



WATER, SANITATION AND HYGIENE FINANCE (WASH-FIN) KENYA

Discussion Paper on Drivers of Low Creditworthiness in Kenyan WSPs

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CREDITWORTHINESS AND ITS IMPORTANCE FOR WSPs

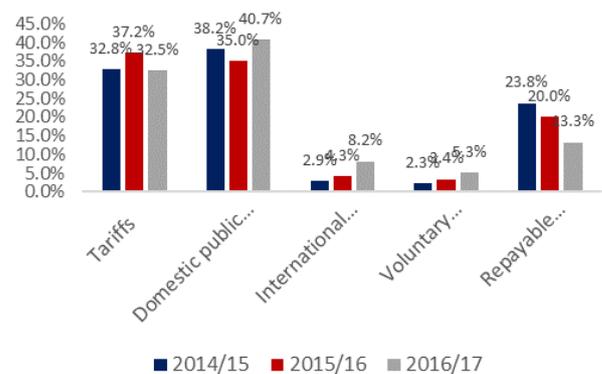
Creditworthiness is a measure of a potential borrower’s ability to take on and repay debt within an agreed period. Lenders typically assess the creditworthiness of a company or an institution by analyzing criteria such as the amount and reliability of revenue generated, ability to maintain positive cash flows over time, availability of collateral, potential market size and growth, financial risks to the business, levels of existing debt, and where applicable, repayment history.

Traditionally, Kenyan water service providers (WSPs) have had a limited history of commercial borrowing and therefore little need to demonstrate creditworthiness to commercial lenders. Similarly, commercial lenders have had little experience in financing the Water, Sanitation and Hygiene (WASH) sector and typically view WASH investment as high risk. This has been driven by lenders’ lack of familiarity with the structure and operations of utilities, WSPs’ lack of guarantees and marketable assets to pledge as collateral, and limited ability to generate surplus cashflows to service loans.¹

Like most other WSPs in Africa, Kenyan WSPs have largely relied on public funding to support infrastructure development and maintenance. According to the Ministry of Water, Sanitation

and Irrigation (MoWSI) tracking of expenditure from FY2014-FY2017, expenditure in the WASH sector has been mainly from domestic public transfers from Government, followed by tariffs

Figure 1: Sources of WASH Finance



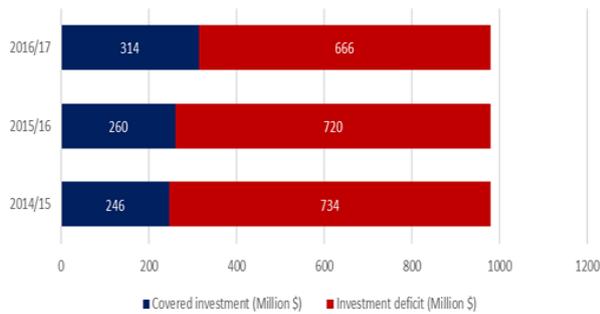
from consumers (except in FY2015-16), repayable financing (mostly concessionary loans from multilateral and bilateral development partners), international public transfers (mostly grants by international multilateral and bilateral partners), voluntary transfers (mostly international NGOs) and a small proportion from WSPs’ own internal funds (Figure 1).²

¹ Frederik Claasen, Jean Pierre Sweets, Commercial Finance for Water Service Providers in Kenya, (Netherlands: Aidenvironment, 2016), <http://www.aidenvironment.org/wp-content/uploads/2016/04/Commercial-Finance-for-WSPs-final-report-external.pdf>

² TrackFin is a methodology developed by WHO and used by MoWSI in Kenya with support from USAID WASH-FIN to collect and analyze data on WASH expenditure leading to creation of National WASH Accounts.

In this same period, Kenya spent an average of \$273 million annually, a spend two-thirds below that required for capital investments (excluding recurrent and other costs) to achieve universal access to WASH, representing an average annual deficit of \$706 million (Figure 2).

Figure 2: WASH Expenditure and Investment Deficits in Kenya, 2014-17



It is clear from the above that public expenditure must increase by more than double the current amount for Kenya to achieve universal access. These public resources are critical and must constitute the bulk of the funding required to expand Kenya’s largely old and dilapidated water and sanitation networks. However, given competing needs for government resources and with Kenya being classified as a lower middle-income country, and also given the level of reforms that have happened in the water sector, it is important that effort must also be put on leveraging and attracting all other available sources of financing, including from commercial banks. This will complement the Government’s effort, enhance the role of the domestic private sector and contribute to Kenya’s journey to self-reliance.

It is imperative that WSPs are creditworthy so they can access commercial financing from private banks. So, what is the status of the WSPs in Kenya in relation to creditworthiness? Are they ready for this challenge and if not, what are the issues making it difficult for them to be creditworthy? This discussion paper attempts to answer these questions by sharing results from work undertaken by the USAID Water, Sanitation and Hygiene Finance (WASH-FIN) activity in Kenya covering over 26 WSPs. The assessments on

which this paper is based were not intended as stand-alone studies but were part of the process of WASH-FIN identifying and assisting those WSPs that were willing to pursue commercial financing. The creditworthiness challenges identified were similar among most WSPs and prompted an interest in WASH-FIN to engage further in this subject with the hope of engendering local discussion on how these issues could potentially be addressed. The paper highlights four key drivers of low creditworthiness and is intended to stimulate discussion amongst the local stakeholders in Kenya on short- and long-term strategies that could be considered by both the WSPs as well as government and interested development partners to remedy these drivers and improve creditworthiness of the sector.

ASSESSING CREDITWORTHINESS OF WSPs

The WASH-FIN program is a five-year activity funded by USAID that seeks to close financing gaps to achieve universal access to safe and reliable WASH services through sustainable and creditworthy business models, increased public funding, and expanded market finance for infrastructure investment across eight countries in Africa and Asia. Since its inception in 2017, WASH-FIN Kenya has worked with more than 26 WSPs, selected from 88 public WSPs regulated by Kenya’s, Water Sector Regulatory Board (WASREB), to help them assess their creditworthiness and undertake debt capacity assessments as part of support to eventual financial transaction close with commercial banks.

The assessments were conducted through a comprehensive desk review of each WSP’s operational and financial documents, followed by site visits and consultations with select WSP management and technical staff to gain an understanding of the company operations, growth plans, financial position, and their suitability for commercial financing.

Management discussions covered topics such as corporate governance, strategic and growth plans, engagement with external stakeholders, and legal and regulatory compliance. These discussions allowed WASH-FIN to assess internal staff capacity to deliver on business plans; the extent to which governance structures that held them accountable were in place; capability and appetite to take on commercial financing by assessing historical borrowings and company cashflows; growth plans to improve performance and drive future revenues; and any risks associated with external stakeholders in the implementation.

Based on the data collected, WASH-FIN conducted quantitative and qualitative analyses to determine the ability of the water utilities to raise and service debt, finance new projects, and identify next steps for seeking financing. Table 1 (see Appendix) provides an overview of the quantitative measures used in the creditworthiness assessments, targets, and key findings across 21 of the 26 WSPs assessed prior to August 2018 (based on FY 2015-16 or 2016-17 financials).³

Based on analysis of the findings, the 21 WSPs were grouped into three categories: creditworthy, near creditworthy, and not creditworthy, each with implications for the WSPs’ ability to borrow and the potential support that they could receive from WASH-FIN (Table 2). It should be noted that the categorization shown in the table below was used as guidance, as no single indicator was enough to determine the creditworthiness of a WSP. Rather, the analysis considered both current

quantitative data, changes in metrics over time, as well as qualitative factors such as governance and capacity.

Table 2: Categorization of WSP Creditworthiness in Kenya

	Creditworthy 9 WSPs assessed	Near creditworthy 8 WSPs assessed	Far from creditworthy 4 WSPs assessed
Criteria	<ul style="list-style-type: none"> ✓ Cost Recovery (O&M > 100%) ✓ Solvent (DSCR >1.3) ✓ Liquid and efficient (liquidity ratio >20%) 	<ul style="list-style-type: none"> ✓ Below Cost Recovery (O&M < 100%) but have identified projects to improve profitability ✓ Just able to meet short term liabilities (liquidity ratio <10%) 	<ul style="list-style-type: none"> ✓ Significantly below Cost Recovery (O&M <100%) ✓ Insolvent (DSCR significantly <1.3) ✓ Liquidity ratio (<0%, debtor days >400)
Outcome	<ul style="list-style-type: none"> ✓ Capable and willing to take on commercial debt financing 	<ul style="list-style-type: none"> ✓ Could potentially raise blended finance with support 	<ul style="list-style-type: none"> ✓ Unable to take on any debt presently and would benefit from technical assistance

Source: WASH-FIN WSP Creditworthiness Reports

It is notable that only nine of the 21 WSPs were found to be creditworthy and could take on commercial debt, eight were near creditworthy and could potentially raise blended finance through programs such as the World Bank-financed Output Based Aid (OBA), and the remaining four were not creditworthy and would require support to improve their creditworthiness. Based on these results, the study set out to define and synthesize the main drivers of low creditworthiness in WSPs. In order to create a better understanding of the situation of the WSPs and inform identification of further technical assistance and support to improve creditworthiness to enable more WSPs to access commercial finance.

DRIVERS OF LOW CREDITWORTHINESS

The assessment highlighted numerous drivers of low creditworthiness for the 21 WSPs, of which four stood out as the main ones: inefficient revenue collection and inadequate management systems, inadequate Operations and Maintenance (O&M) cost coverage, high non-revenue water (NRW), and high levels of existing and uncertain debts.

³ Targets are derived from WASREB’s impact report for WSPs in Kenya.

INSUFFICIENT REVENUE COLLECTION AND MANAGEMENT SYSTEMS

Inefficient revenue collection systems prevent utilities from recovering costs sufficiently and cause significant drag on WSPs' working capital and cash flows. This is measured largely by assessing "debtor days," which refers to the ability of a WSP to convert the amount billed to customers into cash. WSPs assessed had an average of 212 debtor days, which was 3.5 times over the target threshold of 60 days set by the regulator. This was found to be largely driven by lack of, or poorly enforced external collection policies (e.g., difficulty collecting information from meters on a regular basis, lax repayment timelines) and poor internal controls (e.g., lack of fraud prevention measures).

Coupled with this were inefficient debt management systems in some WSPs that make it difficult to keep track and differentiate what component of the outstanding debt comprises the current period versus arrears. This can result in WSPs failing to prioritize collection efforts on viable customers. Furthermore, good revenue collection efficiency ratios for a particular time period do not always equate to effective debt collection ratios if WSPs do not have a clear view of the age profile of debts.

Most WSPs also inherited long overdue consumer debts, which were not clear in terms of the debtors and amounts. Whilst the bulk of this debt would probably be better written off by the WSPs as bad debt, there is currently no clarity on the policy and procedure for such write offs. This debt contributes significantly to the debtor days of the WSPs and makes their creditworthiness much weaker than it would actually be, had it been based only on current receivables.

INADEQUATE O&M COST COVERAGE

The key O&M costs for the WSPs are salaries; general administration; direct operations (electricity, chemicals, and fuel); purchase of bulk water from Water Works Development Agencies (WWDA—mainly for WSPs in the Coast Region); maintenance and repair of infrastructure used in water supply, pumping, water treatment, and transmission costs; levies and fees; and high percentage of NRW that reduces revenue available to cover costs. Smaller WSPs—particularly those with a significant proportion of their customers in rural areas with low population density—often have difficulty in driving economies of scale, leading to high O&M costs.

While most WSPs reported that their O&M costs were very high, it is not possible without some comparator to conclusively say so. Regardless, there is little doubt that most of the WSPs are not able to charge sufficient tariffs that would allow them to recover O&M costs and retain some funds for investments. Based on the assessment of the 21 WSPs, most charged low tariffs that often cover O&M but rarely other costs such as loan repayments. To ensure long term financial sustainability and guarantee service quality, WASREB recommends a minimum of 100 percent of cost recovery for the WSPs. However, as Table 3 shows, none of the WSPs had attained full cost recovery to allow them to fully service debt and carry out investments, while only ten were able to cover O&M costs, meet their debt service obligations, and service minor investments. One major reason for this situation is that most WSPs seem reluctant to request tariff adjustments from WASREB, in part because of the politics related to approval from the county governments that generally focus more on protecting the consumer than increasing financial viability of the WSPs. Some WSPs may also not have required resources to address efficiency improvements required by WASREB in order to prevent the passing on of operational inefficiencies onto the customer.

Table 3: O&M and Maintenance Cost Coverage in WSPs in Kenya

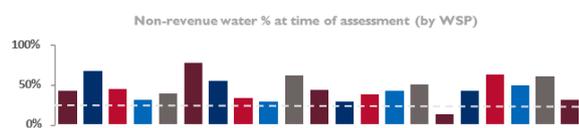
% O&M Cost Coverage	Implications	Creditworthy	Number of WSPs
<100%	WSPs are unable to cover O&M costs	✗	11
101-149%	WSPs are able to cover O&M cost, debt service and minor investments	✓	10
≥150%	Utility has attained full recovery i.e. can meet O&M costs, service debt and increase its assets	✓	None

Source: WASREB, A Performance Review of Kenya's Water Services Sector 2017-2018

HIGH NON-REVENUE WATER

Non-revenue water refers to both commercial and physical losses throughout the WSPs distribution infrastructure. It leads to reduced revenue, which significantly impacts WSPs' operating margins and O&M cost coverage ratios. Examples of commercial losses include unauthorized consumption, customer meter reading inaccuracies, defective or inefficient meters and data handling errors, while physical losses include leakages on transmission or distribution pipes and overflow of utility storage tanks.

Figure 3: Non-Revenue Water in WSPs in Kenya



WSPs assessed had an average NRW of 45 percent with only one WSP being within WASREB's recommended level of 25 percent. Additionally, several WSPs were unable to account for whether NRW was being lost through physical or commercial losses – this is indicative of sub-standard monitoring systems.

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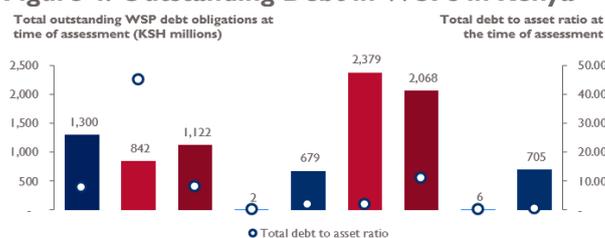
⁴ To keep the WSPs anonymous, names of the specific WSPs, represented by different columns, have been removed on the x-axis.

through physical or commercial losses, indicative of poor monitoring systems.

HIGH LEVELS OF EXISTING AND UNCERTAIN DEBTS

Many WSPs have high levels of existing debt, which limits their ability to finance new projects. Ten of the 21 WSPs had had no outstanding debt at the time of the assessment. Nine of the 21 WSPs had outstanding debt obligations from commercial loans, and in two cases legacy debt as well. The legacy debt was inherited from WWDAs and some local authorities that previously operated the water systems before the reforms of the Water Act 2002. As shown in Figure 4 below, the amount of such debt was unclear and associated with lack of clarity on payment terms and responsibilities. The total debt to asset ratio is included below to provide scale and show that in many cases the WSPs are quite overleveraged, making them less attractive to investors. Given that in some cases the inherited debt and related assets are not yet reflected in the WSPs financial accounts, this ratio is meant to be indicative rather than an exact measure of the ratio for these nine WSPs.

Figure 4: Outstanding Debt in WSPs in Kenya



A few WSPs indicated that this debt was in some cases linked to incomplete and unsuccessful projects that had no last mile connections, therefore leaving the WSPs unable to generate revenue. In many cases, this legacy debt is not yet reflected on the WSPs' financial statements resulting in a lack of clarity for both the WSPs and potential investors on how much is owed and the

repayment terms, thereby posing a major challenge to negotiations for new loans.

IMPACT OF POOR GOVERNANCE

Although the focus of this assessment was on financial performance of the WSPs, it is important to add that the drivers of low creditworthiness outlined above are compounded by poor utility and sector governance. At the utility level for instance, high NRW due to commercial losses (specifically theft), which is said to be the main challenge, reflects inadequate internal systems for monitoring and sanctioning culprits, both in and outside the WSP. At the sector level, the issues of legacy debt and extremely old debtor days reflects a failure to institute sector policies and/or procedures that would resolve these issues and allow the WSPs to be creditworthy. Addressing the creditworthiness of the WSPs must therefore be accompanied by strategies that address the governance of the sector as well. Particular attention must be given to enhancing the management capacities of the WSPs.

CONCLUSION AND POTENTIAL ACTIONS FOR DISCUSSION

As evidenced by this assessment, to achieve financial creditworthiness, Kenyan WSPs need to bolster their operational and financial performance by improving their revenue collection and management systems, improving O&M cost coverage, reducing NRW, and managing the levels of their existing debt. Improving creditworthiness is primarily the responsibility of WSPs, but technical and financial support from other stakeholders including government agencies and development partners is needed. Clarity is required from the government on how to manage the legacy debt, write off extremely old receivables, and create a system for allowing tariff adjustments that gradually help the WSPs to cover

all their O&M costs. Other support could include developing cost diagnostic tools, enforceable credit policies, and providing training and capacity building to staff. Development partners could also help deepen commercial financing in the sector by continuing to offer concessional finance and de-risking mechanisms such as the development credit authority (DCA), already on offer as a partial credit guarantee from USAID, or subsidies that reduce a portion of the utilities' burden of debt repayment, such as those being supported under the World Bank-financed OBA program and the KfW-financed Aid on Delivery (AoD) program.

Table 4 (see Appendix) highlights some key potential actions, the majority of which are known and to a large extent have been discussed or even tried out in the country through numerous programs. The intention in restating these actions is to promote a discussion within the sector on why implementing them is difficult and identifying how key obstacles could be overcome. Additionally, the discussion would focus on identifying who amongst the different stakeholders would be best placed to address which aspects and how their actions could be coordinated with other players for greater effect.

WATER, SANITATION AND HYGIENE FINANCE (WASH-FIN)

The five-year Water, Sanitation and Hygiene Finance (WASH-FIN) program is funded by the United States Agency for International Development (USAID) and began in October 2016. Implementation is led by Tetra Tech with support from Open Capital Advisors, Segura Consulting and Global Credit Rating.

WASH-FIN seeks to close financing gaps to achieve universal access to water and sanitation services through sustainable and creditworthy business models, increased public funding, and expanded market finance for infrastructure investment.

APPENDIX

Table I: Overview of Quantitative Measures Used in Creditworthiness Assessments, Targets, and Key Findings

Indicator	Description	Insight	Target	WSPs w/in Indicator	General Findings (21 total)
Operating margin	Net profit before interest and depreciation / revenue	Profitability from core operations signals ability to repay debt	>15%	4	10 WSPs assessed were profitable in the last financial year, but only 4 had operating margins above target
O&M cost coverage ratio	Revenue / operating & maintenance expenditure	Ability to cover costs and repay financing with internal funds	>100%	11	Average of 102% O&M coverage ratio with 11 WSPs operating above O&M cost recovery, but few had sufficient margin to invest in new assets
Debt-Service Coverage Ratio (DSCR)	Cashflow available for debt service / total debt payments	Ability of WSP to make repayments on current loans	>1.3	5	Several WSPs had unclear debt obligations, which made it challenging to assess their debt service coverage ratio – only 5 WSPs recorded above target DSCR
Debtor days⁵	Billed amount outstanding / revenues from operations x 365	Ability of WSP to convert revenue into cash	<60 days	2	WSPs assessed struggled with debt collection with an average of 212 days – only 2 achieved target 60 debtor days
Liquidity ratio	Cash and near cash reserves / current liabilities	Ability of WSP to meet short term obligations	>15%	12	Average of 34% liquidity ratio with 12 WSPs assessed having liquidity ratios above target, indicating an ability to repay their current liabilities
Total assets to equity	Total assets / total equity	Strength of balance sheet and ability to take on further debt	<1.5	3	Average of 2.5 total assets to equity ratio with only 3 WSPs assessed having total assets to equity ratios below 1.5, though several others were close to target

Source: WASH-FIN WSP Creditworthiness Reports

⁵ While this is sometimes called Days Sales Outstanding (DSO), we use the term Debtor days, aligning with WASREB terminology.

Table 4: Action Items

IMPROVING COLLECTION AND MANAGEMENT SYSTEMS	
<p>Short-term measures:</p> <ul style="list-style-type: none"> • Introducing customer repayment incentives such as gifts and rewards for customers that consistently pay their obligations. • Conducting detailed debtor balance analyses to help improve collection controls by identifying customers with large outstanding balances and establishing payment plans for these customers. • Implementing stricter credit policies both internally (e.g. close follow-up of payments by staff) and externally (e.g. suspension of services to non-paying customers). • Adopting use of mobile phones to read meters and thus increasing efficiencies and reducing meter reading inaccuracies. 	<p>Medium to long-term measures:</p> <ul style="list-style-type: none"> • Rolling out automated collection systems that are more efficient and convenient for customers (e.g. mobile money-based systems save customers time from queuing at collection offices). • Writing off uncollected revenues with long-term arrears that have not been collected, especially those inherited from the local authorities many years ago and for which no one has a clear idea of who even owns such debt. This would bring greater clarity and focus to collection and management of current debt.
IMPROVING MANAGEMENT OF OPERATIONS AND MAINTENANCE COSTS COVERAGE	
<p>Short-term measures:</p> <ul style="list-style-type: none"> • Conducting detailed operating cost diagnostics to help identify and prioritize key O&M cost drivers that can be tackled through longer term projects. • Reducing staff costs by using cost-saving strategies such as better management of the share of personnel expenditure as percentage of O&M costs and improving overall staff productivity. 	<p>Medium to long-term measures:</p> <ul style="list-style-type: none"> • Implementing network rehabilitation projects to install pipes that provide a better alternative to old pipes made of asbestos and concrete, which have a high susceptibility to bursts and leakages. • Installing alternative energy sources to power pumping systems, including but not limited to solar, which despite high up-front initial cost could be cheaper in the long run than electricity powered pumps.
REDUCING LEVELS OF NON-REVENUE WATER	
<p>Short-term measures:</p> <ul style="list-style-type: none"> • Conducting customer awareness campaigns on the implications of NRW from physical and commercial losses. • Introducing and enforcing clear and strict policies on illegal connections (e.g. charges or legal action on persons found with illegal connection). 	<p>Medium to long-term measures:</p> <ul style="list-style-type: none"> • Implementing pipeline and meter rehabilitation works, including investing in GIS mapping to enable detection of water leakages. • Piloting smart meters that can enable automatic meter reading, regulate, and record flow and pressure at their location and replace all the malfunctioning consumers meters.
REDUCING LEVELS OF EXISTING AND UNCERTAIN DEBTS	
<p>Short-term measures:</p> <ul style="list-style-type: none"> • Seeking clarity on inherited obligations from Water Services Boards and working with WASREB and county government on addressing this. 	<p>Medium to long-term measures:</p> <ul style="list-style-type: none"> • Negotiating for the restructuring of repayment schedules and tariff structures to accommodate uptake of new debt to implement new projects, which could potentially improve their financial performance.

POLICY GUIDANCE AND EXTERNAL SUPPORT TO WSPS

Short-term measures:

- **Facilitating discussions between the WSPs and the county and national government** to develop strategies to improve timely payment by public institutions. Public institutions contribute significantly to receivables, and while WSPs cannot disconnect sensitive institutions like hospitals, WASREB could provide valuable support in managing dialogue between WSPs and these institutions.
- **Providing WSPs with technical support to develop cost diagnostic tools** that will help assess the cost-benefit of investing in network rehabilitation and or solar pumping systems. Also provide risk-sharing mechanisms (e.g. guarantees) to reduce the risk to commercial lenders and encourage investment in cost-reduction projects.
- **Providing WSPs with technical support to develop tools** that can analyze revenue collection balances as well as improve collection and management systems.

Medium to long-term measures:

- **Engaging the National Treasury, county, and national governments** to develop clear policies and guidelines on how to deal with bad debts.
- **Partial financing the roll-out of automated collection systems** and develop or revamp their credit and write-off policies.
- **Supporting WSPs to conduct feasibility studies, which will enable them to successfully make investments on projects to improve NRW.** These studies would focus on strategic locations to place the meters. The support could also include providing catalytic funding for such investments and help build the capacity of WSPs' staff in conducting analysis to derive meaningful insights from GIS mapping data and managing GIS mapping software
- **Facilitating commercial financing in the sector** by continuing to provide banks and other lenders with risk sharing mechanisms such as credit guarantees, or subsidies that reduce a portion of the utilities' burden of debt repayment.
- **Providing technical support to commercial lenders** to demystify the structure and operations of utilities and boost their confidence and willingness to invest in the WASH sector, as well as structure appropriate financial instruments for utilities.



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