

EXECUTIVE SUMMARY

The water services sector has a number of attributes that determines its financing. Firstly, there are many decision-makers within the water services sector. Secondly, there are many sources of finance including the national equitable share, conditional grants, loans and tariff income. Thirdly, financial and human capacity within the sector varies considerably. Because of the many institutions involved in all the processes, a complete picture of financing in the sector has not emerged. In order to analyse finances in the water services sector, this research project, following a well-known concept from business management, has postulated a 'value chain'. This envisages the adding of value through a number of sequential functions (or phases), as the technical and institutional arrangements change to match the challenges of each function. This also allows the examination of each function to determine the contribution of the institutions that lead it to overall efficiency and effectiveness. What is important in the context of regulated markets and prices is that "value", "cost" and "price" are not equivalent. (Theoretically they only come together in a perfectly open market.) The purpose of this analysis is, on one level, to guide policy formulation in the water services and municipal sectors and on another level, to assist all decision-makers to be better informed in making financial decisions concerning matters such as financial grant allocations, tariffing, capital expenditure, operations and maintenance expenditure.

Chapter 3 of the report firstly describes the institutions that are involved in the delivery of water services. It notes that there are a number of institutional forms, namely national government departments, local government, a major public entity and national government business enterprises. They are administrated and regulated under several pieces of legislation and have different objectives and governance systems. Secondly, the chapter outlines the technical functions that have to be performed to deliver potable water to the ultimate consumer and receive back and process waste water. Finally the chapter describes the different supply models (or configurations of the value chain) that currently exist. There are four broad models which support the supply of water for municipal water services (all waste water functions are performed by the municipalities).

- Model 1: The municipality abstracts water itself directly from local sources;
- Model 2: The municipality sources water from schemes developed by national government;
- Model 3: The municipality sources water from a water board; and
- Model 4: The municipality sources water from a scheme implemented on behalf of government by a third party (TCTA).

Chapter 4 gives a broad overview of the main policies and related instruments that influence financing in the municipal water sector. These include policies related to finance of government institutions, local government management and water services sector policies.

Chapter 5 outlines the legislative framework for water services. Like that for policy, the legislation can be envisaged in three streams. Firstly, National Treasury administers legislation that regulates the financial affairs of all government institutions. In the context of this research, the Municipal Finance Management Act is probably the most important as it regulates the budgeting and tariffsetting processes of local government. Secondly, the Department of Cooperative Governance and Traditional Affairs (CoGTA) administers the suite of legislation that structures and administers the service delivery functions of local government. The most significant of these is the Municipal Systems Act that deals, inter alia, with the planning process through the IDP and the general service delivery functions. Finally the Department of Water Affairs (DWA) administers the National Water Act and the Water Services Act that are more sector specific.

Chapter 6 reports on the outcome of interviews with municipal officials and others directed at determining whether the budgeting and planning processes in local government followed the prescripts in the regulatory framework and at anecdotal level whether the process was regarded as effective. Interviews were conducted with role players in a sample of 22 municipalities, in all, representing about 36 percent of the South African population. Some of the outcomes are:

- overall the municipal budget and IDP processes were found to be aligned and effective at projecting community preferences;

- social or community desires, political motives, technical needs and financial sustainability can all drive the budgeting process;
- almost all of the interviewed municipalities cited backlogs on maintenance as a significant concern;
- revenue collection and debt management were found to be common issues across the municipalities;
- most municipalities have in place a local subsidy policy and practice for assisting indigent households;
- one of the main challenges identified in all of the cases is a lack of human capacity required to undertake key functions in the budget process;
- almost all the cases identified procurement processes (from tender to adjudication) as being complex, prescriptive and lengthy; and
- it was not clear whether the availability of finance was a limiting factor.

Chapter 7 describes international and national trends in financing the sector. It notes that, over the last decade, internationally the focus was originally on increasing the supply of financing, then on the demand side and finally settling on a balanced approach. The international debate on debt financing links innovation to the creation and stimulation of national capital markets, sub-national debt pooling and credit enhancement. An emerging theme is that of decentralisation in which the responsibility for service delivery is devolved to regional or local governments to realise the benefits of immediacy. The question of governance and its role in creditworthiness has remained in the centre of the debate. Frequent reference is made to the trilogy of tariffs, taxes and transfers. The South African water services sector has access to a wide range of finance sources. No mechanisms were found in the international literature that could make a significant difference in the South African context. Moreover, it appears unlikely that attention to the supply side of financing will noticeably increase investment. Rather, attention will have to be paid to the demand side, i.e. the capacity of institutions to plan, prepare and implement projects and to effectively manage operations and maintenance. The research found nothing to suggest the water services sector is not receiving a reasonable allocation of total available funds either at the national government sphere or at the local government sphere.

Chapter 8 describes the financing instruments that are available to the water services sector. At the municipal level the equitable share and the conditional grants are the main external sources for most municipalities. Commercial debt and project lending by the DBSA is quite widespread and a few of the more empowered municipalities as well as the TCTA and some water boards have the financial capacity to make use of the bond market for capital. The MFMA prohibits municipalities from using long term debt for recurrent expenditure and the conditional grants such as MIG requires an applicant municipality to show that it has the resources for ongoing operation and maintenance. The equitable share is intended to finance those who are unable to pay for services so that the municipality must generally recover O&M costs from revenue. Empirical research suggests that the demand side for debt is limited by capacity constraints, poor tariff collection, insecurity and lack of predictability over future functions and revenues and a legacy of a conservative approach to borrowing by municipalities. Nevertheless, in 2008 National Treasury suggested that there was significant scope for municipalities to leverage additional finance of around R30 billion over the following three years from the private sector through instruments such as long term municipal bonds and bank loans.

Chapter 9 quantifies many of the financial figures but also makes the point that there is inconsistency between the sources of data. It has also not been possible in some cases to disaggregate the water services sector from other infrastructure or services. The total amount of water sourced by water services authorities in 2007 was 3 667 Mm³/a. The metros delivered 61 per cent of all potable water and the “Top21” (B1) a further 21 per cent. Municipalities sourced 51 per cent of water from water boards. Revenue water amounts to 59 per cent of water sourced and of this 8 per cent is sold at zero tariff (the free basic water component). Indications are that around 35

percent of water sourced is lost in the system (i.e. non-revenue or unaccounted for water). Tariffs lie at the core of sector financing. Tariffs are essentially set at three levels, viz. by the DWA for water resource management and the use of national infrastructure, by the water boards for purification and distribution and by the municipalities for final delivery. The national average tariffs for water services in 2010/11 were R0.018/kl for the water resources management charge; R1.19/kl for raw water from national infrastructure; R4.28/kl from water boards and R7.22/kl for the 20 to 60 kl block from municipalities. The DWA Strategic Overview for 2008 estimated that about R22bn was available for operating expenditure in the water services sector in 2007/08. The estimated revenues of the major institutions in the water services value chain are DWA (R7.9bn by Parliamentary appropriation and R1.5bn by WTE tariffs), TCTA (R2.5bn), water boards (R7.7bn) and municipalities (R13bn). These figures cannot be simply aggregated because WTE revenue comes in part from other water user sectors, TCTA revenue comes from bulk users, water boards and municipalities and water board revenue comes from municipalities and other bulk users such as mines. As far as expenditure is concerned, at the municipal level, the purchase of bulk water services makes up 37 per cent of operational expenditure, staff costs 16 per cent and repairs and maintenance 8 per cent. The last figure is low considering the poor state of municipal water infrastructure, particularly on the waste water side. The metros spend roughly twice **per capita** than do the Category B1 and B2 municipalities and roughly four times than does the remainder. Estimated annual capital expenditures on water are R1.2bn by WTE, R5bn by TCTA, R 1.4bn by water boards and R8bn by municipalities. For municipalities this figure represents about 21 per cent of all sector capex. A technical examination of the financial statements of water institutions reveals a range of financial positions. TCTA, the major water boards and a few municipalities are generally sound but the remainder including WTE are weak to parlous. The municipalities, because of low margins and the debilitating cash flow effect of bad debt, are unable to finance their expansion programmes and are increasingly reliant on subsidies and grants.

Chapter 10 examines the drivers of the value chain i.e. those characteristics that are likely to have an impact on financial efficiency. The drivers that have been identified are:

Tariffs

The South African water services sector has national government, a major state entity (TCTA), government business enterprises (water boards) and local government as important determinants of the composite price that the consumer must pay. Each of these institutions has different policy considerations in setting prices. All the price setters are generally driven by wanting some form of cost recovery although this research found that in some of the less capacitated municipalities the revenue collected from water services bore no resemblance to expenditure. The WTE attaches considerable importance to historical costs and is only slowly moving to replacement cost concepts. The municipalities have to consider the free basic water policy in tariff setting. The DWA exercises some influence over tariffs, mainly with social objectives. Other inefficiencies that creep in via the tariff process are related to the price inelasticity of tariffs, which simply result in costs being passed on to the end consumer, and collection inefficiencies, which either inflate the cost of service provision or result in a disjuncture between revenue collected and the expenditure budget. A particular issue related to tariff setting is that municipalities have generally neglected waste water treatment; as the Green Drop Report attests. This implies that municipalities are externalising costs to the environment and downstream users. This runs counter to the widely-accepted principle and proclaimed government policy of 'polluter pays'.

Regulatory mechanisms

The water and sanitation sector is extensively regulated by legislation, regulations, standards, policy and guidelines. However enforcement remains weak. The legislation requires water services institutions to achieve many social, economic and financial objectives, most notably a balance between providing for the poor and financial sustainability. The DWA and municipalities have the structure and governance of traditional government, whereas TCTA and the water boards have the structure and governance of business enterprises. The result is that in DWA and the municipalities the emphasis is placed on extension of service areas and affordability whereas a far more business

approach is adopted in TCTA and (most of) the water boards.

Institutional arrangements

The governance systems of the institutions in the water services value chain are substantially different and explain to a large degree the differences in financial capacity in the sector. The water boards and TCTA are shielded from the downward pressure on tariffs and the allocation of financial resources that is the hallmark of an electorate. Historically the major water boards have used their position as price givers to secure prices that allow them to build up the necessary human capital to fulfil their roles effectively. Municipalities on the other hand have been chronically underfunded and hence lack human capital. Water services are subject to the trilogy of administration of National Treasury on finance, CoGTA on local government and DWA on the water sector. The epitome of this is that all three national departments administer separate legislation that impacts directly on tariffs. The DWA sets itself the roles of “enforcer, enabler and supporter”. Many argue that these roles are conflicting and cannot be successfully achieved simultaneously. The call is for the establishment of an independent regulator, a position conditionally supported in the Parliamentary Portfolio Committee. The natural monopolistic nature of institutions in the value chain also have an impact on their potential efficiency, as do the overlapping mandates of different government departments (human settlements, schools, clinics, and water provision).

Grant Financing

The MIG dominates the capital financing of municipal infrastructure but there are a number of concerns with grant funding, and its methodology and implementation. The first is that MIG and other grants are too focused on projects, without considering the broader needs of a municipality (and the region). A second is that grants foster dependency. A third is that evaluation has been weak so that there is no certainty on what development has been achieved. In the rural municipalities, the equitable share (an unconditional transfer) is significantly larger than tariff income and therefore plays a dominant role in service delivery. In the smaller municipalities especially there are indications that the reliance on grants is crowding out private sector investment as well as loans from dedicated institutions such as the DBSA and INCA.

The Physical flow of water

The largest cost on most municipalities’ income statements is payments for bulk water – and yet studies show that only 50 to 70 per cent of this water is billed. One study indicated water losses of 25 per cent in the sector, with another 11 per cent distributed under the free basic water policy. This places significant pressure on how water is managed – both from a cost and conservation perspective.

Chapter 11 uses the prior analysis to assess potential inefficiencies in the value chain.

On water resource management it is noted that 12 years after the promulgation of the National Water Act, only two of the 19 CMAs have been established. This suggests that the trade-off of moving toward local participation as opposed to keeping a technical process centralised, is less favourable than had been envisaged. However in this context, the contribution of the WRM charge to the water services tariff build up is small. The introduction of TCTA as the favoured mechanism for financing large water infrastructure has been successful in shifting the financial burden to the users. The TCTA has undoubtedly delivered effectively on its mandate but its efficiency is more difficult to assess. As municipalities become less and less able to perform the purification and waste water treatment functions, the water board model appears more attractive. This study postulates above that the governance systems have allowed the water boards to capture adequate resources to be effective. However, National Treasury has pointed out that the water boards are not without problems and water boards with a preponderance of financially weak municipalities as customers have highlighted these problems. An institution cannot perform a highly technical function without financial resources and the ability to attract a threshold of technical skills.

The major players in the sector are able to access the bond market as the most efficient source of debt finance but generally the municipalities are too small. On the other hand the DBSA represents, in a sense, a national bond pooling initiative with relatively low costs. The MIG and other conditional grants have the efficiency questions noted above and there is a case to be made that they and DBSA

are “crowding out” other sources of finance including the private sector.

The inherent nature of the water services value chain as a monopoly brings inefficiencies. Inefficient behaviour in a competitive market is normally punished by reduced turnover and the threat of having to exit the market. Firms operating as a monopoly and without effective regulation do not face this threat and therefore inefficiencies are passed on to the end consumer through higher prices or reduced quality. Institutional capacity is one of the most limiting factors across the water services value chain and causes major inefficiencies. Key functions such as budgeting, project management and the daily operations and maintenance functions are severely hampered. It limits the ability to adequately prepare projects that would be of interest to investors and introduces risk in the areas of revenue collection and debt management attracting risk premiums on interest rates. Regulatory independence is a key discussion issue in the water sector value chain. Although some form of economic regulation is directed at particular institutions operating in the value chain, there is currently no formal regulator which undertakes rational economic regulation of functions from raw water abstraction to supply and eventually wastewater discharge. Many observers believe that regulatory independence is essential and that DWA has been unable to effectively reconcile its multiple roles. Technical inefficiencies include a failure to plan adequately through mechanisms such as the water services development plans and failing to fully recognise the basic and added value of water services.

Chapter 12 concludes with recommendations and scenarios which it is suggested be read in full.