Bank (AfDB). The report was reviewed at a regional utility workshop held in Dakar, Senegal, in November 2008.

The report was compiled by Marc Joffe, Richard Hoffman and Melanie Brown (GCR). Global Credit Ratings would like to take this opportunity to thank the task team, comprised of Thomas Fugelsnes, Kameel Virjee, Meera Mehta, Johan Kruger and Chimere Diop (WSP-Africa), Joel Kolker (PPIAF), Christian Lim (AfDB) and Sylvain Usher (AfWA).

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SECTION 1:

AN ECONOMIC AND REGULATORY OVERVIEW OF WATER UTILITIES

1.1 The economy and human development indicators

Our analysis of the economic structure of a water utility, for the purpose of according the utility a credit rating, revolves around a fundamental understanding of the utility's key economic drivers. We therefore examine the magnitude, diversification and other key characteristics of the economic base within which the utility operates in order to ascertain the utility's fiscal health and stability of revenue growth.

Sound economies are typically underpinned by a growing revenue and output base, private and public investment, construction activity and a diversified retail sales sector. Economies that grow too rapidly usually place excessive strain on their infrastructure, while declining economies are viewed unfavorably for credit rating purposes, due to diminished revenue receipts and increased concentration levels.

We have analysed the demographic composition in conjunction with economic and infrastructural development in order to gain a thorough understanding of the socio-economic status of each water utility's area of jurisdiction. In emerging or under-developed economies such an integrated analysis is particularly important for ascertaining the ability of a population to influence demand for water services, and in turn to ascertain a utility's capacity to extend services to its target population.

Among the parameters we examine is the nature of the labour market. The key aspects looked at are unemployment levels, income levels (measured by per capita income and per capita gross domestic product (GDP)), the stability of the employment market, and employment growth trends. In general, higher per capita income levels translate into increased flexibility to raise taxes.

Factors that are taken into account when according credit ratings include:

- The absolute size and density of the population.
- The historical and projected growth rate – stable or moderately growing populations are considered optimal, while declining populations or rapidly growing populations are generally viewed unfavourably.
- The stratification of the age profile, including an analysis of the dependent population.
- The prosperity of the local population, measured by per capita GDP and income levels, relative to regional and national averages.

BURKINA FASO

Economic overview

Burkina Faso has experienced fairly healthy long-term economic growth, as evidenced by its average annual GDP growth of 5.9 percent over the period 1997-2006. The economic growth rate for 2006 was 6.1 percent (2005: 7.1 percent), although the estimated figure for 2007 equates to 4.3 percent. Projections, however, indicate a modest recovery, as 2008's growth rate stands at a forecast 4.7 percent. It is noted that Burkina Faso's growth for 2006 surpasses the rate achieved by the West African Economic and Monetary Union (WAEMU) for the same period, which averaged 3.1 percent. The country has attained this economic accomplishment while keeping its inflation rate at an efficient level: 2007 realised inflation of 2 percent (2006: 2.4 percent), a number significantly lower than the 6.4 percent recorded in 2005, mainly due to healthy food-crop production and sufficient supply to the markets.

The monetary indicators for Burkina Faso are reflective of its economic improvement. The low inflationary measures mentioned above are projected] to remain subdued for both 2008 and 2009, and this maintenance of purchasing power has been aided by currency appreciation. As a member of the West African Economic and Monetary Union, Burkina Faso's monetary policy, defined by the Central Bank of West African States

Social, demographic and economic indicators 2007
Burkina Faso

Population:	
Total	15.3 million
Density	55.7 per sq. km
Human development:	
Life expectancy	52.6
Population living below the poverty line	46.4%
Human development index	0.37
Adult literacy (2005)	51.4%
Infant mortality (under one year)	86.1 per 1,000
Economic data:	
Nominal GDP (CFA)	3,076bn
Nominal GDP (US$)	6.8bn
GDP per capita (CFA)	201,388
GDP per capita (US$)	443
GDP growth	4.3%
Average CPIX inflation	2.0%
Unemployment rate	n.a.
Gini coefficient	45.4%
Source: CIA Fact File	

(Banque Centrale des États de l'Afrique de l'Ouest (BCEAO)), has the primary objective of controlling inflation. This objective is strongly influenced by the Euro Zone, since the CFA franc, (the common currency of the African Financial Community, a group of 14 west and central African countries that incorporates WAEMU) is pegged to the Euro. The exchange rate for 2007 against the United States dollar was CFA 492.9, representing a 9 percent appreciation against CFA 539.9 for 2006 (2005: CFA 527.5). The current account deficit amounted to a high 14.9 percent of GDP in 2007 (2006: 15.2 percent), although the privatisation of the national telecommunications bureau, ONATEL, led to a transaction of US$ 336m, allowing for a balance of payments surplus of US$ 379m (2006: US$ 84m).

KENYA

Economic overview

The Kenyan economy, which is the regional hub for trade and finance in East Africa, has witnessed accelerating GDP growth over the past five-yearreaching 6.5 percent growth in 2007 (in 2006, growthwas6.1percent).Tourismandagriculturehave been at the forefront of this economic expansion, but strong performances from the financial sector and the growing telecommunications sector have also contributed to GDP growth. Whilst the economy's outlook remains positive, growth estimates for 2008 have had to be revised downwards to around 4 percent (previously around 7 percent) as a direct

Social, demographic and economic indicators 2007 Kenya	
Population:	
Total	32.0 million
Density	65.1 per sq. km
Human development:	
Life expectancy	56.6
Population living below the poverty line	50.0%
Human development index	0.52
Adult literacy (2005)	73.6%
Infant mortality (under one year)	56.0 per 1,000
Economic data:	
Nominal GDP (KShs)	1,986bn
Nominal GDP (US$)	29.3bn
GDP per capita (KShs)	52,337
GDP per capita (US$)	772
GDP growth	6.5%
Average CPIX inflation	9.8%
Unemployment rate	40.0
Gini coefficient	48.6%
Source: CIA Fact File	

consequence of the disruptions caused by the post-election violence.

The Kenyan economy, being heavily reliant on rain-fed agriculture with limited agricultural exports exposed to world price fluctuations, will continue to be vulnerable to alternating periods of prosperity and depression. In addition, poor governance and corruption have had a negative impact on growth, making it expensive to do business in Kenya, while HIV/AIDS remains an economic burden. Other risks to continuing robust growth include weak infrastructure, drought, and the diminution of donor funding because of corruption allegations levelled against the government. Notwithstanding these setbacks, the formation of the coalition government has gone a long way towards allaying the international finance community's fears about the country, and 2008 saw a reversal in the stance of several international bodies with regard to their financial involvement in Kenya.

Kenya's annual inflation reflected a steady climb throughout 2007, buoyed by higher food, transport and energy prices. This was despite a marked decline in the first quarter of 2007, when the year-on-year growth in consumer price index (CPI) reduced to 5.9 percent, from 15.6 percent in March 2006. Inflation soared to 12 percent in December 2007. Overall, average inflation for 2007 amounted to 9.8 percent. The inflation outlook for 2008 remains bleakand was worsened by the post-election violence. Energy imports, rising food prices, and bottlenecks resulting from the economic impasse in the first quarter of 2008, continued to drive the month-on month CPI inflation to over 31 percent by May 2008, leading to a revision of fiscal and monetary policy strategies.

SENEGAL

Economic overview

Senegal saw average GDP growth rates of around 5percent over the last five years on the back of sound macroeconomic policies and structural reforms. However, this rate of growth is considered to be insufficient to fulfill the country's long term goal "to reduce poverty by half and raise the country above the group of the world's least-advanced economies by 2015". Therefore, the government has decided to put in place an accelerated growth strategy, officially called the Stratégie de Croissance Accélérée (SCA). This aims to complement the country's poverty reduction strategy, which identifies five promising industry clusters as providing the bedrock for faster economic growth, namely agro-industry, fishing, tourism, textiles, and information and communication technology (ICT).

Of major concern to the success of the reform programme is the restructuring of large state-owned companies in the industrial and energy sectors: Senelec, the Société Africaine de Raffinage (SAR) and Industries Chimiques du Sénégal (ICS). The economy is widely believed to have rebounded in 2007, supported by more construction activity, an increase in phosphate production (as ICS was recapitalised) and growth in the service sector. In 2008, growth is likely to remain sustained and should be in the range of 5.5 percent to 6.1, powered by the public sector's large infrastructure projects.

Inflation was low in the 10-year period to the end of 2007, largely due to the prudent monetary policy of BCEAO (the Central Bank of West African States) and the overhaul of the region's banking system. The fact that the CFA currency, shared by WAEMU

Social, demographic and economic indicators 2007 Senegal	
Population:	
Total	12.2 million
Density	65.5 per sq. km
Human development:	
Life expectancy	57.1
Population living below the poverty line	54.0%
Human development index	0.50
Adult literacy (2005)	39.3%
Infant mortality (under one year)	58.9 per 1,000
Economic data:	
Nominal GDP (CFA)	5,069.2bn
Nominal GDP (US$)	11.2bn
GDP per capita (CFA)	394,593
GDP per capita (US$)	868
GDP growth	5.0%
Average CPIX inflation	5.9%
Unemployment rate	48.0%
Gini coefficient	41.3%
Source: CIA Fact File	

countries, is pegged against the Euro, has facilitated considerable economic stability for these countries (with the last major revaluation occurring in 1993). Accordingly, the currency has strengthened against the US dollar in line with the Euro, from an average of CFA 540/US$ in 2006 to CFA 493/US$ in 2007 and further to CFA 437/US$ in the first half of 2008.

While the fixed exchange rate policy brought price stability to the sub-region and Senegal in 2007, the economy deviated somewhat on the back of high global energy and food prices. These threats have not subsided, and inflation remained high in 2008.

The economy received a major boost in 2006 with the decision by G8 countries to adopt the International Monetary Fund's Multilateral Debt Relief Initiative, writing off all Senegal's loans from multilateral institutions that were made before January 2005. Until recently foreign direct investment (FDI) remained at low levels, but this trend began to change in during [give time period] and FDI is projected to increase significantly in the coming years

TUNISIA

Economic overview

Tunisia's conservative macroeconomic policies and commitment to structural reform has steered

Social, demographic and economic indicators 2007 Tunisia	
Population:	
Total	10.4 million
Density	63.5 per sq. km
Human development:	
Life expectancy	75.6
Population living below the poverty line	7.4%
Human development index	0.77
Adult literacy (2005)	74.3%
Infant mortality (under one year)	23.4 per 1,000
Economic data:	
Nominal GDP (TD)	43.4bn
Nominal GDP (US$)	35.0bn
GDP per capita (TD)	4,183
GDP per capita (US$)	3,373
GDP growth	6.3%
Average CPIX inflation	3.1%
Unemployment rate	14.1%
Gini coefficient	39.8%
Source: CIA Fact File	

it in the direction of economic stability. The Tunisian economy continued to grow in 2007, achieving a growth rate of 6.3 percent of GDP, the highest figure in a decade. Tunisia has shown that it is capable of maintaining this high degree of economic growth over the long term, as demonstrated by the average GDP growth rate over the period 1999 to 2007, amounting to 5 percent. This growth was accompanied by restrained inflation of 3.1 percent in 2007 (2006: 4.5 percent). While the external environment is positive, the economy remains over-reliant on the European Union and more efforts need to be made to diversify.

At sectoral level, economic development has been driven by advancement of the services division, particularly growth in telecommunications (20 percent); as well as progression in the secondary sectors of machinery and electricity (8 percent), and construction and civil engineering (4.3 percent). The well-diversified Tunisian economy has witnessed a decline of the primary sector's contribution to GDP, from 13.1 percent in 2005 to 12.3 percent in 2006Services are the mainstay of the economy, accounting for 63 percent of GDP , with trade, hotels and restaurants constituting the largest portion of this bracket, with an input to GDP of 17 percent .Manufacturing contributed 19 percent to GDP in , while government expenditure in the form of public administration, represented the third-largest portion of GDP in at 14.4 percent. However, despite the prevalence of the service industry within the framework of the economy, this sector employed

only 22 percent of the working population in , while the waning agricultural sector was responsible for the employment of just over half the work force. Unemployment is running at around 14.1 percent.

Several major investment projects, were announced by foreign of late, primarily by countries in the Persian Gulf; and the government is continuously investing in infrastructure. The government continues to divest itself of state-owned enterprises and is focusing on expanding the tax base but still wants to alleviate the fiscal burden on companies. A 10 percent corporate tax on offshore companies, which was meant to start in 2008, has been postponed to 2010.

UGANDA

Economic overview

Uganda has reflected strong growth over the past few years, with GDP growing at an estimated 6.8 percent in 2007 (2006: 5.1 percent). Economic growth was largely driven by an upswing in the transport and communications sectors, both of which have been growing at an annual average rate of 19.2 percent since 2002. During this period, the country diversified from its strong reliance on the agricultural sector, which contributed 30 percent to GDP in 2006 (2001: 41 percent). It is anticipated that future economic growth will be driven by the

Social, demographic and economic indicators 2007 Uganda	
Population:	
Total	31.4 million
Density	132.9 per sq. km
Human development:	
Life expectancy	52.3
Population living below the poverty line	35.0%
Human development index	0.51
Adult literacy (2005)	66.8%
Infant mortality (under one year)	66.0 per 1,000
Economic data:	
Nominal GDP (Ushs)	19,097.1bn
Nominal GDP (US$)	11.2bn
GDP per capita (Ushs)	608,958
GDP per capita (US$)	358
GDP growth	6.8%
Average CPIX inflation	6.8%
Unemployment rate	n.a.
Gini coefficient	45.4%
Source: CIA Fact File	

transport, power generation and communication sectors, as well as the construction industry. Public investment was budgeted to rise by 23 percent in the current fiscal year. Economic risks include a budgetary dependence on donor funding, the fallout from misappropriations of the global HIV fund for Uganda, and uncertainty about succession planning in the public sector.

The power crisis that has plagued the economy (constraining growth by an estimated 1 percent per annum) saw the government introduce diesel powered thermal stations and provide a diesel facility for manufacturers (diesel import duty is waived for manufacturers). Following the securing of funding by Uganda for the construction of the Bujagali Dam project, and plans to start the Karuma Hydropower plant, the nation's energy constraints are likely to be alleviated in the medium to long term, while remaining a significant risk in the short term. The country's significant dependence on oil was demonstrated during the 2008 Kenyan political crisis, with supply disruptions leading to speculative hoarding, thus undermining price-setting mechanisms.

1.2 Water utility business models

Two types of business model s are employed by the sample of water utilities included in this report, each of which is briefly described as follows:

- An *asset holding company* is responsible for (i) owning infrastructure assets; (ii) planning and financing asset replacements and network expansions; and (iii) regulating the activities of the private operator.
- The *asset operating company or service provider*, (typically a private company although it can be a public company), is paid a fee, which is the price (usually expressed per m3) for the volume of water produced and sold that is required for the operating company to cover all its costs. The operator's payment is calculated according to a formula (set out in a contract), which may contain factors designed to reward performance in certain areas. The operator/service provider collects revenue from consumers on behalf of the asset-holding company, according to the tariffs set by the state, retains the amount of its fee, and remits the difference to the asset holding company.

Please refer to individual rating reports at the end of the regional report for more detail.

1.3 Performance agreements

Performance based agreements, such as contracts between water authorities and local utilities, provide explicit performance targets and clear incentives to service providers for meeting their targets. Performance benchmarking provides a means of evaluating utility performance and guiding continuing performance improvement. In addition, benchmarking is an important utility management tool that enables managers to measure performance against their peers (see the brief overview of each individual water utility's performance agreement below).

1.4 Management

The presence of strong leaders, supported by solid

political will, is crucial to the success of a water utility. Generally speaking, without broad-based political support, transformation processes are unlikely to be implemented.

Management's policies and procedures can add stability to weak credit ratings, or, alternatively, can negatively affect strong credits. In some cases, within the seven water utilities reviewed, leadership was embodied in one or a small number of individuals, who had the dynamism and resolve to create bold proposals and see them through to implementation. It is recommended that in such cases, where utilities are over-reliant on key managers ('key man risk'), efforts should be made to mitigate this.

1.5 Availability of water and sanitation

Table 1 provides an indication of water and sanitation availability in each of the five countries selected for the peer comparison, broken down into urban and rural coverage. As is evident, the water utilities have generally achieved full or close to full coverage with respect to the provision of water in urban centres. With respect to rural coverage, however, this is somewhat lower, typically in the region of 50 percent (except for Tunisia at a comparatively stronger 82 percent).

In its provision of urban sanitation, Tunisia has almost reached a hundred percent coverage and is significantly stronger than most of its peers. Kenya, Burkina Faso and Uganda are materially weaker than the other countries in the sample. Rural sanitation coverage is generally very poor, in particular in Burkina Faso at just 6 percent.

Table 1. Percentage of the population with access to basic services (%)

	Water		Sanitation	
	Urban	Rural	Urban	Rural
Burkina Faso	94	54	42	6
Kenya	83	46	46	41
Senegal	92	60	79	34
Tunisia	99	82	96	65
Uganda	87	56	54	41

Source: Joint Monitoring Program for Water Supply and Sanitation

Table 2 Table 2 provides an indication of the number of households with water and sanitation connections in the five countries, broken down into urban and rural coverage. With the exception of Tunisia (and Senegal to a degree), the number of urban households with a water connection is very low, in particular for Uganda. This implies high growth potential for water utilities in these countries, although the socio-economic characteristics of each country will largely mitigate development. The coverage of rural household water and sanitation connections across all five countries is materially low, and non-existent in some instances, again implying substantial growth potential for water utilities.

Table 2. Household water and sewerage connections (%)

	Water		Sanitation	
	Urban	Rural	Urban	Rural
Burkina Faso	31	0	3	0
Kenya	52	12	9	1
Senegal	75	17	19	2
Tunisia	94	38	75	4
Uganda	7	0	10	0

Source: Joint Monitoring Program for Water Supply and Sanitation

Most households in African cities (70 percent to 90 percent), and virtually all poor households, deal with their own waste by building latrines or septic tanks themselves, or hiring others to do this. In contrast to the more competitive water supply situation, most African public sewer operators are not interested in claiming a monopoly, given the generally very low profitability of the systems they operate.

In terms of the provision of sanitation, of the five water utility operating companies reviewed, three - Nairobi City Water and Sewerage Company (Kenya), National Water and Sewerage Corporation (Uganda) and Office National de L'eau et de L'assainissement (Burkina Faso) - are responsible for the collection and recycling of used water in cities where potable water is distributed. However, sanitation is not very developed in most countries, as is evident in Table 2. In order to address this, major projects (by the three aforementioned utilities) aimed at expanding sanitation distribution to a greater percentage of the population will be undertaken in the medium to long term. Cognisance is taken of the associated funding required to address this, which may serve to exacerbate the already large capital expenditure programmes and related borrowing requirements in the water sector.

Table 3. Water volume and household connection statistics

	Per capita (litres/day)	Population/ connection
Burkina Faso	34	28
Kenya	100	13
Senegal	76	14
Tunisia	n.a.	n.a.
Uganda	46	28

Source: WSP

1.6 Regulatory environment, performance agreements and tariff structure

BURKINA FASO

Office National de L'eau et de L'assainissement (ONEA)

Regulatory

The activities of the Office National de L'eau et de L'assainissement are regulated by the Ministry of Agriculture - Water Supply and Fishery Resources, whose parent body is the Directorate of Water Resources. The utility is managed by a board of directors, which convenes on a regular basis in accordance with its statutes. The board submits an annual general report detailing ONEA's financial and economic situation to the General Assembly of State Corporations, which is chaired by the Prime Minister. The General Assembly of State Corporations approves ONEA's accounts and makes recommendations, and also provides guidelines to the chairperson of the board and the managing director, who is appointed by the board.

ONEA is, however, subject to restrictions regarding its borrowing requirements for all amounts exceeding CFA 1 billion or which have terms of payment exceeding one year. The historical reliance on government as a key source of capex funding has also served to prevent the utility from proceeding with its capex projects in the event that government is not in a position to fund these initiatives. In addition, as government grants can be viewed as

a non-recurring income source, this may dissuade investors, given that they are more likely to lend to an entity displaying consistent predictable revenue flows. More recently, it is noted that the Burkina Faso government is moving away from direct investment in the water sector. This could impact ONEA's financial position if alternative funding sources are not available (cognisance is taken of the existing borrowing restrictions, which present a difficulty with respect to sourcing alternative funding sources).

ONEA displays a fairly stable staffing component, with few positions open at any given time. However, it appears that salary reviews could be subject to some level of intervention from government.

Performance agreements

ONEA operates on the basis of triennial contracts, which state the commitments of government in relation to water sector management, and clearly establish performance targets and indicators. The latest contract outlines commitments and determines technical, financial and commercial objectives, which are evaluated on the performance of 28 indicators. ONEA also works on a contractual basis with municipalities. In addition, ONEA has signed conventions of partnership with some municipalities that do not have safe drinking water. These conventions provide a contractual framework whereby ONEA offers advisory support and technical expertise for the development and implementation of municipal development plans for supplying drinking water, health and sanitation.

Water and sanitation sales and tariffs

Tariffs reflect, as far as is possible, the revenue necessary to cover all costs. A tariff review is conducted every five years. ONEA lacks the financial autonomy to set tariffs, however it is empowered to (and does) propose tariff structures to its board of directors, based on its requirements. Once board approval is obtained, the proposal is forwarded to the Council of Ministers for consideration and final approval.

Different tariffs apply to different consumer sectors based on consumption, with larger consumers subsidising smaller consumers, while larger centres in the service area support small centres that are in deficit. As at July 1, 2008, the following charges were in place:

- CFA 188 for 0m^3 to 8m^3
- CFA 430 for 9m^3 to 15m^3
- CFA 509 for 16m^3 to 30m^3
- CFA 1,040 for +30m^3.

KENYA

Nairobi City Water and Sewerage Company (NCWSC) and Athi Water Services Board (AWSB)

Regulatory

The regulatory structure comprises the Water Services Regulatory Board (WSRB), whose

responsibility it is to enforce the Water Act. Under the Act, the Ministry of Water and Irrigation (MWI) is responsible for policy formulation through the Water Sector Reform Steering Committee and Water Sector Reform Secretariat. Falling under the Ministry of Water and Irrigation are two regulatory authorities: the Water Resources Management Authority and the WSRB. The Water Resources Management Authority is tasked with the national management and regulation of water resources (including the issuance of licences for water abstraction from any source, and disposal of treated effluent into rivers), while the WSRB oversees the maintenance of quality, standards and issuance of licences for service provision.

The organisational structure of the Athi Water Services Board (AWSB) includes a board of directors (appointed by the Ministry of Water and Irrigation) with eleven members, each representing various stakeholder interests. The board convenes on a regular basis to discuss the various issues at hand, as well as the utility's strategy, policies and the general administration. All members of the board are trained in corporate governance and procurement procedure practices.

Nairobi City Water and Sewerage Company (NCWSC), a private limited company, incorporated in December 2003 under the Companies Act, is wholly owned by the Nairobi City Council. The company's organisational structure was adopted from that of the Water and Sewerage Department of the Nairobi City Council. The utility is managed by a board of directors comprising eleven members, with the managing director being the only executive member. The board convenes on a regular basis in accordance with its statutes, but special meetings may be called where a need arises.

While the regulatory framework appears sound, NCWSC continues to face challenges relating to political interference and bureaucracy, which in some instances undermine the company's efficiency and decision-making processes. Although the Water Act of 2002 sought to create a framework in which the government is not directly involved in the management and administration of water, it is noted that Kenyan government involvement in the sector remains material, with ministerial sign-off required prior to sourcing any substantial new funding.

Under the current framework, Athi Water Services Board does not own the bulk of the water and sewerage assets under its mandate, although it holds (on trust) and manages these assets. As such, the water board pays a lease fee to the Nairobi City Council based on a percentage of the lease fees it receives from NCWSC.

Performance agreements

The Nairobi City Water and Sewerage Company has agreed with Athi Water Services Board on a list of tasks or targets to improve revenue and reduce costs. These include improving billing and collection rates, and reducing customer debts and unaccounted-for water. In return, during a transition period, NCWSC is receiving government support, which includes:

- Government transfer of labour and the payment of ministry wages bill
- Agreement by the ministry to pay its electricity bill
- Maintenance budget agreed upon with AWSB and provided on a monthly basis.

Water and sewerage billing and tariffs

In the prevailing tariff regime, charges are set for the following main components:

- Water consumption
- Meter rent, deposit and services charges (e.g. special reading of meter, reconnection).

The level of water tariffs in Kenya has remained unchanged (and not indexed to inflation) over the past 10 years. As such, rising inflation has resulted in a considerable compression of margins for the Nairobi City Water and Sewerage Company, with tariffs in 2008 close to operation and maintenance cost-recovery. Under the legal framework and as detailed in the tripartite agreement, NCWSC can set tariffs based on services provided and costs, but the Athi Water Services Board must review and approve these. Further approval may be required from the Water Services Regulatory Board or the Ministry of Water and Irrigation. As such, pricing is beyond NCWSC's control, which somewhat limits its flexibility, as well as revenue growth prospects. Although the Athi Water Services Board is not directly involved in the sale and provision of water and sewerage services, it is indirectly reliant on tariff levels and water volumes (including water sources and treatment capacity) sold by its Water Service Providers.

Except for some minor differences, the Ministry/NWCPC (National Water Conservation and Pipeline Corporation) and the Nairobi City Water and Sewerage Company have implemented similar tariff structures and consumption charges:

- Where no meter is installed a monthly flat fee of 200 Kenya shillings (KShs) is charged by the Ministry and NWCPC schemes, and KShs120 by NCWSC.
- Bulk supply to kiosks and private vendors is provided on a (subsidised) flat rate tariff of KShs15m^3 (Ministry/NWCPC) and KShs10m^3 (NCWSC).
- Water supply to schools and learning institutions is provided at a flat rate of KShs20 to KShs25 per m^3 (depending on the permissible water demand) for Ministry/NWCPC schemes and KShs15 to KShs34 per m^3 for NCWSC.
- The kiosk/vendor retail tariff is fixed at KShs2 (Ministry/NWCPC) and at KShs1 (NCWSC) per 20-litre jerrycan, which corresponds to KShs100 per m3 (Ministry/NWCPC) or KShs50m3 (NCWSC).
- For metered connections there is a lifeline tariff in place at KShs200 (Ministry/NWCPC) and KShs120 (NCWSC) for the first 10m^3 of consumption, which is paid irrespective of the consumption level within this tariff block (even if consumers used substantially less than 10m^3).
- Subsequent tariff blocks are based on an increasing block tariff structure with a total of five blocks between 10m^3 and 300m^3 consumption (Ministry/NWCPC) and a total of three blocks between 10m^3 and 60m^3 consumption (NCWSC).

The average charge currently is KShs20/m^3, which includes metered, unmetered and kiosk customers.

According to a study carried out by an independent third party, water tariffs need to go up by at least 75 percent to allow the water utilities to become sustainable and able to finance new investments.

The average charge in 2008 was KShs155/m^3, which includes metered, unmetered and kiosk customers. According to a study carried out by an independent third party, water tariffs need to go up by at least 75 percent to allow the water utilities to become sustainable and able to finance new investments.

SENEGAL

Sènègalaise des Eaux (SDE) and Sociètè Nationale des Eaux du Sènègal (SONES)

Regulatory and legal framework

The regulation of the water sector in Senegal is determined by the framework instituted under the 1995/1996 water sector reforms. Sectoral responsibilities (rural and urban, including sanitation) ultimately vest with the Minister of Water (Ministre de l'Hydraulique), with underlying responsibilities and roles designated under the aforementioned framework. Under the planning contract between the state and Sociètè Nationale des Eaux du Sènègal (SONES), the obligations of both parties are clearly defined. The gist of these obligations is that the state performs a monitoring role, with its key task being the setting of tariffs (with assistance from SONES) and the provision of assistance with asset financing and collections from government entities. In contrast, SONES is directly responsible for capital investment in the sector (including raising and servicing debt), as well as ensuring the adequate performance of Sènègalaise des Eaux (SDE).

The obligations of SONES pertain to investment in infrastructure (planning, financing and works) and coordination (with the Minister of Water) of tariff adjustments, albeit with the right to increase tariffs vested with the Minister. SDE's specific obligations the full maintenance of the infrastructure, minimum renewals of pipes and connections and replacement of low-value equipment (up to CFA 17 million). Other SDE obligations relate to water quality and the adequate usage of the infrastructure.

SDE is a privately-owned water sector operator, with its ultimate parent being the Buoygues Group, one of France's largest industrial conglomerates. This has proven to be of strong structural support to the organisation, with technical expertise and systems flowing down from Buoygues to SDE.

SONES is a state-owned entity, with 99.5 percent of its shares held by the state and the remaining 0.5 percent held by eight municipalities. Despite this, SONES is governed by private law and enjoys substantial policy autonomy. The director general of SONES, who is appointed by decree, signed by the President of Senegal, plays a crucial role in the organisation and oversees the activities of all organisational departments. The director general reports to a board of directors for key long-term decisions. Apart from the director general and assistant director general, the board consists of six members from state ministries, plus one from the National Assembly, one representative of the municipalities, one employee representative and a representative for water consumers.

Performance agreements

The responsibilities of SONES and SDE are clearly defined in the performance contract, which provides for review of performance targets every two years. The contract is designed to ensure efficiency of collections and distribution throughout the remuneration structure. SDE is responsible for all collections and pays a portion to SONES, subject to performance targets. Thus, SDE loses revenue if collections and efficiency fall below targets, but benefits if they exceed targets. With regard to technical efficiency (accounted-for water), the initial target was set at 76 percent for 1996. Subsequently, the targets have been set at 77 percent (1997), 80 percent (1998), 83 percent (1999) and 85 percent since 2000 (although this target was later delayed to 2002). The collections efficiency target has remained at 97 percent since 1988 (applied to all customers except the public administration). It is noted that the operator's water supply rate is based on an indexation formula (established at the time of tender), which adjusts SDE's revenues to compensate for increases in staff, energy and iron pipe costs, as well as electromechanical equipment.

Tariffs

SDE has no effective pricing power, as tariffs are determined by the Minister of Water with assistance from SONES. Tariffs (benefiting SDE, SONES and the state-owned company ONAS) are set in order to cover all costs, both operational and in terms of capex spend. A stratified tariff structure is applied to the industry, whereby different rates are applied to different consumer types and consumption levels. Tariffs have evolved since reform to try to reduce subsidies to farmers (an objective of reforms). As at F07 the following charges were in place:

- Social tranche: CFA191.3/m^3 for 0m^3 to 20m^3
- Full tranche: CFA629.9/m^3 for 21m^3 to 40m^3
- Deterrent tranche: CFA788.7/m3 for > 40 m^3.

TUNISIA

Societe Nationale d'Exploitation et de Distribution des Eaux (SONEDE)

Regulatory

SONEDE is overseen by the Ministry of Agriculture and Water Resources (MAWR), which formulates water sector strategies and coordinates investment planning and the allocation of resources. As a public agency, the government is responsible for mobilising financial resources beyond what SONEDE can recover itself through user fees. In addition, the Tunisian government directly owns all of the utility's capital and financial assets, while the management of financial assets, operations and maintenance, rehabilitation, renewal, and installation of equipment is delegated to SONEDE.

A non-executive board of directors (state agents or other government employees) governs SONEDE's policies and the general administration of its activities. The board convenes at least once per quarter to discuss the various issues at hand, as well as the utility's future strategy.

It is noted that in terms of current legislation, ministerial sign-off is required prior to SONEDE being able to source new debt. This hinders the ability of the utility to quickly change forms of financing, and limits the autonomy of the utility to take its own financial decisions and plan with surety. While the system of applying for loans from government generally seems reasonable, utilities must be sure that once loans have been approved they will be disbursed timeously, because the predictability and regularity of such transfers is critical to establish bankability and access to capital markets.

Planning for the drinking water sector is integrated at the national level through five-year plans. These are developed by SONEDE and must be approved by the SONEDE board, the line ministry, and the Ministry of Development and International Cooperation partners. Planning is followed by the creation of an annual budget for operations and development, which is synchronized with the plan's policies and programs. SONEDE is currently on its 11th plan (2007-2011). The historical reliance on government and donor funds as the primary source of capex funding serves to prevent the utility from proceeding with its capex projects in the event that this funding is not forthcoming. In addition, as donor funds/government grants can be viewed as a non-recurring income source, this may dissuade investors given that they are more likely to lend to an entity displaying consistent predictable revenue flows.

The government and the National Trade Union participate in salary negotiations every three years: on average, salaries rise by 6 percent over this period. It is also noted that all recruitment of staff requires ministerial approval.

Water sales and tariffs

SONEDE's tariffs are revised periodically (twice every five years, although, given the 2009 political elections, only one tariff increase is expected during the current five-year term), although exact implementation is not certain. Tariff adjustment requests are submitted to the Oversight Ministry, which has the option to transmit these for evaluation to a ministerial council headed by the Prime Minister.

Water tariff structures are applied uniformly across the country. SONEDE's tariff structure has two components: a fixed component and a variable component, which is proportional to consumption. The first bracket provides for low-income households whose quarterly water consumption does not exceed 20m^3, or the equivalent of 40 liters per day per person. The social tariff results in a subsidy of over 30 percent of the cost to supply water. This tariff structure has resulted in improved coverage and connection rates in poor areas, while encouraging cost savings through increasing tariff scales. As at F07 the following charges were in place:

- TD0.14 for 0m^3 to 20m^3
- TD0.24 for 21m^3 to 40m^3
- TD0.30 for 41m^3 to 70m^3
- TD0.55 for 71m^3 to 150m^3
- TD0.84 for +151m^3

UGANDA

National Water and Sewerage Corporation (NWSC)

Regulatory

The National Water and Sewerage Corporation's operations are governed by the NWSC Statute, which sets out the functions and operating structure of the corporation, while the Water Act of 2000 stipulates the utility's jurisdiction and overall regulatory framework. Under the Act, Uganda's Ministry of Water, Lands and Environment (MWLE) has the responsibility of setting national policies and standards for water development and management. NWSC thus operates under the direction of the MWLE and has to seek authorisation for any tariff adjustments and major capex activities. The regulated and relatively transparent environment has helped eliminate the inefficiencies of the past, allowing for quicker decision making. However, water service provision remains a social and political issue, with interference from the government somewhat undermining the full commercialisation of the corporation.

The utility is directed by a board of directors on behalf of the Government of Uganda, which convenes on a regular basis in accordance with its statutes. The board comprises nine government appointed directors and the Managing Director (MD). The MD, who is responsible for the day-to-day management of the utility, leads the management team, which meets on a regular basis. Quarterly reviews are undertaken of all business units.

Following the capitalisation of debt by the government, NWSC is subject to restrictions regarding its borrowing activity. In addition, the historical reliance on government as a key source of capex funding has prevented the utility from accessing the commercial finance market. It is noted that more recently the government has been moving away from direct investment in the water sector.

The corporation's credit policy does not allow for disconnection for the non-payment of water services, thus directly affecting both operating performance and overall liquidity.

Performance agreements

NWSC executes internally delegated management contracts with service providers at the township level, which include explicit agreed performance targets. These have contributed to increased levels of accountability and overall operating efficiency. Examples of targets include unaccounted-for water, accounts receivable, and connection efficiency. The management contracts establish the terms for monthly payment of management fees to the towns, which include performance fees tied to the percentage of operational targets achieved and additional incentive fees tied to improvements in the cash-operating margin. The contracts also include penalties in the form of withheld payment for persistent failure to achieve certain targets.

Water and sanitation sales and tariffs

With regard to the setting of tariffs, the government determines policy and sets tariffs, as well as ensures service quality levels. Notwithstanding this, NWSC does have the authority to study tariff changes and

propose appropriate tariffs, in line with achieving targets set in its mandate. However, the corporation has not been able to successfully propose real tariff increases. The following charges (in Ugandan shillings - Ushs) are currently in place:

- Public standpipes - Ushs 688 per m^3
- Residential/domestic - Ushs 1,064 per m^3
- Institutional/government - Ushs 1,310 per m^3
- Industrial/ commercial - First 500m^3 per month: Ushs 1,716 per m^3
  - 501 to 1,500m^3 per month: Ushs 1,716 per m^3
  - Over 1,500m^3 per month: Ushs 1,496 per m^3.

1.7 Banking system and capital markets

BURKINA FASO

Banking sector

The banking sector comprises six commercial and three specialised credit institutions called Etablissments Finacieres. The financial system of Burkina Faso is integrated on a regional level, with the Central Bank of West African States (BCEAO) supervising the banking sector and finance institutions. A series of reforms in the 1990s limited state ownership in banking institutions, and encouraged privatisation. Despite these measures, however, intermediation remains low. All major banks have varying degrees of foreign ownership, primarily by France and other African nations. Credit financing is largely of a short-term nature, which impedes longer-term economic growth, although some banks do extend medium and long-term credit. The World Bank, the European Union, the African Development Bank and other donors are also actively engaged in Burkina Faso.

Capital markets

The Regional Stock Exchange (BRVM) - the stock market for the Union Economique et Monétaire Ouest Africaine (UEMOA) region – started operating in September 1998. It is located in Abidjan and has branches in each of the capital cities of the other UEMOA member states. Its main role is to pool and process stock market orders transmitted by brokerage companies (Sociétés de Gestion et d'Intermédiation - SGIs) authorised to negotiate securities quoted on the stock exchange. As of December 2006, 19 brokerage companies were registered in the Union.

As of the same date, there has been only one brokerage company in Burkina Faso that is licensed to trade on the BRVM. The BRVM is regulated by the CREPMF whose responsibilities include the promulgation of policies and procedures to regulate the Regional Stock Exchange, and the promotion of a regional bond market. In order to list on the BRVM, all bond issues must be guaranteed by an approved financial institution, a development financial institution, a guarantee fund, or the parent company. This regulation , however, currently, in the process of being amended to provide for independent ratings. At the end of December 2006, the capitalisation of

the equity market was CFA 2,067bn, whereas the bond market capitalisation stood at CFA4 89bn, with CFA 260bn being government bonds. As at year-end 2006, 61 securities were listed, including 40 shares and 21 bonds, compared to 57 securities comprising 39 shares and 18 bonds at year-end 2005.

KENYA

Banking sector

The banking industry in Kenya is governed by the Companies Act, the Banking Act, the Central Bank of Kenya Act, and the various prudential guidelines issued by the Central Bank of Kenya. The banking sector was liberalised in 1995 and exchange controls lifted.

There are 46 bank and non-bank financial institutions, 15 microfinance institutions and 48 foreign exchange bureaus. Thirty-five of the banks, most of which are small to medium sized, are locally owned. The industry is dominated by a few large banks, most of which are foreign owned, although some are partially locally owned. Six of the major banks are listed on the Nairobi Stock Exchange.

The banks have come together under the Kenya Bankers Association, which serves as a lobby for the banks' interests and also addresses issues affecting member institutions.

Capital markets

The Nairobi Stock Exchange (NSE) is one of the oldest bourses in sub-Saharan Africa. The NSE has 54 equity listings in its main and alternative investment market segments. The greater economic sophistication of the population has resulted in strong demand for all types of investments. Particular interest has been displayed for direct equity investments on the NSE, supported by several large initial public offerings since 2006. This trend has significantly bolstered the number of private investors on the NSE.

The Capital Markets Authority (CMA) was established under the Capital Markets Authority Act (renamed the Capital Markets Act in 2000), which became operational from December 1989. The CMA is responsible for the licensing, regulation and supervision of all operators in the capital markets. The Capital Markets Advisory Committee consists of eleven appointed representatives from private-sector organizations, and nine ex-officio members representing the CMA, NSE, and other non-commercial organizations. The mandate of the committee is to act as a forum for discussion between the Authority and stakeholders on all matters pertaining to capital markets.

Liquidity in Kenya poses a particular opportunity for Ugandan and Tanzanian debt issuances, in that the pension sector regulator in Kenya (the Retirement Benefits Authority) classifies Uganda and Tanzania as onshore investments. The Retirement Benefits Authority requires that at least 85 percent of pension assets be invested onshore. Given the limited existence of debt instruments in Kenya, there is appetite to place some of the considerable pension liquidity into instruments issued in Uganda.

SENEGAL

Banking sector

Senegal's banking sector is the second largest in the Economic Community of West African States (Union Economique et Monétaire Ouest Africaine – UEMOA) after that of Côte d'Ivoire, with about one-quarter of total banking assets. The Senegalese market is widely seen as attractive because it is profitable and its growth prospects are considered to be promising, especially in the light of the low banking penetration rate – only 5 percent to 6 percent of the population currently holds a bank account. The authorities are trying to combat the low penetration rate of banking services by introducing new legislation, such as that lowering the required monthly income threshold for opening an account to around US$ 100 per month.

Measures to integrate all of the member countries' banking systems have also been taken, with the introduction of an electronic clearing system and a payment card to be put into circulation shortly. The structure of banking credits reveals a clear dominance of short term at the expense of longer term credits, and a concentration of credits to the country's large companies to the detriment of the small and medium enterprise (SME) sector of the economy.

There are 17 banks in Senegal, the majority of which are private-sector owned. The year 2007 witnessed a number of banking mergers. The Moroccan bank BMCE acquired a 35 percent stake in Bank of Africa in March 2007. The second merger involved the subsidiary of the Moroccan bank Attijariwaja, which merged with Banque Sénégalo-Tunisienne in July 2007. At the end of 2007, Attijariwaja also announced that it was acquiring 79.15 percent of the share of CBAO, one of Senegal's two largest banks. Microfinancing organisations play a key role in the country's large informal sector.

Capital markets

Senegal's capital markets sector is still in a relative state of infancy. Economic development has traditionally been tied to the general development of the West African region. In 1994, the country was a founding member of UEMOA. With the creation of the BRVM (the Regional Stock Exchange) in 1998, Senegal gained the necessary foundation for the modern capital market structure. Although the use of public and private bonds has recently proved to be the most popular means of raising capital for investment, it is clear that the BRVM's stock market holds the greatest potential for meeting the capital needs of Senegal's emerging economy. Since the signing of the peace deal in Côte d'Ivoire in March 2007, the BRVM 10, which is the index of the market's top ten firms, has excelled. For 2007, the BRVM 10 index registered a 76 percent gain in capitalisation levels.

Bonds are increasingly popular with governments in the UEMOA region which require capital to meet their budget deficit requirements. The potential for the country's regionally oriented capital market is contingent on the members of UEMOA and BRVM taking positive steps. A transition from the traditional commercial bank- and bond-oriented system of acquiring capital for investment will also continue to gain momentum. With several initial public offerings planned for 2008 and the expectation of a number of privatisation projects for Senegalese state-owned assets, increased capital market activity is expected.

TUNISIA

Banking sector

The banking system is regulated by the Central Bank of Tunisia (BCT). The sector, which was responsible for 90 percent of financing to the economy in 2006, comprises 14 deposit banks, eight development banks, eight offshore banks, and two merchant banks. Three public banks maintain a significant market share and their lack of management autonomy makes for slow internal modernisation.

Credit has been growing strongly, helped by a surge in consumer credit, and banks have been focusing on improving their portfolios by increasing provisioning. Branch expansion and cash-dispensers have also been a major focus. However, the sector remains one of the weak points in the economy due to over-fragmentation and a dominant public banking sector. Much still needs to be done for the industry to achieve European Union banking standards by 2010. The authorities are also aiming for full Dinar convertibility by 2011. The Tunisian banking sector seems well geared for growth, with a focus on establishing subsidiaries in overseas markets, in particular Libya and Algeria.

Capital markets

In 2006, around 50 percent of investors in bond markets were mutual funds. The government is responsible for 90 percent of bonds issued; these are listed on the stock exchange, and are regulated by the Financial Markets Council. Tunisia is a regular issuer of Samurai and Yankee bonds with a maximum maturity of 30 years. The exchange is relatively small, in 2006 comprising 48 listings with a market capitalisation of US$ 4bn. Derivative activity comprising modest but growing volumes of foreign exchange forwards completes the capital markets, along with a small secondary bond market.

Foreign participation has increased gradually and stood at 28.2 percent at the end of 2007. The bourse does, however, face a number of key challenges if it is to reach its potential. These include too few listings, insufficient exposure of listed companies to the stock market (few have more than 20 percent to 30 percent public floats); and too few institutional investors. Tunisia's new alternative market, designed to attract companies reluctant to list on the main board because of stringent requirements, is a step in the right direction. However, the market is not yet sufficiently developed to fulfill its desired role as a regional financial platform and major source of corporate investment.

UGANDA

Banking sector

Wide-reaching financial-sector reform followed the spate of bank failures during the mid to late 1990s, which saw prudential regulations upgraded to better reflect international standards. Procedures taken to strengthen the banking system and restore industry confidence included: shutting down several distressed banks; the privatization of the systemically important Uganda Commercial Bank; and the substantial improvement of banking supervision with the introduction of a risk-based approach. In Uganda, the BoU) has proposed 2010 as the implementation deadline for Basel II.

Banking supervision and regulation is outlined in the Financial Institutions Act (2004). During 2005, nine new regulations were gazetted, which covered: licensing, capital adequacy requirements, credit classification and provisioning, limits on credit classification and large exposures, insider-lending limits, liquidity, corporate governance, ownership and control, and credit reference bureaus.

Further regulations have been implemented of late or are in advanced stages of implementation The regulations address issues related to money laundering, consolidated supervision, foreign exchange business, external audits, prompt corrective actions, mergers, acquisitions and takeovers, and internal auditors' reporting standards.

Uganda's banking system is small and underdeveloped, defined by a limited number of commercial banks and a nascent bond market dominated by a single investor. Despite having grown in 2001 – albeit from a very low 20 percent of GDP – by 2005 industry assets still amounted to only 24 percent of GDP. The extent of financial deepening and intermediation in the economy is exceptionally low by international and African standards. As such the market is not fully efficient in relation to capital allocation and pricing. Local banks tend to have low asset-to-deposit ratios, preferring instead to use their deposits to fund treasury bills and bonds. While the larger banks do have excess liquidity that they are willing to deploy in financing medium term assets (5-year to 7-year tenor), the loan covenants required under such lending can be onerous. In addition, given the limited competition within the banking sector (and between banks and the wider capital markets), loan spreads remain high.

Capital markets

The Capital Markets Authority (CMA) was established in 1996 following the enactment of the Capital Markets Authority Statute 1996. It is an autonomous body responsible for promoting, developing and regulating the capital markets industry in Uganda, with the overall objectives of investor protection and market efficiency.

Significant progress has been made in the area of regional co-operation through a forum known as the East African Member States Securities Regulatory Authorities (EASRA), which brings together the securities regulators and stock exchanges in Kenya, Uganda and Tanzania. EASRA's objective is to harmonise the securities laws and infrastructure of capital markets in the East African region leading to common training and conduct of business standards, and cross-border listing of companies within the region.

The Ugandan Stock Exchange currently has only six companies listed. In the past bonds were only issued by the Ugandan government, although three corporate bonds have been listed in recent years.

The capital markets in Uganda have excess liquidity and are continuously seeking longer-term investments, often matched to the demands of infrastructure providers. Pricing of such funds is made difficult in the absence of a liquid long-term tail to the Bank of Uganda yield curve. Given such pricing difficulties there is potential to mis-price infrastructure issues, thereby complicating planning for potential issuers.

Potential infrastructure borrowers have access to competing pools of funding in the development finance institutions (DFIs). These institutions are often able to mobilise the required funds using sub-

sovereign borrower targeted products at rates lower than those available in the local market. These funds are, however, characterised by long approval lead times, frequent currency risks, and again onerous loan covenants.

The demand for infrastructure finance is to some degree linked to its availability locally as well as to competition between commercial and concessional finance. However in Uganda the condition of potential issuers is the key demand driver for infrastructure finance.

In Uganda the unreformed pension sector has led to a concentration of liquidity with the National Social Security Fund (NSSF). There are other smaller pension funds that have also participated in bond issuances in the past, but the NSSF has acted as a de facto underwriter for most issues. Recently, the NSSF has been engaged in an enquiry into its investment decisions. This enquiry has left the Fund without a functioning investment committee, essentially removing the considerable liquidity it holds from the market. Given the dearth of corporate bond issues in the country, however, the appetite of remaining investors for corporate and infrastructure debt is considerable. But this short-term limitation of NSSF's ability to invest in debt instruments may limit the success of bond issuances in the country. In the longer term, an unreformed pension sector obviously poses a liquidity risk to potential issuers of debt instruments.

SECTION 2:

COMPARATIVE WATER UTILITY ANALYSIS

2.1 Size and profitability statistics

Table 1: Income statement (US$'m)Kenya	Total revenue		Total operating expenditure		Net income	
	F06	F07	F06	F07	F06	F07
Service Providers						
NCWSC (Kenya)	44.9	45.3	37.4	41.5	7.4	3.4
NWSC (Uganda)	31.9	38.9	29.7	35.2	(9.4)	0.6
ONEA (Burkina Faso)	38.6	48.7	39.9	52.7	2.0	1.4
SDE (Senegal)	96.8	116.2	93.4	118.3	2.3	2.8
SONEDE (Tunisia)	166.0	175.6	161.3	173.0	1.4	0.8
Asset Holding Companies						
AWSB (Kenya)	7.3	10.2	6.2	9.6	1.1	0.6
SONES (Senegal)	27.9	36.4	22.2	24.8	0.9	2.6

An analysis of the seven water utilities in terms of total revenue generated over the two-year period 2006 to 2007 reveals that the revenue of Tunisian service provider, SONEDE, is significantly larger than that of its counterparts. SONEDE has a higher level of coverage than the other utilities – within the urban areas covered by SONEDE access to water services is at roughly 99 percent and in rural areas it is 50 percent. The utility also has a higher level of water sales, and operates within a stronger underlying economy. However, the high level of coverage limits SONEDE's growth prospects somewhat, with the other utilities being better positioned for growth in the medium to long term. In particular those utilities that also offer sewerage and sanitation services, namely NWSC (Uganda), NCWSC (Kenya) and ONEA (Burkina Faso), have good growth prospects.

Following a spike in NCWSC's revenue in F06, its F07 revenue was largely unchanged, with growth constrained by limited water production capacity (given limited funding for infrastructure development) and high levels of unaccounted for water. Uganda's NWSC exhibited fairly consistent and strong growth in revenue of close to 20 percent in recent years. ONEA (Burkina Faso), AWSB (Kenya) and NWSC (Uganda) are all recipients of operating grant funding. In the case of AWSB this is fairly significant at roughly 28 percent of the Kenyan utility's income

in F07. Conversely, SONEDE does not receive any operating grants. While operational grant funding is generally favourably viewed, this is not the case where a water utility is reliant on such funding to meet operational requirements and/or interest charges, and where the grants are not predictable/ formula based. If such funds had to fall away, there utility would be placed under significant operational strain.

Measured by revenue, the Kenyan asset holding company AWSB is the smallest of the water utilities surveyed, which is understandable given that it commenced operation only in 2004. Nonetheless it has exhibited fairly strong growth since its inception: this has been largely a result of the change in lease fee structure, coupled with improved performance by Water Service Providers (WSPs). However, limited water production capacity and high levels of unaccounted for water have constrained AWSB's revenue growth. In addition, limited funding for infrastructure development has exacerbated this to a degree.

AWSB is mandated with the management and development of water infrastructure in Nairobi and surrounding districts and is responsible for the contracting out of water and sewerage service provision to Water Service Providers. NCWSC is the asset holding company's largest client in terms of revenue, accounting for around 69 percent of AWSB's revenue in F07. A similar relationship exists in Senegal, whereby SONES is the public asset holding and management company operating in the urban and semi-urban water sector, while water distribution is performed by the privately-owned company SDE, and sanitation is performed by a further state-owned company ONAS (not one of the utilities surveyed). SONES derives most of its revenue from SDE, and accordingly, its growth prospects are integrally linked to those of the water distributor.

Most of the water utilities experienced comparatively higher increases in operating expenditure relative to revenue growth during F07. This could be explained partly by higher exogenous costs (such as fuel and energy prices), as well as by the reality that utilities were grappling to contain staff costs and salary increases in an inflationary environment. The returns have been affected by the fact that tariff increases for some water utilities have been below the prevailing inflation rate, resulting in margin compression. For SDE, operating expenditure comprises a large component of payments to SONES and ONAS under their compensation arrangement.

2.1.1 Aggregate water utility expenditure

The Aggregate Water Utility Expenditure graph reflects cumulative expenditure for each water utility during F06 and F07. As is evident, SONEDE is the largest utility with respect to both operating expenditure and capital expenditure. During F07, the relative level of capital expenditure, as a proportion of aggregate expenditure, increased for just two of the utilities – AWSB and SONEDE. ONEA and SONES reflect comparatively higher levels of capital expenditure than their counterparts, with ONEA at 34 percent and SONES at 54 percent of aggregate expenditure. Reflective of the fairly aggressive investment programmes for the bulk of the water utilities over the next few years, it is expected that water utility capital expenditure will follow a generally increasing trend (relative to aggregate water utility expenditure) for the foreseeable future. In the experience of Global Credit Ratings (GCR), water utility service providers operating in a mature

Aggregate Water Utility Expenditure

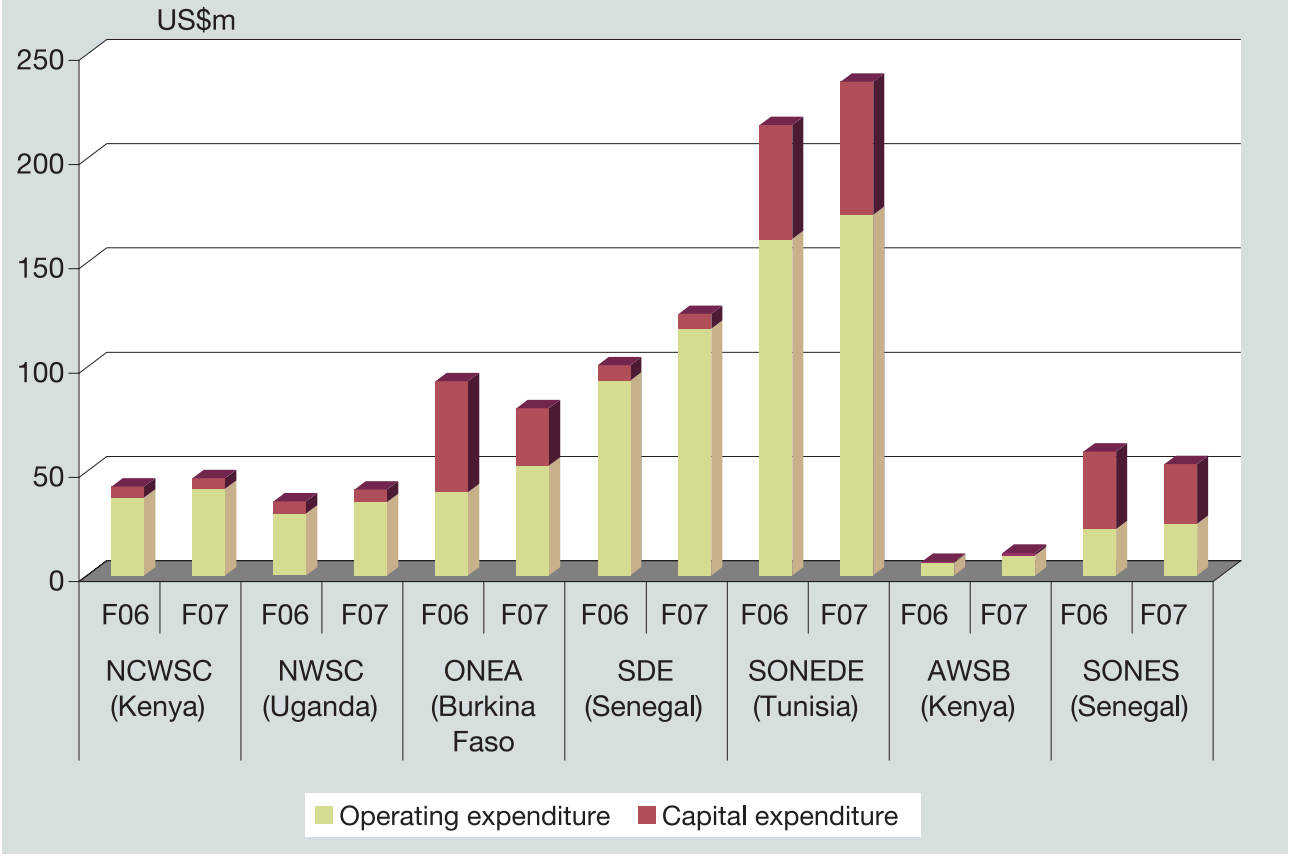


Table 2: Aggregate water utility expenditure	Service Providers										Asset Holding Companies			
	NCWSC (Kenya)		NWSC (Uganda)		ONEA (Burkina Faso		SDE (Senegal)		SONEDE (Tunisia)		AWSB (Kenya)		SONES (Senegal)	
	F06	F07	F06	F07	F06	F07	F06	F07	F06	F07	F06	F07	F06	F07
Operating expenditure	87.8	89.1	83.4	85.7	42.9	65.7	92.7	94.4	74.7	73.1	94.0	88.9	37.4	46.4
Capital expenditure	12.2	10.9	16.6	14.3	57.1	34.3	7.3	5.6	25.3	26.9	6.0	11.1	62.6	53.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

market should ultimately aim for an average level of 80 percent operating costs versus 20 percent capital expenditure. This would naturally be higher for capital-intensive asset holding companies.

With respect to profitability, SONES is significantly stronger than its counterparts, exhibiting a substantial operating profit margin of 33 percent in 2007 (F06: 21 percent). This is in sharp contrast to the Senegalese water provider, SDE, and the Tunisian provider, SONEDE, both of which exhibit low operating profit margins of 4.4 percent and 1.5 percent respectively. Both the Kenyan entities, which together operate in a similar vein to the Senegalese utilities, reflected sharp decreases in their operating profit margins during F07, with profitability for the two entities being fairly closely aligned.

In contrast to the other utilities, ONEA has continuously posted operating losses, implying that tariffs are insufficient to address operating requirements. Cognisance is, however, taken of the fact that ONEA derives fairly large extraordinary income (relating to the writing off of depreciation from investment subsidies and non cash accounting adjustment), which more than covers the operating loss and contributes to the water utility's net result.

Continuous and relatively stable increases in the EBITDA (earnings before interest, taxes, depreciation and amortization) and operating margins are a good indicator of operating efficiency and a basis for potential investors to predict future trends. Some of the water utilities evaluated have, however, exhibited erratic or decreasing earnings over the period reviewed, thereby complicating forecasting efficiency.

The ability to manage the debt serviceability cost of a water utility is measured through the gross and net interest coverage ratios. NCWSC reflects the strongest level of gross interest coverage (operating income relative to gross interest charges), albeit that the level of 10.9x attained in F07 was significantly down on the 73x cover recorded in F06: this was driven by a halving of operating income and a jump in the net interest expense, although remaining comfortable. ONEA, by virtue of

Table 3: Profitability and coverage

	EBITDA: revenues (%)		Operating profit margin (%)		EBITDA: average total assets (%)		Gross interest cover (x)		Net interest cover (x)	
	F06	F07	F06	F07	F06	F07	F06	F07	F06	F07
Service Providers										
NCWSC (Kenya)	19.3	11.2	17.5	8.9	19.0	9.6	72.9	10.9	72.9	10.9
NWSC (Uganda)	23.9	26.4	7.0	9.7	5.1	5.4	0.4	n.a.	0.4	n.a.
ONEA (Burkina Faso)	39.3	38.4	(3.3)	(8.1)	4.7	4.8	(0.6)	(0.9)	(0.7)	(0.9)
SDE (Senegal)	8.7	9.3	3.6	4.4	11.8	12.1	3.5	5.3	3.6	5.3
SONEDE (Tunisia)	22.0	21.0	2.8	1.5	4.2	3.9	0.6	0.4	3.9	147.4
Asset Holding Companies										
AWSB (Kenya)	20.3	9.7	19.4	8.1	115.3	25.2	n.a.	n.a.	n.a.	n.a.
SONES (Senegal)	89.1	90.2	20.7	33.2	6.0	7.2	0.7	1.4	0.7	1.5

the continued operating losses posted, continues to reflect negative gross and net interest coverage. AWSB and NWSC are both currently ungeared and reflected net finance income for F07. A level of over 5x net interest coverage is considered prudent, although this must be assessed in conjunction with the predictability and volatility of earnings, as well as future borrowing requirements and the impact the additional interest expense burden will have on interest coverage ratios.

2.2 Operating statistics

Under the current regulatory framework, Kenya's NCWSC can recommend tariff increases to AWSB, which in turn is expected to review and approve these. However, in the ten years tariffs have remained unchanged as a result of political and social pressures, and this has contributed to a reduction in water margins. Burkina Faso's ONEA lacks the financial autonomy to set tariffs, although it is empowered to and does propose tariff structures to its board of directors, based on financial requirements. It is also noted that over the past few years the tariff increases approved by the Ministry in Burkina Faso have been lower than inflation.

For SONEDE (Kenya), water tariffs are approved by the Ministry and are revised periodically (twice every five years), although exact implementation is not certain. Given the timing uncertainty, this makes it difficult for SONEDE to prepare budgets and can result in a relative income shortfall. This may require above inflationary tariff increases in future. In terms of NWSC, the Ugandan cabinet approved an annual indexation policy in order to stop further erosion of tariffs, thus seeing an improvement in water margins. This notwithstanding, tariffs did not result in full cost recovery for the utility. Senegal's SDE has no effective pricing power, as tariffs are determined by the Minister of Water with assistance from the asset holding company SONES. Tariffs, which benefit SDE, SONES and ONAS (the state owned sanitation company), are set in order to cover all costs, both operational and in terms of capex spend. A stratified tariff structure in the Senegalese industry, applies different rates to different consumer types and consumption levels.

The average tariff measures the notional average tariff of the utility. It is not the same as the actual tariff charged, which may incorporate tariff bands and applies different tariffs for domestic and industrial customers. Unit operating costs per cubic metre sold reflect the cost of providing water at the customer

Table 4: Tariff statistics (F07)*	Average tariff (US$m^3 sold)	Unit operating costs (US$m^3 sold)	OCCR
Service Providers			
NCWSC (Kenya)	0.41	0.4	1.03
NWSC (Uganda)	0.74	0.71	1.04
ONEA (Burkina Faso)	1.0	0.64	1.63
SDE (Senegal)	1.01	1.04	0.97
SONEDE (Tunisia)	0.44	0.35	1.26

take-off point, while the operating cost coverage ratio (OCCR) is a key measure of a water utility's ability to cover its operating and maintenance costs (excluding interest and depreciation) from revenues, without reliance on external subsidies. These three indicators - average tariff, unit operating costs and OCCR - give some insight into the financial discipline of a utility and its ability to cover operational costs with revenues from tariffs.

As is evident in Table 4, two of the participating water utilities (NCWSC and NWSC) are barely able to cover operational costs from tariff revenues, while SDE is not managing to do so. The average tariff per cubic metre of water billed ranges from as low as US$ 0.41 for NCWSC to as high as US$1.01 for SDE. An OCCR value greater than one implies that revenues from tariffs cover the operating and maintenance costs comfortably, while a value of less than one indicates that a water utility is not able to cover these costs. Of the sample, only ONEA and SONEDE were fairly comfortably above the break-even point.

It should also be noted that the calculations for average tariff per cubic metre of water billed are based on billed water sales rather than actual collections. When actual collections are used in the calculation, the amount recovered by the service provider is lower. This implies that it would be possible to implement comparatively lower tariff increases if utilities significantly improved collection efforts. In reality, however, affordability is a key financial constraint in many African countries, thereby compounding collection efficacy.

In respect of billed water sales, SONEDE is significantly larger than its counterparts and more than three times bigger than SDE, the second largest utility in the sample. NWSC (which reflected flat sales in F07) and ONEA are the smallest utilities with respects to billed water sales. During F07, Kenya's NCWSC reflected the strongest level of growth in water sales, at 20 percent. By comparison SONEDE, given the mature nature of its market, recorded growth in billed water sales of only 2.4 percent during F07. AWSB and SONES, by virtue of the fact that they are responsible for asset distribution, do not reflect any water sales.

A water utility's distribution loss is the amount of water that the service provider purchases, but does not sell. This loss may be unaccounted for, or due to theft (through illegal connections), or wastage through faulty meters, or loss during purification and distribution processes. Inadequate capital

Table 5: Water statistics	Billed water sales (million m^3/year)		Estimated Water distribution losses (%)	
	F06	F07	F06	F07
Service Providers				
NCWSC (Kenya)	85.0	102.0	47.0	45.0
NWSC (Uganda)	40.8	40.8	29.7	32.5
ONEA (Burkina Faso)	36.6	40.1	18.0	18.0
SDE (Senegal)	103.7	108.7	19.8	20.0
SONEDE (Tunisia)	337.2	345.2	16.0	16.7

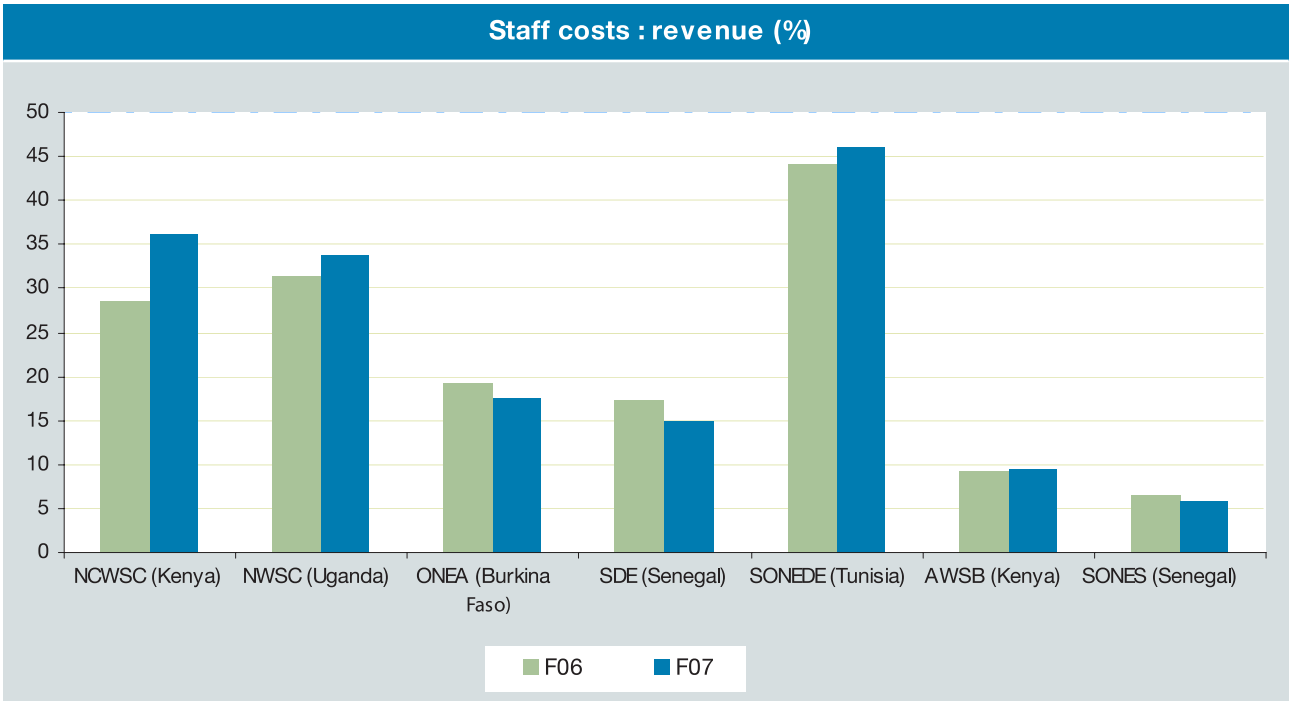
expenditure on maintenance is probably a major factor behind high distribution losses, which, in turn, results in considerable lost revenues. Poor maintenance also leads to higher costs down the line when infrastructure needs to be replaced or more extensively repaired. In terms of distribution losses, special project teams should be established to identify problem areas, followed by the deployment of task teams to reduce the amount of non-revenue water.

Although no exact statistics exist for ONEA, water distribution losses are estimated to be in the range of 18 percent, which is much lower than the losses of NCWSC and NWSC, and is comparable to the other two service providers. At an average of just over 16 percent (for F06 and F07) SONEDE exhibits the lowest level of distribution losses, while SDE's losses are in the region of 20 percent, which are considered acceptable. By contrast, NCWSC's losses are unsustainable, impacting negatively on revenue generation and operating capacity. While in the long run the aim should be to reduce unaccounted for water losses to around 20 percent, this level should only be pursued if the additional revenues generated by reducing water losses outweigh the costs.

The East African water utilities experienced significantly higher staff expenditure increases than their West and North African counterparts during F07. For SONEDE, staff costs equated to a high 46 percent of revenue in F07 (F06: 44 percent), which is well above the levels of the other utilities. Contributing to the utility's comparatively high staff costs, however, is the fact that SONEDE retains most functions in-house, while other utilities tend to outsource more of their operational tasks. Such high levels of non-discretionary expenditure do, however, serve to impede an entity's financial flexibility, and concerted steps should be taken to reduce staff expenditure to lower levels over the medium term, enabling the freeing up of funds to address other important expenditure items. Staff cost ratios would have been even higher for utilities had there not been unfilled positions - most specifically technical and engineering posts.

Over the period surveyed, the best performing utilities in terms of containment of staffing costs were the two asset holding companies, AWSB and SONES,

Table 6: Staffing statistics	Staff costs: revenue (%)		Staff costs: operating costs (%)		Increase/ (decrease) in staff costs (%)		Staff per 1,000 connections	
	F06	F07	F06	F07	F06	F07	F06	F07
Service Providers								
NCWSC (Kenya)	28.7	36.2	34.4	39.5	37.8	22.4	10.6	9.5
NWSC (Uganda)	31.5	33.8	33.3	36.1	(11.3)	27.6	7.0	7.0
ONEA (Burkina Faso)	19.3	17.4	18.7	16.1	2.2	3.9	6.4	4.6
SDE (Senegal)	17.3	15.0	17.1	14.8	9.2	(0.3)	2.6	2.4
SONEDE (Tunisia)	44.2	46.0	45.5	46.7	3.2	6.1	3.0	3.0
Asset Holding Companies								
AWSB (Kenya)	9.4	9.6	11.0	10.1	75.4	36.8	n.a.	n.a.
SONES (Senegal)	6.6	5.8	8.1	8.5	23.7	6.8	n.a.	n.a.



with levels of below 10 percent relative to income posted during F06 and F07. Given the more capital-intensive nature of their operations (management and development of water infrastructure), this was somewhat expected. Among the service providers, ONEA and SDE were the most cost effective, maintaining staffing ratios relative to both income and expenditure below 20 percent in F06 and F07. For NCWSC and NWSC, staff costs equated to a comparatively high 36 percent and 34 percent respectively in F07.

All other things being equal, growth in a water utility's number of customers should be accompanied by an improvement in the ratio of staff to connections, with a well-run organisation requiring proportionally fewer staff members relative to new connections implemented. SDE and SONEDE employ the lowest number of staff per thousand connections implemented. For NCWSC, inefficient staff levels (currently at 9.5 staff per thousand connections) and poor support staff skills remain a challenge, with further rationalisation of staff levels and skills development essential. NWSC displays a reasonable level of staff efficiency (seven staff members per thousand connections), although capacity does exist to further reduce this in the medium to long term.

Table 7 details the broader operational expenditure components of each water utility and their relative contribution to overall operational costs (before net finance costs). For three of the five service providers, staff costs comprise the largest component of total expenditure. For ONEA the largest expenditure item is depreciation, while for SDE the biggest costs are payments to SONES and ONAS. For the asset holding company, SONES, depreciation accounts for over 80 percent of expenditure, a direct result of the nature of its business and historically vast

Table 7: Operational expenditure breakdown (%)	Staff costs		Water & related purchases*		Electricity & energy		Depreciation		Other**	
	F06	F07	F06	F07	F06	F07	F06	F07	F06	F07
Service Providers										
NCWSC (Kenya)	34.4	39.5	20.0	21.0	6.5	6.1	2.0	2.3	37.1	31.1
NWSC (Uganda)	33.3	36.1	8.8	7.8	11.4	17.3	18.0	17.2	28.5	21.6
ONEA (Burkina Faso)	18.7	16.1	15.0	13.5	13.9	11.2	41.3	43.1	11.1	16.1
SDE (Senegal)	17.1	14.8	46.4	47.8	14.3	14.9	5.0	4.8	17.2	17.8
SONEDE (Tunisia)	45.5	46.7	12.4	13.5	9.3	9.8	19.7	19.8	13.1	10.2
Asset Holding Companies										
AWSB (Kenya)	11.0	10.1	0.0	0.0	0.0	0.0	0.8	1.2	88.2	88.7
SONES (Senegal)	8.1	8.5	0.0	0.0	0.2	0.3	84.3	83.6	7.4	7.7

* Related purchases generally includes water treatment chemicals, water equipment repairs and water conservancy.

** Other typically includes operational and grant expenditure and other administration expenses. In the case of AWSB, other includes lease payments of 39.9% in F07 (F06: 50.5%).

capital expenditure. By contrast, given AWSB's relative infancy, it holds a low level of fixed assets, and accordingly depreciation charges are nominal. These will gradually accumulate in line with the water utility's proposed capital expenditure programme.

2.3 Efficiency statistics

The following briefly details the credit control policies of each of the five water distributors.

NCWSC - After reading meters (or in some cases determining estimates), NCWSC sends a monthly bill for water and sewerage, allowing customers seven days to settle their accounts. Thereafter, another seven days' notice of intention to disconnect is given. However, while the law allows the company to cut off water supply for non-payment, NCWSC lacks capacity (in terms of manpower) to enforce this provision, as consumers illegally reconnect themselves.

NWSC - The corporation's credit control policy allows customers 14 days to pay their bills; thereafter NWSC can cut off water supply. The corporation has, however, stopped disconnecting customers for non-payment in order to reduce the vandalism of infrastructure. To support this initiative NWSC has appointed an outside debt collector to collect debts over three months old.

ONEA - Private individuals (households) are given 90 days to pay their accounts (includes notification of overdue amounts), after which the water service is cut off. This is only re-instated once the customer pays at least 50 percent of their historical account and signs a commitment to pay off the balance. A penalty fee of around US$ 4 for individual accounts and US$ 11 for private companies is applicable on overdue accounts. No penalties or disconnections are applied to the public sector. Bad debts are written off after five years.

SDE - Typically, private clients are given three days to meet payments, after which their water service is cut-off. However, concessions are made to sensitive clients (such as hospitals) and where clients have informed SDE of their inability to meet payment. Nonetheless, late payment carries interest penalties, whilst fraudulent activity is discouraged by sizeable fines. However, SDE is not empowered to cut off water to government entities, which accordingly account for the overwhelming majority of long-overdue debtors.

SONEDE - Clients with amounts outstanding for over three months are sent notification of their arrears position. After a further 60 days, if payment has not been received, SONEDE removes the client's water meter, and also applies a removal fee charge. This policy is not, however, applicable to public entities. SONEDE provides for all outstanding debtors in full over a five-year period. Twenty percent is provided for accounts that are overdue for between one and two years, a further 50 percent is provided for accounts overdue for between two and three years, and the remainder for outstanding amounts over five years.

Table 8 shows that of the seven utilities, five exhibited a deterioration in debt collection during F07. In F07, the collection period for NCWSC and ONEA was over 200 days, which is significantly higher than acceptable international norms. It is therefore crucial that increased emphasis be placed on efficiency of debt collection until such time as the number of debtor days has been lowered to at most a hundred days and there has been a marked improvement in the overall collections as a percentage of total billings. This will have a positive impact on cash flows.

Of concern is that AWSB exhibited a doubling of its collection period to 86.7 days, which is somewhat concerning given that the bulk of its debtors' book pertains to money owed by the service provider NCWSC (notwithstanding this, AWSB's debtors' days compared favourably to other water utilities). The same is true for SONES, which exhibited a collection period of over 200 days in F07, with the bulk of these debtors relating to SDE. For F07, NCWSC's level of debtors' days remained the highest at 272 days. Over the longer term, a collection period of between 60 and 90 days should be targeted by the water utilities, which is more in line with internationally accepted norms.

Table 8: Credit control policies – Service Providers	Days permitted to pay water bill after due date	Additional days notification	Total days permitted to pay water bill	Thereafter water disconnection applied	Interest/ penalty applied for overdue accounts	Disconnection applicable to government departments
NCWSC (Kenya)	7	7	14	No	Yes	No
NWSC (Uganda)	14	0	14	No	Yes	No
ONEA (Burkina Faso)	90	0	90	Yes	Yes	No
SDE (Senegal)	3	0	3	Yes	Yes	No
SONEDE (Tunisia)	90	60	150	Yes	Yes	No

Table 9: Efficiency	Collection period (days)		Net debtors: revenue (%)		Current ratio (:1)	
	F06	F07	F06	F07	F06	F07
Service Providers						
NCWSC (Kenya)	278.1	272.0	66.2	78.3	4.1	2.6
NWSC (Uganda)	133.4	133.3	36.9	42.0	0.3	3.8
ONEA (Burkina Faso)	188.9	205.7	64.3	56.8	1.2	1.4
SDE (Senegal)	145.9	173.6	47.0	54.2	1.1	1.1
SONEDE (Tunisia)	185.5	190.1	54.0	51.1	1.2	1.2
Asset Holding Companies						
AWSB (Kenya)	41.3	86.7	19.6	32.0	1.9	1.4
SONES (Senegal)	207.3	207.8	59.9	64.6	3.0	2.9

Excluding AWSB and SONES, a large component of the water utilities' debtors' books pertain to private individuals. Typically private individuals (except those falling under NWSC) have tended to pay their water bills on time. This is largely because failure to pay means disconnection, and because tariff structures usually incorporate a cross subsidy to the poorer portion of the population. However affordability for private individuals is becoming an increasing concern, with high increases in the cost of living resulting in significant declines in real household income.

In contrast to the better credit record for individuals, government administrations generally have very poor payment records, equivalent to over one year's (or in some instances) two years' consumption. Furthermore, water utilities' credit control policies normally do not allow the disconnection of water supply to government departments, thereby exacerbating this difficulty. It appears, therefore, that credit control policies are too lenient towards the public sector, and that there is therefore little incentive for this sector to pay on time. This negatively impacts a utility's cash flow and often results in unnecessary borrowings to cover costs.

The number of net debtors, as a percentage of revenue, remains high for most of the water utilities. Generally speaking, a more conservative provisioning policy should be implemented for outstanding water collections. While cognisance is taken of the fact that the water utilities have the ability to cut off water supplies, certain debtors have had outstanding debts for a number of years. These debtors should not be reflected as a current asset, and bad debt write offs should be effected when debts are known to be non-recoverable.

2.4 Debt and liquidity levels and associated credit protection statistics

Table 10 reflects the composition of each of the seven water utilities' borrowings for F06 and F07. Having carried an interest-bearing debt of US$ 46m on its balance sheet in F06, NWSC became

ungeared for the first time over the review period in F07. This followed the conversion of loan stock to equity. As such, capacity exists for the corporation to raise financing from the commercial market. In this regard, NWSC is in the process of issuing a bond to finance a portion of its capital expenditure requirements.

AWSB also reflected an ungeared position for F07. Although the utility reflects a relatively weak balance sheet, capacity exists for the water board to raise additional debt to fund new projects, within defined limits. Of the remaining five utilities, four reflected an increase in borrowings during F07, with SDE largely unchanged. Having inherited substantial debt from the Nairobi City Council (NCC) at inception, NCWSC continues in its efforts to reduce its level of borrowings, which stood at US$ 13.3m as at year-end F07.

Given the capital-intensive nature and expected long life of water assets, borrowings also typically exhibit a long maturity profile. Interestingly, AWSB reflected very little or zero debt, which is somewhat surprising given its mandate of developing new water infrastructure. New loans are, however, expected to be sourced by AWSB in the short to medium term to address its vast capital expenditure requirements.

In terms of borrowings for all the water utilities, these are typically sourced through a combination of the following: 1) international funding agencies directly; 2) international funding agencies, sourced via the government on behalf of the water utility; and 3) domestic banks. In terms of domestic borrowings, these are typically small in relation to total borrowings and are often used to fund short-term requirements. With respect to loans sourced through international funding agencies, this often exposes the water utility to foreign exchange risk, although in some instances it is understood that government assumes the foreign exchange risk on behalf of the water utility. Finally, funds sourced on behalf of a water utility by government may have a repayment guarantee attached in the event that the water utility is itself unable to provide this. In the absence of an explicit guarantee, cognisance is taken of the fact that new borrowings typically require ministerial consent (implying implicit government support), particularly when government is also the shareholder.

Table 10: Borrowings (US$'m)	Short term debt		Long term debt		Total debt	
	F06	F07	F06	F07	F06	F07
Service Providers						
NCWSC (Kenya)	0.2	3.2	12.2	10.1	12.4	13.3
NWSC (Uganda)	22.5	0.0	23.7	0.0	46.2	0.0
ONEA (Burkina Faso)	5.8	9.1	108.9	121.2	114.7	130.4
SDE (Senegal)	3.1	2.7	19.8	20.0	22.9	22.6
SONEDE (Tunisia)	31.6	25.2	191.5	208.3	223.1	233.5
Asset Holding Companies						
AWSB (Kenya)	0.0	0.0	0.0	0.0	0.0	0.0
SONES (Senegal)	5.0	5.7	181.2	201.7	186.2	207.5

2.4.1 Gearing

Financial flexibility is assessed in terms of a water utility's gearing levels – debt to EBITDA (earnings before interest, taxes, depreciation and amortization) and equity ratios. Despite an improvement, given SDE's relatively low capital base, net debt to capital and reserves remained high at 271 percent in F07 (F06: 329 percent), although net debt to EBITDA amounted to a much more comfortable 185 percent (F06: 260 percent). Net debt was also comfortable relative to total income, amounting to only 17 percent in F07 (F06: 23 percent). When compared with its geared counterparts, SONEDE displayed a comparatively moderate level of net debt to capital and reserves of 27 percent in F07. All other geared water utilities exhibited reasonably low levels of gearing on a capitalisation basis (in particular, given the capital intensive nature of their business).

For SONES, although the level of debt relative to capital is considered acceptable, other gearing measures register high. In this respect, net debt amounted to a sizeable 543 percent of EBITDA (F06: 682 percent) and 490 percent of total income (F06: 607 percent) in F07. As mentioned previously, NWSC and AWSB were ungeared on a gross basis in F07, while also exhibiting a fairly strong net cash position. Both utilities will, however, be sourcing new borrowings in future. Both ONEA and SONEDE exhibit relatively low levels of debt in relation to their capital base; however, this is comparatively high when measured in terms of both gross and net debt to EBITDA.

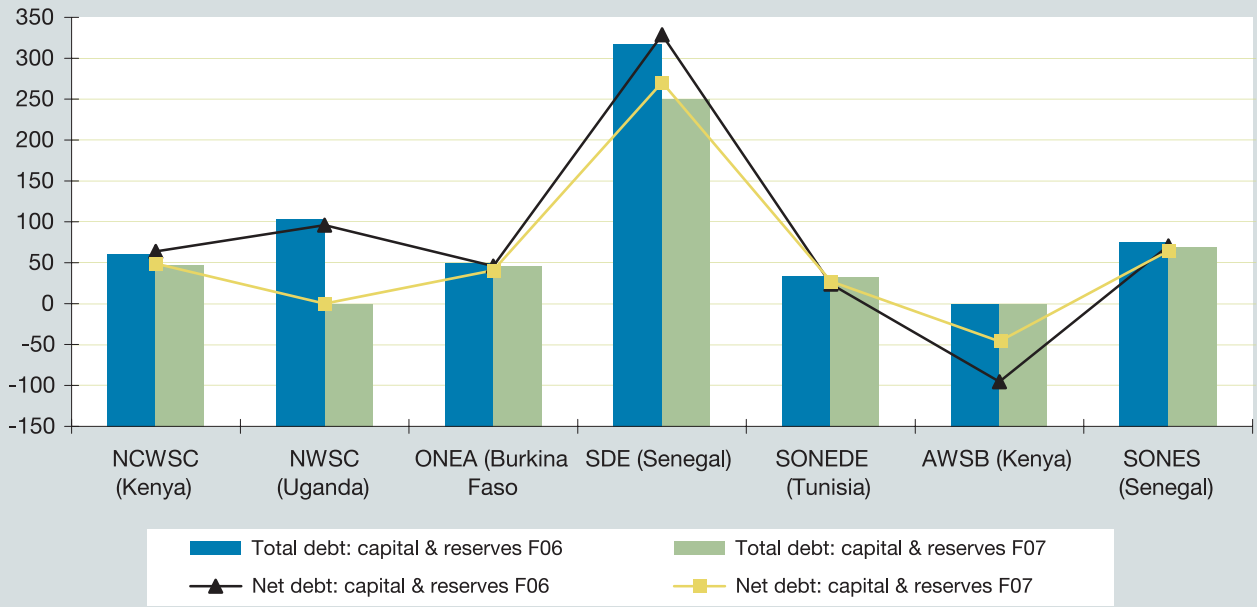
2.4.2 Liquidity

Overall, the movement in cash holdings was mixed across the water utilities in F07. In particular, SONEDE evidenced a 32 percent decrease during the year, compared to a 65 percent increase for ONEA. Notwithstanding this, SONEDE remains the largest utility (by some margin) in terms of absolute cash holdings. Overall, most of the geared water utilities exhibited relatively unchanged levels of cash coverage of short-term debt in F07 (not applicable to AWSB and NWSC, which had no debt in F07). Relative to their peers, SONES and ONEA reflected comparatively strong cash coverage of short-term

Table 11: Capitalisation & gearing*	Net debt: capital & reserves (%)					Net debt: EBITDA (%)				
	F06	F07	B08	B09	B10	F06	F07	B08	B09	B10
Service Providers										
NCWSC (Kenya)	63.8	48.9	n.a.	n.a.	n.a.	149.1	247.9	n.a.	n.a.	n.a.
NWSC (Uganda)	95.8	(4.2)	neg.	9.9	22.5	575.2	(59.4)	neg.	156.1	n.a.
ONEA (Burkina Faso)	46.0	40.7	45.4	55.8	70.0	646.5	544.2	739.2	910.9	1108.2
SDE (Senegal)	328.8	270.6	291.9	405.0	355.7	259.7	184.5	195.5	268.0	232.6
SONEDE (Tunisia)	23.8	27.2	25.6	27.0	29.4	421.0	507.8	448.7	405.8	462.9
Asset Holding Companies										
AWSB (Kenya)	(95.6)	(46.4)	35.2	37.5	39.4	(156.3)	(185.0)	260.3	335.2	460.4
SONES (Senegal)	70.5	64.4	86.6	87.3	84.5	681.6	542.8	779.8	718.9	644.9

* Forecasts for F06 and F07; budgets for F08, F09 and F10.

Capitalisation (%)



Debt : EBITDA (%)

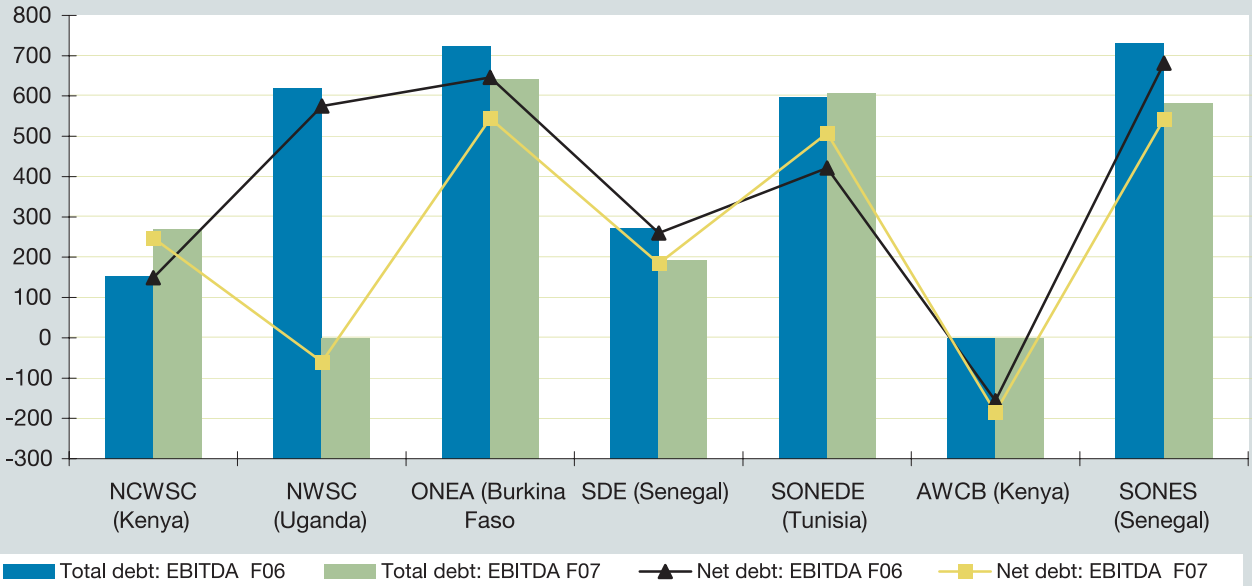


Table 12: Liquidity	Cash holdings (US$'m)		Cash coverage of short-term debt (x)		Days cash on hand (days)		Operating cash flow: total debt (%)		Operating cash flow: net debt (%)	
	F06	F07	F06	F07	F06	F07	F06	F07	F06	F07
Service Providers										
NCWSC (Kenya)	0.2	1.0	1.2	0.3	2.2	8.4	102.8	28.4	104.7	30.8
NWSC (Uganda)	3.4	6.3	0.1	n.a.	35.7	61.5	10.9	n.a	11.7	(143.2)
ONEA (Burkina Faso)	12.1	20.0	2.1	2.2	101.4	117.7	8.6	12.0	9.6	14.2
SDE (Senegal)	1.1	1.1	0.4	0.4	7.5	5.7	29.6	47.6	31.1	49.9
SONEDE (Tunisia)	70.6	48.2	2.2	1.9	155.0	97.8	5.2	2.4	7.7	3.0
Asset Holding Companies										
AWSB (Kenya)	1.7	1.4	n.a.	n.a.	103.1	49.5	n.a	n.a	(52.5)	(30.8)
SONES (Senegal)	12.7	14.0	2.5	2.4	145.6	143.9	6.3	8.9	6.8	9.6

borrowings of 2.4x and 2.2x respectively in F07. NCWSC, which was driven by a significantly higher component of debt in the short term, reflected a decline in its cash coverage of short-term debt to 0.3x in F07 (F06: 1.2x).

One of the key ratios that Global Credit Ratings (GCR) uses in assessing a water utility's liquidity is the days' cash on hand ratio, which is essentially a measure of the entity's ability to cover its operating and debt servicing costs. Four of the seven water utilities exhibited decreases in their level of days' cash on hand in F07. In particular, AWSB experienced a halving in its ratio to 50 days in F07. This, coupled with the decline in the water board's operating cash flows over the past three years has served to weaken liquidity and is channelling cash away from capex projects, which have largely been funded by concessionary capital grants.

Liquidity is, however, strengthened by the absence of debt. SONEDE reflected a lower 98 days' cash on hand, down from 155 days in F06 (the highest of the water utilities for that year). Conversely, both NWSC and ONEA posted healthy increases in their respective liquidity levels. For NWSC, liquidity levels increased to 62 days' cash on hand at the end of F07 (F06: 36 days), supported by the suspension of interest payment on government loans. Both NCWSC and SDE continue to reflect marginal levels of cash holdings (for NCWSC, liquidity is expected to improve significantly once the utility has repaid in full the debt inherited from the Nairobi City Council). Such low levels often require the utilisation of short term funding to address operational requirements during the year.

Improved operating cash flows for SDE, the strongest of the geared water utilities, was reflected in the level of operating cash to total debt increasing to a healthy 48 percent in F07 (F06: 30 percent). NCWSC also displayed a comparatively strong level of coverage (relative to total and net debt), although this decreased significantly in F07, from a level of over a hundred percent in F06. In particular SONEDE, as well as ONEA and SONES, reflect comparatively weak operating cash coverage of total and net debt.

Days cash on hand

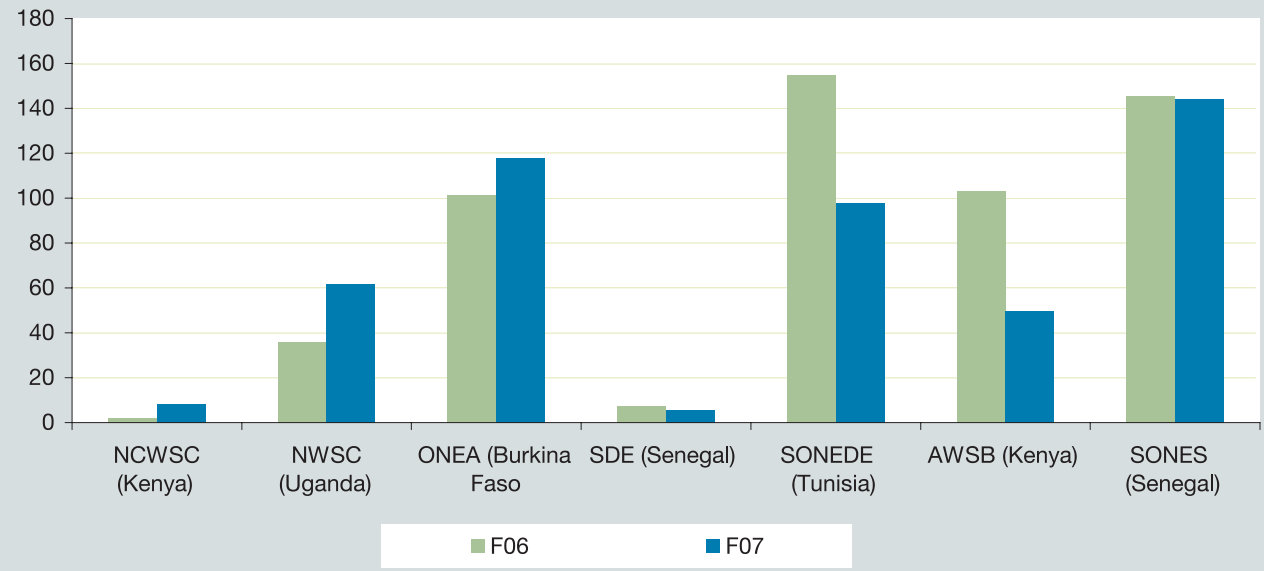


Table 13: Capital expenditure (US$'m)	Actual		Budgeted*		
	F06	F07	F08	F09	F10
Service Providers					
NCWSC (Kenya)	5.2	5.1	6.6	8.4	6.8
NWSC (Uganda)	5.9	5.9	28.5	39.1	n.a.
ONEA (Burkina Faso)	53.1	27.5	54.3	85.1	78.0
SDE (Senegal)	7.4	7.0	6.0	5.2	5.2
SONEDE (Tunisia)	54.6	63.7	93.5	99.3	107.2
Asset Holding Companies					
AWSB (Kenya)	0.4	1.2	26.5	47.7	51.3
SONES (Senegal)	37.2	28.6	48.0	34.5	23.1

* Translated at FYE07 closing exchange rate.

2.5 Capital expenditure and operating estimates

Generally speaking, capex levels are expected to rise in the medium term (for some of the water utilities this is expected to be significant relative to historical levels). In addition, through an expected increase in the use of interest bearing borrowings, gearing levels are anticipated to rise somewhat for certain water utilities. SONEDE reflected growth in capital expenditure of 17 percent to US$ 64m in F07, confirming the water utility's position as the largest

investor (in absolute terms) in water infrastructure. A continued expenditure on infrastructure is expected to see the water utility increase these levels further to around US$ 100m per annum for the next few years. While ONEA reflected capital expenditure only slightly below that of SONEDE in F06, the water utility spent only half this amount in F07. Notwithstanding this, capital expenditure was budgeted to revert to F06 levels in F08, increasing significantly to around US$ 85m and US$ 78m in F09 and F10 respectively.

The other relatively large water utility with respect to capital expenditure is SONES, which budgeted for a sharp jump in infrastructural spend in F08, with this expected to taper off somewhat in subsequent years. While SDE and AWSB are responsible for asset maintenance and development, infrastructural spend remained comparatively low in F06 and F07. This is supported by their level of capital expenditure to revenue, with SDE representing the lowest at 5.6 percent, and AWSB the third lowest at 12.2 percent, as shown in Table 14. For SDE, capital expenditure was budgeted to remain low over the period F08 to F10; however, AWSB has implemented a very aggressive expansionary programme. This is reflected in the expected substantial jump in capital expenditure to US$ 26.5m in F08 (F07: US$ 1.2m), thereafter almost doubling by F10 (funded by IDA and AFD loans as concessionary capital grants from the GoK and other development partners). However, with the majority of AWSB's capex targeted towards rehabilitation of water infrastructure and the development of water and sanitation for informal settlements, as opposed to the expansion of existing infrastructure, short term benefits are expected to remain relatively small.

In F07 SONES reflected the highest level of expenditure on infrastructure relative to revenue, with ONEA investing the most on infrastructure in F06. AWSB, which has an aggressive investment programme, has budgeted for capital expenditure as a percentage of revenue to increase significantly, to over 300 percent in both F09 and F10. ONEA is expected to revert to levels in line with F06, while NWSC is also expected to see a noticeable increase relative to historical norms.

Table 14: Income (US$'m)	Actual		Budgeted*		
	F06	F07	F08	F09	F10
Service Providers					
NCWSC (Kenya)	44.9	45.3	49.7	52.1	54.6
NWSC (Uganda)	31.9	38.9	43.1	47.8	n.a.
ONEA (Burkina Faso)	38.6	48.7	44.0	46.9	50.2
SDE (Senegal)	96.8	123.4	120.4	126.8	133.9
SONEDE (Tunisia)	166.0	175.6	184.7	198.9	204.7
Asset Holding Companies					
AWSB (Kenya)	7.3	10.2	11.5	12.7	15.2
SONES (Senegal)	27.9	36.9	38.1	40.3	43.4

* Translated at FYE07 average exchange rate.

Table 15: Capex: revenue (%)	Actual		Budgeted*		
	F06	F07	F08	F09	F10
Service Providers					
NCWSC (Kenya)	11.5	11.3	13.3	16.1	12.5
NWSC (Uganda)	18.6	15.2	66.1	81.8	n.a.
ONEA (Burkina Faso)	137.5	56.5	123.4	181.4	155.4
SDE (Senegal)	7.6	5.6	5.0	4.1	3.9
SONEDE (Tunisia)	32.9	36.3	50.6	49.9	52.4
Asset Holding Companies					
AWSB (Kenya)	6.0	12.2	230.4	375.6	337.5
SONES (Senegal)	133.5	77.7	126.0	85.6	53.2

* Translated at FYE07 exchange rate.

Table 16 provides an overview of funding sources for the water utilities during F06 and F07. As is evident, both ONEA and SONES were largely reliant on grant funding to support their infrastructural projects - in addition to government grants, the sampled water utilities have typically relied on generating much of their finance from developmental organisations and donor agencies, as well as bilateral entities (which underlies the important role these organisations have played in enabling infrastructural development). Prior to F07, SONEDE received fairly large grant funds, however, this dipped noticeably from US$ 27m in F06 to US$ 6.3m in F07. The strongest water utilities in terms of funding capital expenditure from

Table 16: Funding (US$'m)	Service Providers						Asset Holding Companies			
	NCWSC (Kenya)		NWSC (Uganda)		ONEA (Burkina Faso)		SDE (Senegal)		SONEDE (Tunisia)	
	F06	F07	F06	F07	F06	F07	F06	F07	F06	F07
Service Providers										
NCWSC (Kenya)	0.2	1.0	1.2	0.3	2.2	8.4	102.8	28.4	104.7	30.8
NWSC (Uganda)	3.4	6.3	0.1	n.a.	35.7	61.5	10.9	n.a	11.7	(143.2)
ONEA (Burkina Faso)	12.1	20.0	2.1	2.2	101.4	117.7	8.6	12.0	9.6	14.2
SDE (Senegal)	1.1	1.1	0.4	0.4	7.5	5.7	29.6	47.6	31.1	49.9
SONEDE (Tunisia)	70.6	48.2	2.2	1.9	155.0	97.8	5.2	2.4	7.7	3.0
Asset Holding Companies										
AWSB (Kenya)	1.7	1.4	n.a.	n.a.	103.1	49.5	n.a	n.a	(52.5)	(30.8)
SONES (Senegal)	12.7	14.0	2.5	2.4	145.6	143.9	6.3	8.9	6.8	9.6

internally generated funds (in relative terms) during F06 and F07 were NCWSC, NWSC and SDE.

2.6 Conclusion

2.6.1 Credit rating results and challenges

All seven of the water utilities reviewed have been accorded investment grade domestic currency credit ratings. This is important as it enables each utility confidently to approach its domestic financial markets for funding. In some instances these ratings compare favourably to the ratings accorded by GCR to various large entities operating across other key sectors (within the same countries as those of the participating water utilities). Notwithstanding this, it is important to note that key credit protection ratios reflected by some of the African water utilities are not overly conducive to the accordance of the high ratings typically associated with being virtual monopoly providers of a life sustaining resource.

In some instances gearing is too high by international standards, interest cover is very low, liquidity is poor and internally generated cash flows are insufficient to ensure protection, especially in the light of the high operating cost structures in place at the time of the survey. Furthermore, notwithstanding the fact that some of the water utilities in the sample exhibit fairly healthy operational performance and associated financial statistics (as reflected by comparatively high domestic currency ratings), scope exists for each of the water utilities to improve its respective credit ratings in the medium to longer term (in some instances by several rating notches). This can be done through lessons learned during the credit ratings and benchmarking exercise, and by focussing on the areas highlighted by GCR to improve creditworthiness. This will, in turn, reduce the cost of borrowing, which is crucial, given the vast capital expenditure requirements of each water utility.

The current constraints in relation to of the general credit quality of water utilities in Africa revolve around socio-economic, structural, administrative and financial issues. Some of the constraints can be addressed in the near term by the utilities themselves, but some can be addressed only in the context of a broader national policy framework involving the central government. Given continued urbanisation and relatively high unemployment, the most immediate steps that should be taken revolve around increasing efficiencies and reducing costs. However, sustainable and material improvements in key credit protection ratios are likely to occur only in the medium to long term and in the context of broader regulatory and macro economic developments.

In summary, the sampled water utilities face various common challenges, including:

- Containment of costs: in some instances, a high proportion of expenditure is generally non-discretionary, leaving insufficient funds to be allocated to make contributions to capital expenditure. This has been made exacerbated by the high inflationary environment.
- Working capital management remains constrained by the challenges experienced with regard to debtors' management. This is exacerbated by increased migration into various urban areas, with most of the migrants not being able to afford water services, given that most are unemployed. The clear inability of many of the water utilities to implement stringent credit collections processes, and to cut off supply to government entities, is a

major problem, which needs to be addressed. This will, in turn, require the necessary political support from governments.

- Water utilities' levels of autonomy remain overly restricted, in particular pertaining to tariff approval, borrowing requirements and salary increases.
- Many of the sampled water utilities are able to fund only a small component of capital expenditure from internally generated revenue, and have in the past relied heavily on government grants, donations and other soft loans to address their infrastructural requirements. In addition, some of governments under which the utilities operate are looking to move away from direct investment in the water sector in the medium to longer term. These governments therefore face a major challenge as they need to generate alternate forms of funding (for example from the private sector) to address the vast capital expenditure requirements. Furthermore, implementing capital expenditure programmes is in some instances made difficult, as grant and donor funding is not always provided at the time that it is anticipated. The fact that government grants can be viewed as a non-recurring income source, may dissuade investors, given that they are more likely to lend to an entity displaying consistent predictable revenue flows. Utilities and government/donors should work on a formula that provides security and consistency of yearly transfers, or alternatively develop a financial policy geared towards limiting future government/donor support. This would be likely to enable the utility to finance its own activities in the longer term.
- A lack of technical skills to address the vast infrastructural requirements.
- Most importantly, given the high capital expenditure requirements of most water utilities, it is crucial that water tariffs are more aligned with actual costs (there is a need to translate full cost recovery policy into reality). In most instances, tariffs are extraneously determined at government level. This involvement is understandable in the context of the vital importance of the sector, but in many instances sub-inflationary cost increases have been enforced for long periods, while the utilities seem to have limited influence in determining tariffs in practical terms. Establishing a transparent, indexed and long-term pricing structure is crucial for the utilities to provide services in accordance with their mandate and to make the necessary long-term plans with greater certainty. This requires co-ordination and buy-in from all key role players, particularly government. In this regard, it seems that a number of lessons can be drawn from steps implemented in Senegal (and more recently Uganda), as well as in South Africa.

2.6.2 Domestic debt funding opportunities and the way forward

It is apparent that the credit ratings and benchmarking exercise has been favorably received by domestic banks and other funding institutions. Evidence for this could be seen at the educational presentations made to the financial sector regarding credit ratings and the benefits thereof (during the introductory on-site visits to each water utility), and through the

level of interest expressed by the financial sector at the final workshop in Dakar, Senegal in November 2008. This is particularly encouraging given that the financial sector in Africa has typically perceived the water sector to be of a very high risk.

In addition to this, given the current global financial turmoil and re-assessment of lending criteria by many international banks and/or donors, the accordance of domestic currency ratings provides the water utilities with an opportunity to source funding domestically, thereby eliminating currency conversion risk. While increased and ongoing interaction between the water and financial sector is required to better understand the various risks, the progress made of late is very encouraging. Global Credit Ratings (GCR) also notes that most of the water utilities reviewed during this initial credit ratings exercise were considering or already in the process of raising debt funding through their respective domestic capital markets.

It is important that independent assessment through credit ratings continues (water utilities must engage directly with credit rating agencies to improve their self assessment) so as to improve each utility's credit rating and hence financial attractiveness to investors. An annual review (or more frequently if required) of each water utility's credit rating is also crucial in terms of maintaining transparency through regular monitoring, as well as widening the investor base available to each entity. This is particularly pertinent in light of the fact that the capital markets in many African countries have excess liquidity and are continuously seeking alternative long-term investments. Finally, benchmarking of water utilities across the African continent must continue so as to enable continuous learning and improvement. It is also hoped that the ratings and benchmarking process will be extended to include additional water utilities, with a view to improving each entity's financial viability.

SECTION 3:

LIST OF RATINGS ASSIGNED AND INDIVIDUAL RATING REPORTS

Name	Short term rating	Long term rating
Athi Water Service Board	A2	BBB+
Nairobi City Water and Sewerage Company	A3	BBB
National Water and Sewerage Corporation	A2	A
Office National de L'eau et de L'assainissement (ONEA)	A2	BBB+
Sènègalaise des Eaux (SDE)	n.a.	n.a.
Sociètè Nationale des Eaux du Sènègal (SONES)	A1	A+
Société Nationale d'Exploitation et de Distribution des Eaux (SONEDE)	A1-	A

5=Positive rating outlook

°= Rating watch

Athi Water Services Board

Kenya Water Utility Analysis **July 2008**

Security class	Rating scale	Currency	Rating	Rating watch	Expiry date
Long term	National	KShs	BBB+	No	07/2009
Short term	National	KShs	A2		

Financial data:

(US$'m Comparative)

	30/06/06	30/06/07
KShs/US$ (avg.)	73.7	70.8
KShs/US$ (close)	74.2	66.8
Total assets	3.4	5.5
Total debt	0.0	0.0
Total capital	1.7	2.4
Cash & equiv.	1.7	1.4
Turnover	5.5	7.3
EBITDA	1.1	0.7
NPAT	1.1	0.6
Op. cash flow	0.9	0.4
Market cap.	n.a.	
Market share	n.a.	

Fundamentals:

Athi Water Services Board ("AWSB") is a state corporation mandated by the Kenyan Ministry of Water and Irrigation ("MWI") (under the Water Act of 2002) with the management and development of water infrastructure in Nairobi and surrounding districts. Following its establishment in 2003, AWSB commenced operations in 2004, taking over management of water assets from the City Council of Nairobi ("CCN"). The water board is responsible for the contracting out of water and sewerage service provision to Water Service Providers ("WSPs"), with Nairobi City Water and Sewerage Company ("NCWSC") being its largest client.

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Rating rationale

The rating is based on the following key factors:

- AWSB's significant reliance on the performance of NCWSC (contributing 96% core operating revenue in F07) and the revenue risk implied, was a significant constraining factor on the rating.
- Being a wholly government-owned utility, AWSB has implicit support from the Kenyan government.
- A level of comfort is provided by AWSB's sound management and corporate governance structures.
- AWSB does not own the water assets under its mandate, with ownership still vesting with the CCN (which has failed to maintain these assets despite receiving significant lease fee revenue from AWSB). Cognisance is taken of the fact, however, that all new investment in existing infrastructure will be conducted by AWSB, while it is the intention to transfer all existing assets from CCN to AWSB by 2012 (at zero cost).
- AWSB's large operating expense base, driven by the high proportion of lease revenue ceded to CCN, has served to undermine the water board's profitability.
- Of concern is AWSB's aging debtors and declining days cash on hand.
- Total debt funding of KShs5.8bn over the next 4 years, to finance the expansion of the network and development of water sources, will result in a significant rise in gearing levels going forward. Notwithstanding, this will in turn increase billing and revenue capacity of WSP's.

Funding and liquidity profile

While AWSB has remained ungeared over the review period (with grants largely funding the water board's capex activity), liquidity strain is evident. This has been characterised by a significant increase in working capital absorption, with net debtors increasing to KShs165m in F07 (F06: KShs80m). This resulted in days cash on hand declining to 50 days in F07 from 209 days in F05 (F06: 103 days). Although the percentage of the debtors book collected declined to 40% in F07 (F06: 56%), the water board does not provide for bad debts. The water board spent a net amount of KShs88m on capex projects in F07 (F06: KShs32m), which saw a relative increase in fixed assets reflected on the balance sheet.

Website: www.globalratings.net

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Background

The formation of Athi Water Services Board ("AWSB") in 2003 was a direct result of the enactment of the Water Act of 2002. The act was setup with the objective of decentralising and delineating the management of water infrastructure and the provision of water. Before the formation of water service boards, the Ministry of Water and Irrigation ("MWI") administered national water supply and sanitation. Following the passing of the Act, MWI appointed AWSB to manage and develop water and sewerage assets in Nairobi and surrounding districts. Prior to this appointment, water assets in Nairobi (the water board's largest service area) were managed by the City Council of Nairobi ("CCN"), which currently maintains ownership of these assets.

Under the Act, the MWI is responsible for policy formulation through the Water Sector Reform Steering Committee ("WSRSC") and Water Sector Reform Secretariat ("WSRS"). Falling under the MWI are two regulatory authorities; Water Resources Management Authority ("WRMA") and Water Services Regulatory Board ("WSRB"). A Water Services Trust Fund ("WSTF") assists in financing the provision of water services to areas without financial capacity to develop water services.

AWSB's key functions under the WSRB licence are:

- The management and development of water and sewerage assets in the greater Nairobi area;
- the contraction of Water Service Providers (water companies such as Nairobi City Water and Sewerage Company Ltd) to provide water and sewerage services under a Service Provision Agreement (SPA); and
- the oversight of water and sewerage service provision in its jurisdiction.

Under the current framework, AWSB does not own the bulk of the water and sewerage assets under its mandate, although it holds (on trust) and manages these assets. As such, the water board pays a leasing fee to the CCN based on a percentage of the lease fees it receives from the Water Service Providers (WSPs). These assets cover approximately 40,000km^2 and service a population of over 6 million people. In December 2004, the Government of Kenya ("GoK") put a transfer plan in place, which sought to facilitate the transfer of the full ownership of water assets from the CCN to AWSB by June 2006, at zero cost to the water board. However, as a result of political resistance, the transfer process has been delayed considerably and is now expected to only be completed by 2012. In order to accurately determine the value of the assets it holds, AWSB has recently appointed an independent third party (Lloyd Masika Consortium) to carry out an asset valuation exercise. The study determined that assets leased by AWSB had a total market value of KShs8.7bn and replacement value of KShs21.2bn[1]. This notwithstanding, given the sizeable capital expenditure program in place, the value of the assets owned by CCN will be naturally diluted, given the planned investment in these assets.

AWSB's areas of coverage are Nairobi City and surrounding districts of Kajiado, Loitoktok, Kiambu East, Kiambu West, Machakos, Yatta, Makueni, Kibwezi, Thika and Gatundu. ASWB currently has 17 WSPs operating under its mandate in these areas. WSPs are mostly private companies initially setup by local authorities, but may include NGOs, and community groups. A large proportion of AWSB's operational revenue (96%) is garnered from the Nairobi City Water and Sewerage Company ("NCWSC").

Operating environment

Economic

Following years of economic stagnation, Kenya has seen economic recovery since 2004, and the country's macroeconomic environment has stabilised, notwithstanding the downturn occasioned by violence following the December 2007 elections. The economy grew at 6.1% in 2006, up from 5.8% in 2005. It grew a further 6.5% in 2007, even though external development assistance to Kenya amounted to only about 5% of government spending and about 1% of GDP. On average, Kenya's economy has grown by 5.1% in the period 2003-2007, making it one of the fastest growing economies in Sub-Saharan Africa. This recovery has been mainly due to improved macroeconomic management and progress in structural reform. As a result, public debt has declined and prices have stabilised. Several decades of declining economic performance, however, combined with rapid population growth, translated to increased poverty and worsening unemployment. Between the 1970s and 2000, the number of Kenyans classified as poor grew from 29% to about 57%, despite increases in overall per capita incomes.[2]

The Kenyan economy is largely dependent on agriculture, which accounts for more than a quarter of GDP and employs nearly 75% of the country's

[1] AWSB Asset Valuation Report, 2007
[2] World Bank, 2007

economically active population. The sector, together with tourism, manufacturing and telecommunications has underpinned growth in the past three years, despite erratic weather patterns. Whilst the economy's outlook remains positive, growth estimates for 2008 have had to be revised downwards to around 4% (previously around 7%) as a direct consequence of the disruptions caused by the post-election violence. Going forward, the Kenyan economy, being heavily reliant on rain-fed agriculture and limited agricultural exports (exposed to world price fluctuations), will continue to be vulnerable to alternating periods of prosperity and depression. In addition, poor governance and corruption also have had a negative impact on growth, making it expensive to do business in Kenya, while another large drag on Kenya's economy is the burden of HIV/AIDS. Risks to continuing robust growth also include weak infrastructure, drought and the diminution of financial flows from donors because of corruption allegations leveled against the government. Despite these setbacks, however, the formation of the coalition government has gone a long way towards allaying the international finance community's fears about the country, and 2008 has seen a reversal in stance of several international bodies with regards to financial involvement in Kenya.

Kenya's annual inflation reflected a steady climb throughout 2007, buoyed by higher food, transport and energy prices. This was despite a marked decline in the first quarter of 2007, when the y-o-y growth in CPI reduced to 5.9% from 15.6% in March 2006. Inflation soared to 12% in December 2007. Overall, average inflation for the year amounted to 9.8%. The inflation outlook for 2008 remains bleak and has been worsened by the post-election violence. Energy imports, rising food prices and bottlenecks resulting from the economic impasse in 1Q 2008 continued to drive the month-on month CPI inflation to over 31% by May 2008, leading to a revision of fiscal and monetary policy strategies.

Regulatory

Following the enactment of the Water Act of 2002, the MWI ceased to be directly involved in the regulation of water services and appointed a regulatory authority. The regulatory structure comprises the WSRB and WRMA. The WSRB's responsibility is to enforce the Water Act, including development and maintenance of quality standards, approval of tariff increases and issuance of licenses for service provision. The WRMA is tasked with the national management and regulation of water resources (including the issuance of licenses for water abstraction from any source and disposal of treated effluent into rivers). In the event of a dispute the case is submitted to the Water Appeals Board, which then has the final decision. AWSB operates in a fairly regulated environment under which it has the authority to make certain operational decisions. However, the legal framework restricts the water board's ability to make major capex and policy decisions without approval from WSRB and sometimes the MWI, which somewhat limits its flexibility and lengthens the decision-making process.

Operations

AWSB's operational framework is set by a tripartite agreement entered into with CCN and NCWSC, which spells out the roles of all parties involved. Although ownership of the assets still vests with the CCN, AWSB currently has operational control. At present AWSB holds 4 water reservoirs with a combined capacity of 80,000 megalitres, together with water infrastructure covering 6,000km^2. However, rapid population growth, driven by massive rural-urban migration, has seen Nairobi's population reaching an estimated 3 million people, which continues to place considerable pressure on water assets. In addition, limited water sources, in a region that continues to be highly susceptible to drought, has negatively affected supply.

Given that the water board's main responsibility is the maintenance and development of water infrastructure, daily operations require highly technical skills. In this regard, the water board employs 5 engineers with the bulk of the manpower sourced through district water officers (paid by the MWI). However, capacity constraints have led to WSPs carrying out certain maintenance work (then having to submit claims to AWSB). This, however, requires express permission from the water board and due to time and work pressures, WSPs often carry out work without obtaining the required approval. More specifically, AWSC have rejected a claim from NCWSC amounting to KShs194m for works executed since its inception on the basis of non-compliance with the procedures for delegated works as required by the SPA. Given the concentration in revenues, a significant level of risk is inherent in that NCWSC can withhold lease payments in order to offset expected reimbursements for delegated works.

Given the low technological component and long useful life of water infrastructure, the level of operational risk is generally considered low for water utilities. However, given the aging nature of

water assets in AWSB's jurisdiction, operational risk is significantly higher. In this respect, the old infrastructure is a large contributor to the high unaccounted-for water (or non-revenue water) - currently at 45% - as a substantial amount of water is lost through leaks and burst pipes. These commercial losses are exacerbated by theft, vandalism and poor metre reading & billing systems. This results in reduced revenues for the WSPs and in turn AWSB. In light of the aforementioned, proper maintenance and replacement of assets (which currently only covers 40% of AWSB's jurisdiction, leaving huge areas unserviced) is crucial going forward.

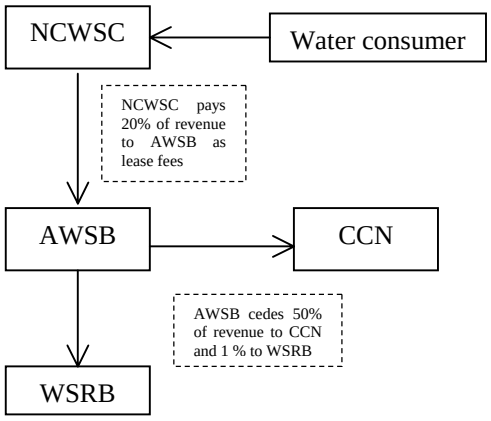
Water sales and tariffs

Although AWSB is not directly involved in the sale and provision of water and sewerage services, it is indirectly reliant on tariff levels and water volumes (including water sources and treatment capacity) sold by its WSPs. AWSB derives its revenue from lease fees charged to the WSPs for use of the water assets (currently determined as a percentage of water sold as set out by the tripartite agreement). In this regard, although the number of connections has increased over the review period and demand for water & sanitation services continues to be high, tariffs have remained unchanged (and not indexed to inflation) over the past ten years. As such, rising inflation has resulted in a considerable compression of margins for WSPs, with tariffs currently close to operation and maintenance cost-recovery. In this regard, a study carried out by an independent third party (WS Atkins International) in October 2007 recommended that tariffs in Nairobi be increased by at least 75% and 300% for water and sewerage respectively in order to achieve full cost recovery given the existing cost structure. Recommendations were also made for these increases to be gradually phased in over a period of 5 years for water and 10 years for sewerage. WS Atkins also recommended that a tariff indexation policy be adopted until full cost recovery is achieved.

Under the legal framework, NCWSC can propose tariff increases based on services provided and costs, but these must be reviewed and approved by AWSB. However, further approval may be required from the WSRB or MWI. In this regard, social factors and political resistance have dampened efforts to raise tariffs.

The diagram below depicts the flow of water revenue in the Nairobi area. Whilst AWSB's core operating revenue is derived largely from Nairobi City Water and Sewerage Company, accounting for 96% in F07, from 100% in F06, cognisance is taken of the risk posed by smaller WSPs, which may constitute unfunded mandates as they generate relatively small amounts of revenue but yet may require substantial capital funding. From a regulatory perspective, the water board is not required to match the source of revenue with capital expenditure, which heightens this risk.

Nairobi Water Revenue Structure



Initially set at 10% of the WSP's revenue, lease fees paid to AWSB increased to 15% in 2005 before increasing further to 20% in January 2006. AWSB then cedes 50% of this revenue to the CCN, and a 1% fee to the WSRB. The cessation of 50% of revenue to CCN represents a substantial leakage and significantly undermines AWSB's revenue and growth potential, as CCN does not use the revenue to develop the assets. However, once the transfer has been completed, AWSB will retain all its revenue, which should result in improved operating performance.

Table 1: Debtors breakdown KShs'm	F06	F07
Lease fees receivable (from WSPs)	78.4	139.4
Advances to district water offices	1.1	1.6
Staff debtors	0.0	1.5
IDA grants receivable	0.0	18.0
National Water Corporation Pipeline Co.	0.3	4.1
Total debtors	**79.8**	**164.6**

In F07, the increase in trade debtors was characterised by a KShs61m increase in lease fees receivable and KShs18m in IDA grants receivable. The increase in lease fees was ascribed to improved performance by WSPs, as well as the increase in the percentage of revenue payable as lease fees (from 15% to 20%).

Table 2: Debtors age analysis	F06		F07	
	KShs'm	%	KShs'm	%
Current	21.0	26.3	47.2	28.7
31-60 days	22.5	28.2	46.8	28.4
61-90 days	9.0	11.3	18.0	10.9
91-120 days	13.8	17.3	23.0	14.0
121-150 days	13.5	16.9	13.0	7.9
>150 days	0.0	0.0	16.6	10.1
Total	**79.8**	**100.0**	**164.6**	**100.0**

Going forward, an adjustment in the tariff structure, as well as growth of the customer base, are crucial if water utilities are to become financially self-sustainable and capable of financing infrastructural development. However, a significant challenge to growing the revenue base remains the culture of non-payment. In this regard, awareness campaigns and sound credit policies and implementation thereof are required to improve payment records, particularly in domestic consumers who have historically shown a lack of willingness to pay water bills.

Financial performance

A synopsis of AWSB's financial results is reflected at the end of this report, with brief comment following.

AWSB's financial performance is directly linked to the performance of NCWSC, its largest client. In F07, a significant 69% of total income (including other income) was garnered from the NCWSC, while the remainder comprised largely of government grants and sale of tender documents (that is the development of transitional business plans for WSPs). Despite slightly weaker performance by NCWSC, the water board reported a 26% increase in operational revenue to KShs515m in F07. This was on the back of revenue from other WSPs, as well as the 2006 percentage increase to 20% taking full effect. AWSB also recorded a robust 61% increase in grants and sale of tender documents, which saw total revenue increase by 35% to KShs724m in F07.

Notwithstanding the aforementioned, an 18% rise in lease payments to KShs272m (which comprised 40% of total operating costs) and a 104% increase in grant expenditure (30%) saw total expenses increase by 48% to KShs674m. Staff costs (driven by an increase in staff levels and inflation adjustments) represented a relatively low 10% of overall expenditure (F06: 11%). The water board reported a 40% lower EBITDA of KShs50m in F07. Following a depreciation charge of KShs8m, the water board reported operating income of KShs42m (F06: KShs79m).

Overall, the water board has evidenced decreased profitability over the review period (driven by the aforementioned rise in operating expenses), with the operating margin declining from 34% in F05 to 8% in F07 (F06: 19%). AWSB has reflected modest year to date performance, with total revenue exceeding budget by 9%, while expenses surpassed forecasts by 8%.

Table 3: Operating performance KShs'm	F07	YTD* Actual	YTD* Budget	Variance %
Income				
Lease fees - WSPs	514.5	398.1	395.6	0.6
Grants - restricted	136.3	7.3	0.2	3,550.0
Grants - unrestricted	69.6	0.0	0.0	n.a.
Miscellaneous income	3.4	27.3	0.9	2,937.0
Total revenue	**723.9**	**432.7**	**396.7**	**9.1**
less: Expenditure				
Staff costs	(69.1)	(52.8)	(57.3)	(7.9)
Board costs	(7.6)	(3.2)	(4.9)	(34.8)
Operational expenses	(83.6)	(75.4)	(80.6)	(6.4)
Administrative expenses	(40.3)	(18.1)	(20.4)	(11.3)
General expenses	(5.2)	(17.2)	(16.7)	3.0
Lease fees – CCN	(251.4)	(182.5)	(182.5)	0.0
Lease fees - WSRB	(20.7)	(24.6)	(20.8)	18.1
Grant expenditure	(203.3)	(40.2)	(0.0)	n.a
Total expenditure	**(681.3)**	**(414.0)**	**(383.2)**	**8.0**
Surplus/deficit	**42.6**	**18.7**	**13.5**	**38.5**

** For the nine months ended March 2008.*

Following an annualised 9% increase in cash generated by operations in F06, AWSB reported a 39% decline in F07. Given AWSB's operational expansion since inception, the water board evidenced a KShs22m working capital absorption in F07 (an increase of 44% from F06). This saw a 58% decline to KSh29m in cash flow from operations. This is largely attributed to the shifting of cash to debtors as evidenced by the increased average days receivable to 87 days in F07 (F06: 42 days). Since inception AWSC has invested KShs129m in water assets, of which KShs88m was spent in F07. This expenditure was partially funded by KShs23m in capital grants, which resulted in a net cash decrease of KShs37m.

Funding profile

Since inception, AWSB (which has remained ungeared) has primarily been funded by grants, from the Government of Kenya ("GoK") and the International Development Association ("IDA") – (a lending window for the World Bank), amongst others. Given the capital-intensive nature of AWSB's operations, it is expected that the water board would reflect a more sizeable balance sheet. However, this is not the case, given the inefficient ownership structure, although as mentioned, the development of assets by AWSB will see the gradual transfer of these assets onto its balance sheet. To date, 69% of fixed assets relate to water assets and work in progress. This notwithstanding, the water board's ability to leverage financing is thus somewhat constrained at present. Taking cognisance of the expected capex over the next four years and the funding thereof, gearing is forecast to increase significantly relative to historical levels.

As at F07, the water board reflected cash holdings of KShs92.5m, down from KShs129m, used largely to fund working capital. Days cash on hand has decreased from 209 days in F05 to 50 days in F07 (F06: 103 days). Currently 82% of cash vests with Co-operative Bank, which is unrated.

Capex projects and funding

Recently, AWSB has embarked on a number of infrastructure development projects aimed at increasing production capacity (to service growing demand) and expanding sewerage systems in the greater Nairobi area. The water board has received substantial support over the last 3 years from the IDA in the form of a US$15m (KShs975m) grant to fund its setup costs, which was meant to operationally prepare both AWSB and NCWSC for the bulk of the funding expected to come through in the first half of F09 (specifically October 2008).

Table 4: Capex and funding KShs'm	F08	F09	F10	F11
Capex				
Water supply infrastructure -IDA	112.0	1,720.0	1,500.0	1,500.0
Water supply infrastructure -AFD	1,461.0	450.0	650.0	750.0
Water and sanitation -districts	0.0	747.4	1,094.8	6,323.9
Intervention -informal settlements	48.0	110.0	120.0	120.0
Nairobi city W&S development	150.0	162.0	65.0	75.0
Total	**1,771.0**	**3,189.4**	**3,429.8**	**8,768.9**
Capex funding				
Internal funds	0.0	172.0	95.0	105.0
SIDA/DANIDA (KWSP)	50.0	--	--	--
IDA grants	112.0	220.0	--	--
IDA loans	0.0	1,500.0	1,500.0	1,500.0
AFD grants	1,461.0	200.0	300.0	350.0
AFD loans	0.0	250.0	350.0	400.0
EU grant	48.0	90.0	90.0	90.0
GoK grants	100.0	757.4	1,094.8	6,323.9
Total	**1,771.0**	**3,189.4**	**3,429.8**	**8,768.9**

The WSTF has funded some of the projects undertaken, while the World Bank and AFD are financing other ongoing projects (including the rehabilitation of the Sasumua Dam). A large portion of the funding from the World Bank is targeted towards water infrastructure (pipes, metres, sewerage systems and treatment facilities) and water systems for informal settlements. An amount of US$66m (KShs4.5bn) is to be disbursed through the IDA to MWI, which will then on-lend through the Ministry of Finance to AWSB. The loan will be extended to AWSB with an 8-year moratorium (at an interest rate of 1.5% per annum) and AWSB will only start repaying the loan in 2016 over a period of 15 years. The water board is also receiving €30m (KShs3.3bn) from the AFD, with one third of this funding disbursed as a loan and the balance as a grant. In addition, AWSB will receive a grant of €2.7m from the EU restricted to the development of water systems for informal settlements.

Currently, the most significant project the water board is undertaking is the rehabilitation of the Sasumua Dam (financed by the AFD). Once complete (by end of 2008), the dam will have a storage capacity of 16 million m^3, from the current 3.8 million m^3. With sewerage services being the least covered in the southern part of Nairobi and surrounding districts, a substantial portion of the US$60m funding from IDA is earmarked for sewerage works. This will augment recent efforts made through the Southern Outfall Trunk Sewer project, carried out in partnership with NCWSC.

Future prospects

Whilst funding from the World Bank and AFD will secure the water board's operational revenue in the long term (i.e once capex projects have been completed and the new capacity comes on-stream), it is not expected to drive short term revenue growth.

Table 5: Operating budget KShs'm	F08	F09	F10	F11
Income				
Lease fees - WSPs	565.8	622.4	746.9	821.5
Grants - restricted	150.0	165.0	198.0	217.8
Grants - unrestricted	96.1	105.7	126.8	139.5
Miscellaneous income	3.8	4.2	2.5	27.0
Total revenue	**815.7**	**897.3**	**1,074.2**	**1,205.8**
less: Expenditure				
Staff costs	(78.7)	(90.5)	(99.5)	(114.4)
Board costs	(8.3)	(9.1)	(9.9)	(10.8)
Operational expenses	(151.4)	(166.5)	(249.8)	(288.5)
Administrative expenses	(50.0)	(62.5)	(78.1)	(97.7)
General expenses	(5.4)	(5.9)	(6.5)	(7.2)
Lease fees - NCC	(282.9)	(311.2)	(373.4)	(410.8)
Lease fees - WSRB	(28.3)	(31.1)	(37.3)	(41.1)
Grant expenditure	(101.6)	(111.8)	(123.0)	(135.3)
Total expenditure	**(706.6)**	**(788.6)**	**(977.5)**	**(1,105.7)**
Profit before finance costs	109.1	108.7	96.7	100.1
less: Financing costs				
AFD	0.0	(37.7)	(37.7)	(36.3)
World Bank	0.0	(48.2)	(48.2)	(48.2)
Total finance costs	**0.0**	**(85.9)**	**(85.9)**	**(84.5)**
Surplus/ deficit	**109.1**	**22.8**	**10.8**	**15.5**
Key ratios:				
Turnover growth (%)	12.7	10.0	19.7	12.3
Operating margin (%)	13.4	12.1	9.0	8.3
Net interest coverage (x)	n.a.	1.3	1.1	1.2
Total debt to equity (%)	n.a.	50.5	71.2	46.1

In F08 the water board plans to achieve revenue growth of 13% to KShs816m, accompanied by 4% growth in total operating expenses, which should see improved profitability. However, the growth of concessionary grant revenue, although substantial in the short term, is considered unsustainable in the

long term. The relative underperformance in the first 9 months of F08 is also noted. Finance charges will remain low as finance is to be provided at low interest rates, relative to the commercial market. Although a portion of the AFD funding is to be disbursed as grant funding, gearing levels are expected to rise significantly over the next three years. Moreover, the water board has a number of pending project proposals for the development of water sources and production capacity, although funding for this has not been secured.

Athi Water Services Board

(KShs in millions except as noted)

Income Statement Year end : 30 June	2005*	2006	2007
Revenue	166.5	407.8	514.5
Other income	27.7	130.2	209.4
Operating expenditure	(137.0)	(455.2)	(673.9)
EBITDA	**57.2**	**82.8**	**50.0**
Depreciation	(0.2)	(3.5)	(8.1)
Operating income	**57.0**	**79.2**	**41.8**
Net finance charges	0.0	0.6	0.8
Net income	**57.0**	**79.8**	**42.6**
Cash Flow Statement			
Cash generated by operations	**57.3**	**83.4**	**50.8**
Working capital: (increase)/decrease	14.8	(15.5)	(22.3)
Net finance charges	0.0	0.0	0.0
Cash flow from operations	**72.0**	**67.9**	**28.5**
Maintenance capex	(0.2)	0.0	0.0
Net expansionary capex and investments	(8.9)	(32.1)	(88.2)
Capital contributions	44.8	(11.2)	22.8
Cash movement: (increase)/decrease	(107.7)	(24.6)	36.9
Borrowings: increase/(decrease)	0.0	0.0	0.0
Net increase/(decrease) in debt	**(107.7)**	**(24.6)**	**36.9**
Balance Sheet			
Capital and reserves	108.9	127.9	162.9
Total interest-bearing debt	**0.0**	**0.0**	**0.0**
Short-term	0.0	0.0	0.0
Long-term	0.0	0.0	0.0
Interest-free liabilities	20.1	120.7	206.8
Total liabilities	**129.0**	**248.6**	**369.7**
Fixed assets	8.7	24.7	58.3
Projects in progress	0.0	11.7	51.1
Investments	0.0	0.0	0.0
Cash and cash equivalents	104.6	129.4	92.5
Net trade debtors	12.4	79.8	164.6
Other current assets	3.3	3.0	3.3
Total assets	**129.0**	**248.6**	**369.7**
Ratios			
Operating:			
Turnover growth (%)	n.a.	83.7	26.2
Net capex : total income (%)	4.7	6.0	12.2
Staff costs : operating costs (%)	21.0	11.0	10.1
Staff costs : total income (%)	14.8	9.4	9.6
Cash Flow:			
Operating cash flow : total debt (%)	n.a	n.a	n.a
Operating cash flow : net debt (%)	(91.9)	(52.5)	(30.8)
Profitability:			
EBITDA : revenues (%)	34.3	20.3	9.7
Operating profit margin (%)	34.2	19.4	8.1
EBITDA : average total assets (%)	n.a	115.3	25.2
Coverage:			
Operating income : gross interest (x)	n.a	n.a	n.a
Operating income : net interest (x)	n.a	(134.6)	(53.4)
Activity and liquidity:			
Days receivable outstanding (days)	n.a	41.3	86.7
Net debtors : total income (%)	5.6	19.6	32.0
Current ratio (:1)	6.0	1.9	1.4
Average days working cash (days)	208.6	103.1	49.5
Capitalisation:			
Net debt : capital and reserves (%)	(96.0)	(95.6)	(46.4)
Total debt : total assets (%)	0.0	0.0	0.0
Total debt : EBITDA (%)	0.0	0.0	0.0
Net debt : EBITDA (%)	(137.1)	(156.3)	(185.0)
Total debt : total income (%)	0.0	0.0	0.0
Net debt : total income (%)	(40.4)	(22.7)	(10.4)

* 9 months to June 2005

Nairobi City Water and Sewerage Company Limited

Kenya Water Utility Analysis **July 2008**

Security class	Rating scale	Currency	Rating	Rating watch	Expiry date
Long term	National	KShs	BBB-	No	07/2009
Short term	National	KShs	A3		

Financial data:

(US$'m Comparative)

	30/06/06	30/06/07
KShs/US$ (avg.)	73.7	70.8
KShs/US$ (close)	74.2	66.8
Total assets	42.1	57.1
Total debt	12.4	13.3
Total capital	20.5	27.9
Cash & equiv.	0.2	1.0
Turnover	42.8	41.7
EBITDA	8.2	4.7
NPAT	7.4	3.3
Op. cash flow	12.9	3.6
Market cap.	n.a.	
Market share	n.a.	

Fundamentals:

Nairobi City Water and Sewerage Company ("NCWSC") is a water service provider contracted by Athi Water Services Board ("AWSB") to service Nairobi City and surrounding districts. The company (also referred to as Nairobi Water Company) is a wholly-owned subsidiary of the City Council of Nairobi ("CCN") and was incorporated in December 2003 under the Companies Act. NCWSC took over the provision of water and sewerage services within Nairobi and surrounding districts from the CCN's water and sewerage department. NCWSC operates under a Service Provision Agreement ("SPA") entered into with AWSB.

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Rating rationale

The rating is based on the following key factors:

- NCWSC is set to benefit significantly from the funding being received by AWSB for the development of water assets in Nairobi and surrounding districts.
- Despite ongoing initiatives to improve the company's operational efficiency, NCWSC still bears considerable legacy challenges (inherited from the CCN), which include billing errors, inherited debt of KShs688m (18% of total assets), poor public perceptions of customer service, as well as a large and unskilled workforce. In terms of the latter, overall staff costs remain high and undermine profitability at 40% of expenditure, relative to a management-set target level of 25%.
- Significant capacity constraints in the sourcing and distribution of water, exacerbated by aging infrastructure, vandalism and theft. Growth is further constrained by uneconomically low tariffs, the culture of non-payment and ongoing errors in the billing system.
- Part settlement of the substantial amount of inherited debt, coupled with increased working capital absorption, continued to weigh on the company's liquidity in F07, and is expected to continue in F08.
- Of concern is the significant level of debtors outstanding, a large portion of which is deemed irrecoverable.
- However, the installation of new and improved billing and customer management systems in 2006 should see a sizeable improvement in billing accuracy and management going forward. In this regard, cognisance is taken of the steps being taken to improve systems and streamline its operating structure.

Funding and liquidity profile

Assets have largely been funded by capital grants and interest-free liabilities. Despite a 57% drop in net income in F07, capital and reserves increased by 23% to KShs1.9bn (underpinned by increased capital grants and a positive foreign exchange adjustment). Total interest-bearing debt (including debt inherited from the CCN) declined to KShs888m (F06: KShs923m). The company evidenced an increase in short term debt as a result of a KShs200m short term loan acquired to finance the company's operational expansion. This, coupled with a 46% decline in EBITDA resulted in total debt to EBITDA increasing to 269% in F07 (F06: 152%). As such, a 222% increase in net finance charges saw net interest coverage decrease to 10.9x in F07 (F06: 72.9x), albeit still high. Cash holdings remained marginal, with liquidity strain evident, exacerbated by the high level of net debtors, currently averaging 272 days.

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GLOBAL CREDIT RATING CO.

Background[1]

Nairobi City Water and Sewerage Company's ("NCWSC") or ("Nairobi Water Company") formation arose from the enactment of the Water Act of 2002, which sought to delineate water infrastructure management and service provision in Kenya. The new structure established seven water services boards, each allocated a jurisdiction. These were tasked with the management and development of water assets, as well as the appointment of water companies responsible for water and sewerage service provision. In this regard, the Athi Water Services Board ("AWSB"), appointed for the Nairobi jurisdiction, contracted NCWSC to provide water and sewerage services to Nairobi and surrounding districts. NCWSC was incorporated in December 2003 under the Companies Act and is wholly-owned by the City Council of Nairobi ("CCN"). NCWSC took over the provision of water and sewerage services in Nairobi and surrounding districts from the CCN's water and sewerage department. The company operates within the framework of a Service Provision Agreement ("SPA") entered into with AWSB, whilst a tripartite agreement entered into by CCN, AWSB and NCWSC sets out the company's overall responsibilities, with the one complementing the other.

NCWSC's key functions under the SPA are:

- Adequate provision of quality water and sewerage/sanitation services in the areas agreed to with AWSB;
- Billing of water and sewerage services provided and credit control; and
- Maintenance and improvement of water and sewerage infrastructure (after seeking prior approval from AWSB).

At inception the company inherited a number of operational challenges from the CCN. These included a high proportion of unskilled staff, KShs1.5bn debt and billing errors. While the majority of management staff has changed, the company is still in the process of improving skills (through various training programmes) and rationalising staff levels. In addition, the company has also embarked on initiatives to improve public perceptions and overall operational efficiencies. These include the adoption of a customer service charter, as well as awareness campaigns.

Operating environment

Economic

Following years of economic stagnation, Kenya has seen economic recovery since 2004, and the country's macroeconomic environment has stabilised, notwithstanding the downturn occasioned by the December 2007 elections. The economy grew at 6.1% in 2006, up from 5.8% in 2005. It grew a further 6.5% in 2007, even though external development assistance to Kenya amounted to only about 5% of government spending and about 1% of GDP. On average, Kenya's economy has grown by 5.1% in the period 2003-2007, making it one of the fastest growing economies in Sub-Saharan Africa. This recovery has been mainly due to improved macroeconomic management and progress in structural reform. As a result, public debt has declined and prices have stabilised. Several decades of declining economic performance, however, combined with rapid population growth, translated to increased poverty and worsening unemployment. Between the 1970s and 2000, the number of Kenyans classified as poor grew from 29% to about 57%, despite increases in overall per capita incomes.[2]

The Kenyan economy is largely dependant on agriculture, which accounts for more than a quarter of GDP and employs nearly 75% of the country's economically active population. The sector, together with tourism, manufacturing and telecommunications has underpinned growth in the past three years, despite erratic weather patterns. Whilst the economy's outlook remains positive, growth estimates for 2008 have had to be revised downwards to around 4% (previously around 7%) as a direct consequence of the disruptions caused by the post-election violence. Going forward, the Kenyan economy, being heavily reliant on rain-fed agriculture and limited agricultural exports (exposed to world price fluctuations), will continue to be vulnerable to alternating periods of prosperity and depression. In addition, poor governance and corruption also have had a negative impact on growth, making it expensive to do business in Kenya, while another large drag on Kenya's economy is the burden of HIV/AIDS. Risks to continuing robust growth also include weak infrastructure, drought and the diminution of financial flows from donors because of corruption allegations leveled against the government. Despite these setbacks, however, the formation of the coalition government has gone a long way towards allaying the international finance community's fears about the country, and 2008 has seen a reversal in stance of several international bodies with regards to financial involvement in Kenya.

Kenya's annual inflation reflected a steady climb throughout 2007, buoyed by higher food, transport and energy prices. This was despite a marked decline in the first quarter of 2007, when the y-o-y growth in CPI reduced to 5.9% from 15.6% in March 2006. Inflation soared to 12% in December 2007. Overall, average inflation for the year

[1] Readers requiring more information are asked to refer to the 2008 AWSB credit rating report

[2] World Bank, 2007

amounted to 9.8%. The inflation outlook for 2008 remains bleak and has been worsened by the post-election violence. Energy imports, rising food prices and bottlenecks resulting from the economic impasse in 1Q 2008 continued to drive the month-on month CPI inflation to over 31% by May 2008, leading to a revision of fiscal and monetary policy strategies.

Local economy

As a result of massive rural–urban migration, Nairobi's population has grown significantly in recent years and as at 2007 was estimated at just over 3 million, with an average life expectancy of 63 years recorded. Currently, absolute poverty levels in Nairobi are estimated at 21%, which is relatively low compared to a national average of 46%. With the massive rural-urban migration, water per capita has declined significantly over the last 10 years. Only 23% of Nairobi's population has access to clean drinking water, with 29% having piped access in residences. The majority of the population use boreholes and wells, and also buy from water vendors at an inflated price.

Regulatory

The regulatory structure comprises the Water Services Regulatory Board ("WSRB"), whose responsibility is to enforce the Water Act. Under the Act, the Ministry of Water and Irrigation ("MWI") is responsible for policy formulation through the Water Sector Reform Steering Committee ("WSRSC") and Water Sector Reform Secretariat ("WSRS"). Falling under the MWI are two regulatory authorities; the Water Resources Management Authority ("WRMA") and the WSRB. The WRMA is tasked with the national management and regulation of water resources (including the issuance of licenses for water abstraction from any source and disposal of treated effluent into rivers), while the WSRB oversees the maintenance of quality, standards and issuance of licences for service provision. While the regulatory framework appears sound, NCWSC continues to face challenges relating to the lack of by-laws to aid the enforcement of proper utilisation of water and sewerage services. In some instances, this has served to undermine the company's efficiency and decision-making processes.

Operations

As set out by the SPA, the company is responsible for ensuring the availability of water and sewerage services, as well as billing and credit control. The water company thus interfaces directly with the consumer. While the idea is for the company to operate as a private company, NCWSC still carries with it some of the internal processes set by the CCN. The company, however, continues to focus on streamlining its operating structure with emphasis on skills and technological development. Being a labour intensive operation, the company has a staff complement of 2,015 (150 of whom are management staff), slightly below 2,059 in the previous year. In addition to management's efforts to improve the quality of staff and rationalise staff levels, the company has experienced natural attrition of staff since inception. Staff optimisation is estimated at 1,700.

The company's technical operations involve the sourcing of water, treatment and storage, followed by distribution to consumers. In addition, the SPA provides for the company to undertake certain operational responsibilities, as well as take transfer of fixed assets, allowing NCWSC to develop or expand infrastructure on behalf of AWSB (provided express permission is obtained from the water board). In this regard, the company is also responsible for installing new connections and attending to connection failures. Under the agreement, AWSB will reimburse the water company for any work done on its behalf. However, given the problems and complexities of the current structure, it appears efficient for NCWSC to carry out all the capex activities itself, as it appears to have more on-the-ground knowledge of capex requirements.

NCWSC's only source of water is from a single dam 52km from Nairobi City, with 3 reservoirs having a combined capacity of 80,000 megalitres. Whilst demand for water (including non-revenue water) is currently estimated at around 600,000 m^3 per day, NCWSC only has capacity to supply 525,000 m^3 of treated water per day[3]. The focus of AWSB and NCWSC over recent years has, however, been the expansion and rehabilitation of sewer services (which continue to lag water services). In this respect, a substantial amount of investment is earmarked for sewerage works (to be implemented largely by AWSB). This will augment the Southern Outfall Trunk Sewer project embarked on in May 2007 in partnership with ASWB, in an effort to improve sanitation services in the industrial and residential areas. In the interim, NCWSC continues to provide exhauster services to properties not connected to the central sewerage system.

The company faces enormous challenges relating to the sourcing and distribution of water. These include old and dilapidated infrastructure that continues to be a significant contributor to the high unaccounted-for water or non-revenue water (currently in the region of 45%), as a substantial amount of water is lost through leaks and burst pipes. This has been exacerbated by vandalism and theft, which has also seen a reduction of inventories of spares and maintenance parts. The level of

[3] AWSB Tariff Modelling Report, October 2007 (Atkins)

operational risk is also heightened by the company's reliance on a single source of water in a drought prone region. Although the quality of water meets World Health Organisation ("WHO") standards, the old infrastructure poses a significant threat to quality going forward. Other challenges facing technical operations include the unavailability of detailed drawing plans showing the location of pipes, as well as buildings erected over infrastructure and therefore hindering repairs and maintenance.

Water & Sewerage billing and tariffs

The level of water tariffs in Kenya has remained unchanged (and not indexed to inflation) over the past 10 years. As such, rising inflation has resulted in a considerable compression of margins for NCWSC, with tariffs currently close to operation and maintenance cost-recovery. Under the legal framework and as detailed in the tripartite agreement, NCWSC can propose new tariffs based on services provided and full costs of providing these services, but the AWSB must review and approve these. Further approval may be required from the WSRB or MWI. As such, pricing is beyond the company's control, which somewhat limits the company's flexibility, as well as revenue growth prospects. While efforts have in the past been made to raise tariffs, these have been met with political resistance, particularly in the period running up to the December 2007 elections.

According to a study carried out by an independent third party (WS Atkins International), water tariffs in Nairobi should be adjusted upwards by at least 75% and sewerage tariffs by at least 300% to allow water utilities to become self-sustainable and be able to finance new investments. In arriving at these recommendations, Atkins used the full cost of providing water and sewerage services. In addition to recommending the gradual phasing in of tariff increases (over a 5-year period), Atkins also proposed a tariff indexation policy in the period up to full cost recovery.

Table 1: Customer categories	**Number of connections**
Metered residential	192,736
Metered social services	142
Commercial	19,658
Industrial	608
Water kiosks	2,978
EPZ	1
Community project	1
Government	344
CCN	2
Boreholes	19
Total	**216,489**

The company's commercial department is responsible for billing and credit control, which involves meter reading, preparation of statements, and management of debtors. NCWSC inherited a substantial amount of old irrecoverable debts. The department also faces a number of legacy challenges, which include internal corruption, billing errors (caused by old and inadequate billing software) and general unwillingness and sometimes inability to pay for water among water consumers.

While 70% of the company's revenue is derived from domestic users, a significant 24% of the revenue is garnered from commercial and industrial users (with the 5 largest accounting for 8% of total income). The remainder comprises government institutions. Overall, as at June 2008 the company had 216,489 water connections in Nairobi and surrounding districts.

After reading meters (or in some cases determining estimates), NCWSC sends a monthly bill for water and sewerage, allowing customers 7 days to settle their accounts. Thereafter, another 7 days' notice to disconnect is given. Although revenue and receivables have previously been inflated as a result of billing errors, the implementation of a new billing and customer management system should see improved revenue measurement and debtors management going forward. In addition, the proposed full roll-out of data loggers (handheld devices used in meter reading) will see the full automation of the process, thus improving accuracy.

Since inception NCWSC has reported a decrease in debtors collections, largely as a result of inaccurate records and as such the company was not able to provide debtors aging for F06. In addition, the period in the run-up to the election, together with the violence that occurred post election, saw a significant reduction in collections. While the law allows the company to cut-off water supply for non-payment, NCWSC lacks capacity to enforce this process (in terms of manpower), as some consumers illegally reconnect themselves.

NCWSC maintains a high level of provisioning for bad and doubtful debts, with 53% of trade debtors provided for in F07 (F06: 69%). However, management has not been able to provide an accurate debtors age analysis and as such GCR is unable to determine the adequacy of the company's provisioning policy (given low levels of collections and the significant debtors book inherited from the CCN, which is largely uncollectible). The majority of the company's debtors relate to domestic consumers, while a smaller proportion comprises government institutions. In an effort to improve collections the company has appointed an external debt collector to collect government debt. NCWSC also does not write-off bad debts, with management arguing that this would encourage consumers to abscond from paying their bills.

Financial performance

A synopsis of NCWSC's financial results is reflected at the end of this report, with brief comment hereafter.

Table 2: Operating performance (KShs'm)	F07 Actual	F07 Budget	Variance (%)	YTD* Actual
Income				
Water	2,239.1	2,160.1	3.7	1,992.3
Sewerage	715.4	495.0	44.5	756.3
Other	78.0	156.8	(50.3)	76.8
Miscellaneous	81.1	1.6	4,968.8	166.3
Grant	92.2	54.0	70.7	127.2
Direct op. revenue	**3,205.8**	**2,867.5**	**11.8**	**3,118.9**
Expenditure				
Staff costs	(1,161.4)	(868.2)	33.8	(990.4)
Operations	(1,213.1)	(1,283.8)	(5.5)	(981.9)
Maintenance	(246.1)	(427.8)	(42.5)	(110.2)
Finance costs	(24.5)	(223.1)	(89.0)	(35.3)
Other expenses	(322.4)	(5.0)	6,348.0	(570.0)
Total op. expenditure	**(2,967.5)**	**(2,807.9)**	**5.7**	**(2,687.8)**
Net op. surplus	**238.3**	**59.6**	**299.8**	**431.1**

** 10 months ending April 2008.*

Water revenues were revised downwards by KShs1.5bn in 2007 and 2006, following the implementation of a new billing system that identified significant billing errors. As such, NCWSC reported a 7% decline to KShs3.0bn in F07, despite a 20% increase in water volumes produced. Management confirms that there are still a number of problems that need to be addressed and 2007 figures may be revised down further. Overall, coupled with 4% growth in sewerage revenue, this saw water contributing a marginally lower 76% to revenue in F07 (F06: 78%). Although the level of non-revenue water decreased marginally to 45% in F07 (F06: 47%) it remains very high and well above the acceptable level of 20% for emerging markets. NCWSC reported a 63% increase in other income (which includes meter rentals and grant income).

In F07, the company reported a 6% increase in operating expenses, with staff costs comprising a significant 40% (F06: 35%). Other significant cost drivers include water treatment chemicals (40%) and power (20%). This, coupled with the lower revenue, saw EBITDA decline to KShs331m (F06: KShs608m) translating into an EBITDA margin of 11.2% (F06: 19.3%). The operating margin also declined to 8.9%, having improved to 17.5% in F06 (F05: 2.8%). Following slightly higher depreciation and amortisation charges the company posted a significantly lower operating profit of KShs263m (F06: KShs554m).

Despite a significant decrease in interest-bearing debt in F07, the company registered net finance charges of KShs25m (F06: KShs8m). This saw NCWSC posting net income of KShs234m in F07 (F06: KShs545m). The company is still in the process of applying for clarification of its tax-exemption status, and has not made any tax provisions since inception.

Weaker operating profits in F07 resulted in NCWSC reporting 37% lower cash generated by operations of KShs371m. Following a working capital absorption of KShs94m, and net finance charges of KShs25m, the company registered cash flow from operations of KShs252m, a significant drop from the KShs949m reported in F06. The increase in working capital absorption is largely attributed to a significant build-up of inventories, and increased net trade debtors, as a result of lower collections on outstanding accounts. As such, the level of days receivable outstanding decreased to 272 days in F07 from a high 660 days previously. The company spent KShs364m on expansionary capex and investment (plant machinery and motor vehicles), funded by capital contributions of KShs198m and short term borrowings of KShs200m, which saw a net increase in debt of KShs87m.

Funding profile

Despite a significant drop in gearing levels over the review period, these remain relatively high, with its assets funded by capital grants and interest free liabilities. The company continues to carry KShs668m of debt inherited from the CCN. In F07, NCWSC raised an additional KShs200m short term loan from the commercial market (Co-operative Bank) for the development of operating assets and infrastructure. The company, however, intends to repay this loan by the end of 2008. Despite a 57% decline in net income, shareholders interest increased by 23% to KShs1.9bn in F07 (as a result of increased capital grants and a positive foreign exchange adjustment), while total interest-bearing debt declined by 4% to KShs888m. Interest-free liabilities increased by 55% to KShs1.1bn, which included an amount of KShs150m (F06: KShs73m) owing to AWSB. As such, coupled with volatile EBITDA (over the review period), total debt to EBITDA decreased sharply to 152% in F06 before rising to 268% in F07. Interest coverage has declined significantly from 72.9x in F06 to 10.9x in F07), although remaining comfortable.

Future prospects

The company's revenue growth going forward is expected to be driven by increased volumes and new connections. The new billing system in place should provide management with more accurate data, allowing them to run the organisation more effectively.

From a technical perspective, the capital expenditure projects (proposed and currently under way), should see improved efficiencies, as well as increased supply & treatment capacity. The

forecasts below are extracted from the company's three-year business plan.

Table 3: Operating budget	F08	F09	F10
Income			
Water	2,492.4	2,617.0	2,747.8
Sewerage	830.8	872.3	915.9
Other	70.0	72.0	74.0
Miscellaneous	37.0	39.0	41.0
Grant	86.0	86.0	86.0
Direct operating revenue	**3,516.2**	**3,686.3**	**3,864.7**
Expenditure			
Staff costs	(1,244.0)	(1,257.9)	(1,250.8)
Operations	(1,452.4)	(1,451.2)	(1,506.3)
Repairs and maintenance	(301.9)	(309.9)	(313.4)
Finance costs	(43.9)	(34.6)	(46.5)
Other expenses	(69.7)	(177.4)	(272.5)
Total operating expenditure	**(3,111.9)**	**(3,231.0)**	**(3,389.5)**
Net surplus	**404.3**	**455.3**	**475.2**

Source: F08- F10 business plan.

The operating budget predicts moderate water and sewerage revenue growth over the three years to F10, while grant income is expected to remain unchanged at KShs86m. Although revenue projections are deemed achievable assuming that the current tariffs prevail, it is expected that operating expenses are likely to exceed budget (particularly staff costs). NCWSC project fairly moderate increases in operating expenses, which are not reflective of the planned operational expansion. NCWSC projects borrowings to decline to KShs14m in F08, from KShs888m in F07, declining to zero in F09. This assumes the full repayment of inherited debt in F08 as well as the short term loan of KShs200m. This notwithstanding, cash flow forecasts suggest this is not the case; with debt in fact remaining on balance sheet (despite debt repayments of KShs213m and KShs6m in F08 and F09 respectively). As reflected in the balance sheet extract below, the company expects the amount of trade receivables to increase significantly, while a substantial drop in cash holdings is projected. However, a significant increase in payables is also forecast, implying the withholding of amounts due to AWSB. Overall, the company reflects a weaker liquidity profile over the three-year period.

Table 4: Projected funding profile (KShs'm)	F08	F09	F10
Capital and reserves	2,508.6	2,878.0	3,267.3
Borrowings	13.9	0.0	0.0
Trade and other receivables	2,640.7	2,763.1	2,943.7
Cash holdings	53.9	13.5	8.0
Trade and other payables	1,337.0	1,783.8	2,177.7
Ratios (%):			
Total debt : total assets	0.3	0.0	0.0
Total debt : EBITDA	2.5	0.0	0.0
Total debt : total income	0.4	0.0	0.0

Source: F08 - F10 business plan.

Over the short to medium term, NCWSC is likely to continue facing the aforementioned operational challenges, although ongoing reforms are expected to see an improvement in the long term. However this is dependant upon focus being placed on streamlining the company's operations, as well as increasing tariffs to more realistic levels.

Nairobi City Water and Sewerage Company Limited

(KShs in millions except as noted)

Income Statement	Year end : 30 June	2005*	2006#	2007#
Revenue		2,542.5	3,158.2	2,954.4
Other income		279.8	153.9	251.4
Operating expenditure		(2,724.7)	(2,704.0)	(2,875.3)
EBITDA		**97.6**	**608.1**	**330.6**
Depreciation		(25.8)	(52.5)	(62.8)
Amortisation		(0.5)	(1.4)	(4.9)
Operating income		**71.3**	**554.1**	**262.9**
Net finance charges		(23.3)	(7.6)	(24.5)
Net income		**47.5**	**545.0**	**233.6**
Foreign exchange adjustment		0.0	(28.7)	10.2
Cash Flow Statement				
Cash generated by operations		**7,110.2**	**587.9**	**370.9**
Working capital: (increase)/decrease		(5,328.5)	368.7	(94.1)
Net finance charges		(23.3)	(7.6)	(24.5)
Cash flow from operations		**1,758.4**	**949.0**	**252.4**
Maintenance capex		(25.8)	(52.5)	(62.8)
Net expansionary capex and investments		(251.0)	(328.0)	(300.7)
Capital contributions		1.1	74.1	198.1
Cash movement: (increase)/decrease		(1.9)	(14.7)	(51.4)
Borrowings: increase/(decrease)		(1,480.8)	(627.8)	(35.5)
Net increase/(decrease) in debt		**(1,482.7)**	**(642.5)**	**(86.9)**
Balance Sheet				
Capital and reserves		7,058.6	1,520.2	1,867.3
Total interest-bearing debt		**1,576.4**	**922.9**	**887.5**
Short-term		13.9	13.9	213.9
Long-term		1,562.5	909.0	673.6
Interest-free liabilities		1,253.9	684.2	1,060.4
Total liabilities		**9,888.9**	**3,127.4**	**3,815.2**
Fixed assets		245.1	373.9	553.3
Projects in progress		2.2	152.4	175.0
Cash and cash equivalents		1.9	16.5	68.0
Net trade debtors		9,331.3	2,090.6	2,313.0
Other current assets		308.4	494.0	705.9
Total assets		**9,888.9**	**3,127.4**	**3,815.2**
Ratios				
Operating:				
Billed water sales (M^3) - millions		n.a.	85	102
Turnover growth (%)		n.a.	44.9	(6.5)
Staff costs : operating costs (%)		25.1	34.4	39.5
Staff costs : total income (%)		24.4	28.7	36.2
Staff per 1,000 connections		11.6	10.6	9.5
Water distribution losses (%)		n.a.	47.0	45.0
Net capex : total income (%)		8.9	9.9	9.4
Cash Flow:				
Operating cash flow : total debt (%)		95.6	102.8	28.4
Operating cash flow : net debt (%)		95.7	104.7	30.8
Profitability:				
EBITDA : revenues (%)		3.8	19.3	11.2
Operating profit margin (%)		2.8	17.5	8.9
EBITDA : average total assets (%)		2.3	9.4	9.6
Coverage:				
Operating income : gross interest (x)		3.1	72.9	10.9
Operating income : net interest (x)		3.1	72.9	10.9
Activity and liquidity:				
Days receivable outstanding (days)		n.a.	660.0	272.0
Net debtors : total income (%)		428.2	66.2	78.3
Current ratio (:1)		7.8	4.1	2.6
Average days working cash (days)		0.3	2.2	8.4
Capitalisation:				
Net debt : capital and reserves (%)		22.7	63.8	48.9
Total debt : total assets (%)		15.9	29.5	23.3
Total debt : EBITDA (%)		1,884.6	151.8	268.5
Net debt : EBITDA (%)		1,882.4	149.1	247.9
Total debt : total income (%)		72.3	29.2	30.0
Net debt : total income (%)		73.5	30.7	30.9

* 14 months to 30 June 2005

Debt inherited from NCC restated as borrowings

National Water and Sewerage Corporation

Uganda Water Utility Analysis **July 2008**

Security class	Rating scale	Currency	Rating	Rating watch	Expiry date
Long term	National	UShs	A	No	07/2009
Short term	National	UShs	A2		

Financial data:

(US$'m Comparative)

	30/06/06	30/06/07
UShs/US$ (avg.)	1,826.1	1,810.8
UShs/US$ (close)	1,841.0	1,701.0
Total assets	151.5	238.6
Total debt	46.2	0.0
Total capital	44.7	151.4
Cash & equiv.	3.4	6.3
Turnover	31.4	37.6
EBITDA	7.5	9.9
NPAT	(9.4)	0.6
Op. cash flow	5.1	8.5
Market cap.	n.a.	
Market share	n.a.	

Fundamentals:

The National Water and Sewerage Corporation ("NWSC") is a government-owned water utility mandated (under the Water Act of 2000) with the provision of water and sewerage services in its jurisdiction. Since inception in 1972, the corporation's operations have expanded from the 3 major towns of Kampala, Jinja and Entebbe to the current 22 towns. In 1995 NWSC was re-established under the National Water and Sewerage Statute, whose main objective was to facilitate the conversion of the corporation into a commercial entity. Currently, NSWC produces approximately 64.6 million m^3 of water per annum, servicing roughly 2.7 million people (15% of Uganda's population).

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Rating rationale

The rating is based on the following key factors:

- The company's robust revenue growth over the review period, with 5-year compound average growth of 19% achieved. This notwithstanding, aging infrastructure and strain caused from rapidly increasing demand poses a significant threat to short to medium term growth, exacerbated by the cost of rising non-revenue water.
- Being a wholly-government-owned utility, NWSC has implicit support from the Government of Uganda ("GoU"). Further comfort is derived from NWSC's sound management and corporate governance structures, as well as the increased operational efficiencies achieved to date.
- The capitalisation of principal debt of UShs85bn (on-lent from the International Development Association) and accrued interest of UShs68.6bn by the government has bolstered the balance sheet and should facilitate increased profitability going forward.
- The absence of title deeds for properties held, which saw the qualification of the company's accounts in F07, is noted. Management has, however, indicated that the issue is in the process of being resolved.
- The high level of government trade debtors, with a significant amount over 360 days in arrears.
- Cognisance is also taken of the high proportion of staff costs (44% of operating expenditure in F07), which has served to undermine profitability.

Funding and liquidity profile

The conversion of on-lent loans to equity by the government in F07 resulted in NWSC becoming ungeared for the first time over the review period. This saw NWSC's assets being largely funded by government-held equity and capital grants from various development partners. Accordingly, shareholders interest jumped to UShs257.5bn in F07 (F06: UShs82.3bn), while capital grants and interest free liabilities increased by 33% to Ushs148.3bn. Improved operating performance saw cash flow from operations increase by 65% to UShs15.3bn, while cash holdings rose by 73% to UShs10.7bn. However, a high level of trade debtors (largely comprising government institutions) continues to place strain on the corporation's liquidity. Net debtors to total income increased to 42% in F07 (F06: 37%), while days receivable outstanding remained unchanged at 133 days.

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Background

The National Water and Sewerage Corporation ("NWSC") is a government-owned corporation originally established in 1972 under decree No. 34. Initially the corporation only operated in the 3 major towns of Kampala, Jinja and Entebbe. Following the enactment of the National Water and Sewerage Corporation Statute in 1995, the company was re-established with the objective of transforming it into a commercialised entity. The passing of the Water Act of 2000 entrusted the corporation with the provision of water and sewerage services in specified jurisdictions (which are gazetted to NWSC). Over the years the corporation's area of jurisdiction has increased from 8 towns in the 80's, to 12 in the 90's and currently covers 22 towns across the country (representing 15% of the population), with the balance under the jurisdiction of District Water Boards. NWSC's jurisdiction currently covers Kampala (including Kajansi, Nansana), Mukono, Jinja/Njeru, Entebbe, Tororo, Mbale, Masaka, Mbarara, Gulu, Lira, Fort Portal, Kasese, Kabale, Arua, Bushenyi/Ishaka, Soroti, Malaba, Lugazi, Mubende, Hoima, Masindi and Iganga.

Coming from a history of mismanagement and operational inefficiencies, in 1998 NWSC began a performance enhancement exercise that saw a pronounced improvement in revenue and a significant drop in water distribution losses. Over the past 8 years the corporation has undergone further structural changes, which have seen a notable improvement in its operational efficiencies. This has been in the form of Internally Delegated Area Management Contracts ("IDAMCs") established to decentralise the corporation's operations, enhancing autonomy at area level. The adoption of IDAMCs also allowed NWSC to introduce other internal management reforms and staff incentives such as awards for areas achieving exceptional performance, which has resulted in some of its areas attaining ISO certification. Furthermore, NWSC has introduced value-enhancing services, including an external services division that provides consultancy services to other water utilities in Africa and other developing countries.

Operating environment

Economic

Uganda has reflected strong growth over the past few years, with GDP growth amounting to an estimated 6.8% in 2007 (2006: 5.1%). Economic growth has been largely driven by the increased upswing in the transport and communications sector, growing at an annual average rate of 19.2% since 2002. During this period, the country has diversified from its strong reliance on the agricultural sector, which contributed 30% to GDP in 2006 (2001: 41%).

This notwithstanding, Uganda remains one of the poorest countries in the world, with per capita income of about US$281 in 2007, and a life expectancy at birth of around 50 years. Population growth, at about 3.2%, remains amongst the highest in the world. Nevertheless the country's commitment to poverty reduction, as spelled out in the Poverty Eradication Action Plan ("PEAP") and the World Bank's and other Development Partners' contributions, brought the country closer to reaching the Millennium Development Goals. This has seen poverty decline rapidly from 1992 to 2006, as a result of high and broad-based economic growth. The poverty headcount dropped from 56% in 1992 to 31% in 2006. Poverty, however, remains high in rural areas and Northern and Eastern Uganda.

The power crisis that has plagued the economy (constraining growth by an estimated 1% per annum) saw the government introduce diesel powered thermal stations and provide a diesel facility for manufacturers (diesel import duty is waived for manufacturers). Following the country securing funding for the construction of the Bujagali Dam project, and plans to start the Karuma Hydropower plant, the nation's energy constraints are likely to be alleviated in the medium to long term (although remaining a significant risk in the short term). As a result, the manufacturing sector grew by nearly 3% in 2006, underpinned by increased electricity generation following improved rainfall patterns countrywide in the 2006/2007 season. The country's significant dependence on oil was demonstrated during the Kenyan political crisis, with the supply disruptions leading to speculative hoarding, thus undermining price-setting mechanisms.

Although the effect of the recent energy shortages on industrial production; and the high and volatile world oil prices, have weighed heavily on the domestic economy, the outlook for 2008 envisages average real growth of about 7%, barring energy and food procurement challenges. In the short term, infrastructure gaps, internal budgetary pressures, high population growth, exogenous shocks, as well as the recovery cost following a return to peace in the North (Sudan) will limit the prospects for faster growth.

Regulatory

NWSC's operations are governed by the NWSC Act, which sets out the functions and operating structure of the corporation, while the Water Act of 2000 stipulates the utility's jurisdiction and overall

regulatory framework. Under the Act, Uganda's Ministry of Water and Environment ("MWE") has the responsibility of setting national policies and standards for water development and management. NWSC thus operates under the direction of the MWE and the Ministry of Finance (which has representation on the board as set by an Act of parliament). The Ministry of Finance's interest in the corporation is derived from the capitalisation of debt, which resulted in a substantial amount of equity stock being held by the ministry. Overall, however, NWSC operates under a transparent environment, which has helped eliminate the inefficiencies of the past allowing for quicker decision making. The corporation has undergone a number of commercialisation processes, which have greatly improved its efficiency. However the major problem is that the tariff is still not at full cost recovery, which impairs the ability of the corporation to effectively meet its investment needs.

Operations

The corporation is responsible for both asset development and service provision, and operates within a clearly defined operating and management structure. As at year end F07, the corporation had a staff complement of 1,338 (96% of which are on contract terms), up from 1,067 previously. NWSC sources the bulk of it raw water from Lake Victoria, to supply the areas of Kampala, Jinja and Entebbe (which represent over 80% of the corporation's water sales). Over recent years, the receding levels of water in Lake Victoria, as a result of a drought in the region, have seen a deterioration in the quality and quantity of raw water sourced. This has in turn seen higher treatment costs and frequent clogging of filters, which has forced NWSC to ration water supply in these areas. Sewerage coverage remains very low (currently estimated at 6%), constrained by limited network capacity. This has largely been due to low investment in this area in the past, as well as limited funding.

Over the review period NWSC increased its water production by 18%, with total annual water production reaching 60.5 million m^3 in F07. The growth in water production was due to major refurbishment of treatment plants and increased efficiency in production as well as the completion of the Gaba III project (which increased capacity). This notwithstanding, demand for water is currently at 208,000 m^3 per day, whilst NWSC has capacity to supply 317,981 m^3 of treated water per day. As such, aging infrastructure and strain caused by rapidly increasing demand (urban growth is estimated at 4.5% per annum) in the corporation's largest service area of Kampala poses a significant threat to NWSC's operations in the short to medium term. This has been exacerbated by illegal water connections and vandalism of water infrastructure, which has resulted in increased non-revenue water (unaccounted-for water), especially in the Kampala area. As such, although non-revenue water has come down significantly from around 60% 10 years ago, Kampala is the only area recording non-revenue water above the 20% accepted level for developing countries, at 38.5% (F06: 35.7%), two thirds of which is stolen. Other areas averaged 18.2% from 15.2% previously. Hence, given Kampala's sizeable contribution, NWSC's overall level of non-revenue water increased to 32.5% in F07 (F06: 29.7%).

IDAMCs

IDAMCs were introduced in March 2005 and signed in June of that year. These are contracts that are tendered internally for the management of service provision in the 22 towns under the corporation's jurisdiction. Once an area management contract is open, interested and eligible employees submit tenders for the contract, which include a business plan and operating budgets. A committee (independent of the board) then selects an area manager based on the applicants' business plan. Once selected, the employee is awarded a two-year contract to manage service provision in the area. The area manager is responsible for the majority of the area's operating functions, including the hiring of staff (internally or externally). Managers submit quarterly and annual reports to the corporation, which access the area's performance relative to others. Awards for good performance and penalties for poor performance are issued at various intervals.

IDAMCs were set up in order to separate the function of asset management from that of operations. However, as a means of effectively operationalising the IDAMC in the Kampala area (which accounts for roughly 70% of water revenue), Zonal Performance Contracts ("ZPCs") were established for the area in 2005. This saw autonomy being transferred to the zones, resulting in improved accountability and efficiency. While operational functions and administration of service areas are decentralised (including new connections, mains extensions, leak control and billings), the following functions have remained centralised:

- Maintenance
- Quality control
- Bulk procurements
- Block mapping
- Taxes

Water & Sanitation sales and tariffs

In 2002, Cabinet approved an annual fomula-based indexation policy in order to stop further erosion of tariffs thus seeing an improvement in water margins. This notwithstanding, tariffs are not at full cost recovery. Under the current legal framework, tariff increases can only be approved by the MWE, although no formal real tariff increase plan is in place. At present, a uniform tariff policy is applied in all areas, with lower tariffs for public standpipes and domestic consumers and higher tariffs for government and commercial consumers. However, block tariffs for industrial and commercial consumers decline as consumption increases. It is noted that the current structure provides an incentive for the corporation to supply more water to commercial consumers in times of water shortages. Sewerage tariffs for all areas are based on the amount of water consumed (75% for domestic consumers and 100% for other categories).

In F07, NWSC increased its number of water connections by 19% to 180,679. The demand for new (particularly domestic) connections has been driven by the new connection policy implemented in 2004. In terms of the policy, new customers are not billed a connection fee, although existing clients pay a small surcharge each month, which is put aside for new connections (thereby ultimately subsidising connection costs). Demand for commercial connections has been driven by strong growth in the commercial and industrial sectors.

Table 1: Water market segments	No. of connections	% of total connections	% of total revenue
Industrial/commercial	20,397.0	11.3	33.1
Domestic	149,478.0	82.7	36.0
Government/institutions	5,504.0	3.1	28.7
Other	5,318.0	2.9	2.2
Total	**180,697.0**	**100.0**	**100.0**

Although 83% of connections related to domestic consumers, a significant 33% and 29% of revenue is garnered from commercial and government consumers respectively, given the higher tariffs that apply to them. Although the number of water connections increased in F07, the increase in the amount of water volumes sold was negligible as a result of reduced raw water supply, given the prevailing drought in the region.

Table 2: Debtors age analysis	F06		F07	
	UShs'm	%	UShs'm	%
Current	275.7	0.9	1,480.6	4.1
30-90 days	4,022.0	13.0	13,547.0	37.7
91-180 days	6,553.0	21.2	4,686.0	13.0
181-360 days	5,656.0	18.3	5,152.0	14.3
>360 days	14,368.0	46.6	11,118.0	30.9
Total	**30,874.7**	**100.0**	**35,983.6**	**100.0**

NWSC reflects a very high proportion of debtors over 360 days, which largely consist of amounts owed by the GoU. While efforts are being made to reduce the amount owed by the government, it places significant strain on the corporation's liquidity, which undermines its ability to expand. As at year-end 2007, the total amount owed by government institutions was UShs15.1bn.

Table 3: Water and sewerage debtors	F06		F07	
	UShs'm	%	UShs'm	%
Industrial/commercial	6,126.0	19.8	6,437.0	17.9
Domestic	11,067.0	35.8	12,250.0	34.0
Government/institutions	12,732.0	41.2	15,139.0	42.1
Other	949.7	3.1	2,157.6	6.0
Total	**30,874.7**	**100.0**	**35,983.6**	**100.0**
Provision for bad/doubtful debts	(9,694.6)	(31.4)	(7,392.9)	(20.5)
Net debtors	**21,180.1**	**68.6**	**28,590.7**	**79.5**

Overall, the reluctance to pay water bills, particularly among domestic and government consumers, has made collections difficult. The corporation's credit control policy allows customers 14 days to pay their bills, thereafter NWSC can cut off water supply. The corporation has, however, stopped disconnecting customers for non-payment in order to reduce the vandalism of infrastructure. To support this initiative NWSC has appointed an outside debt collector to collect debtors amounts over 3 months old. In this regard the significant decline in the proportion of long outstanding debtors (from 47% in F06 to 31% in F07) is noted. Although not fully automated, the corporation's billing efficiency remains high, with errors estimated at less than 1%.

External services

This department's role is to market NWSC's expertise and to benchmark the corporation's performance against other utilities. The division also aims to promote capacity building and sustainable management of water and sewerage systems through the running of capacity building programmes with other water utilities. Over the years, the corporation's staff have developed a set of skills, which has allowed it to offer advisory and project management services to other utilities. The division carries out a number of projects in partnership with these utilities.

At present the division operates profitably, however, with only a small portion of the shared costs being absorbed by the corporation. In F07, this division contributed UShs224m to revenue and UShs127m to operating profit. As detailed in NWSC's corporate plan, the ultimate goal is to spin off the external services division, allowing it to operate as a self-sustaining subsidiary. In addition, in an effort to improve staff knowledge and skills the corporation has recently embarked on the

construction of a training centre (at an estimated total cost of US$1.6m), which according to management will be funded internally (5 year pay back period). The centre will offer skills and management training to various staff in the utility industry.

Financial performance

A 5-year financial synopsis of the company's performance is reflected at the back of this report and brief comment follows.

Over the review period, NWSC has evidenced strong revenue growth, with a 5-year compound average growth rate of 19%. In F07, operational revenue grew by a robust 19% to UShs68bn. Despite the aforementioned decrease in water supply (which resulted in an insignificant increase in volumes sold in F07), the increase in revenue was also supported by the tariff inflation adjustment, coupled with rationing of water for domestic consumers, which saw the bulk of the water sold to industrial/commercial consumers at higher average tariffs. Other income, which comprises reversals of provisions, exchange gains/losses and deferred income, increased by 158% to UShs2.3bn.

Table 4: Operating performance (UShs'm)	F07 Actual	F07 Budget	Variance (%)
Income			
Water & sewerage income	68,146.1	68,302.0	(0.2)
Other income	1,017.2	760.0	33.8
Deferred income	1,243.7	732.0	69.9
Direct op. revenue	**70,407.1**	**69,794.0**	**0.9**
Expenditure			
Staff costs	(18,191.5)	(20,674.0)	(12.0)
Service gratuity	(2,016.6)	(1,763.0)	14.4
Terminal benefits	(2,810.1)	(0.0)	n.a
Administrative costs	(6,670.4)	(8,133.0)	(18.0)
Static plant & network repair	(13,544.9)	(10,574.0)	28.1
Supplies and services	(4,729.1)	(5,537.0)	(14.6)
Premises maintenance	(2,023.4)	(2,019.0)	0.2
Transport	(2,434.5)	(2,263.0)	7.6
Direct op. expenditure	**(52,420.4)**	**(50,963.0)**	**2.9**
Depreciation	(11,465.4)	(12,541.0)	(8.6)
Net finance income	394.6	0.0	n.a
Surplus/(deficit) before tax	**6,915.8**	**6,290.0**	**9.9**
Taxation	(5,782.4)	(1,887.0)	206.4
Net surplus/(deficit)	**1,133.4**	**4,403.0**	**(74.3)**

Operating expenditure (of which staff costs comprised a high 44%, including service gratuity and terminal benefits) increased by 18% to UShs52.4bn in F07, driven largely by the recruitment of new middle management staff. Given the energy intensive nature of NWSC's operations, electricity and fuel continued to be significant cost drivers in F07 (21% of total costs), exacerbated by frequent power cuts and erratic supply. In addition, a deterioration in raw water quality pushed up the cost of water treatment. Foreign-denominated expenses constituted 12% of total expenses, which are not hedged, thereby exposing the company to foreign exchange fluctuations. NWSC reported EBITDA of UShs18bn in F07 (F06: UShs13.7bn), translating into a marginally improved EBITDA margin of 26% (F06: 24%). Following an increased depreciation charge of UShs11.4bn (F06: UShs9.7bn), NWSC reported a 64% increase in operating income to UShs6.6bn, to see an improved operating margin of 9.7% in F07 (F06: 7.0%). The capitalisation of NWSC's interest-bearing debt resulted in net finance income of UShs396m in F07, a stark contrast to the UShs8.9bn net cost in F06. Consequently, NWSC registered net income after tax of Ushs6.9bn against a loss of Ushs5bn in F06, a direct result of the lifting of the interest burden. Taxation reduced after tax profits to Ushs1.1bn, from a loss of Ushs17.2bn in F06. The latter was driven by the significant taxation expense of UShs12.2bn in the prior year. This was due to an under-provisioning of deferred taxation amounting to UShs11.2bn. In F07 the corporation reported net income of UShs1.1bn following a reduced tax charge of UShs5.8bn.

NWSC's improved operating performance drove a 72% rise in cash generated by operations to UShs19.1bn. However, an increase in trade debtors resulted in a UShs4.2bn working capital absorption in F07 (F06: UShs1.9bn). With the payment of interest on the government loan having been suspended in 1999, the corporation has evidenced net finance inflows over the review period. In F07 NWSC reported a net finance inflow of UShs396m, up from an inflow of UShs95m in F06, to see cash flow from operations of UShs15.3bn in F07 (F06: UShs9.3bn).

Funding profile

Having carried interest-bearing debt of UShs84bn on balance sheet, NWSC became ungeared for the first time over the review period in F07. This followed the conversion of loan stock to equity, which was approved by the Cabinet on the 30th of May 2007. As a result, government held equity and retained earnings, as well as a substantial amount of interest-free liabilities and capital grants from international development partners now largely fund NWSC's assets.

Capex projects and funding

As at June 2008, an external asset revaluation of the corporation's water infrastructure was undertaken, with assets valued at UShs483bn.

In F07, the most significant capex activity was the completion of the Gaba III water supply project,

adding 80,000 m^3 of water production capacity in Kampala. As at year-end 2007, a substantial UShs42bn (F06: UShs11.1bn) of the corporation's non current assets comprised of 11 capital projects in progress. These are expected to see a significant increase in water production capacity over the short to medium term, as well as a reduction in non-revenue water. The following table outlines the capex program for F09 and F10.

Table 5: Capex budget Ushs'm	F08	F09
Capital expenditure		
Land	90.0	5.0
Buildings	1,474.0	3,272.3
Static plant/network extensions	33,402.0	55,061.9
Vehicle and mobile plant	112.0	107.8
Furniture and equipment	1,718.0	2,306.0
Total capex	**36,796.0**	**60,753.0**
Contribution to projects	11,675.0	5,755.0
Total capex	**48,471.0**	**66,508.0**
Capex funding		
Internal funds	22,761.0	20,510.5
Bond issue	--	30,000.0
ADB loans	1,760.0	--
IDA loans	3,300.0	--
AFD loans	--	10,997.5
KfW/GoU	5,720.0	--
UN Habitat	80.0	--
GoU grants	14,850.0	5,000.00
Total	**48,471.0**	**66,508.0**

Overall, the financial strategy for the corporation is to finance the expansion of sanitation through grants and use commercial finance specifically for commercial projects. Total capex spend of UShs115bn is projected over the next two-year period, a substantial amount of which will be funded internally and from grants from the GoU. Additional funding to be disbursed over the next few years includes a €30m grant from the African Development Bank ("ADB"), a €7m grant from the European Union ("EU") and a €6m grant from KfW. All of this will be restricted to sanitation, which currently lags water service provision. In terms of debt funding, the corporation plans to issue a UShs30bn bond in the first half of F09 and take a loan of UShs11bn from the French Development Agency ("AFD"). The full amount from the AFD loan is to be used to finance the Jinja and Gaba intake extensions, while the bond finance is to be divided as follows: Kampala network rehabilitation (UShs18bn), Arua (Ushs1bn), Bushenyi (UShs2.2bn), Mukono (UShs4.0bn) and procurement of electromechanical equipment (UShs4.9bn).

Future prospects

The corporation is expected to continue reporting strong operational revenue growth over the short term, supported by growth in the customer base. Water and sewerage revenue is expected to increase by a robust 14% in F08. For the nine months ending March 2008, the company had achieved 71% of budgeted revenue, while operating costs were marginally higher at 78% of budget. Staff costs are budgeted to remain high at 44% of total expenses in F08 and are expected to continue driving the corporation's costs in the short term, although relative costs should reduce as capacity comes onboard. As at March, staff costs represented an unchanged 44% of overall costs, and an annualised 104% of full year budget. Overall, the company was in line to meet profit forecasts at the end of the third quarter.

Table 6: Operating performance/budget (UShs'm)	YTD*	F08	F09
Income			
Water and sewerage income	55,490.2	77,771.0	86,213.0
Other income	4,215.1	321.5	321.5
Deferred income	0.0	0.0	0.0
Direct operating revenue	**59,705.3**	**78,092.5**	**86,534.5**
Expenditure			
Staff costs	(19,683.4)	(25,315.0)	(27,700.0)
Administrative costs	(4,603.7)	(6,736.0)	(7,390.0)
Static plant and network repair	(11,989.2)	(14,684.0)	(15,418.0)
Supplies and services	(4,958.8)	(6,225.0)	(6,848.0)
Premises maintenance	(1,500.8)	(1,947.0)	(2,044.0)
Transport	(2,198.1)	(2,927.0)	(3,073.0)
Direct operating expenditure	**(44,934.0)**	**(57,834.0)**	**(62,473.0)**
Depreciation and amortisation	(8,997.3)	(12,783.0)	(14,121.0)
NPBT	**5,774.0**	**7,475.5**	**9,940.5**

**9 months ending March 2008.*

Whilst the short term challenges faced by NWSC remain, cognisance is taken of the longer term benefits to be derived from the capex programme, alleviating the strain on existing infrastructure and positioning the company to take full advantage of growing demand. This notwithstanding, the investment in infrastructure will result in a rise in gearing over the next three years, with gross debt to EBITDA expected at around 170% in F09, from a previously ungeared position in F07. NWSC's liquidity is expected to remain adequate in the short to medium term.

Table 7: Forecast balance sheet (UShs'm)	F08	F09	F10
Property plant & equipment	416,496	466,202	531,582
Trade & other receivables	36,169	41,744	45,949
Cash& equivalents	8,165	9,367	9,747
Other assets	9,519	9,818	10,118
Total assets	470,349	527,131	597,396
Equity and reserves	308,596	321,107	352,825
Total interest-bearing borrowings	--	40,998	80,000
Other liabilities	161,753	165,026	164,571
Total capital employed	470,349	527,131	597,396

National Water and Sewerage Corporation

(UShs in millions except as noted)

Income Statement Year end : 30 June	2003	2004	2005	2006	2007
Revenue	33,604.5	39,095.2	50,934.8	57,347.7	68,146.1
Other income*	2,672.6	3,716.6	2,952.2	877.4	2,260.0
Operating expenditure	(29,069.0)	(31,599.1)	(40,334.0)	(44,523.1)	(52,420.4)
EBITDA	**7,208.1**	**11,212.7**	**13,553.0**	**13,702.0**	**17,985.7**
Depreciation	(7,262.3)	(9,650.1)	(9,450.1)	(9,692.9)	(11,391.5)
Operating income	**(54.2)**	**1,562.5**	**4,102.9**	**4,009.1**	**6,594.2**
Amortisation	(31.3)	(72.4)	(94.7)	(86.7)	(73.9)
Net finance charges	(10,935.9)	(7,199.2)	(9,560.9)	(8,932.1)	395.6
Income after finance charges	**(11,021.4)**	**(5,709.0)**	**(5,552.7)**	**(5,009.7)**	**6,915.8**
Exceptional Items**	0.0	0.0	26,263.5	0.0	0.0
Taxation	6,034.9	0.0	3,658.2	(12,190.0)	(5,782.4)
Net income	**(4,986.5)**	**(5,709.0)**	**24,369.0**	**(17,199.7)**	**1,133.4**
Cash Flow Statement					
Cash generated by operations	**(4,215.8)**	**4,946.8**	**6,694.2**	**11,089.5**	**19,118.6**
Working capital: (increase)/decrease	10,457.4	7,207.4	3,405.0	(1,928.2)	(4,204.4)
Net finance charges	213.6	570.5	655.9	94.7	395.6
Cash flow from operations	**6,455.2**	**12,724.8**	**10,755.0**	**9,256.0**	**15,309.8**
Net capex and investments	(16,040.7)	(10,791.9)	(18,731.9)	(10,835.1)	(10,728.8)
Capital contributions	8,187.2	772.6	5,412.5	710.8	0.0
Cash movement: (increase)/decrease	n.a.	(3,439.9)	2,719.6	899.7	(4,515.5)
Borrowings: increase/(decrease)	n.a.	841.4	0.0	0.0	0.0
Net increase/(decrease) in debt	**n.a.**	**(2,598.5)**	**2,719.6**	**899.7**	**(4,515.5)**
Balance Sheet					
Capital and reserves	92,222.8	87,259.7	95,609.3	82,271.6	257,513.0
Total interest-bearing debt	**84,131.2**	**84,779.5**	**84,670.8**	**84,985.9**	**0.0**
Short-term	9,462.4	14,281.2	18,933.0	41,376.3	0.0
Long-term	74,668.8	70,498.3	65,737.9	43,609.6	0.0
Interest-free liabilities	44,939.2	53,452.8	92,982.3	111,632.9	148,332.7
Total liabilities	**221,293.2**	**225,492.1**	**273,262.5**	**278,890.4**	**405,845.7**
Fixed assets	154,160.9	189,182.3	223,107.6	230,438.2	313,906.5
Projects in progress	43,042.1	7,506.4	12,719.2	11,094.3	41,999.1
Investments	0.0	0.0	0.0	0.0	0.0
Cash and cash equivalents	6,351.6	9,791.3	7,071.8	6,172.1	10,687.6
Net trade debtors	12,255.2	13,003.7	20,752.0	21,180.1	28,590.7
Other current assets	5,483.5	6,008.3	9,611.8	10,005.6	10,661.8
Total assets	**221,293.2**	**225,492.1**	**273,262.5**	**278,890.4**	**405,845.7**
Ratios					
Operating:					
Billed water sales (m^3) - millions	31.2	34.2	38.2	40.8	40.8
Volume increase (%)	11.0	9.6	11.7	6.8	0.0
Turnover growth (%)	n.a.	16.3	30.3	12.6	18.8
Collection efficiency (%)	92.0	98.0	89.0	90.0	92.0
Staff costs : operating costs (%)	22.0	28.1	40.9	33.3	36.1
Staff costs : revenue (%)	23.7	29.6	39.9	31.5	33.8
Staff per 1,000 connections	11.0	10.0	9.0	7.0	7.0
Water distribution losses (%)	39.4	37.6	33.8	29.7	32.5
Net capex : revenue (%)	47.7	27.6	36.8	18.9	15.7
Cash Flow:					
Operating cash flow : total debt (%)	7.7	15.0	12.7	10.9	n.a
Operating cash flow : net debt (%)	8.3	17.0	13.9	11.7	(143.2)
Profitability:					
EBITDA : revenues (%)	21.4	28.7	26.6	23.9	26.4
Operating profit margin (%)	(0.2)	4.0	8.1	7.0	9.7
EBITDA : average total assets (%)	n.a	5.2	5.6	5.1	5.4
Coverage:					
Operating income : gross interest (x)	(0.0)	0.2	0.4	0.4	n.a
Operating income : net interest (x)	(0.0)	0.2	0.4	0.4	(16.7)
Activity and liquidity:					
Days receivable outstanding (days)	n.a.	137.2	157.6	133.4	133.3
Net debtors : total income (%)	36.5	33.3	40.7	36.9	42.0
Current ratio (:1)	0.4	0.4	0.4	0.3	3.8
Average days working cash (days)	49.0	73.8	43.5	35.7	61.5
Capitalisation:					
Net debt : capital and reserves (%)	84.3	85.9	81.2	95.8	neg
Total debt : total assets (%)	38.0	37.6	31.0	30.5	0.0
Total debt : EBITDA (%)	1,167.2	756.1	624.7	620.2	0.0
Net debt : EBITDA (%)	1,079.1	668.8	572.6	575.2	(59.4)
Total debt : total income (%)	250.4	216.9	166.2	148.2	0.0
Net debt : total income (%)	214.4	175.2	144.0	135.4	neg

* Including exchange gains/losses

** Exceptional item relates to an impairment reversal for static plant

Office National de L'eau et de L'assainissement (ONEA)

Burkina Faso Water Utility Analysis **July 2008**

Security class	Rating scale	Currency	Rating	Rating watch	Expiry date
Long term	National	CFA	BBB+	No	07/2009
Short term	National	CFA	A2		

Financial data:

(US$'m Comparative)

	31/12/06	31/12/07
CFA/US$ (avg.)	539.9	492.9
CFA/US$ (close)	517.2	454.6
Total assets	376.8	445.6
Total debt	114.7	130.4
Total capital	229.4	280.8
Cash & equiv.	12.1	20.0
Revenue	38.6	48.7
EBITDA	15.2	18.7
NPAT	2.0	1.0
Op. cash flow	9.4	14.5
Market cap.	n.a.	
Market share*	76%	

* Rate of overall service to 31/12/2007.

Fundamentals:

A public water utility was established in 1945, which subsequently underwent various stages of change, culminating in the establishment of Office National de L'eau et de L'assainissement (ONEA) in 1985. The utility was transformed into a 100% state owned public company in 1994, with legal and financial autonomy. Sanitation services have been provided by the utility since 1985. Burkina Faso's urban and rural water sector institutional framework is organised around three institutions, namely government agencies, territorial communities and ONEA. ONEA is responsible for water and sanitation to urban and semi-urban areas in Burkina Faso.

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Rating rationale

The rating is based on the following key factors:

- ONEA is the monopoly supplier of potable water within the urban areas of Burkina Faso.
- The utility has close ties to the state and operates in a regulated environment, overseen by the Ministry of Agriculture, Water Supply and Fishery Resources.
- In addition, although government does not explicitly guarantee the utility's debt, cognisance is taken of the fact that any new borrowings require ministerial consent.
- Liquidity levels appear to be adequate, while cash flow from operations has improved somewhat in recent years.
- The operating margin has remained negative in each year over the review period, implying that tariff increases are insufficient to address operating requirements. However, operating losses have historically been more than covered by Hors Activites Ordinaires (reflected as extraordinary income).
- The utility displays a poor debtors collection profile, with the collection period of 206 days being significantly higher than international norms.
- While a fairly large component of capital expenditure has being funded through grants in recent years, cognisance is taken of the government's stated intention of moving away from direct investment in the water sector in the medium to long term. The shortfall in grant funding will be replaced through concessional loans, while new borrowings are being assessed as a means to address insufficient internal funds. Cognisance is taken of the associated financial risk, with gearing levels forecast to increase to levels well above historical norms in the coming years.
- A further challenge for ONEA is the replacement of its aging infrastructure, which would likely enable lower unaccounted for water losses.

Funding profile

Total interest bearing debt was largely unchanged at CFA59.3bn in F07, of which short term debt comprised CFA4.1bn, or 7% (F06: 5.1%). Total debt declined to 46% of total capital and reserves (F06: 50%), while net debt to equity decreased to 41% from 46% in F06. Furthermore, total debt to EBITDA was posted at a review period low of 643% in F07 (F06: 723%). Cash and cash equivalents increased by CFA2.8bn to CFA9.1bn in F07. This supported an increase in the level of cash holdings covering short term debt to 2.2x from 2.1x in F06. In addition, the level of days cash on hand increased to 118 days in F07, from 101 days previously. Total net debtors were posted at a 1.8% higher CFA13.6bn in F07. The debtors collection period increased for a third consecutive year to a high 206 days (F06: 189 days).

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Operating environment

Economic

Burkina Faso has experienced fairly healthy long term economic growth, as evidenced by its average annual GDP growth of 5.9% over the period 1997-2006. The economic growth rate for 2006 equalled 6.1% (2005: 7.1%), although the figure for 2007 equates to 4.3%. The reason for this lower level is largely attributed to the decrease in the level of cotton production, upon which Burkina Faso's economy is reliant. Projections, however, indicate a modest recovery, as 2008's growth rate stands at a forecast 4.7%. It is noted that Burkina Faso's growth for 2007 surpasses that rate achieved by the West African Economic and Monetary Union (WAEMU) for the same period, which averaged 2.9%. The country has attained this economic accomplishment while keeping its inflation rate at an efficient level: 2007 realised inflation of 2% (2006: 2.4%), a number significantly lower than the 6.4% recorded in 2005, mainly due to healthy food-crop production and sufficient supply to the markets.

Despite this economic expansion and performance, Burkina Faso remains one of the poorest countries in the world, substantiated by the fact that 45% of the population lives on less than US$1 per day. The country's economic performance remains hampered on account of poorly diversified agriculture, insufficient road coverage, constrained energy supply and the fact that it is landlocked. Cotton's position as the primary agricultural product, accountable for 82.7% of the country's total exports, has restrained economic progression due to the unresolved problems within the cotton industry. The government has, however, joined with three other cotton producing countries in the region, namely Mali, Niger, and Chad, to lobby the World Trade Organisation for fewer subsidies to producers in other competing countries.

Agriculture contributes 21% to GDP and employs 90% of the population (largely engaged in subsistence agriculture), however, remains vulnerable to periodic drought. Consequently, the diversification index for the country (a variable compiled by the African Development Bank and OECD to measure the extent to which exports are diversified) amounted to just 1.5, which measures poorly against the low African average of 3.6. The other sectors within the country that constitute the main contributors to GDP are livestock, forestry and fisheries (14%), manufacturing (14%), and trade, transport and communications (14%).

The monetary indicators for Burkina Faso are reflective of its economic improvement. The low inflationary measures mentioned above are projected to remain subdued for both 2008 (2%) and 2009 (1.9%), and this maintenance of purchasing power has been aided by currency appreciation. As a member of the WAEMU, Burkina Faso's monetary policy, defined by the Central Bank of West African States (BCEAO), has the primary objective of controlling inflation, a guideline strongly influenced by the Euro Zone, since the CFA is pegged to the Euro. The exchange rate for 2007 against the US$ was CFA492.9, representing an 9% appreciation against CFA539.9 for 2006 (2005: CFA527.5). The current account deficit amounted to a high 14.9% of GDP in 2007 (2006: 15.2%), although the privatisation of ONATEL (the national telecommunications bureau) led to a transaction of US$336m, allowing for a balance of payments surplus of US$379m (2006: US$84m).

Regulatory

ONEA's activities are regulated by the Ministry of Agriculture, Water Supply and Fishery Resources (MAWFR), whose parent body is the Directorate of Water Resources (DWR). The utility is managed by a Board, which convenes on a regular basis in accordance with its statutes. The Board submits an annual general report detailing ONEA's financial and economic situation to the General Assembly of State Corporations (GASC), which is chaired by the Prime Minister. The GASC approves ONEA's accounts and makes recommendations, as well as provides guidelines to the Chairperson of the Board and the Managing Director (MD), who is appointed by the Board. The MD oversees day to day management of the utility, and is assisted by a Secretary General and management committee comprising nine main functional departments namely: Sanitation; Operations; Finance; Human Resources; Customer Care; Procurement & Logistics; Planning & Investment; IT; and Department in charge of Ziga dam operations (discussed later in the report). Management meet on a monthly basis, while weekly reviews are undertaken of all business units.

The Board determines overall policy objectives. The Director General is responsible for studying tariff changes and proposes appropriate tariffs in line with achieving targets set in ONEAs mandate. These rates are adopted by the State prior to their application. ONEA is, however, subject to restrictions regarding its borrowing requirements, for all amounts exceeding CFA 1 billion and terms of payment exceeding one year.

Operations

ONEA is mandated to supply potable water to private and public sector consumers on a basis that enables the utility to fully recover its costs. With respect to sanitation, ONEA's mandate includes the collection and recycling of used water in all cities where potable water is distributed. However, sanitation is not very developed and at this stage only covers Ouagadougou (50%) and Bobo-Dioulasso (35%). ONEA receives financial support from its financial partners in the form of operational and capital subsidies.

ONEA operates on the basis of triennial contracts, which state the commitments of government relating to water sector management, and clearly establishes performance targets and indicators. The latest contract outlines commitments and determines technical, financial and commercial objectives, evaluated based on performance of 28 indicators. ONEA also works on a contractual basis with municipalities. In addition, ONEA has signed conventions of partnership with some municipalities that do not have safe drinking water. These conventions provide a contractual framework whereby ONEA offers advisory support and technical expertise for the development and implementation of municipal development plans for supplying drinking water, health and sanitation.

The utility's operations are largely decentralised, with operational departments overseen by regional directors in Ouagadougou and Bobo-Dioulasso, as well as 43 auxiliary centres throughout the country. ONEA also owns and runs six laboratories for water quality assurance. The utility provides metered networked services and manages standpipes to private households, government branches and municipalities. Water is sourced via a combination of underground and surface water (8 dams), various boreholes across the country and natural springs. Following treatment and cleansing, the raw water is sent to various water reservoirs for domestic, industrial and public use. Water supply is assured to approximately two thirds of ONEA's service area on an ongoing basis, with the remaining one third requiring rationing, particularly between the high drought months of March to May.

Current infrastructure geared towards the Ziga dam (Phase 1 completed in 2007,), with an eventual capacity of 200 million m^3, will generate sufficient water capacity to cover all of Ouagadougou and surrounding areas for the foreseeable future.

ONEA has a reasonably stable staff complement. As at December 2007, the company had 660 permanent staff, which are divided into 129 managers, 163 supervisors and 368 implementing agencies and agents. The majority of staff are relatively young. Attrition is low, at less than 2% per annum. The management to staff ratio is 44.2% (managers and supervisors), while the staff to subscriber ratio in 2007 was 4.6 per 1,000 connections, an improvement from 7 per 1,000 connections in 2005. The ONEA Centre for Water Treatment and Sanitation evaluates training needs and ensures implementation of the company's training programme for internal and external staff. Government does not interfere in staffing requirements.

Water distribution losses are in the range of 18%, compared to a target of 16%. The age of water infrastructure is very high, particularly in Ouagadougou and Bobo-Dioulasso. This will be addressed through an equipment renewal policy based on five year plans.

Water & sanitation sales and tariffs

Tariffs reflect, as far as is possible, the required revenue necessary to cover all costs. A tariff review is conducted every five years. ONEA lacks the financial autonomy to set tariffs, however, it is empowered to (and does) propose tariff structures to its Board of Directors (Board), based on financial requirements. Once Board approval is obtained, the proposal is forwarded to the Council of Ministers for consideration and final approval.

Table 1: Water tariffs (CFA/m^3)

Private consumers	**2002**
0-6 m^3	180
7-30 m^3	370
Over 30 m^3	1,040
Private consumers	**(2008)***
0-8 m^3	188
9-15 m^3	430
16-30 m^3	509
Over 30 m^3	1,040

* Tariffs were amended as at 1 July 2008.

Different tariffs apply to different consumer sectors based on consumption, with larger consumers subsidising smaller consumers, while larger centres in the service area support small centres that are in deficit. GCR notes that future tariff increases could be constrained by low wealth levels displayed by the majority of the populace and the fact that new connections to networks tend to be to indigent households.

The following table compares tariff increases to inflation over the past five years. The average water tariffs implemented by ONEA between F03 and F06 were lower than CPIX inflation.

Table 2: (% annual change)	F03	F04	F05	F06	F07
Average water tariff*	423.3	493.2	464.7	514.7	n.a.
CPIX inflation	2.0	(0.4)	6.4	2.4	2.0

* This is the average price of m^3 of water sanitation fee included in the period 2003 to 2007.

Financial performance

A synopsis of ONEA's financial results for the past 5 years is reflected at the end of this report, with brief comment following.

Sales volumes of water increased by 9.7% to 40 million m^3 in F07. ONEA posted a 15% increase in total revenue to CFA24bn in F07, driven by a 13.1% increase in water & sanitation revenue to CFA20.6bn. Growth in revenue in recent years has been supported by the additional sales generated through the Ziga dam project for supplying water to Ouagadougou. Overall, total revenue has increased by an annual average compound rate of 12% over the period F03 to F07, which is well above inflation over the same period. Operating subsidies increased by 48% to CFA1bn in F07, or 4.3% of total income (F06: 3.4%).

Table 3: Operating Performance (CFAm)	F07 Actual	Budget	% of budget
Income			
Water & sanitation sales	20,621	20,331	101.4
Operating subsidies	1,039	39	2,664.1
Other operating income	2,346	2,242	104.6
Total revenue	**24,006**	**22,612**	**106.2**
Staff costs	(4,187)	(4,088)	102.4
Related purchases	(3,511)	(4,034)	87.0
Electricity	(2,905)	(2,738)	106.1
Other operating expenses	(4,180)	(2,819)	148.3
EBITDA	**9,222**	**8,933**	**103.2**
Depreciation	(11,175)	(10,044)	111.3
Operating result	**(1,953)**	**(1,111)**	**175.8**
Net finance costs	(2,189)	(2,257)	97.0
Extraordinary items	5,045	4,679	107.8
Taxation	(195)	(195)	100.0
NPAT	**708**	**1,116**	**63.4**

Operating expenditure (including depreciation) increased by 20.4% to CFA26bn in F07, well above revenue growth for the year. The primary components of operating expenditure are depreciation (43%), staff costs (16%), related purchases (14%) and electricity costs of CFA2.9bn (11%). Staff costs increased by a modest 4% to CFA4.2bn in F07, and accounted for a review period low 17.4% of revenue (F06: 19.3%).

ONEA has consistently posted an operating deficit over the review period, with the operating margin posted at negative 8.1% in F07 from negative 3.3% previously. The operating deficit worsened to CFA2bn in F07 from CFA696m in F06. Interest received amounted to only CFA80m, compared to financial costs of CFA2.3bn, and accordingly, net finance charges more than doubled to CFA2.2bn in F07 (F06: CFA1bn). The government of Burkina Faso assumes the risk of all foreign denominated liabilities of the utility, and as such, no forex movements are incurred by the company. Extraordinary income of CFA5bn (Hors Activites Ordinaires), relating to the writing off of depreciation from investment subsidies (non cash accounting adjustment), supported the net result in F07, with net profit after tax reported at CFA708m in F07 (F06: CFA1.1bn). Although it is government owned, ONEA operates as a private sector company and is liable for income tax.

Cash generated by operations amounted to CFA8.8bn in F07 (F06: CFA9bn). Following the first working capital release in three years, of CFA510m (F06: CFA2.9bn absorption), and higher net finance charges of CFA2.2bn (F06: CFA1bn), cash flow from operations was recorded at a review period high of CFA7.1bn (F06: CFA5.1bn). Operating cash flow as a percentage of net debt increased to 14.2% in F07, from 9.6% in F06. Following four years of comparatively high capital expenditure spend, net expansionary capex more than halved to CFA13.6bn in F07. Accordingly, net capex to total income fell to 57% in F07 from 138% previously. Capital grants received remained high at CFA14bn in F07 (F06: CFA15.7bn). ONEA recorded a CFA7.6bn decrease in net debt in F07, following three consecutive years of increases cumulatively totalling CFA31bn.

Liquidity and gearing

Total interest bearing debt was largely unchanged at CFA59.3bn in F07, of which short term debt comprised CFA4.1bn, or 7% (F06: 5.1%). Total debt declined to 46% of total capital and reserves (F06: 50%), while net debt to equity decreased to 41% from 46% in F06. Furthermore, total debt to EBITDA was posted at a review period low of 643% in F07 (F06: 723%), although this remains relatively high.

Total borrowings are mainly comprised of various concessional loans from international funding agencies, such as the African Development Bank (roughly CFA16bn), BEI (CFA8.2bn) and IDA (CFA17.7bn). While these loans are mainly

sourced in foreign currency, as mentioned previously, the government of Burkina Faso assumes the foreign exchange risk of all foreign denominated liabilities of the utility. Although government does not explicitly guarantee the utility's debt, cognisance is taken of the fact that any new debt requires ministerial consent (which according to management is decided fairly quickly by government). The utility exhibits a fairly well spread debt maturity profile, extending over periods of up to 15 years.

Cash and cash equivalents increased by CFA2.8bn to CFA9.1bn in F07. This supported an increase in the level of cash holdings covering short term debt to 2.2x from 2.1x in F06. In addition, the level of days cash on hand increased to 118 days in F07, from 101 days previously.

Accounts receivable

Gross consumer debtors decreased by 1.3% to CFA13.5bn in F07. Following a marginal increase in the provision for bad debts (to CFA2.3bn), net consumer debtors were 1.8% lower at CFA11.2bn. The total provision amounted to a higher 17.2% of gross consumer debtors in F07, from 16.8% in F06. Inclusive of other net debtors totalling CFA2.4bn (F06: CFA2bn), total net debtors were posted at a 1.8% higher CFA13.6bn in F07.

Table 4: Debtors (CFAm)	F06	F07
Gross consumer debtors	**13,708.5**	**13,525.6**
Less provision for bad debts	(2,305.4)	(2,328.0)
Net consumer debtors	**11,403.1**	**11,197.7**
Other net debtors	2,005.9	2,449.4
Total net debtors	**13,408.9**	**13,647.1**

The increase in total income outpaced the rise in net debtors for the year, which saw the ratio of net debtors to income decrease to 57% in F07 from 64% previously. The debtors collection period increased for a third consecutive year to a high 206 days (F06: 189 days).

All of ONEA's customers are metered, and billing is conducted monthly. The overall payment rate is around 85%, compared to a targeted level of 92%. The main reason behind the poor recovery rates is a failure by municipalities and local communities to pay their bills on time. The average bill payment rate for private individuals is in the region of 2 to 3 months (94% payment rate), and around 6 months for public institutions. Municipalities and local communities have very poor payment records, ranging in excess of two years' consumption. Recently, an agreement was signed between ONEA and the government, whereby the state will endeavour to repay all amounts owing. In terms of the utilities credit control policy, private individuals (households) are given 90 days to pay their accounts (includes notification of overdue amounts), after which the water service is cut off. This is only re-instated once the customer addresses at least 50% of their historical account and signs a commitment to pay off the balance. A penalty fee of CFA2,000 and CFA5,000 is applicable to overdue individual and private company accounts respectively. No penalties or disconnections are applied to the public sector. Bad debts are written off after five years.

Capex projects and funding

Capital expenditure incurred in the development of new infrastructure, and the refurbishing and upgrading of existing infrastructure amounted to CFA13.6bn in F07 (F06: CFA28.7bn), or only 63% of the originally budgeted CFA21.6bn. As is illustrated in the following table, the majority of net capital expenditure was funded from grants from F06 to F07, with a decreasing reliance on external borrowings noted.

Table 5: Funding (CFAm)	F06	F07
Internal funding	5,080.7	7,139.3
Government grants	15,671.8	13,981.7
Net debt	7,937.6	(7,559.9)
Net capex	**28,690.1**	**13,561.1**

ONEA has two core expansionary plans. Firstly, the Development Plan focuses on the long term (2004-2015), while the Strategic Plan covers a four-year cycle (the latest is for 2008-2010). These plans articulate the company's long-term vision, and are developed within a context that involves the entire company, from the Board through to staff. In addition to this, ONEA is responsible for developing a financial policy that is geared towards limiting future government support, in terms of financing its activities.

The government launched the PN-AEPA (the National MDG Water and Sanitation Program) in February 2008. The total investment requirements amount to around CFA543.8bn. ONEA is responsible for implementing the bulk of the urban component, which amounts to around CFA137.8bn, of which the following (as per table 6 below) has been earmarked for Phase I (2007-2011). Major projects to be undertaken over this period are aimed at expanding water and sanitation distribution to a greater percentage of the population. Furthermore, several projects aimed at

the upgrading and replacement of existing infrastructure will be undertaken.

Table 6: Capex and funding CFAm	F08	F09	F10	F11
Capex				
Production	4,508	8,057	23,102	812
Distribution	13,025	7,931	6,621	6,709
Connections	1,252	4,616	1,514	1,643
Replacement capex	2,926	3,174	3,261	3,289
Other	2,995	14,896	940	1,880
Total	**24,706**	**38,674**	**35,438**	**14,333**
Capex funding				
Internal	5,923	5,886	5,747	6,158
Net borrowings	10,278	16,950	21,415	3,605
Donations/grants	7,461	11,161	7,084	2,829
Other (shortfall not yet financed)	1,044	4,677	1,192	1,741
Total	**24,706**	**38,674**	**35,438**	**14,333**

The aforementioned table summarises ONEA's sources of funding for its capex programme from F08 to F11. ONEA relies on its own resources, along with government and donor finance. The extent to which local bank finance is used tends to be on a short term basis, in the form of advances for working capital (in part to bridge the cash flow gap caused by late payments from government agencies). Net new borrowings of CFA52bn are budgeted to be sourced over the four year period and are expected to fund a fairly large and increasing component of capital expenditure spend up to F10 (F08: 42%; F09: 44%; F10: 60%), before reducing to 25% in F11. Total revenue is forecast to increase from CFA21.7bn in F08 to CFA26.6bn in F11 (see future prospects). Based on the forecasts provided, GCR estimates that total debt to EBITDA could increase to 850% in F08 (F07: 642%), peaking at around 1,225% in F10. Total debt to capital & reserves is forecast at a high 95% in F11 (F07: 46%).

Despite a high level of political commitment, the government is moving away from direct investment in the water sector in the medium to long term, and accordingly, less reliance is being placed on grant funding than in prior years. This could clearly impact ONEA's financial position going forward.

Future prospects

The following budget is extracted from ONEA's latest financial forecasting model. The model appears to be somewhat outdated given that the actual F07 results have not replaced the original F07 forecasts. Based on the model provided, the utility expects to generate an average annual compound growth rate in revenue of 7% over the period F08 to F11. Operating costs are forecast at a level well above revenue over this period, culminating in large operating deficits being posted (the operating margin is forecast at around negative 20% in each year over the four year period). The key drivers of the rise in operating expenditure are staff costs and other operating expenses. Furthermore, this will be exacerbated by the higher interest charges incurred as a result of the increased borrowings, as well as larger depreciation charges incurred from the large capex investments in water assets. As a percentage of total income, staff costs are forecast to increase from 21% in F08 to 22% in F11 (F07: 17%). Extraordinary income is expected to remain fairly substantial in each year (this relates to the previously mentioned non cash Hors Activites Ordinaires), albeit insufficient in supporting a positive net result.

Table 7: Operating budget (CFAm)	F08	F09	F10	F11
Total revenue	**21,694**	**23,113**	**24,762**	**26,594**
less: Op. expenditure				
Staff costs	(4,606)	(4,982)	(5,378)	(5,964)
Water & related purchases	(3,812)	(3,996)	(4,178)	(4,378)
Electricity	(3,023)	(3,294)	(3,568)	(3,876)
Other operating expenses	(2,074)	(2,343)	(2,720)	(2,960)
EBITDA	**8,179**	**8,498**	**8,918**	**9,416**
Depreciation	(12,299)	(13,317)	(14,163)	(14,153)
Operating result	**(4,120)**	**(4,819)**	**(5,245)**	**(4,737)**
Net finance costs	(2,149)	(2,498)	(3,050)	(3,126)
Extraordinary items	5,947.0	5,983	6,309	7,010
Taxation	(107)	(114)	(123)	(132)
NPAT	**(429)**	**(1,448)**	**(2,108)**	**(986)**
Key ratios (%)				
Turnover growth	(9.6)	6.5	7.1	7.4
EBITDA : revenues	37.7	36.8	36.0	35.4
Operating profit margin	(19.0)	(20.9)	(21.2)	(17.8)
Op. income : net interest	(1.9)	(1.9)	(1.7)	(1.5)
Net debt : EBITDA	739.2	910.9	1,108.2	1,087.8
Net debt : capital & reserves	45.4	55.8	70.0	74.7

The following are ONEA's main objectives in the medium term:

- Productivity gains to minimise tariff increases and improve operating performance;
- Improve ONEA's image to its customers and increase customer satisfaction;
- Improve the commitment level of ONEA staff, with systematic evaluation; and
- Increase water and sanitation coverage to more municipalities and cities.

Key challenges in achieving these objectives include:

- Tariffs are structured whereby household consumers are in fact purchasing water below the cost of production, with profitability deriving from large-scale consumers (such as government and other commercial users) who are charged higher rates. As such, with the rollout of services being largely to households, this is likely to place further downward pressure on the sectors margins. Tariffs should be restructured such that households are purchasing water on a cost-reflective basis.
- Given government's stated intention of eventually moving away from direct investment in the water sector, establishing a transparent, indexed and long term pricing structure is crucial in order for ONEA to provide services in accordance with its mandate and to make the necessary long term plans with greater certainty. This requires co-ordination and buy in from all key roll players, particularly government.
- The inability of ONEA to implement a stringent credit collections policy (and cut off supply) to government entities is a concern, which needs to be addressed. This will, in turn, require the necessary political support from the government.
- Deteriorating exogenous factors of late (higher average oil price, inflation etc) present a risk to the utility in the short term.

Office National de L'eau et de L'assainissement (ONEA)

(CFA in millions except as noted)

Income Statement Year end : 31 December	2003	2004	2005	2006	2007
Revenue	15,274.8	17,416.8	18,305.4	20,864.6	24,006.0
Operating expenditure	(11,286.6)	(12,038.6)	(13,384.7)	(12,657.5)	(14,783.9)
EBITDA	**3,988.2**	**5,378.2**	**4,920.7**	**8,207.1**	**9,222.1**
Depreciation	(5,669.1)	(6,984.5)	(8,320.4)	(8,903.5)	(11,175.2)
Operating income	**(1,680.9)**	**(1,606.3)**	**(3,399.7)**	**(696.4)**	**(1,953.1)**
Net finance charges	(566.6)	(618.0)	(546.5)	(1,033.3)	(2,188.5)
Finance costs capitalised	0.0	0.0	0.0	0.0	0.0
Income after finance charges	**(2,247.5)**	**(2,224.3)**	**(3,946.2)**	**(1,729.7)**	**(4,141.6)**
Extraordinary Items	3,351.6	3,060.9	5,131.6	3,002.9	5,044.6
Income tax	(556.6)	(323.3)	(926.5)	(167.1)	(195.3)
Net income	**547.5**	**513.3**	**258.9**	**1,106.1**	**707.7**
Prior year adjustment	0.0	0.0	0.0	0.0	0.0
Cash Flow Statement					
Cash generated by operations	**3,400.2**	**4,423.5**	**4,348.5**	**9,009.3**	**8,818.3**
Working capital: (increase)/decrease	565.7	(97.3)	(1,556.9)	(2,895.3)	509.5
Net finance charges	(663.5)	(720.4)	(586.8)	(1,033.3)	(2,188.5)
Cash flow from operations	**3,302.4**	**3,605.8**	**2,204.8**	**5,080.7**	**7,139.3**
Net expansionary capex and investments	(31,678.0)	(29,876.0)	(20,067.0)	(28,690.1)	(13,561.1)
Capital contributions	9,740.9	12,531.2	8,419.6	15,671.8	13,981.7
Cash movement: (increase)/decrease	n.a.	625.6	23.7	(14,159.7)	(3,305.6)
Borrowings: increase/(decrease)	n.a.	13,011.0	9,378.6	22,097.3	(4,254.3)
Net increase/(decrease) in debt	**n.a.**	**13,636.6**	**9,402.3**	**7,937.6**	**(7,559.9)**
Balance Sheet					
Capital and reserves	89,013.6	99,045.5	102,968.9	118,621.4	127,657.2
Total interest-bearing debt	**31,687.2**	**40,232.0**	**54,864.5**	**59,333.8**	**59,261.6**
Short-term	1,598.3	2,371.6	2,036.5	3,017.1	4,149.2
Long-term	30,088.9	37,860.4	52,828.0	56,316.7	55,112.4
Interest-free liabilities	10,725.3	15,254.8	11,108.6	16,913.9	15,653.5
Total liabilities	**131,426.1**	**154,532.3**	**168,942.0**	**194,869.1**	**202,572.3**
Fixed assets	114,284.4	135,820.7	150,735.3	171,343.0	175,301.5
Projects in progress	3,785.3	6,082.7	2,756.0	1,508.7	1,649.7
Investments	0.0	0.0	0.0	0.0	0.0
Cash and cash equivalents	5,878.2	5,193.6	5,171.0	6,274.3	9,078.5
Net trade debtors	5,941.8	5,392.7	8,182.9	13,408.9	13,647.1
Other current assets	1,536.4	2,042.6	2,096.8	2,334.2	2,895.5
Total assets	**131,426.1**	**154,532.3**	**168,942.0**	**194,869.1**	**202,572.3**
Ratios					
Operating:					
Billed water sales (million m3 / year)	n.a.	n.a.	n.a.	36.6	40.1
Volume increase (%)	n.a.	n.a.	n.a.	n.a.	9.7
Turnover growth (%)	n.a.	14.0	5.1	14.0	15.1
Staff costs : total operating costs (%)	19.9	19.0	18.2	18.7	16.1
Staff costs : revenue (%)	22.1	20.8	21.5	19.3	17.4
Staff per 1,000 connections	8.1	8.4	7.3	6.0	4.6
Net capex : revenue (%)	207.4	171.5	109.6	137.5	56.5
Cash Flow:					
Operating cash flow : total debt (%)	10.4	9.0	4.0	8.6	12.0
Operating cash flow : net debt (%)	12.8	10.3	4.4	9.6	14.2
Profitability:					
EBITDA : revenues (%)	26.1	30.9	26.9	39.3	38.4
Operating profit margin (%)	(11.0)	(9.2)	(18.6)	(3.3)	(8.1)
EBITDA : average total assets (%)	n.a	3.9	3.1	4.7	4.8
Coverage:					
Operating income : gross interest (x)	(2.5)	(2.2)	(5.8)	(0.6)	(0.9)
Operating income : net interest (x)	(3.0)	(2.6)	(6.2)	(0.7)	(0.9)
Activity and liquidity:					
Days receivable outstanding (days)	n.a.	135.4	142.3	188.9	205.7
Net debtors : total income (%)	38.9	31.0	44.7	64.3	56.8
Current ratio (:1)	1.2	0.8	1.3	1.2	1.4
Average days working cash (days)	122.4	96.5	84.8	101.4	117.7
Capitalisation:					
Net debt : capital and reserves (%)	30.4	36.9	49.6	46.0	40.7
Total debt : total assets (%)	24.1	26.0	32.5	30.4	29.3
Total debt : EBITDA (%)	794.5	748.1	1,115.0	723.0	642.6
Net debt : EBITDA (%)	647.1	651.5	1,009.9	646.5	544.2
Total debt : total income (%)	207.4	231.0	299.7	284.4	246.9
Net debt : total income (%)	169.0	201.2	271.5	254.3	209.0

Sènègalaise des Eaux (SDE)

Senegal Water Utility Analysis **August 2008**

Financial data:

(US$'m comparative)

	31/12/06	31/12/07
CFA/US$ (avg.)	539.9	492.9
CFA/US$ (close)	517.2	454.6
Total assets	78.2	107.3
Total debt	22.9	22.6
Total capital	7.2	9.1
Cash & equiv.	1.1	1.1
Revenue	92.3	116.2
EBITDA	8.0	10.8
NPAT	2.3	2.8
Op. cash flow	6.5	9.9
Market cap.	n.a.	
Market share	n.a.	

Fundamentals:

Owned by the Bouygues Group of France (63%), SDE is the private sector asset operating company in the urban & semi-urban water sector in Senegal. SDE was formed following sectoral reform in 1995/1996, which resulted in the division of asset holding and operation in the water distribution sector. In this respect, asset development and the majority of maintenance is performed by a public company (SONES), while sanitation is performed by a further state-owned company (ONAS). Although operations in the sector are bound by the contracts implemented at the time of reform, governance of the sector ultimately falls under the ambit of the Minister of Water; who is also responsible for tariff setting.

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Analytical considerations

Key analytical considerations

- The strong overall state of the Senegalese urban water infrastructure following the wholesale water sector reforms undertaken in 1995/1996. These reforms have resulted in a well organised water sector, with clear designation of roles and responsibilities by way of detailed contractual agreements.
- SDE's contractual mandate, covering the operation and maintenance of the infrastructure only, has allowed it to focus its efforts on the core activities of potable water production and distribution, as well as collections. Ongoing spend by SONES on the infrastructure has enabled a sustained rise in water volumes produced, while SDE's strong performance in terms of new connections to the network has seen strong growth in volumes sold.
- Note is taken of the punitive contractual structure under which SDE operates. In this regard, the private operator has consistently failed to meet technical efficiency targets, which has constrained profitability. Although subject to contractual protection, collection levels from government have significantly lagged the high private collection levels and this remains a key challenge to SDE.
- Supported by the network's growth and sustained tariff increases, SDE has reported stable profitability and operating cash flows over the review period, translating to comfortable debt serviceability. However, the entity remains fairly highly geared.
- Although Senegal is relatively stable, both politically and economically, it displays weak fiscal and social finances. As such, government collections are expected to remain poor, while the low wealth levels could prevent viable tariff increases in the future.

Funding profile

SDE displays a geared balance sheet, especially relative to capitalisation. In this respect, the private operator's asset base of largely debtors (64%) is funded predominantly by interest-free liabilities (70%) and interest-bearing debt (21%). Interest-bearing debt amounted to CFA10.3bn in F07 (F06: CFA11.8bn), of which 12% consists of bank overdrafts. With low equity of CFA4.1bn, this equates to net debt to equity of 271% in F07 (F06: 329%). Similarly, net debt to EBITDA registered at 194% in F07 (F06: 273%), although operating cash flow amounted to a comfortable 50% of net debt. Although liquidity is poor, given low cash holdings, debt serviceability remained comfortable, with net interest cover of 5.3x in F07 (F06: 3.6x).

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Background

The Senegalese water sector has witnessed considerable reform over the past two decades, with a focus on ensuring adequate water resources and service delivery for the country's burgeoning urban population. In this regard, urban water services were nationalised in 1971, with SONEES (*Société Nationale d'Exploitation des Eaux du Sénégal*) becoming responsible for the operation of water and sanitation services. In 1983 SONEES become responsible for water sector asset investment, which was formalised only by 1990 through a "*contrat-plan"*. However, by the mid-1990s it had become apparent that such an arrangement was failing, with sub-optimal tariff increases approved by government and weak collections from public enterprises. Moreover, and most significantly, there was serious concern regarding the adequacy/security of water supply for Dakar at the time. Precipitated by the economic turmoil that followed the devaluation of CFA against the French Franc in 1993, this led to significant water sector reform in 1995/1996.

The 1995/1996 water sector reforms saw the operations of SONEES dismantled and split between three key operators, as follows:

- SONES (Soci*ètè Nationale des Eaux du Sènègal*) is the public asset holding company in charge of managing & developing water related assets in urban/semi-urban areas of Senegal and monitoring the delivery of water services.
- A private operator in charge of producing and delivering potable water to these areas, as well as maintaining the network and collecting revenues from customers. SDE (*Sènègalaise des Eaux*) was set up as the private operator, with an effective 63% held by French water sector operator SAUR (now held directly by the Bouygues Group).
- ONAS (*Office National d'Assainissement Urbain*) is a government owned and managed company responsible for the sanitation services of six major urban centres.

The above reforms resulted in a clear division and designation of water sector responsibilities, with the roles & responsibilities stipulated by way of a strong legal/contractual framework. SONES entered into a 30-year Concession contract with the Senegalese Republic, as well as an annexed Planning contract, effectively outlining the respective responsibilities of SONES and the State. A 10-year Affermage contract was entered into by the State, SONES and SDE, while a Performance contract (between SDE & SONES) was annexed to this contract. These latter contracts defined the asset regime, service standards & conditions, governance of the works, remuneration and monitoring mechanisms for SDE.

The above reforms brought positive benefits for the sector as a whole. Most significant of these has been the substantial expenditure undertaken on the core production and distribution infrastructure.

In 2006, having performed strongly under the first affermage contract, SDE's operational mandate was extended for a further 5 years to 2011. SDE was formed in December 1995, following the appointment of SAUR (*Société d'Aménagement Urbain et Rural)*, which was selected as the operator due to its considerable experience in Africa (having operated water utilities in the Ivory Coast, Guinea, Central African Republic, Mozambique, South Africa and Zambia). Moreover, SAUR had in the past provided technical assistance to SONEES. In late 2004 the Bouygues Group sold its share in SAUR, although water contracts in Africa and Italy remained within the Bouygues Group and are currently managed by 100%-owned subsidiary Finagestion. This ensures the considerable financial strength of SDE, as well as synergies and benefits gained from its parent (notably the Sapphire information system).

Operating environment

Socio-economic context

Senegal is a country spanning around 197,000km^2, located on the Westernmost tip of Africa and bordered in the North by Mauritania, the East by Mali and in the South by Guinea & Guinea Bissau. Having achieved independence from France in 1960 as part of the Mali Confederacy (and thereafter gaining independence from Mali), Senegal has grown into a hub of Francophile West-Africa, with its capital Dakar being a centre of commercial activity and an important port. The country reported a moderate population of around 12.2m people in 2007, with the most notable trend being the migration of the population towards urban centres (especially the Dakar area in which over 60% of the population now resides). This populace is comprised of various ethnic groupings, the largest (at around 50%) being Wolof, while two official languages (Wolof and French) are spoken. The Senegalese religion is particularly unified, with 95% of the population being Muslim.

Senegal remains a poor, agrarian-based economy, lacking the wealth of commodities displayed by neighbouring West-African states. As such, its economy remains highly skewed towards a few

outputs, such as fishing and groundnuts. In recent years, the fishing sector has replaced groundnuts as the country's leading export, with peanut product exports being detrimented by falling global prices. Phosphate production has suffered from the recent financial collapse of the nationalised *Industrie chimique du Sènègal*, which also resulted in the loss of over 3,000 jobs. However, the tourism sector continues to flourish, with over 0.5m tourists visiting per annum. With a relatively low level of industrialisation, the economy reports a substantial current account deficit and is highly dependant on grants and concessional funding.

Table 1: Key economic indicators	2004	2005	2006	2007	2008e
GDP (US$'bn)	8.0	8.7	9.2	11.1	12.9
GDP growth (%)	5.8	5.3	2.1	5.0	5.4
GDP per capital (US$)	704.8	743.4	767.7	909.8	1,027.1
Inflation, avg. (%)	0.5	1.7	2.1	5.9	4.5
Current account (% of GDP)	(6.1)	(7.8)	(9.8)	(8.1)	(10.3)
Exchange rate (CFA/US$)*	528.9	524.7	539.9	492.9	437.4
Population (million)	11.4	11.7	11.9	12.2	12.5

** Average exchange rate. 2008e denotes the average rate for 1H 2008.*
Source: IMF.

Notwithstanding the above, the economy has reported relatively stable fundamentals over recent years, with GDP growth estimated to have recovered to 5% in 2007 (2006: 2.1%) and expected at 5.4% in 2008. Moreover, rising consumer wealth levels have been accompanied by relatively low (single digit) inflation and a strengthening exchange rate. It is noted that despite the strong measured growth, economic activity remains centred in the informal sector.

As a member of the West Africa Economic and Monetary Union (WAEMU), Senegal's monetary policy is defined by the Central Bank of West African States (BCEAO), which has the primary objective of controlling inflation. The prevailing CFA currency shared by WAEMU countries is pegged against the Euro, which has facilitated considerable economic stability for these countries (with the last major revaluation occurring in 1993). Accordingly, the currency has strengthened against the US$ in line with the Euro, from an average of CFA540/US$ in 2006 to CFA493/US$ in 2007 and further to CFA437/US$ in 1H 2008.

Regulatory and legal framework

The regulation of the water sector in Senegal follows from the framework instituted under the 1995/1996 water sector reforms. Sectoral responsibilities (rural & urban, including sanitisation) ultimately vest with the Minister of Water (*Ministre de l'Hydraulique*), with underlying responsibilities & roles designated per the aforementioned contractual arrangements. Under the Planning contract between the State and SONES, obligations of both parties were clearly defined. The gist of these obligations is that the State performs a monitoring role, with its key roles being the setting of tariffs (with assistance from SONES) and assistance with asset financing and collections from government entities. In contrast, SONES is directly responsible for capital investment in the sector (including raising and servicing debt), as well as ensuring the adequate performance of SDE. In this regard, the responsibilities of SONES and SDE are clearly defined in the Performance Contract. This contract was renewed after the first 10-year period of operation and provides for review of performance targets every two years.

Obligations of SONES and SDE per Performance Contract

SONES

- Ensuring adequate infrastructure is available to the operator and that requisite investment is made (including a rolling 3-year investment programme).
- Timeous execution of works related to system investments.
- Financing of works.
- Adjustment of tariffs.

SDE

- Optimal usage of productive assets.
- Maintaining and repairing infrastructure at its own cost.
- Renewing a minimum of 14,000m of pipe and 6,000 connections per year.
- Replacing electromechanical equipment valued below CFA15m and with a lifespan up to 10 years.
- Prepare an annual maintenance place and technical report.
- Meet WHO standards for water quality.
- Respond to mains leakage with one hour.
- Adhere to renewal schedule (min. 17km of pipe per annum).
- Supply monthly data to SONES on consumption, billing and collections.
- Meet performance targets in terms of leakage and collections.

As reflected above, SONES's obligations pertain to the investment in infrastructure (planning, financing and works) and the coordination with the Minister of Water in respect of tariff adjustments, albeit with the right to increase tariffs vested with the Minister. SDE's specific requirements are stipulated with regards to maintenance obligations, which covers the full maintenance of the infrastructure, minimum renewals of pipes & connections and replacement of low value equipment. Other requirements are in respect of water quality and the adequate usage of the infrastructure.

The Performance Contract was designed to ensure collections and distribution efficiency through the remuneration structure. Under this system, SDE is responsible for all collections and pays a portion across to SONES, subject to performance targets (which are periodically negotiated). In this way SDE loses revenue if collections and efficiency fall below targets but benefits should they exceed targets. With regards to technical efficiency, the initial target was set at 76% for 1996. Since this time targets were set at 77% in 1997, 80% in 1998, 83% in 1999 and 85% since 2000 (although this target was later delayed to 2002). Similarly, the collections efficiency targets has remained at 97%

since 1988 (applied to all customers except the public administration). It is noted that the operator's water supply rate is based on an indexation formula (established at the time of tender), which adjusts SDE's revenues to compensate for increases in staff, energy & iron pipe costs, as well as electromechanical equipment.

Calculation of SONES's remuneration

Amount paid to SONES $= (T_{avg,n} - OP_n)\ Vp_n \times CTE_n \times CCE_n$

$T_{avg,\ n}$ = average tariff ; sum of the amount billed in each tariff category divided by the total overall volume billed for in cubic meters: this is the weighted average of all tariffs (net of taxes).

OP_n = operator's water supply rate in CFA/ m^3 (referred to as "bid price" or "operator's fee"), adjusted annually according to the indexation formula.

Vp_n = water put into supply (volume of water produced) in m^3/yr.

CTE_n = contractual technical efficiency; the target for water billed divided by water produced according to the contract.

CCE_n = contractual commercial (bill collection) efficiency; the target for water paid for divided by water billed according to the contract.

Operations

Given the above remuneration calculation, SDE's earnings is exposed to nearly every risk facet in the production and distribution of water, as well as in the billings and collections of consumers.

SONES and SDE have free and unrestricted access to water, which it sources from rivers and ground water. In this regard, daily installed capacity registers at around 280,000m^3, of which approximately 110,000m^3 is sourced from surface water and the remainder (around 60%) from underground sources. In this regard, the actual purification and transportation of water drive the cost of production, with major costs in the process being electricity, labour and (cost of) capital. It is noted that the cost of producing underground water is markedly lower than surface water, because underground water requires less treatment and can often be sourced closer to the consumption points than surface water. However, Senegal's underground water does have certain problems (for which studies are underway), including trace iron in some water and high fluoride in Dakar. Water quality is maintained at WHO acceptable levels.

The water production & distribution infrastructure is essentially contained along a single conduit running between the Senegal River in the North and Dakar in the South-West of the country. Approximately 110,000m^3 is sourced from Lac de Guiers, a lake on the Senegal River. This water is processed via two treatment plants, with around 110,000m^3 treated at the Ngnith and Keur Momar Sarr (KMS) plants. From these treatment plants, a dual pipeline carries the water towards Dakar, feeding numerous towns and villages en-route (including the major centers of Saint-Louis, Thiès and Touba). Notwithstanding the above, the majority of potable water is in fact accumulated along the conduit's path via a plethora of reservoirs and boreholes (around 840), contributing the remaining 170,000m^3 of installed capacity.

SDE utilises SONES's substantial asset base in order to service Dakar and a further 55 towns & 414 villages along the primary network. SDE uses the conduit without any additional charge above SONES's remuneration per the performance contract, however, certain ancillary premises are leased from SONES. Most of SDE's activities are centralised from Dakar, with a sophisticated central information system providing live feedback on the network's performance (with a central monitoring "cockpit").

Tariffs

SDE has no effective pricing power, as tariffs are determined by the Minister of Water with assistance from SONES. Tariffs (benefiting SDE, SONES and ONAS) are set in order to cover all costs, both operational and in terms of capex spend. A stratified tariff structure is applied to the industry, whereby different rates are applied to different consumer types and consumption levels. As at year end 2007 typical charges were in place as follows:

- Social tranche: CFA191.3/m^3 for 0m^3 to 20m^3;
- Full tranche: CFA629.9/m^3 for 20m^3 to 40m^3; &
- Deterrent tranche: CFA788.7/m^3 for > 40 m^3.

It is noted that SDE's average cost of production registered at around CFA305.3/m^3 (2006: CFA292.6/m^3), from CFA271.5//m^3 in 2004. Accordingly, profits derive from large users, with small social users typically being unprofitable. Since customers are metered, all tariffs are volumetric and consist of a basic portion, a sanitation allotment, VAT, a municipal surcharge and water development levy, as represented in the following table.

Table 2: Water tariffs (CFA/m^3)	2004	2005	2006	2007
Average global tariff	485.6	485.6	531.6	525.8
Taxes	(50.9)	(52.4)	(81.1)	(30.2)
Net tariff	**434.7**	**433.2**	**450.5**	**495.6**
ONAS (sanitation)	(40.8)	(40.3)	(40.7)	(39.8)
SONES (asset development)	(146.5)	(142.7)	(140.9)	(164.1)
Net tariff - SDE	**247.4**	**250.2**	**268.9**	**291.7**

Source: Management.

Production, collections and efficiency

A key revenue driver is the number of connections to the distribution network, as this ultimately drives consumption. A failure to make the requisite connections has a two-fold impact on SDE, in that it incurs penalties under the Performance Contract and results in lost revenue (as water sales would

lag water production). Connection rates, however, have been robust and in line with requirements, rising from 363,228 connections in F03 to 461,887 in F07 (F06: 433,676).

As remuneration to SONES is calculated on a production basis, while more water produced translates to higher sales (assuming the requisite connections are effected), the onus rests on SDE to ensure that production levels translate into sales. In this respect, distribution losses of 15% are allowable per the Performance Contract, being the proportion of water produced that is not billed.

Table 3: Efficiency statistics	F03	F04	F05	F06	F07
Number of connections (000s)	363.2	383.0	412.3	433.7	461.9
Water production (m^3- millions)	113.8	118.7	124.7	129.2	135.4
Water sold (m^3- millions)	90.8	94.8	99.7	103.7	108.7
Technical efficiency (%)	79.9	80.1	80.1	80.2	80.3
Collections (%)	98.2	98.3	97.9	98.2	97.4

Sustained expenditure on the infrastructure by SONES has facilitated strong growth in actual water production, which has risen from 113.8m cubic meters in F03 to 135.4m in F07, representing a compound annual growth rate of 4.4%. Simultaneously, volumes sold have risen from 90.8m cubic meters to 108.7m. As such, technical losses have remained around 20%, with SDE resultantly penalised under the contract. The issue of technical efficiency will continue to be a point of contention between SDE and SONES, with the former contending that initial benchmarking was incorrect and an 85% target is not feasible.

Only non-governmental collections are included in the contractually prescribed collections target. This is due to difficulties in cutting-off water to the administration and the requirement that SONES actively aides in such collections. As such, prescribed collection rates relate to household and commercial debtors. Given a strong credit control infrastructure, SDE has reported a high level of collections, with the average collection rate of 98% for the five-year period exceeding the stipulated 97% requirement in each year.

Financial performance

A synopsis of SDE's financial performance for the past 5 years is reflected at the end of this report, whilst brief comment appears hereafter.

SDE has reported a sustained rise in revenue over the review period, spurred by stable tariff increases and sustained growth in billings. In this regard, revenue has grown at a compound annual rate of 7.1% from CFA43.6bn in F03 to CFA57.3bn in F07. Revenues have been boosted by substantial ancillary operating income (other products, transfer charges and provision reversals), which totalled CFA3.6bn in F07 (F06: CFA2.4bn).

Examination of expenditure reveals that the single largest component consists of payments to SONES & ONAS under the compensation arrangement. Having dipped to CFA17.6bn in F05, these payments leapt to CFA27.9bn in F07 (F06: CFA23.4bn). General operating expenses rose 13% to CFA27.7bn in F07, inclusive of unchanged staff costs of CFA8.6bn and electricity charges of CFA8.7bn (F06: CFA7.2bn). Accordingly, having peaked at CFA5.8bn in F05, EBITDA amounted to CFA5.3bn in F07 (F06: CFA4.3bn). Thus, the EBITDA margin of 9.3% in F07 (F06: 8.7%) was well below the 12.7% recorded in F05. Given its more moderate fixed asset base, SDE reports relatively low depreciation charges compared to SONES. Specifically, depreciation amounted to CFA2.8bn in F07 (F06: CFA2.5bn), resulting in operating profits of CFA2.5bn (F06: CFA1.8bn) and an operating margin of 4.4% (F06: 3.6%).

Table 4: Operating Performance (CFA'm)	F07 Actual	F07 Budget*	% of budget
Income			
Sales	57,268.6	50,200.2	114.1
Operating subsidies	0.0	0.0	n.a.
Other operating income	3,561.5	1,354.8	262.9
Total revenue	**60,830.1**	**51,555.0**	**118.0**
less: Op. expenditure			
Staff costs	(8,602.9)	(8,175.8)	105.2
Payment to SONES & ONAS	(27,853.8)	(14,929.8)	186.6
Operating charges	(19,057.6)	(23,538.6)	81.0
EBITDA	**5,315.8**	**4,910.8**	**108.2**
Depreciation & amortisation*	(2,787.7)	(2,401.9)	116.1
Operating result	**2,528.2**	**2,508.9**	**100.8**
Net finance costs	(478.1)	(675.6)	70.8
Extraordinary items	32.4	0.0	--
Taxation	(684.9)	(583.5)	117.4
NPAT	**1,397.6**	**1,249.8**	**111.8**

** Source: Management.*

Net finance charges registered 5% lower at CFA478m in F07, facilitating an improvement in debt serviceability, with net interest cover recovering to 5.3x (F06: 3.6x). Income tax reduced to CFA39m in F06 but normalised to CFA685m in F07. Overall, inclusive of exceptional earnings of CFA32m, retained income amounted to CFA1.4bn in F07 (F06: CFA1.3bn).

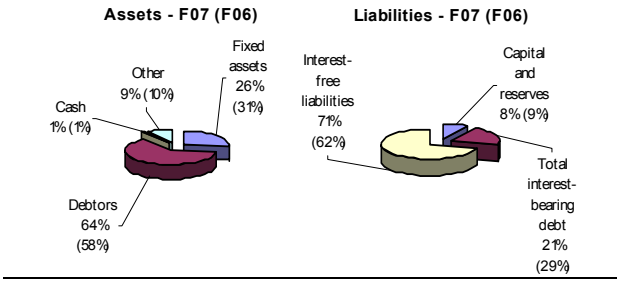
SDE reported sizeable cash generated by operations of CFA4.4bn in F07 (F06: CFA4.1bn). This was boosted by a working capital release of CFA1bn (F06: CFA0.1bn absorption), with a CFA9.2bn increase in trade payables outweighing a CFA7.6bn increase in receivables. Coupled with relatively unchanged actual taxation paid of CFA0.5bn, this saw cash flow from operations 40% higher at CFA4.9bn in F07.

With its limited capex mandate, SDE has reported moderate capital expenditure over the review period, the majority of which is for maintenance of infrastructure. In this respect, total capex amounted

to CFA2.4bn in F07 (F06: CFA2.3bn). Other significant investing outflows pertained to dividends paid of CFA1.7bn and CFA1.1bn in F06 and F07 respectively. A CFA1.5bn net decrease in debt was reported in F07, mostly pertaining to the paydown of debt.

Funding profile

Funding profile



SDE's funding profile is in line with its nature as the operator in the industry. The balance sheet reflects an asset base that is 26% comprised of fixed assets of CFA12.7bn (meters, vehicles and pipes), with 64% derived from debtors of CFA31bn. Assets are mainly funded by interest free liabilities, which comprised 71% of the asset base in F07. Interest free liabilities include trade creditors (SONES and ONAS) of CFA10.3bn in F07, fiscal and social creditors of CFA6.2bn and other creditors of CFA16.5bn. SDE displays a low level of capitalisation at 8% of total funding, with shareholders funds rising 10% to CFA4.1bn in F07. The remaining 21% of the asset base derives from borrowings of CFA10.3bn in F07. It is noted that an amount of CFA6bn owing to SONES has been restructured into a loan.

Debtors

Gross consumer debtors amounted to CFA36.5bn in F07, with provisions of CFA5.5bn amounting to around 15% of the gross book. The sharp rise in net debtors was associated with the rise in tariffs and water volumes sold, as well as poor collections from government. In this regard, it is noted that payments to SONES on government collections are withheld until funds are received, with the increase in amounts owing to SONES largely explained by the increase in government debtors. Net debtors to total income rose to a review period high of 54% in F07 (F06: 47%), from 36% in F05. Similarly, the days receivables outstanding rose from 146 days in F06 to 174 days in F07.

SDE conducts it billing activities monthly for large clients (generally government and commercial users) and bimonthly for private clients, in order to smooth cash flows and reduce administrative burdens. Unlike other economies, where certain water sales such as standpipes are subsidised, all water sales are billeable and measured by meters.

Table 5: Debtors (CFA'm)	F06	F07
Gross consumer debtors	**n.a.**	**36,514.6**
Less provision for bad debts	n.a.	(5,487.0)
Net consumer debtors	**23,436.1**	**31,027.6**
Other net debtors	2,031.1	2,550.4
Total net debtors	**25,467.2**	**33,578.0**

The comprehensive collections and renewals process ensures that meters are functional (with a maximum down-time of a single month), with meter readers also performing meter replacements & repairs, delivering invoices and cutting of delinquent debtors. Billings and collections are managed through the Sapphire system, which provides real-time debtors information.

Clients payments are made by various means, such as posted cheques, payments at any of SDE's 65 centres and direct debit orders. Typically, clients are given three days to meet payments, after which their water service is cut-off. However, concessions are made to sensitive clients (such as hospitals) and where clients have informed SDE of their inability to meet payment. Nonetheless, late payment carries interest penalties, whilst fraudulent activity is discouraged by sizeable fines. Other initiatives to improve customer service and collections include a 24-hours call centre (for complaints, suggestions and reporting of leakages), as well as ongoing consumer surveys.

Gearing and liquidity profile

Total interest-bearing debt declined by 13% to CFA10.3bn in F07, consisting 88% of long-term borrowings of CFA9.1bn and 12% of overdrafts of CFA1.2bn. This represents a cumulative 29% rise on the CFA8bn reported in F03. In comparison, despite the stripping of profits via dividends, equity has risen by 31% from CFA3.1bn in F03 to CFA4.1bn in F07 (F06: CFA3.7bn).

As such, gearing levels have remained high over the review period. Despite improving, net debt to capital and reserves remained high at 271% in F07 (F06: 329%), while net debt to EBITDA amounted to a more comfortable 185% (F06: 260%). Furthermore, net debt is comfortable relative to total income, amounting to only 17% in F07 (F06: 23%).

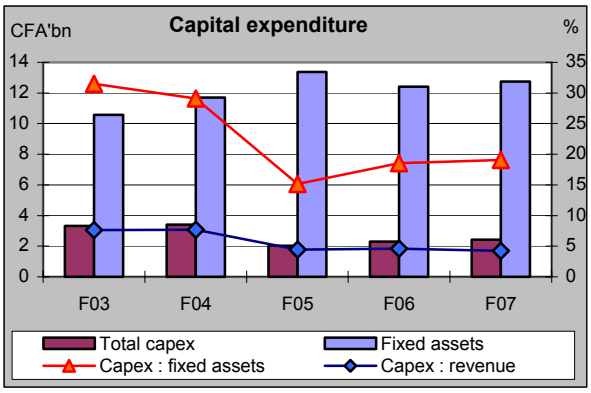
With moderate cash holdings of CFA0.5bn in F07 (F06: CFA0.6bn), SDE displays a weak liquidity profile. In this regard, cash covered short term debt by just 0.4x in F07, while cash on hand fell to 6 days cover (F06: 7.5 days).

Capex projects and funding

Capital expenditure is largely directed towards the maintenance of the infrastructure owned by SONES. As such, capex is not performed for long term projects and for long term asset formation purposes. Rather, it is undertaken ad-hoc for

repairs and per the agreed replacement schedule for renewals & connections.

Examination of historical capex reveals that it has remained at moderate levels over the review period, peaking at CFA3.4bn in F04 and declining to CFA2.3bn by F07. In this respect, capex relative to fixed assets and revenues has decreased consistently over the review period to amount to just 19% and 4% respectively in F07, further indicative of the low capex burden on SDE.



Going forward, capex is expected to remain at similar levels to those displayed historically, with projected spend of CFA2.7bn in F08 reducing to CFA2.4bn in each of F09 and F10.

Table 7: Capex budget (CFA'm)	2008	2009	2010
Capex spend			
Intangible assets	96.0	63.9	63.9
Fixed assets	2,619.7	2,287.6	2,287.6
Total	**2,715.7**	**2,351.5**	**2,351.5**
Source de financement			
Internal cash flows	1,100.2	1,100.2	1,100.1
Debt	1,615.5	1,251.3	1,252.4
Total	**2,715.7**	**2,351.5**	**2,351.5**

Future prospects

Table 8: Operating budget (CFAm)	F08	F09	F10
Total revenue	**59,336.6**	**62,475.7**	**66,014.5**
less: Op. expenditure			
Payments to SONES & ONAS	(21,146.5)	(23,215.7)	(25,529.9)
Staff costs	(9,222.6)	(9,374.0)	(9,757.4)
Other operating expenses	(23,592.1)	(24,446.1)	(25,221.9)
EBITDA	**5,375.4**	**5,440.0**	**5,505.3**
Depreciation*	(2,796.8)	(2,879.3)	(2,920.5)
Operating result	**2,578.6**	**2,560.6**	**2,584.8**
Net finance costs*	(505.9)	(496.1)	(489.9)
Net profit before tax	**2,072.7**	**2,064.6**	**2,094.9**
Capital and reserves	3,600.0	3,600.0	3,600.0
Net borrowings	10,509.6	14,578.7	12,803.8
Key ratios (%)			
Turnover growth	3.6	5.3	5.7
EBITDA : revenues	9.1	8.7	8.3
Operating profit margin	4.3	4.1	3.9
Op. income : net interest	5.1	5.2	5.3
Net debt : EBITDA	195.5	268.0	232.6
Net debt : Capital & reserves	291.9	405.0	355.7
Net debt : Total income	17.7	23.3	19.4

** GCR has estimated the allocation between depreciation and finance charges.*

SDE is expecting a stable operating performance in the medium term. In this respect, revenue is expected at CFA59.4bn in F08 and thereafter to rise by around 5.5% in each year to reach CFA66bn in F10. However, growth in operating expenditure is expected to slightly outpace revenue, with a resultant compression in margins. In this respect, total operating expenditure is forecast to rise to CFA54bn in F08 and thereafter by 6% in each year to CFA60.5bn in F10. Accordingly, EBITDA is budgeted to remain at around CFA5.4bn in each of the next three years, with a fall in the EBITDA margin from the 9.3% reported in F07 to 8.3% by F10.

Following relatively unchanged depreciation, operating profits are expected to remain similarly stable and a compression in the operating margin is likewise anticipated. However, interest coverage is forecast to remain comfortable and above 5x for the three years to F10.Gearing levels are expected to remain at the high levels displayed historically.

Examination of SDE's projected balance sheet indicates a more highly geared entity over the next three years, with gearing peaking in F09 and reducing thereafter in F10. In this respect, net borrowings are expected to peak at CFA14.6bn in F09 and reduce to CFA12.8bn in F10. GCR notes that SDE will continue to payout all of its retained earnings as dividends.

SDE's overall prospects are robust. In this respect, the private operator's strong performance since water reform has served to entrench its position in the industry. Notably, SDE's operating contract is up for renewal in 2011. This has a number of implications for SDE and the industry. Positively, it is expected that SDE will be working to retain its contract. Conversely, the tenuous contractual scenario might result in delayed investment by SDE and profit taking by its parent (evidenced in the historically high dividend payout ratio of SDE). Nonetheless, it seems likely that SDE will retain its contract in 2011, given its strong historical performance and entrenched position in the industry. GCR notes that an apparent conflict of interest appears in the industry structure, as government ultimately appoints the industry operator but is also the single largest customer of that operator. This could potentially impact SDE's operations leading up to the contract renewal.

In addition to the above, the organisation will continue to face a number of ongoing challenges looking ahead. Chief amongst these is the issue of technical efficiency, with punitive targets expected to continue to impair SDE's profitability. Other challenges include the ongoing difficulties experienced in collections from State entities and continuing to expand service delivery in line with the growth of the infrastructure.

SENEGALAISE DES EAUX (SDE)

(CFA in millions except as noted)

Income Statement Year end : 31 December	2003	2004	2005	2006	2007
Revenue	43,574.2	44,248.3	45,815.0	49,837.0	57,268.6
Transfer to SONES & ONAS	(20,959.2)	(21,529.4)	(17,635.4)	(23,427.8)	(27,853.8)
Operating expenditure	(19,697.9)	(21,525.8)	(24,687.4)	(24,488.6)	(27,660.5)
Other income and expenses	2,348.0	3,692.1	2,303.4	2,412.7	3,561.5
EBITDA	**5,265.0**	**4,885.2**	**5,795.7**	**4,333.4**	**5,315.8**
Depreciation	(2,424.2)	(2,115.2)	(3,445.0)	(2,533.8)	(2,787.7)
Operating income	**2,840.8**	**2,770.0**	**2,350.7**	**1,799.6**	**2,528.2**
Amortisation	0.0	0.0	0.0	0.0	0.0
Net finance charges	(515.4)	(435.1)	(453.0)	(502.4)	(478.1)
Corporate income tax	(987.9)	(961.5)	(714.6)	(39.3)	(684.9)
Income after finance charges	**1,337.4**	**1,373.5**	**1,183.1**	**1,257.9**	**1,365.2**
Exceptional Items	29.6	13.5	50.2	(3.7)	32.4
Net income	**1,367.0**	**1,387.0**	**1,233.3**	**1,254.2**	**1,397.6**
Cash Flow Statement					
Cash generated by operations	**3,253.6**	**2,247.0**	**6,170.1**	**4,069.7**	**4,383.6**
Working capital: (increase)/decrease	3,494.9	(649.5)	276.6	(66.8)	991.3
Net finance charges	(515.4)	(435.1)	(453.0)	(502.4)	(478.1)
Cash flow from operations	**6,233.0**	**1,162.4**	**5,993.8**	**3,500.6**	**4,896.8**
Maintenance capex*	(2,424.2)	(2,115.2)	(2,024.6)	(2,299.3)	(2,429.8)
Discretionary cash flow from operations	**3,808.8**	**(952.8)**	**3,969.2**	**1,201.3**	**2,467.0**
Net expansionary capex and investments	(1,741.4)	(2,521.9)	(1,247.6)	(1,684.1)	(1,002.2)
Capital contributions	0.0	0.0	0.0	0.0	0.0
Cash movement: (increase)/decrease	(375.2)	366.9	44.1	(1,344.4)	64.1
Borrowings: increase/(decrease)	(1,692.1)	3,107.8	(2,765.8)	1,827.3	(1,528.9)
Net increase/(decrease) in debt	**(2,067.4)**	**3,474.7**	**(2,721.7)**	**482.9**	**(1,464.8)**
Balance Sheet					
Capital and reserves	3,118.1	3,155.0	4,731.6	3,728.1	4,118.9
Total interest-bearing debt	**7,981.2**	**11,089.0**	**8,323.3**	**11,821.7**	**10,292.8**
Short-term	675.0	2,565.8	(75.0)	1,596.2	1,213.6
Long-term	7,306.3	8,523.2	8,398.2	10,225.5	9,079.2
Interest-free liabilities	19,456.3	19,806.1	20,534.5	24,870.2	34,358.9
Total liabilities	**30,555.6**	**34,050.1**	**33,589.4**	**40,420.0**	**48,770.6**
Fixed assets	10,575.8	11,703.6	13,383.0	12,409.6	12,737.7
Projects in progress	0.0	0.0	0.0	0.0	0.0
Investments	0.0	0.0	0.0	5.2	23.0
Cash and cash equivalents	661.7	294.8	250.7	568.3	486.5
Net trade debtors	15,399.8	17,989.8	16,398.0	23,436.1	31,027.6
Other current assets	3,918.4	4,061.9	3,557.7	4,000.7	4,495.8
Total assets	**30,555.6**	**34,050.1**	**33,589.4**	**40,420.0**	**48,770.6**
Ratios					
Operating:					
Average cost of treated water (CFA/m3)	n.a.	271.5	277.8	292.6	305.3
Billed water sales (million m^3/year)	90.8	94.8	99.7	103.7	108.7
Volume increase (%)	n.a.	4.4	5.2	4.0	4.8
Average tariff increase (%)	n.a.	n.a.	0.0	9.5	(1.1)
Turnover growth (%)	n.a.	1.5	3.5	8.8	14.9
Transfers to SONES & ONAS : revenue (%)	48.1	48.7	38.5	47.0	48.6
Staff costs : operating costs (%)	35.9	34.8	32.0	35.2	31.1
Staff costs : revenue (%)	16.2	16.9	17.3	17.3	15.0
Staff per 1,000 conections	3.2	3.0	2.8	2.6	2.4
Water distribution losses (%)	20.1	19.9	19.9	19.8	20.0
Net capex : revenue (%)	7.6	7.7	4.4	4.6	4.2
Cash Flow:					
Operating cash flow : total debt (%)	78.1	10.5	72.0	29.6	47.6
Operating cash flow : net debt (%)	85.2	10.8	74.2	31.1	49.9
Profitability:					
EBITDA : revenues (%)	12.1	11.0	12.7	8.7	9.3
Operating profit margin (%)	6.5	6.3	5.1	3.6	4.4
EBITDA : average total assets (%)	n.a.	15.4	17.3	11.8	12.1
Coverage:					
Operating income : gross interest (x)	5.4	6.3	5.2	3.5	5.3
Operating income : net interest (x)	5.5	6.4	5.2	3.6	5.3
Activity and liquidity:					
Days receivable outstanding (days)	n.a.	139.8	141.8	145.9	173.6
Net debtors : total income (%)	35.3	40.7	35.8	47.0	54.2
Current ratio (:1)	1.1	1.0	1.0	1.1	1.1
Average days working cash (days)	10.7	4.5	3.2	7.5	5.7
Capitalisation:					
Net debt : capital and reserves (%)	271.0	370.7	189.7	328.8	270.6
Total debt : total assets (%)	26.1	32.6	24.8	29.2	21.1
Total debt : EBITDA (%)	151.6	227.0	143.6	272.8	193.6
Net debt : EBITDA (%)	139.0	221.0	139.3	259.7	184.5
Total debt : total income (%)	18.3	25.1	18.2	23.7	18.0
Net debt : total income (%)	16.8	24.4	17.6	22.6	17.1

Sociètè Nationale des Eaux du Sènègal (SONES)

Senegal Water Utility Analysis **August 2008**

Security class	Rating scale	Currency	Rating	Rating watch	Expiry date
Long term	National	CFA	A+	No	07/2009
Short term	National	CFA	A1		

Financial data:

(US$'m comparative)

	31/12/06	31/12/07
CFA/US$ (avg.)	539.9	492.9
CFA/US$ (close)	517.2	454.6
Total assets	439.9	519.8
Total debt	186.2	207.5
Total capital	247.0	301.5
Cash & equiv.	12.7	14.0
Revenue	27.4	36.4
EBITDA	24.4	32.9
NPAT	0.9	2.6
Op. cash flow	11.3	17.1
Market cap.	n.a.	
Market share	n.a.	

Fundamentals:

SONES is the public asset holding and management company operating in the urban & semi-urban water sector in Senegal. SONES was formed following sectoral reform in 1995/1996, which resulted in the division of asset holding and operation in the water distribution sector. In this respect, water distribution is performed by a privately-owned company (SDE), while sanitation is performed by a further state-owned company (ONAS). Although operations in the sector are bound by the contracts implemented at the time of reform, governance of the sector ultimately falls under the ambit of the Minister of Water; who is also responsible for tariff setting.

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Rating rationale

The rating is based on the following key factors:

- The strong overall state of the Senegalese urban water infrastructure following the wholesale water sector reforms undertaken in 1995/1996. These reforms have resulted in a well organised water sector, with clear designation of roles and responsibilities by way of detailed contractual agreements.
- With respect to the above, SONES's limited mandate has facilitated the substantial development of the urban water production and distribution infrastructure. This has seen a sustained level of fixed asset formation, with fixed assets of CFA213bn amounting to 91% of the company's asset base as at F07. Note is taken of the high level of spend still to be undertaken by SONES. In this regard, there are numerous capex projects underway, with the Millennium Development Goals spanning through to 2015.
- The asset base has historically been funded via a combination of grant and debt funding, with the latter largely being concessional funding from global infrastructure development agencies. As such, SONES displays a highly geared balance sheet especially relative to earnings.
- Due to the prevailing industry structure, SONES is reimbursed based on volumes of water produced and tariffs. As such, it is not exposed to the risks of distribution loss and debtors. As a result, SONES has displayed robust operating cash flows and strong profitability (the largest expense being depreciation), with stable debt serviceability. Note is taken of the stable rises in tariffs and SDE's efficacy as an operator since reform.
- Although Senegal is relatively stable, both politically and economically, it remains a relatively poor country. As such, government support to SONES is weak, while the low prevailing wealth levels could prevent viable tariff increases in the future.

Funding profile

SONES's assets are funded via a combination of debt and equity of CFA94.3bn and CFA137.1bn respectively in F07 (F06: CFA96.3bn and CFA127.7bn). In terms of capitalisation, SONES has been moderately geared, with net debt to capital & reserves of 64% in F07 (F06: 71%). However, indebtedness is particularly high when compared to earnings, with net debt to EBITDA at 543% in F07 (F06: 682%) and operating cash flow amounting to a low 9.6% of this debt. In the same vein, debt serviceability has been low (albeit stable), with net interest cover reaching a peak of 1.5x in F07 (F06: 0.7x). Note is taken of the long dated capital redemption profile of the utility's debt.

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Background

The Senegalese water sector has witnessed considerable reform over the past two decades, with a focus on ensuring adequate water resources and service delivery to the country's burgeoning urban population. In this regard, urban water services were nationalised in 1971, with SONEES (*Société Nationale d'Exploitation des Eaux du Sénégal*) becoming responsible for the operation of water and sanitation services. In 1983 SONEES became responsible for water sector asset investment, which was formalised only in 1990 through a "*contrat-plan"*. However, by the mid-1990s it had become apparent that such an arrangement was failing, with sub-optimal tariff increases approved by government and weak collections from public enterprises. Moreover, and most significantly, there was serious concern regarding the adequacy/security of water supply for Dakar at the time. Precipitated by economic turmoil following the devaluation of CFA against the French Franc in 1993, this led to the significant water sector reform undertaken in 1995/1996.

The 1995/1996 water sector reforms saw the operations of SONEES dismantled and split between three key operators, as follows:

- SONES (Soci*ètè Nationale des Eaux du Sènègal*) is the public asset holding company in charge of managing & developing water related assets in urban/semi-urban areas of Senegal and monitoring the delivery of water services.
- A private operator in charge of producing and delivering potable water to these areas, as well as maintaining the network & collecting revenues from customers. SDE (*Sènègalaise des Eaux*) is the private operator, with 62% effectively held by French water sector operator SAUR. These shares were transferred to the Finagestion subsidiary of the Bouygues Group.
- ONAS (*Office National d'Assainissement Urbain*) is a government owned and managed company responsible for the sanitation services of six major urban centres.

The above reforms resulted in a clear division and designation of water sector responsibilities, with roles & responsibilities designated by way of a strong legal/contractual framework. SONES entered into a 30-year Concession contract with the Senegalese Republic, as well as an annexed Planning contract, effectively outlining the respective responsibilities of SONES and the State. A 10-year Affermage contract was also entered into by the State, SONES and SDE, while a Performance contract (between SDE & SONES) was annexed to this contract. These latter contracts defined the asset regime, service standards & conditions, governance of the works, remuneration and monitoring mechanisms for SDE.

The above water sector reforms have brought positive benefits for the sector as a whole. Most significant of these has been the substantial expenditure undertaken on the core production and distribution infrastructure. In 1995 the Water Sector Project was initiated, with a view to meet water demands in Dakar by 2003 (although the project experienced substantial delays). The project was a considerable success, with capacity doubled along pipeline between purification facilities off the Senegal River (on Lac de Guiers) and Dakar. This also saw the addition of further reservoir points along the pipeline, as well as the rehabilitation of the Ngnith Treatment plant.

In 2006, having performed strongly under the first Affermage contract, SDE's operational mandate was extended for a further 5 years to 2011. The focus of SONES's capex activities, as currently stands, fall under the Long Term Water Project, which aims to address long-term water supply concerns, as well as meet the water-specific targets per the Millennium Development Goals. In this respect, with dwindling groundwater and rapid urbanisation, water security remains a key concern.

Operating environment

Socio-economic context

Senegal is a country spanning around 197,000km^2, located on the Westernmost tip of Africa and bordered in the North by Mauritania, the East by Mali and in the South by Guinea & Guinea Bissau. Having achieved independence from France in 1960 as part of the Mali Confederacy (and thereafter gaining independence from Mali), Senegal has grown into a hub of Francophile West-Africa, with its capital Dakar being a centre of commercial activity and an important port. The country reports a moderate population of around 12.2m people in 2007, with the most notable trend being the migration of the population towards urban centres (especially the Dakar area in which over 60% of the population now resides). This populace is comprised of various ethnic groupings, the largest (at around 50%) being Wolof, while two official languages (Wolof and French) are spoken. The Senegalese religion is particularly unified, with 95% of the population being Muslim.

Table 1: Key economic indicators	2004	2005	2006	2007	2008e
GDP (US$'bn)	8.0	8.7	9.2	11.1	12.9
GDP growth (%)	5.8	5.3	2.1	5.0	5.4
GDP per capital (US$)	704.8	743.4	767.7	909.8	1,027.1
Inflation, avg. (%)	0.5	1.7	2.1	5.9	4.5
Current account (% of GDP)	(6.1)	(7.8)	(9.8)	(8.1)	(10.3)
Exchange rate (CFA/US$)*	528.9	524.7	539.9	492.9	437.4
Population (million)	11.4	11.7	11.9	12.2	12.5

** Average exchange rate. 2008e denotes the average rate for 1H 2008.*
Source: IMF.

Senegal remains a poor, agrarian-based economy, lacking the wealth of commodities displayed by neighbouring West-African states. As such, its economy remains highly skewed towards a few outputs, such as fishing and peanuts. In recent years, the fishing sector has replaced groundnuts as the country's leading export, with peanut product exports being detrimented by falling global prices. Phosphate production has suffered from the recent financial collapse of the nationalised *Industrie chimique du Sènègal*, which also resulted in the loss of over 3,000 jobs. However, the tourism sector continues to flourish, with over 0.5m tourists visiting per annum. With a relatively low level of industrialisation, the economy reports a substantial current account deficit and is highly dependant on grants and concessional funding.

Notwithstanding the above, the economy has reported relatively stable fundamentals over recent years, with GDP growth estimated to have recovered to 5% in 2007 (2006: 2.1%) and expected at 5.4% in 2008. Moreover, rising consumer wealth levels have been accompanied by relatively low (single digit) inflation and a strengthening exchange rate. It is noted that despite the strong measured growth, economic activity remains centred in the informal sector.

As a member of the West Africa Economic and Monetary Union (WAEMU), Senegal's monetary policy is defined by the Central Bank of West African States (BCEAO), which has the primary objective of controlling inflation. The prevailing CFA currency shared by WAEMU countries is pegged against the Euro, which has facilitated considerable economic stability for these countries (with the last major revaluation occurring in January 1994). Accordingly, the currency has strengthened against the US$ in line with the Euro, from an average of CFA540/US$ in 2006 to CFA493/US$ in 2007 and further to CFA437/US$ in 1H 2008.

Regulatory and legal framework

The regulation of the water sector in Senegal follows from the framework instituted under the 1995/1996 water sector reforms. Sectoral responsibilities (rural & urban, including sanitisation) ultimately vest with the Minister of Water (*Ministre de l'Hydraulique*), while underlying responsibilities & roles are designated per the aforementioned contractual arrangements. Under the Planning contract between the State and SONES, obligations of both parties were clearly defined, as tabulated below. The gist of these obligations is that the State performs a monitoring role, with its key roles being the setting of tariffs and assistance with asset financing and collections from government entities. In contrast, SONES is directly responsible for capital investment in the sector (including raising and servicing debt), as well as ensuring the adequate performance of the operator.

Obligations of the State and SONES per Planning Contract

State

- Define and monitor water sector policy, with a focus on financial viability, efficiency and transparency.
- Ensure efficient allocation of water resources.
- Set cost-reflective tariffs and provide investment subsidies in exception cases only.
- Increase tariffs per indexing and apply specific tariffs to farmers, as well as modifying tariff structures.
- Reduce State consumption and ensure payment by the administration.
- Approve SONES's 3-year investment plans and 3-year investment agreements with SDE.
- Facilitate financing via grants, loans, subsidies or guarantees.

SONES

- Prepare 3-year investment plans and agree on 3-year investment agreements with SDE.
- Calculate annual changes in tariffs & submit these to the State.
- Supervise construction works.
- Service the sector's debt.
- Allocate revenue to fund infrastructure renewals.
- Establish a yearly communication/sensibilisation programme.
- Prepare annual financial accounts.

Similar to the above are the responsibilities of SONES and SDE as defined in the Performance contract. This contract was renewed (after the first 10-year period) in 2006 for a further five years.

Obligations of SONES and SDE per Performance contract

SONES

- Ensuring adequate infrastructure is available to the operator and that requisite investment is made (including a rolling 3-year investment programme).
- Timeous execution of works related to system investments.
- Financing of works.
- Adjustment of tariffs.

SDE

- Optimal usage of productive assets.
- Maintaining and repairing infrastructure at its own cost.
- Renewing a minimum of 14,000m of pipe and 6,000 connections per year.
- Replacing electromechanical equipment valued below CFA15m and with a lifespan up to 10 years.
- Prepare an annual maintenance plan and technical report.
- Meet WHO standards for water quality.
- Respond to mains leakage with one hour.
- Adhere to renewal schedule (min. 17km of pipe per annum).
- Supply monthly data to SONES on consumption, billing and collections.
- Meet performance targets in terms of leakage and collections.

Key to the above Performance contract is the calculation of remuneration under both contracts. SDE, through its billing and collections function, effectively controls the cash flows of both organisations. Per the Affermage contract, SDE must pay to SONES the average tariff minus the operator's fee, multiplied by the volume produced and the annual targets for efficiency and collections. This has resulted in one of the key contentions under the contract, being the technical efficiency the operator requires (at 85%), which is considered to be unachievable by SDE's management.

Calculation of SONES's remuneration

Amount paid to SONES $= (T_{avg,\,n} - OP_n)\ Vp_n \times CTE_n \times CCE_n$

$T_{avg,\,n}$ = average tariff ; sum of the amount billed in each tariff category divided by the total overall volume billed for in cubic meters: this is the weighted average of all tariffs (net of taxes).

OP_n = operator's water supply rate in CFA/ m^3 (referred to as called "bid price" or "operator's fee"), adjusted annually according to the indexation formula.

Vp_n = water put into supply (volume of water produced) in m^3/yr

CTE_n = contractual technical efficiency; the target for water billed divided by water produced according to the contract.

CCE_n = contractual commercial (bill collection) efficiency; the target for water paid for divided by water billed according to the contract.

CTE_n and CCE_n are fixed at 85% and 97% respectively.

Operations

SONES's mandate, as described above, is to hold and develop the urban water asset infrastructure, as well as ensure the ongoing performance of the operator. As such, its key operating activities are the planning of infrastructure development, the raising of funding via debt & grants and the monitoring of SDE's activities. With respect to the latter task, although its revenue derives from the efficacy of SDE, the performance contract between SONES and SDE is designed such that SONES is largely unexposed to the performance of the operator. Examination of the remuneration formula reveals that SONES's risk in terms of revenue derives from the average tariff (set by the Minister of Water) and the volume of water produced, which SDE is contractually bound to maintain per the current capacity of the infrastructure.

SONES is modelled along a "lean" staffing infrastructure, with a preference to hire technically skilled staff and rely on computer systems for secretarial & administrative functions. In this regard, at formation in 1996, SONES had around 79 staff (of which the majority derived from SONEES). Since this time, despite the substantial increase in the infrastructure, the total staff complement has increased moderately to 82 as at 2007. In this regard, staff members are dispersed into a number of key departments covering different organisation functions.

SONES and SDE have free and unrestricted access to water (albeit controlled by the Department of Administration and Planning of Water Resources), which it sources from rivers and ground water. In this regard, daily installed capacity registers around 280,000m^3, of which approximately 110,000m^3 is sourced from surface water and the remainder (around 60%) from underground sources. The actual purification and transportation of water drive the cost of production, with major costs in the process being electricity, labour and (cost of) capital. Of these cost drivers, it is only the financing of capital that accrues to SONES's account. It is noted that the cost of producing underground water is markedly lower than surface water, because underground water requires less treatment and can often be sourced closer to the consumption points than surface water. However, Senegal's underground water does have certain problems (for which studies are underway), including trace iron in some water and high fluoride in Dakar. Water quality is maintained at WHO acceptable levels.

Asset infrastructure

Table 2: Asset infrastructure (CFA'bn)	F06	F07
Land	10.6	10.6
Buildings	37.9	37.8
Facilities	142.6	150.0
Equipment	15.6	14.1
Equipment – transport	0.3	0.2
Operational assets	*206.9*	*212.6*
Projects in progress	*1.4*	*0.9*
Total fixed assets	**208.3**	**213.5**

SONES displays a substantial asset base, which is utilised by SDE in order to service Dakar and a further 55 towns and 414 villages along the primary network. Most of the asset base (70%) is vested in actual water production/distribution assets, whilst a cumulative 23% pertains to land & buildings owned by SONES. Land & buildings are largely leased to SDE.

The water production & distribution infrastructure is essentially contained along a single conduit, running between the Senegal River in the North and Dakar in the South-West of the country. Approximately 110,000m^3 is sourced from Lac de Guiers, a lake on the Senegal River. This water is processed via two treatment plants, with around 110,000m^3 treated at the Ngnith and Keur Momar Sarr (KMS) plants. From these treatment plants, a dual pipeline carries the water towards Dakar, feeding numerous towns and villages en-route. Notwithstanding the above, the majority of potable water is in fact accumulated along the conduit's path via a plethora of reservoirs and boreholes (around 840), contributing the remaining 170,000m^3 of installed capacity.

Water sales

Due to the nature of the compensation arrangement between SONES and SDE, SONES is precluded from certain risks associated with revenue generation in the industry. In this regard, the contract stipulates that revenue is calculated on water production at an 85% efficiency rate (i.e. 15% technical loss) and that revenue is calculated assuming a 97% collection rate. Accordingly,

SONES is remunerated assuming the above and benefits should SDE underperform in terms of collections or efficiency. For more information on collections and efficiency, please refer to GCR's corresponding report on SDE.

SONES is exposed to the volume of water produced and the average tariffs. With regard to the former, SONES is largely responsible for capital formation, as well as ensuring that capacity is utilised. However, tariffs are effectively set by the Minister of Water, exposing SONES to regulatory risk. However, the Minister of Water bases such decisions on proposals from SONES. As reflected below, water volumes increased robustly between F04 and F07. Coupled with strong tariff increases since F05, this transpired into a marked rise in revenues in F07. Going forward, through to F11, production volume growth is expected to be more sluggish, although stable tariff increases are anticipated.

Table 3: Efficiency statistics	F03	F04	F05	F06	F07
Number of connections (000s)	363.2	383.0	412.3	433.7	461.9
Water production (m^3- millions)	113.8	118.7	124.7	129.2	135.4
Water sold (m^3- millions)	90.7	94.8	99.7	103.7	108.7
Technical efficiency (%)	79.9	80.1	80.1	80.2	80.3
Collections (%)	98.2	98.3	97.9	98.2	97.4

Table 4: Water tariffs (CFA/m^3)	F04	F05	F06	F07
Average global tariff	485.6	485.6	531.6	525.8
Taxes	(50.9)	(52.4)	(81.1)	(30.2)
Net tariff	**434.7**	**433.2**	**450.5**	**495.6**
ONAS (sanitation)	(40.8)	(40.3)	(40.7)	(39.8)
SONES (asset development)	(146.5	(142.7)	(140.9)	(164.1)
Net tariff - SDE	**247.4**	**250.2**	**268.9**	**291.7**

Financial profile

A synopsis of SONES's financial performance for the past 5 years is reflected at the end of this report, whilst brief comment appears hereafter.

Table 5: Operating performance (CFA'm)	F07		% of budget
	Actual	Budget	
Income			
Sales	17,965.8	17,357.8	103.5
Operating subsidies	0.0	0.0	--
Other operating income	536.4	462.3	116.0
Total revenue	**18,502.2**	**17,820.1**	**103.8**
less: Op. expenditure			
Staff costs	(1,035.4)	(959.4)	107.9
Operating charges	(940.5)	(964.5)	97.5
Ancillary expenses	(59.9)	(1.0)	--
EBITDA	**16,466.4**	**15,895.3**	**103.6**
Depreciation & ammortisation*	(10,503.4)	(10,323.9)	101.7
Operating result	**5,963.0**	**5,571.4**	**107.0**
Net finance costs	(3,972.0)	(4,610.5)	86.2
Exceptional items	(591.8)	666.0	n.a.
Taxation**	(127.0)	(188.9)	67.2
NPAT	**1,272.2**	**1,438.0**	**88.5**

* *Includes specific provisions.*
** *Operational (not income) taxation.*

On the back of higher volumes produced by SDE and the aforementioned increased tariffs, SONES posted a sizeable 22% rise in its core revenues to CFA18bn in F07. Although growth in core sales revenue has fluctuated in line with increases in capacity and tariffs (with revenue contraction reported in F06), this has equated to a compound annual growth rate of 7.3% between F03 and F07. Revenue in F07 was augmented by ancillary revenues of CFA0.5bn, including sizeable provision reversals and exchange gains.

Due to its asset-holding nature, SONES displays low operating costs, with the single largest cost being the (7% higher) staff expenses of CFA1bn in F07. With a moderate 3% rise in other operating expenses to CFA0.9bn, this resulted in substantial EBITDA (including specific provisions) of CFA16.2bn in F07 (F06: CFA13.2bn), translating to a margin of 90% (F06: 89%).

Also in line with SONES's nature is that its largest operating charge pertains to the depreciation of its asset base. As depreciation & amortisation (excluding specific provisions) remained relatively unchanged at CFA10.2bn in F07 (F06: CFA10.1bn), this resulted in a 95% higher operating profit of CFA6bn in F07. Accordingly, the operating margin registered at a robust 33% in F07, following the review period low 21% reported in the prior year.

Net finance charges were 11% lower at CFA4bn in F07, and resultantly, net interest cover amounted to an improved 1.5x for the year (F07 0.7x). Overall, retained income was reported at CFA1.3bn in F07 (F06: CFA0.5bn). Earnings in F06 were boosted by net extraordinary gains totalling CFA2.1bn (associated with the salvage of assets), compared to an exceptional loss of CFA0.6bn in F07 (resulting from provisions of CFA1.3bn for renewals).

The improved profitability transpired in a sharp 25% rise in cash generated by operations to CFA16.1bn in F07. This was moderated by a third successive working capital absorption of CFA3.7bn in F07 (F06: CFA2.4bn), pertaining largely to increased amounts owing by SDE. The above, coupled with lower finance charges, resulted in 39% higher cash flow from operations of CFA8.4bn in F07.

Total capex declined markedly to CFA15.4bn in F07 (F06: CFA20.6bn), well below the CFA27.7bn reported in F04. Cash flows were also boosted by recoveries of advance payments to suppliers of fixed capital totalling CFA1.3bn in F07. Resultantly, capital/donor contributions amounted to a much lower CFA7.5bn in F07 (F06: CFA14.5bn). Overall, net debt decreased for the second consecutive year by CFA1.8bn in F07

(F06: CFA0.5bn), following a cumulative CFA5.3bn increase in F04 and F05.

Funding profile

Examination of SONES's balance sheet reveals that a substantial CFA213.5bn (90%) of the asset base is vested in fixed assets (including work in progress). Other assets include cash holdings of CFA6.4bn (3%) and net trade debtors of CFA11.6bn (5%), being SDE.

Given that much of the fixed asset base was inherited from SONEES, whilst a substantial proportion of subsequent capex has been funded by capital grants, the utility displays substantial equity of CFA 137.1bn in F07 (F06: CFA127.7bn), well up on the CFA105.6bn reported in F03. In contrast, interest-bearing debt has grown more moderately, rising from CFA88bn in F03 to CFA94.3bn in F07 (F06: CFA96.3bn).

Examination of borrowings by source reveals a broad array of funders, albeit with the majority stemming from four key lenders. In this regard, KfW (Kreditanstalt für Wiederaufbau) is the single largest funder with outstanding borrowings of CFA24.2bn at F07, while the World Bank's IDA (Independent Development Agency) is similarly exposed at CFA23.7bn. The other two significant lenders are AFD (Agence Française de Développement) and the EIB (European Investment Bank). The most notable feature of the above is that SONES's funders are predominantly development agencies, which provide it with low interest or interest-free long-dated loans.

Examination of the application of these funds reveals that the majority pertained to the PSE (Water Sector Project) initiated in 1995 and the PLT (Long Term Water Project), both of which have witnessed extensions in their mandates and delays in project completion.

Table 6: Borrowings	F06		F07	
source (CFA'm)	CFA'm	%	CFA'm	%
AFD	18,963.0	19.7	17,528.5	18.6
KfW	24,148.5	25.1	24,164.7	25.6
IDA	22,681.1	23.6	23,735.7	25.2
BADEA	2,362.5	2.5	1,986.7	2.1
BEI	10,073.3	10.5	9,704.9	10.3
BOAD	8,775.5	9.1	7,134.0	7.6
CBAO	3,361.8	3.5	2,828.2	3.0
Accrued interest	3,328.0	3.5	4,634.2	4.9
Long term borrowings	**93,693.5**	**97.3**	**91,716.9**	**97.2**
Reclassified borrowings	2,607.6	2.7	2,611.6	2.8
Total borrowings	**96,301.1**	**100.0**	**94,328.5**	**100.0**

Table 7: Borrowings	F06		F07	
Application (CFA'm)	CFA'm	%	CFA'm	%
Outside of PSE	19,775.6	20.5	19,472.9	20.6
PSE	43,843.9	45.5	39,059.0	41.4
PLT	30,074.0	31.2	33,184.9	35.2
Reclassified borrowings	2,607.6	2.7	2,611.6	2.8
Total borrowings	**96,301.1**	**100.0**	**94,328.5**	**100.0**

Given relatively large cash holdings, SONES displays sufficient liquidity. Specifically, days cash on hand amounted to an ample 144 days (F06: 146 days). Gearing measures, however, register high. In this respect, net debt amounted to a sizeable 543% of EBITDA (F06: 682%) and 490% of total income (F06: 607%) in F07.

Capex projects and funding

Capital expenditure is a core function of SONES, which has a number of ongoing projects to address water distribution and long term water security. A key focus has been to meet the Millennium Development Goals, which for the urban water sector are: to increase water via domestic connection to 85% in Dakar and 79% regionally by 2015, translating to an additional 2.3m people on the network. Since reform in 1995/1996, water sector projects have been organised along PSE and PLT funding lines. PSE's initial objective was to rehabilitate the Ngnith treatment plant and increase capacity of the pipeline between the lake and Dakar (both of which have been completed). The project was also instrumental in funding new boreholes, as well as increasing the network and new social connections. The project's mandate has continued in terms of social connections, with a KFW project to cover 11 regional villages, as well as a number of research studies. The PLT, with an initial budget of US$300m, has followed on from the PSE, with a view to consolidate industry reforms and continue to address long term water supply issues. Delays in funding have seen this project continue well beyond its original 2007 target.

Other projects are funded distinctly, including certain MDG/PEPAM projects between 2006 and 2011. A second phase is set to run between 2011 and 2015, following which further plans are being developed with regard to long term water security.

Table 8: Funding (CFA'm)	F06	F07
Borrowings	6,577.5	9,712.9
Grants	14,488.7	7,474.0
Internal funding	(476.8)	(1,793.5)
Net capex	**20,589.4**	**15,393.3**

Substantial capital expenditure is expected over the next four years to F11, albeit with an amount of CFA21.8bn in F08 tailing off to CFA10.1bn by F11. The largest portions of this expenditure will be on the network at CFA18.1bn (31%) and new connections at CFA17.6bn (30%), although a cumulative CFA19.5bn (34%) is to be spent on civil works and electromechanical equipment & instrumentation. Examination of funding sources reveals that a high 94% of funds are expected to derive from internal cash flow, with grant funding falling away after F08. In this regard, SONES has

secured considerable new debt of around CFA37.2bn from a consortium of lenders (AFD and EIB amongst others), largely in respect of the MDGs.

Table 9: Capex and funding (CFA'm)	F08	F09	F10	F11
Capex				
Construction & engineering	1,859.7	3,394.6	2,182.6	1,592.3
Network	7,963.9	3,832.4	2,466.2	3,871.0
Connections & equipment	4,462.1	5,860.6	4,087.1	3,221.5
Electromechanic instruments	6,632.1	1,809.9	1,148.2	887.8
Planning, material & tools	682.3	577.6	371.7	270.1
Other	216.4	220.8	225.2	229.6
Total	**21,816.5**	**15,695.9**	**10,481.0**	**10,072.3**
Capex funding				
Borrowings	14,749.2	13,040.9	13,161.7	13,467.0
Internal cash flow	2,545.2	2,655.0	(2,680.7)	(3,394.7)
Donations/grants	4,522.1	--	--	--
Total	**21,816.5**	**15,695.9**	**10,481.0**	**10,072.3**

Source: Management.

Future prospects

Table 10: Operating budget (CFA'm)	F08	F09	F10	F11
Total revenue	**18,761.6**	**19,873.4**	**21,407.9**	**22,987.7**
less: Op. expenditure				
Staff costs	(1,056.1)	(1,077.3)	(1,098.8)	(1,120.8)
Other operating charges	(1,866.2)	(1,393.3)	(1,421.2)	(1,449.7)
Ancillary expenses	(1.0)	(1.0)	(1.0)	(1.0)
EBITDA	**15,838.3**	**17,401.8**	**18,886.9**	**20,416.2**
Depreciation*	(10,922.0)	(12,397.8)	(13,925.7)	(15,649.3)
Operating result	**4,916.4**	**5,004.0**	**4,961.2**	**4,766.9**
Net finance costs	(3,818.7)	(4,097.6)	(3,968.3)	(3,731.9)
Exceptional items	502.0	474.6	448.7	424.2
Taxation	(150.7)	(153.7)	(156.7)	(159.9)
NPAT	**1,449.0**	**1,227.3**	**1,284.9**	**1,299.4**
Key ratios (%)				
Turnover growth	1.4	5.9	7.7	7.4
EBITDA margin	84.4	87.6	88.2	88.8
Operating profit margin	26.2	25.2	23.2	20.7
Net interest cover (x)	1.3	1.2	1.3	1.3

** Includes amortisation and specific provisions.*
Source: financial model.

The above operating budget derives from the financial model - updated to include SONES's 2007 results. The model predicts stable growth in total revenue (including insignificant ancillary incomes), with revenue rising at a compound annual growth rate of 5.8% to CFA23bn by F11 (largely in line with new connections and stable tariff increases). Operating expenses, and notably staff costs, are expected to increase moderately. Accordingly, the EBITDA margin is set to dip in F08, before increasing thereafter. In contrast, given the ongoing capital formation, depreciation charges are expected to rise faster than revenue, resulting in compression in the operating margin. Nonetheless, debt serviceability is expected to remain stable, with an interest cover of around 1.3x through to F11.

With the receipt of funds for the MDGs, SONES's gearing is expected to peak in F08 and thereafter decline moderately over the four years to F11 (with earnings-based gearing improving more sharply).

Table 11: Projected funding profile (CFA'bn)	F08	F09	F10	F11
Capital and reserves	142.6	143.3	144.1	145.0
Borrowings*	131.4	134.0	131.7	131.4
Cash holdings	7.9	8.9	9.9	13.7
Net debt : equity (%)	86.6	87.3	84.5	81.2
Net debt : EBITDA (%)	779.8	718.9	644.9	576.5
Net debt : total income (%)	658.3	629.5	568.9	512.0

Source: financial model.
** Including CFA37.2bn to be raised for the MDGs.*

Going forward, SONES reports a viable financial platform from which to continue to target the MDGs. With SDE continuing to perform adequately under its performance contract, SONES's focus will be to ensure the necessary asset formation required to expand the network's capacity and continue with new connections. It is noted that plans for the above goals currently span up to 2015, after which expected growth of the urban population will necessitate further water supply. As such, management of SONES has been exploring a number of long-term solutions, including: sourcing ground water to the East of Dakar, a desalination plant near Dakar and sourcing additional surface water from the Lake. One of the biggest constraints to all expansion activities is the energy shortages in Senegal, with costs and availability of reliable electricity being contemplated for all investments.

SOCIETE NATIONALE DES EAUX DU SENEGAL (SONES)

(CFA in millions except as noted)

Income Statement Year end : 31 December	2003	2004	2005	2006	2007
Revenue	13,552.5	14,131.9	15,347.2	14,775.3	17,965.8
Operating expenditure	(1,743.4)	(1,659.3)	(1,496.7)	(1,883.4)	(1,975.9)
Other income and expenses	185.5	184.5	339.3	275.1	213.1
EBITDA	**11,994.6**	**12,657.1**	**14,189.7**	**13,167.0**	**16,203.0**
Depreciation and ammortisation	(8,000.7)	(7,820.3)	(9,212.5)	(10,111.8)	(10,240.0)
Operating income	**3,994.0**	**4,836.8**	**4,977.2**	**3,055.3**	**5,963.0**
Net finance charges	(4,028.0)	(4,612.0)	(4,622.1)	(4,450.6)	(3,972.0)
Finance costs capitalised	0.0	0.0	0.0	0.0	0.0
Income after finance charges	**(34.0)**	**224.9**	**355.1**	**(1,395.4)**	**1,991.0**
Exceptional Items	524.2	518.5	569.1	2,113.1	(591.8)
Corporation income Tax	(106.2)	(179.5)	(81.1)	(226.2)	(127.0)
Net income	**384.0**	**563.9**	**843.1**	**491.5**	**1,272.2**
Cash Flow Statement					
Cash generated by operations	**11,410.5**	**12,535.2**	**14,128.7**	**12,928.7**	**16,112.6**
Working capital: (increase)/decrease	446.9	1,532.8	(1,918.0)	(2,395.4)	(3,702.4)
Net finance charges	(4,028.0)	(4,612.0)	(4,622.1)	(4,450.6)	(3,972.0)
Cash flow from operations	**7,829.4**	**9,456.1**	**7,588.6**	**6,082.7**	**8,438.2**
Maintenance capex*	(8,000.7)	(7,820.3)	(9,212.5)	(10,111.8)	(10,240.0)
Discretionary cash flow from operations	**(171.3)**	**1,635.8**	**(1,623.9)**	**(4,029.1)**	**(1,801.9)**
Net expansionary capex and investments	(14,064.7)	(21,879.4)	(5,120.1)	(9,982.8)	(3,878.6)
Capital contributions	5,214.2	17,295.9	4,379.6	14,488.7	7,474.0
Cash movement: (increase)/decrease	n.a.	(3,024.4)	(597.7)	118.5	179.1
Borrowings: increase/(decrease)	n.a.	5,972.1	2,962.1	(595.2)	(1,972.6)
Net increase/(decrease) in debt	**(2.6)**	**2,947.7**	**2,364.3**	**(476.8)**	**(1,793.5)**
Balance Sheet					
Capital and reserves	105,624.2	122,979.8	127,640.8	127,723.6	137,086.5
Total interest-bearing debt	**87,962.1**	**93,934.2**	**96,896.3**	**96,301.1**	**94,328.5**
Reclassified	56.4	69.5	55.6	2,607.6	2,611.6
Long-term	87,905.7	93,864.7	96,840.7	93,693.5	91,716.9
Interest-free liabilities	11,715.5	8,564.1	5,427.2	3,494.1	4,921.2
Total liabilities	**205,301.8**	**225,478.1**	**229,964.3**	**227,518.8**	**236,336.2**
Fixed assets	186,743.7	208,631.6	211,728.3	206,909.7	212,596.2
Projects in progress	3,288.1	1,229.7	338.7	1,418.3	887.9
Investments and other financial assets	454.5	443.3	316.2	1,766.5	1,788.7
Cash and cash equivalents	2,970.3	5,981.8	6,679.6	6,561.1	6,382.1
Net trade debtors	8,119.3	6,836.9	7,933.7	8,846.1	11,611.5
Other current assets	3,725.9	2,354.8	2,967.9	2,016.9	3,069.8
Total assets	**205,301.8**	**225,478.1**	**229,964.3**	**227,518.8**	**236,336.2**
Ratios					
Operating:					
Average cost of treated water (CFA/kl)	n.a.	271.5	277.8	292.6	305.3
Billed water sales (millions of m^3 per year)	90.8	94.8	99.7	103.7	108.7
Volume increase (%)	n.a.	4.4	5.2	4.0	4.8
Average tariff increase (%)	n.a.	n.a.	0.0	9.5	(1.1)
Turnover growth (%)	n.a.	4.3	8.6	(3.7)	21.6
Staff costs : operating costs (%)	55.6	48.3	52.4	51.5	52.4
Staff per 1,000 conections	n.a.	n.a.	n.a.	n.a.	n.a.
Water distribution losses (%)	20.1	19.9	19.9	19.8	20.0
Net capex : revenue (%)	183.9	195.9	74.2	139.4	85.7
Cash Flow:					
Operating cash flow : total debt (%)	8.9	10.1	7.8	6.3	8.9
Operating cash flow : net debt (%)	9.2	10.8	8.4	6.8	9.6
Profitability:					
EBITDA : revenues (%)	88.5	89.6	92.5	89.1	90.2
Operating profit margin (%)	29.5	34.2	32.4	20.7	33.2
EBITDA : average total assets (%)	n.a.	6.0	6.4	6.0	7.2
Coverage:					
Operating income : gross interest (x)	1.0	1.0	1.0	0.7	1.4
Operating income : net interest (x)	1.0	1.0	1.1	0.7	1.5
Activity and liquidity:					
Days receivable outstanding (days)	n.a.	201.4	190.7	207.3	207.8
Net debtors : total income (%)	59.9	48.4	51.7	59.9	64.6
Current ratio (:1)	1.3	1.8	3.4	3.0	2.9
Average days working cash (days)	78.7	154.9	159.0	145.6	143.9
Capitalisation:					
Net debt : capital and reserves (%)	80.7	71.7	70.9	70.5	64.4
Total debt : total assets (%)	42.8	41.7	42.1	42.3	39.9
Total debt : EBITDA (%)	733.3	742.1	682.9	731.4	582.2
Net debt : EBITDA (%)	708.6	694.9	635.8	681.6	542.8
Total debt : total income (%)	649.0	664.7	631.4	651.8	525.0
Net debt : total income (%)	627.1	622.4	587.8	607.4	489.5

** Depreciation used as a proxy.*

Societe Nationale d'Exploitation et de Distribution des Eaux (SONEDE)

Tunisia Water Utility Analysis **July 2008**

Security class	Rating scale	Currency	Rating	Rating watch	Expiry date
Long term	National	Tunisian Dinars	A	No	07/2009
Short term	National	Tunisian Dinars	A1-		

Financial data:

(US$'m Comparative)

	31/12/06	31/12/07
TD/US$ (avg.)	1.34	1.29
TD/US$ (close)	1.31	1.24
Total assets	1,006.3	1,072.9
Total debt	223.1	233.5
Total capital	660.4	715.6
Cash & equiv.	70.6	48.2
Turnover	166.0	175.6
EBITDA	36.5	36.9
NPAT	1.4	0.8
Op. cash flow	11.4	5.3
Market cap.	n.a.	
Market share	n.a.	

Fundamentals:

SONEDE is a publicly owned and operated water utility that has been responsible for delivering potable water in Tunisia since 1968. While its mandate traditionally focused on urban areas, in recent years SONEDE has been expanding its operations in rural areas. SONEDE manages water infrastructure covering an area of approximately 160,000km^2 serving a population of over 10 million.

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Rating rationale

The rating is based on the following key factors:

- SONEDE enjoys a monopolistic position by virtue of the fact that it operates as the sole supplier of bulk potable water in urban Tunisia (and several rural areas).
- Furthermore, the utility is a 100% held entity of the Tunisian government and operates in a regulated environment, with its activities overseen by the Ministry of Agriculture and Water Resources.
- Gearing levels have remained relatively stable over the review period, notwithstanding gradually increasing levels of borrowings.
- Liquidity levels appear to be adequate, although cash flow from operations has deteriorated somewhat in recent years.
- The continued deterioration in the operating margin over the review period implies tariff increases are insufficient to address operating requirements.
- While a portion of SONEDE's anticipated increase in capital expenditure will continue to be internally funded and through government grants, the utility's borrowings and gearing are expected to increase in the medium to long term.
- Tunisia is located in a semi-arid zone characterised by irregular rainfall, and is among those countries least endowed with renewable natural water resources. As such, a prolonged drought could potentially threaten raw water supplies, which would likely impede the utility's financial flexibility.

Funding profile

Total interest bearing debt decreased by TD2.8m to TD290m in F07, of which short term debt comprised 10.8% from 14% previously. Total debt to equity was largely unchanged at 33% of total capital and reserves (F06: 34%), although net debt to equity increased to 27% from 24% in F06. Furthermore, total debt to EBITDA, which has increased consistently over the review period, was posted at a higher 608% in F07 from 598% in F06. Cash and cash equivalents decreased by 35% to TD60m in F07, and accordingly, cash holdings covered short term debt a lower 1.9x from 2.2x in F06. In addition, the level of days cash on hand decreased to 98 days in F07, from 155 days previously. Net trade debtors decreased by 4% to TD116m in F07. Accordingly, the ratio of net debtors to income ratio decreased to 51% in F07 (F06: 54%), although the debtors collection period increased slightly to 190 days (F06: 186 days).

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GLOBAL CREDIT RATING CO.

Operating environment

Economic

Tunisia's conservative macroeconomic policies and commitment towards structural reforms have steered it towards economic stability, despite the challenges posed by the disbanding of the textile industry's Multifibre Arrangement in 2005. GDP growth for 2007 measured 6.3% (2006: 5.5%), resulting in GDP per capita rising to US$2,626 (at constant 2000 prices). Tunisia has exhibited that it is capable of maintaining this high degree of economic growth over the long term, as demonstrated by the average GDP growth rate over the period 1999-2007 amounting to 5%. The attainment of this level of growth has been accompanied by restrained inflation of 3.1% in 2007 (2006: 4.5%).

While Tunisia's primary export products of petroleum and mineral oils summed to a slight 8.7% of total exports in 2007, the country remains a net oil importer. Nonetheless, despite the negative impact of high oil prices on the balance of trade account, the region has contained the current account deficit to measure 0.5% of GDP (2006: 2.1%), and has posted an average deficit of just 2% of GDP over the past five years. Finished textile goods and olive oil comprise the other major exports. Having received FDI net inflows of US$3,279m in 2006, an amount significantly above the net inflows of US$782m in 2005, Tunisia has proven a popular target for international investor funds since the liberalisation of the capital account. The privatisation of institutions such as Tunisia Telecom further advances the country's financial appeal.

These measures for the balance of payments accounts have impacted positively upon net external debt, which totaled 25% of GDP for 2007 – an amount considerably lower than the measure of 50% for 2003, although still comparatively high given Tunisia's recent economic strength. The debt service paid increased from US$2.5bn in 2006 to an estimated US$3bn in 2007. The Tunisian Dinar (TD) experienced slight appreciation to average TD1.29 against the US$ in 2007 (2006: TD1.34). Foreign exchange reserves increased by 16.2% to reach an estimated US$7.9bn in 2007 (2006: US$6.8bn), representing 5.3 months of import cover.

The economic development has been driven at sectoral level by the advancement of the services division, particularly due to the growth of telecommunications (20%), as well as progression in the secondary sectors of machinery and electricity (8%), and construction & civil engineering (4.3%). The well diversified Tunisian economy has witnessed a decline of the primary sector's contribution to GDP, from a level of 13.1% in 2005 to 12.3% in 2006. Services are the mainstay of the economy, accounting for 63% of GDP, with trade, hotels and restaurants constituting the largest portion of this bracket with an input to GDP of 17%. Manufacturing contributes 19% to GDP, while government spend in the form of public administration represents the third largest portion of GDP at 14.4%. However, despite the prevalence of the service industry within the framework of the economy, it employs only 22% of the working population, while the waning agricultural sector is responsible for the employment of just over half the work force. Unemployment is running at around 14.1%.

The Tunisian authorities have taken steps to ensure greater solvency within the financial arena. In this regard, banks now have the ability to deduct provisions for bad debts from taxable income, and are restrained from dividend payouts prior to coverage of 70% of doubtful loans by provisional funds.

Regulatory

SONEDE is overseen by the Ministry of Agriculture and Water Resources (MAWR), which formulates water sector strategies and coordinates investment planning and the allocation of resources. As a public agency, the government is responsible for mobilising financial resources beyond what SONEDE can recover itself through user fees. In addition, the Tunisian government directly owns all of the utility's capital and financial assets, while the management of financial assets, operations & maintenance, rehabilitation, renewal and installation of equipment are delegated to SONEDE.

SONEDE's board consists of 12 members, who are state agents or other government employees selected to protect the interests of shareholders to the drinking water sector. The board meets at least quarterly, and is responsible for reviewing and approving SONEDE's budgets.

Operations

SONEDE operates across 40 decentralised districts across the country, which are responsible for operations (network management, maintenance etc.), as well as the management of clients (issues, billing etc.). Each district is run as a separate cost centre, which helps SONEDE identify the investment priorities and operating requirements /

performance of each. 4 operational directors are each responsible for 10 districts.

In urban areas, which represent around 65% of the country's population, 99% of residents are provided with access to safe drinking water by SONEDE. In rural areas, access to water services is at around 89%, with around 52% of these services provided by SONEDE. Service levels tend to be consistent, without frequent structural interruption. Moreover, the network for distributing safe drinking water operates at 85% efficiency. The lifespan for water piping infrastructure is around 60 years, and SONEDE aims to replace on average 1% of the network annually (currently attaining around 0.6%). Approximately 80% of water piping is less than 40 years of age. Leakages are being experienced at a rate of 55 per every 1,000 connections. A level of 35 per 1,000 is being targeted. Distribution losses have gradually increased over the review period, from 15.4% in F03 to 16.7% in F07. This is, however, well below levels of around 25% exhibited in 1981.

SONEDE employs more than 7,000 staff (8% senior staff, 22% first-line supervisors and 70% executing staff) and delivers water to over ten million people. The government and the National Trade Union participate in salary negotiations every three years, which rises on average 6% over this period. SONEDE has an aging management structure, and also competes with corporate entities in terms of retaining existing staff. A succession plan is in place, whereby 10% of retirement age management staff is expected to leave in each year over the next five years. It is, however, noted that all recruitment of staff requires ministerial approval (this is a major impediment, supported by the fact that only 52 of the recently requested 106 new positions were approved by the Minister).

Private sector participation is currently limited to sub-contracting technical services for extending water networks and installing connections. These include leakage detection and engineering studies.

Tunisia, which is located in the south of the Mediterranean basin has very limited water resources. According to FAO, the southern Mediterranean countries are among those that will face particularly severe water resource scarcity in the future. Regarding the demographic evolution of those countries, the greatest challenge over the coming decades will be increasing food production with limited water resources, and under global climatic changes. The amount of renewable freshwater available per inhabitant is 50% below the water scarcity standard. Moreover, this situation is exacerbated by irregular annual precipitations. In addition, water supply is confronted to two major constraints: the remote location of water resources and the low quality of water. The remoteness of water resources from consumption centres results in significant water transfer infrastructure investments and the low quality of water resources with high salinity increases the cost of water treatment.

Water sales and tariffs

Sales volumes of water increased by 2.4% to 345 million m^3 in F07. The number of customers increased by 4% to 2.1m in F07, driven by growth of 6.5% in the rural areas to 315,431 (or 15.3% of total customers from 14.9% in F06). Residential consumers account for over 50% of water income, with the bulk of the remainder fairly evenly spread amongst government, industry, commerce and tourism. The utility exhibits a very well diversified revenue base, with no single entity responsible for more than 0.6% of annual revenue.

SONEDE's tariffs are revised periodically (twice every five years, although given the 2009 political elections only one tariff increase is expected during the current five year term), although exact implementation is not certain. Tariff adjustment requests are submitted to the Oversight Ministry, which has the option to transmit it for evaluation to a Ministerial Council headed by the Prime Minister.

Water tariff structures are applied uniformly across the country. SONEDE's tariff structure has two components: a fixed component and a variable component, which is proportional to consumption. The first bracket provides for low-income households whose quarterly water consumption does not exceed 20 m^3, or the equivalent of 40 litres per day per person. The social tariff results in a subsidy of over 30% of the cost to supply water. This tariff structure has resulted in improved coverage and connection rates in poor areas, while encouraging cost savings through increasing tariff scales.

Table 1: Tariff structure	**Brackets**				
	1st	**2nd**	**3rd**	**4th**	**5th**
Consumption (m^3)	0-20	21-40	41-70	71-150	+151
Cost/ m^3 (TD)	0.140	0.240	0.300	0545	0.840

The last tariff represents six times the first one and three and a half times the second, which has resulted in a situation whereby roughly 1.5% of customers pay for more than 29% of the population

and a high percentage of users pay water below the real economic cost.

The following table compares tariff increases over the past five years to inflation. The average water tariffs implemented by SONEDE between F03 and F07 were lower than inflation, resulting in margin compression.

Table 2: (% annual change)	F03	F04	F05	F06	F07
Average water tariff	0.51	0.52	0.55	0.55	0.57
Inflation	2.7	3.6	2.0	4.5	3.1

Financial performance

A synopsis of SONEDE's financial results for the past 5 years is reflected at the end of this report, with brief comment following.

Table 3: Operating performance (TDm)	F07 Actual	Budget	% of budget
Income			
Water sales & connections	202.5	218.3	92.8
Other operating income	24.0	12.8	187.5
Total revenue	**226.5**	**231.1**	**98.0**
less: Op. expenditure			
Staff costs	(104.3)	(107.7)	96.8
Water & related purchases	(30.1)	(29.2)	103.1
Electricity & energy	(21.8)	(17.2)	126.7
Other operating expenses	(22.7)	(27.9)	81.4
EBITDA	**47.6**	**49.1**	**97.0**
Depreciation	(44.2)	(45.7)	96.7
Total operating costs	**223.1**	**227.7**	**98.0**
Operating income	**3.4**	**3.4**	**100.0.**
NPBT	**2.0**	**(0.1)**	**n.a.**

Total revenue increased by 1.8% to TD227m in F07, and has increased by an average annual compound growth rate of 3.1% from F03 to F07. This is below inflation of around 3.3% over the same period. Water sales & connections comprise the bulk of income at 89% (F06: 90%). According to management, SONEDE does not receive operating subsidies. Included in other operating income of TD24m in F07 is an amount of TD13.5m relating to 3rd party investment subsidies, which is described as follows: For over a decade, SONEDE has installed an average of 70,000 new connections per year, at an average unit cost of TD300. As of 1998, new customers were able to pay cash for new connections, or pay the cost of the connection on a quarterly basis over five years. New customers who opted for a credit connection receive a bill each quarter that includes the tariff for consumption during the previous quarter, and a loan repayment installment.

Total operating expenditure (including depreciation) increased by 3.2% to TD223m in F07, above revenue growth for the year. The largest cost component is staff costs, which increased by 6.1% to TD104m in F07 to comprise a significant 47% of operating expenditure (F06: 46%). As a percentage of revenue, staff costs increased to a high of 46% in F07. Another major input is the cost of raw water and related purchases of TD30m. Electricity & energy costs increased to 12.2% of operating expenditure in F07 from 11.6% previously.

The operating profit margin has steadily decreased over the review period, falling from 6.1% in F03 to 1.5% in F07. Accordingly, operating income decreased to TD3.4m in F07 from TD6.3m in F06. Interest received was in line with finance charges in F07 (F06: TD1.6m net finance charge), while the foreign exchange loss doubled to TD1.4m. Since 1989, SONEDE has been liable for corporate tax at a rate of 35% of its pre-tax income. Net income after tax totalled TD1m in F07 (F06: TD1.9m).

Cash generated by operations decreased by 8% to TD27m in F07. Following a higher (and fourth consecutive) working capital absorption of TD20m, cash flow from operations was recorded at a review period low of TD6.8m (F06: TD15.3m). Net expansionary capex amounted to TD82m in F07 (F06: TD73m), or 36% of revenue (F06: 33%). SONEDE evidenced a TD67m increase in net debt in F07. Operating cash flow as a percentage of net debt fell to 3% in F07 (F06: 7.7%), a review period low.

Liquidity and gearing

Total interest bearing debt decreased by TD2.8m to TD290m in F07, of which short term debt comprised 10.8% from 14% previously. Cash and cash equivalents decreased by 35% to TD60m in F07, and accordingly, cash holdings covered short term debt a lower 1.9x from 2.3x in F06. In addition, the level of days cash on hand decreased to 98 days in F07, from 155 days previously. According to management, around TD10m of cash holdings at FYE07 related to donor funds. If excluded, days cash on hand falls to around 82 days. The utility has both domestic currency and forex denominated bank accounts, whereby foreign denominated donor funds are allocated until disbursed. Liquid funds are allocated based on best available funding rates. Credit risk across banks in Tunisia is mitigated given that the Central Bank owns 30% of all registered banks' capital.

Total debt to equity was largely unchanged at 33% in F07 (F06: 34%), although net debt to equity increased to 27% from 24% in F06. Furthermore,

total debt to EBITDA, which has increased consistently over the review period, was posted at 608% in F07 from 598% in F06.

Table 4: Sources of debt (TDm)	F06	F07	% change
State transferred debt	39.9	36.2	(9.3)
Government guaranteed loans*	170.7	177.4	3.9
Subscriber advances & surety receipts	36.7	39.5	7.6
Other	3.6	5.2	41.7
Long term debt	***250.9***	***258.3***	***3.0***
Short term debt	***41.4***	***31.2***	***(24.6)***
Total debt	**292.3**	**289.5**	**(0.1)**
*** Government guaranteed loans**			
IBRD	*12.0*	*10.3*	*(14.2)*
Islamic Development Bank	*48.0*	*43.1*	*(10.2)*
European Investment Bank	*86.0*	*90.2*	*4.9*
African Development Bank	*20.6*	*27.0*	*31.1*
KFW	*4.1*	*6.8*	*65.9*
Total	***170.7***	***177.4***	***3.9***

Total borrowings are mainly comprised of a range of concessional loans totalling TD177m (61% of total debt). These loans were financed through the Tunisian government on behalf of SONEDE, who has also guaranteed repayment in the event that the utility is unable to do so. Roughly half of these loans are sourced through the European Investment Bank, and in foreign currency (primarily Euro's), exposing the utility to foreign exchange risk. Domestically sourced borrowings as a new source of financing could contribute to mitigating this risk going forward (locally sourced borrowings amounted to only TD22m in F07).

Accounts receivable

Gross trade debtors decreased by 8% to TD140m in F07, driven by lower government & other public administration debtors. Following the provision for bad debts of TD24m, net trade debtors were 4% lower at TD116m. The total provision amounted to 17% of gross trade debtors in F07 (F06: 21%).

Table 5: Debtors (TDm)	F06	F07
Households	62.6	63.9
Industrial	7.9	8.5
Government & other public administrations	63.7	53.4
Other	18.3	13.8
Gross trade debtors	**152.5**	**139.6**
Less provision for bad debts	(32.4)	(23.8)
Net trade debtors	**120.1**	**115.8**

The ratio of net debtors to income decreased to 51% in F07 (F06: 54%), while the debtors collection period increased slightly to 190 days (F06: 186 days).

Billing is done on a quarterly basis for 98% of customers. The other 2%, representing private customers, are billed on a monthly basis. Most customers' bills are calculated on the basis of meter readings. The overall payment rate was 82.2% in F07 (F06: 80.6%). The average collection period for private individuals typically does not exceed 40 days. However, state and local administrations have very poor payment records, equivalent to one years' consumption for the state administration, and approximately two years' consumption for the local administrations.

Table 6: Debtors age analysis	F06		F07	
	TDm	%	TDm	%
Current	27.1	17.8	15.1	10.8
31-60 days	14.7	9.6	14.6	10.5
61-90 days	9.6	6.3	9.6	6.9
91-120 days	7.4	4.9	7.4	5.3
121-150 days	3.9	2.6	3.8	2.7
>150 days	89.8	58.9	89.1	63.8
Total	**152.5**	**100.0**	**139.6**	**100.0**

Outstanding amounts over 3 months are forwarded notification of their arrears position. After a further 60 days, if payment has not been received, SONEDE removes the clients' water meter, and also applies a removal fee charge. This policy is not, however, applicable to public entities. SONEDE provides for all outstanding debtors in full over a five year period. 20% is provided for overdue accounts between one to two years, a further 50% is provided for between two to three years, and the remainder for outstanding amounts over five years.

Capex projects and funding

Through a strategic plan developed for the period 1990-2011, SONEDE aims to establish and implement a strategy for water sector regulation and mobilisation. Through this plan, the rate of water resource mobilisation increased to 88%, from 67% in 1996, and is expected to increase to 95% by 2011. A second strategic plan will forecast to 2030, and will be focussed on non-conventional water resources, such as desalination and recycling treated wastewater; protection of water resources against pollution; preventing the over exploitation of water tables; increasing water efficiency; and demand management of water resources.

Tunisia's water policy is designed so as to address future demand in a sustainable manner. Planning for the drinking water sector is integrated at the national level through five year plans. These are developed by SONEDE and must be approved by the Board, the line Ministry and the Ministry of Development and International Cooperation. Planning is followed by the creation of an annual budget for operations and development, which is synchronised with the plan's policies and programmes. SONEDE is currently underway with its 11th plan (2007-2011).

Total capex spend over the 5 year period, as per the investment plan provided to GCR (as below), is budgeted at TD598m. Given that capex fell short of budget in F07 (TD82m achieved versus TD116m budgeted), mainly due to slow tender processes, this will have to be made up over the remaining years of the plan (of the TD498m budgeted from 2002 to 2006, TD480m, or 96%, was achieved).

SONEDE has completed a detailed study for the construction of a desalination plant in the island of Jerba, which will have a total capacity of 50,000 m^3 per day, and commenced construction in 2008. It is anticipated that the facility will be designed as a Build-Operate-Transfer (BOT) model through a public private partnership. Under a BOT contract, the private sector is responsible for the design, building and financing of new investment projects. It is also responsible for operating and maintaining the investments during the concession period, before handing over to the public sector. Funding is expected to be sourced through domestic borrowings.

Table 7: Capex and funding (TDm)	F07	F08	F09	F10	F11
Capex					
Work in progress	69.0	52.5	35.6	14.5	9.7
Rehabilitation & replacement	19.4	20.8	22.1	22.6	23.0
Production improvements	17.9	13.5	8.7	9.1	18.9
Major projects	8.6	28.0	60.9	55.3	48.1
Urban services	1.1	8.3	4.1	3.2	13.3
Rural services	0.0	0.0	1.5	2.3	5.8
Total	**116.0**	**123.1**	**132.9**	**107.0**	**118.8**
Capex funding					
Internal funds	33.3	35.4	38.2	30.7	34.1
Long term loans	39.6	42.0	45.3	36.5	40.5
Third party funding – concessionary loans	12.3	13.0	14.1	11.3	12.6
Government grants	20.9	22.2	23.9	19.3	21.4
Loans – Jerba	10.0	10.6	11.4	9.2	10.2
Total	**116.0**	**123.1**	**132.9**	**107.0**	**118.8**

SONEDE has established partnerships with a number of donors, who finance long term investments for development and upgrading of existing assets, as well as strengthening the utility's management and technical capacity.

SONEDE has reported a stable funding profile in recent years, which is expected to remain as such based on budgets provided. This points to increased stability in the sector, with major projects having been discharged in the earlier years following sector reform and historical capex having been supported by strong grant funding. Positively too, it is noted that the water utility displays adequate liquidity. Moreover, cash holdings comfortably cover short term debt obligations. New long term loans, third party funding and concessionary loans could see borrowings (net of redemptions) increase to around TD318m by F11. Based on this, GCR estimates that net debt to capital & reserves could increase to around 34% by F11 (F07: 27%), albeit well within acceptable limits. Total debt to EBITDA is forecast to remain fairly stable at around 450% over the period F08 to F11.

Future prospects

The following table is extracted from SONEDE's latest financial forecasting model. This model requires continuous input, with concern that the financial model provided contains outdated information. Management has confirmed that the preceding investment plan is correct. As the commentary that follows and the assumptions/forecasts tie in with the investment plan, this may present an inaccurate picture if the financial model is indeed outdated, and not aligned to the investment plan.

The utility is positioned for adequate revenue growth in the medium to long term, supported by tariff increases and additional revenue sourced through newly completed capex projects. Total revenue is forecast to increase from TD227m in F07 to TD284m in F11, which represents a compound average annual growth rate of 5.8%.

Notwithstanding the growth in revenue, SONEDE expects to record an operating deficit in F08, partly due to the higher depreciation charges forecast from the large capex investments in water assets, as well as a jump in staff expenses of over 6% per annum. In addition, operating margins are expected to remain weak over the forecast period. Furthermore, significantly larger net interest charges incurred through higher levels of borrowings would see the utility post net losses in each year from F08 to F10, only reverting to a profit in F11. Staff costs are budgeted at around 48% of revenue over the four year period. Electricity charges are forecast at around 7.5% of total income, although management has confirmed that these are currently running at around 12% given the recent spike in the oil price, thereby negatively impacting the utility's financial flexibility.

Table 8: Operating budget (TDm)	F08	F09	F10	F11
Income				
Water sales & connections	225.3	243.0	250.3	269.7
Other operating income	13.0	13.6	13.8	14.3
Total revenue	**238.3**	**256.6**	**264.1**	**284.0**
less: Expenditure				
Staff costs	(114.5)	(121.6)	(129.0)	(136.8)
Water & related purchases	(30.3)	(31.4)	(32.5)	(33.7)
Electricity & energy	(18.1)	(19.1)	(20.1)	(21.1)
Other operating expenses	(28.2)	(28.9)	(29.2)	(29.9)
EBITDA	**47.2**	**55.6**	**53.3**	**62.5**
Depreciation	(48.6)	(50.7)	(53.2)	(54.7)
Operating income	**(1.4)**	**4.9**	**0.1**	**7.8**
Net interest charges	(8.3)	(8.7)	(8.7)	(8.2)
NPBT	**(7.4)**	**(1.5)**	**(6.1)**	**1.2**
Key ratios (%)				
Turnover growth	5.2	7.7	2.9	7.5
EBITDA : revenues	19.8	21.7	20.2	22.0
Operating profit margin	(0.6)	1.9	0.0	2.8
Op. income : net interest	(0.2)	0.6	0.0	0.9
Net debt : EBITDA	448.7	405.8	462.9	457.3
Net debt : capital & reserves	25.6	27.0	29.4	33.9

Notwithstanding the good operational progress made by SONEDE over time, the perceived strength of management, and virtual monopolistic position it holds, the utility faces various challenges going forward, including:

- The relative level of expenditure on staff costs remains high, impeding the organisations ability to allocate financial resources to other key operating functions. Staff costs should be reduced to the lowest possible level, to improve the financial position and flexibility of the organisation.
- In addition to this, deteriorating exogenous factors of late (higher average oil price, inflation etc) present a risk to the utility in the short term.
- Tariffs are structured whereby household consumers are in fact purchasing water below the cost of production, with profitability deriving from large-scale consumers (such as government, farmers and other commercial users) who are charged higher rates. As such, with the rollout of services being largely to households, this is likely to place further downward pressure on margins. Tariffs should be restructured such that households are purchasing water on a cost-reflective basis.
- Working capital management remains constrained by the challenges experienced with regards to debtors management, in particular government entities. This directly impacts cash generation. As such, a key organisational focus should be on improving collections from government entities.
- Restricting levels of autonomy, in particular pertaining to tariff approval, borrowing requirements and salary increases.

Société Nationale d'Exploitation et de Distribution des Eaux (SONEDE)

(Tunisian Dinars in millions except as noted)

Income Statement Year end : 31 December	2003	2004	2005	2006	2007
Revenue	**200.5**	**201.0**	**216.7**	**222.5**	**226.5**
Operating expenditure	(149.3)	(152.1)	(166.7)	(173.6)	(178.9)
EBITDA	**51.2**	**48.9**	**50.0**	**48.9**	**47.6**
Depreciation	(39.0)	(42.0)	(41.3)	(42.6)	(44.2)
Operating income	**12.2**	**6.9**	**8.7**	**6.3**	**3.4**
Net finance charges	1.4	1.0	0.4	(1.6)	(0.0)
Foreign exchange gains/(losses)	0.0	0.0	(3.4)	(0.7)	(1.4)
Income after finance charges	**13.6**	**7.9**	**5.7**	**4.0**	**2.0**
Post retirement benefits	0.0	0.0	0.0	0.0	0.0
Exceptional Items	0.0	0.0	0.0	0.0	0.0
Income tax	(7.2)	(5.4)	(2.6)	(2.1)	(1.0)
Net income	**6.4**	**2.5**	**3.1**	**1.9**	**1.0**
Prior year adjustment	0.0	(1.1)	(0.8)	0.4	0.0
Cash Flow Statement					
Cash generated by operations	**29.5**	**34.2**	**28.5**	**29.5**	**27.0**
Working capital: (increase)/decrease	3.3	(14.8)	(0.9)	(12.6)	(20.2)
Net finance charges	1.4	1.0	0.4	(1.6)	(0.0)
Cash flow from operations	**34.2**	**20.4**	**28.0**	**15.3**	**6.8**
Net expansionary capex and investments	(79.3)	(111.1)	(94.5)	(73.1)	(82.2)
Capital contributions	0.0	21.7	26.8	36.1	8.1
Cash movement: (increase)/decrease	n.a.	5.6	14.8	(31.6)	52.4
Borrowings: increase/(decrease)	n.a.	63.4	25.0	53.2	14.9
Net increase/(decrease) in debt	**n.a.**	**69.0**	**39.7**	**21.7**	**67.2**
Balance Sheet					
Capital and reserves	760.2	782.0	811.5	865.1	887.3
Total interest-bearing debt	**186.8**	**253.7**	**263.3**	**292.3**	**289.5**
Short-term	23.2	38.1	34.1	41.4	31.2
Long-term	163.6	215.6	229.2	250.9	258.3
Interest-free liabilities	136.8	136.9	157.3	160.9	153.5
Total liabilities	**1,083.8**	**1,172.6**	**1,232.1**	**1,318.3**	**1,330.4**
Fixed assets	836.4	745.4	835.4	1,008.6	878.8
Projects in progress	17.6	186.1	162.8	30.3	199.2
Investments	43.3	42.8	42.3	40.6	42.7
Cash and cash equivalents	76.1	80.6	58.5	92.5	59.8
Net trade debtors	89.2	95.6	106.1	120.1	115.8
Other current assets	21.1	22.1	27.0	26.1	34.0
Total assets	**1,083.8**	**1,172.6**	**1,232.1**	**1,318.3**	**1,330.4**
Ratios					
Operating:					
Billed water sales (million m3 / year)	300.8	313.9	325.6	337.2	345.2
Volume increase (%)	1.1	4.4	3.7	3.6	2.4
Average tariff increase (%)	n.a.	(1.1)	1.4	0.1	0.3
Turnover growth (%)	n.a.	0.2	7.8	2.7	1.8
Staff costs : total operating costs (%)	45.0	45.9	45.8	45.5	46.7
Staff costs : revenue (%)	42.3	44.3	44.0	44.2	46.0
Staff per 1,000 connections	4.0	4.0	4.0	3.0	3.0
Water distribution losses (%)	15.4	15.5	16.0	16.0	16.7
Net capex : revenue (%)	39.6	55.3	43.6	32.9	36.3
Cash Flow:					
Operating cash flow : total debt (%)	18.3	8.0	10.6	5.2	2.4
Operating cash flow : net debt (%)	30.9	11.8	13.7	7.7	3.0
Profitability:					
EBITDA : revenues (%)	25.5	24.3	23.1	22.0	21.0
Operating profit margin (%)	6.1	3.4	4.0	2.8	1.5
EBITDA : average total assets (%)	n.a	4.9	4.6	4.2	3.9
Coverage:					
Operating income : gross interest (x)	1.7	1.1	1.1	0.6	0.4
Operating income : net interest (x)	(8.7)	(6.9)	(21.8)	3.9	147.4
Activity and liquidity:					
Days receivable outstanding (days)	n.a.	168.2	183.1	185.5	190.1
Net debtors : total income (%)	44.5	47.6	49.0	54.0	51.1
Current ratio (:1)	1.2	1.2	1.0	1.2	1.2
Average days working cash (days)	148.6	152.4	102.9	155.0	97.8
Capitalisation:					
Net debt : capital and reserves (%)	15.8	23.4	26.0	23.8	27.2
Total debt : total assets (%)	17.2	21.6	21.4	22.2	21.8
Total debt : EBITDA (%)	364.8	518.8	526.6	597.7	608.3
Net debt : EBITDA (%)	234.2	374.2	421.2	421.0	507.8
Total debt : total income (%)	93.2	126.2	121.5	131.3	127.8
Net debt : total income (%)	55.2	86.1	94.5	89.8	101.4

APPENDIX: WATER UTILITY RATIO DEFINITIONS

Operating ratios

Staff costs: operating costs (%) = (salaries & allowances)*100 / (Total operating costs)

Staff costs: total income (%) = (salaries & allowanaces) *100 / (Total income)

Water distribution losses (%) = (Units purchased-units sold)*100 / (Units purchased)

Net capex: total income (%) = (Net expansionary capital expenditure)*100 / Total income

Cash flow

Operating cash flow: total debt (%) = (Cash generated by operations + working capital changes +net finance charges)*100 / (Long term liabilities +short term liabilities+bank overdraft)

Operating cash flow: net debt (%) = (Cash generated by operations + working capital changes +net finance charges)*100 / (Long term liabilities+short term liabilities+bank overdraft-cash &cash investments)

Profitability

EBITDA:revenues (%) = (EBITDA)*100 / (Total revenue)

Operating profit margin (%) = (Operating income)*100 / (Total revenue)

EBITDA: average total assets (%) = (EBITDA)*100 / (Current year's assets+previous year's assets)/2

Coverage

Operating income: gross interest (X) = (Operating income) / (-Interest paid)

Operating income: net interest (X) = (Operating income) / (Interest paid-interest received)

Activity and liquidity

Days receivable outstanding (days) = ((Current year's net trade debtors+previous year's net trade debtors)/2)*365 / (Revenue)

Net debtors: total income (%) = (Net trade debtors)*100 / (Total income)

Current ratio (:1) = (Total current assets) / (Total current liabilities)

Average days working cash (days) = (Cash & cash investments)*365 / (-(operating expenditure+depreciation+net finance costs)

Capiltalisation

Net debt: capital and reserves (%) = (Long term liabilities+short term liabilities+bank overdraft-cash &cash investments)*100 / (Capital & reserves)

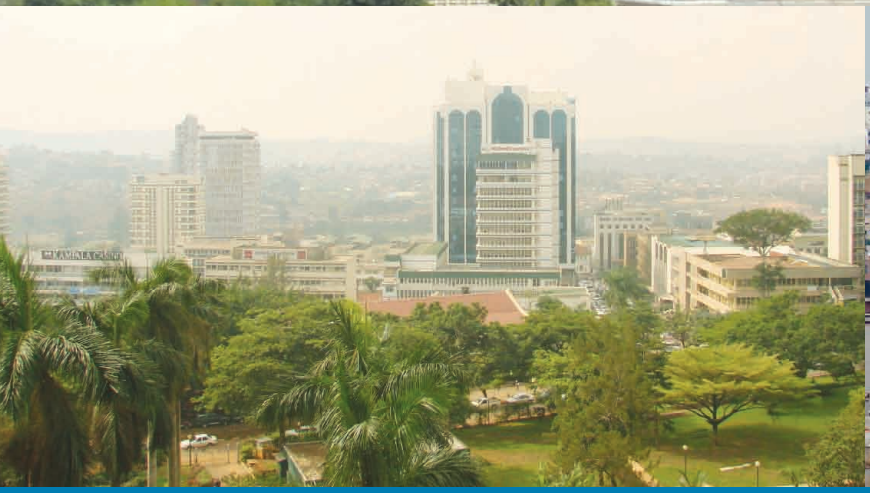
Total debt: total assets (%) = (Long term liabilities +short term liabilities+bank overdraft)*100 / (Total assets)

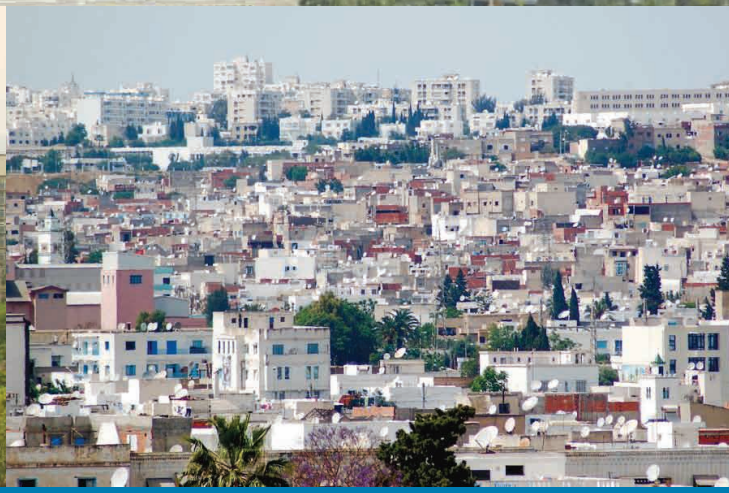
Total debt: EBITDA (%) = (Long term liabilities +short term liabilities+bank overdraft)*100 / (EBITDA)

Net debt: EBITDA(%) = (Long term liabilities+short term liabilities+bank overdraft-cash &cash investments) / (EBITDA)

Total debt: total income (%) = (Long term liabilities +short term liabilities+bank overdraft)*100 / (Total income)

Net debt: total income (%) = (Long term liabilities+short term liabilities+bank overdraft-cash &cash investments) / (Total income)





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