ZIPAR
Zambia Institute for Policy Analysis & Research

SCALING THE EUROBOND DEBT WALL

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THE LONG AND SHORT OF THE EUROBOND DEBT

The writing is on the wall - Zambia is at a high risk of debt distress: The country risks defaulting on repaying the principal amounts of the three Eurobonds due during 2022-2027. A default could lead to exclusion from the international capital markets, a dented reputation which would culminate into a decline in Foreign Direct Investments and reduced credit to the private sector and credit rating downgrades. This would ultimately result in an economic contraction which would affect future payments and further compounding the default. Government has to pay back US$750 million in 2022, US$1 billion in 2024 and US$1.25 billion over 2025-2027. Between 2018 and 2022, Government will spend about US$237.4 million per annum in interest payments towards the three Eurobonds – this annual amount is about the same as the entire social protection budget in 2017.

Policy measures have been put in place to manage the debt, but they seem inadequate: The measures include a debt management strategy that will guide borrowing decisions in the medium term. The Government has also signalled its intensions to set up a sinking fund and/or refinance the debt – essentially replacing the old loans with a new loan offering different, perhaps more favourable, terms. To set up the sinking fund, Government intends to set aside K100 million in 2018, K800 million in 2019 and K3.97 billion in 2020. But setting up the fund requires an excess of K6 billion per annum between 2018 and 2022. No clear indication has been given with regard to when refinancing will be considered. So the plans put in place may not be adequate to pay back the Eurobonds.

Government should not wait until it is too late: In order to meet the principal and interest payments on the three Eurobonds, Government needs to start the strategies for paying back the Eurobonds sooner rather than later. Government has already lost time as a pay-back plan should have been instituted for the Eurobonds as soon as they were issued. But without any budget surpluses, and with foreign financing having somewhat dried up, Zambia has to look to more domestic resource mobilisation to raise the funds needed to pay back the Eurobonds.

Government's previous attempts to set up a sinking fund failed, citing budget constraints: Between 2018 and 2027, it is inevitable that Government has to pay back about US$4.8 billion in principal and interest payments. So where will such a colossal sum of money come from? The following are some practical options that Government could consider:

- *Government should take advantage of the surging copper price to build a reserve fund*. Copper price projections show that Government only anticipated the prices to hit US$6,000/mt in 2020. Having recently breached the US$7,000/mt, mineral royalties are being charged at 6% as per the 3-tier mining tax regime. The extra funds raised from mineral royalties beyond the price of US$6,000/mt (potentially K1 billion in 2018) can be channelled to the sinking fund account.

- *Government needs to rationalise infrastructure spending*: Based on Government's commitment not to start new infrastructure projects, acritical examination of the 2018 Estimates of Revenue and Expenditure revealed that that there are some infrastructure projects that were not in the 2017 Budget. For starters, Government could forego the K1.8 billion earmarked for unspecified road projects which it plans to borrow from various financiers or creditors.

- *Government could then issue a Government Bond of the same amount foregone for unspecified road projects to put into the sinking fund in 2018*. Though domestic borrowing reduces the foreign exchange risk, it crowds out private sector investment and increases the cost of borrowing. We therefore urge deepening of the local currency capital markets.

- *A local bond for small investors could be issued to widen domestic creditor sources*: This will help mitigate the risks associated with domestic borrowing. One way could be to develop a bond market for small investors as has been done in Kenya using mobile phone technology. With mobile money transactions valued at K2.8 billion in 2016, the potential to tap into small investors exist. By offering attractive tax-free return on their investment, Government could potentially raise at least a quarter of the mobile money transaction (or K700 million) from small investors by tapping into the mobile money market. Through the mobile money platform, Government should explore options for investors to buy and sell these bonds using already existing infrastructure on the Lusaka Securities Exchange via their smart phones or basic features phones.

- *Government should appoint an independent fund manager:* To ensure transparency, accountability and minimise the risk of fungibility as was the case in Mozambique where "Tuna" bonds were diverted to military equipment, Government should disburse the initial funds (the K3.5 billion to be potentially raised from extra copper proceeds, Government bonds and small investors) to a fiduciary agent, as is the case in Gabon and Cameroon, who will in turn purchase financial assets to build up and manage the ensuing portfolio till maturity.

- *Government could consider refinancing, but there are risks:* Given the challenging macroeconomic conditions, it is unlikely that all the money for the sinking fund will be realised. Refinancing by means of a bond buy-back scheme remains an alternative option that could be used hand-in-hand with the sinking fund. At the time of writing this report, Government was confident of obtaining a bailout package from the IMF, and Standard and Poor's changed its rating outlook from negative to stable. Now is a good time as any to consider buying back part of the principal for the second and third Eurobonds, whose current yield rates are below their respective coupon rates. If Government was to buy back the full value of the second and third Eurobonds at the same tenor of 10 years and the current yield rates, the total potential savings in interest payments will be about US$27.875 million per annum, which is almost equivalent to what has been budgeted for building health infrastructure in the 2018 Budget.

Scaling the
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1 The size of the Eurobond problem

Zambia is at a high risk of debt distress[1] and risks defaulting on the principal repayments on the three Eurobonds due during 2022-2027. A default would lead to exclusion from the international capital markets, a dented reputation which would culminate into a decline in Foreign Direct Investments and reduced credit to the private sector and credit rating downgrades. This would ultimately result in an economic contraction which would affect future payments and further compounding the default[2].

Policy measures have been put in place to manage the emerging debt sustainability risks. These measures include the intention to set up a sinking fund[3] and the publishing of a debt management strategy that will guide borrowing decisions during the period 2017-2019[4].

But setting up the sinking fund has been a challenge. While there are benefits of setting up a sinking fund as outlined in our 2015 report on Eurobonds called "A Cautionary Tale of Zambia's International Sovereign Bond Issuances", previous efforts to set up the sinking fund in 2016 did not materialise[5]. Economic growth has slowed down from highs of over 6% per annum to 2.9% in 2015 and 3.8% in 2016. This has constrained tax revenue collection, the main source of government budget financing. In the absence of a fiscal surplus, the setting up of the sinking fund requires that funds are borrowed. The current financial conditions dictate that any commercial external borrowing in US dollar terms is likely to attract interest rates of about 9%[6], a far-cry from the 5.375% coupon rate on the 2012 debut Eurobond. Further, at around 20%[7], the interest rates from government securities are considerably higher than on external borrowing.

Interest payments on the Eurobonds are huge, and about the same as the entire social protection budget. Between 2017 and 2027, US$5 billion of principal and interest on the Eurobond debt will have to be repaid. Presently, Government pays US$40.3 million on the US$750 million Eurobond, US$85 million on the US$1 billion Eurobond and US$112.1 million on the US$1.25 billion Eurobond. By the end of 2016, Government has paid US$161.2 million in interest on the first Eurobond, US$170 million on the second Eurobond and US$112.1 million on the third Eurobond. That means Government has spent about US$443 million or an annual average of about US$148 million. Between 2017 and 2021, Government will spend about US$237.4 million per annum. This is almost equivalent to the entire social protection budget for 2018. In 2022, when the first bond is due, the payments will be US$ 987.4 million. With the second Eurobond falling due in 2024, a total of US$1.2 billion will have to be paid. The third Eurobond has a three-year amortisation plan; the payments during 2025-2027 will average just under US$500 million per annum. Table 1 shows the principal and interest payments on the three Eurobonds between now and 2027.

Table 1: Principal and Interest Payments on the Three Eurobonds, US$ 'million

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	TOTAL
EURO BOND I	Principa	-	-	-	-	-	750.0	-	-	-	-	-	750.0
	Interest	40.3	40.3	40.3	40.3	40.3	40.3	-	-	-	-	-	241.8
	Sub-total	**40.3**	**40.3**	**40.3**	**40.3**	**40.3**	**790.3**	**-**	**-**	**-**	**-**	**-**	**991.8**
EURO BOND II	Principal	-	-	-	-	-	-	-	1,000.0	-	-	-	1,000.0
	Interest	85.0	85.0	85.0	85.0	85.0	85.0	85.0	42.5	-	-	-	637.5
	Sub-total	**85.0**	**85.0**	**85.0**	**85.0**	**85.0**	**85.0**	**85.0**	**1,042.5**	**-**	**-**	**-**	**1,637.5**
EURO BOND III	Principal	-	-	-	-	-	-	-	-	416.7	416.7	416.7	1,250.1
	Interest	112.1	112.1	112.1	112.1	112.1	112.1	112.1	112.1	112.1	74.7	37.4	1,121.0
	Sub-total	**112.1**	**112.1**	**112.1**	**112.1**	**112.1**	**112.1**	**112.1**	**112.1**	**528.8**	**491.4**	**454.0**	**2,371.0**
Grand total		**237.4**	**237.4**	**237.4**	**237.4**	**237.4**	**987.4**	**197.1**	**1,154.6**	**528.8**	**491.4**	**454.0**	**5,000.3**

Source: Authors' own calculation based on the Eurobond's respective coupon rates.

Just how did Zambia move from a low risk to high risk of debt distress? This paper reveals the unfolding macroeconomic challenges which culminated in the country rapidly accumulating external debt, and particularly Eurobond debt. It also discusses the size and structure of the Eurobond debt and the associated risks, including refinancing risks. We draw on the 2015 report "A Cautionary Tale of Zambia's International Sovereign Bond Issuances"[1] and build on some of the policy options suggested in that report.

1 ZIPAR (2015). A Cautionary Tale of Zambia's International Sovereign Bond Issuances: available at http://www.zipar.org.zm/resource-centre/publications/category/9-working-papers

2 How we got here

Until recently, Zambia was a poster boy for economic growth in Sub Sahara Africa. Following the privatisation of the copper mines in the early 2000s, the rebound in copper prices and associated massive investments contributed to the increase in copper output from 260,000 tonnes at the turn of the century to 771,000 tonnes in 2016[8]. The country's debt reduced significantly following debt forgiveness when it reached the HIPC Completion Point in 2005. During 2006-2012, the economy grew at an annual average of over 6% per annum. The country was reclassified to a lower middle income country and etched its name on the '*Africa Rising*' narrative and was considered part of the 10 African Lions (the fastest growing economies at the time) which were set to outrun the growth rates of the Asian Tigers[9].

The country then succumbed to the lure of the Eurobond. As a result of dwindling concessional resources coupled with strong investor demand from developed countries, and the decline in the international price of copper which had peaked in 2011 following a slowdown in demand in China, Government joined the bandwagon of other developing countries to diversify its financing sources by resorting to commercial borrowing from external markets – hence the issuance of the first sovereign bond in 2012.

But soon after this issue, the road started to get bumpy around 2013 mainly due to the decline in coper prices. Copper prices, which declined by 8.6% in 2012, declined further in 2013 by 6.6%. This price fall, coupled with changes in the mining tax regime, contributed to reduced foreign exchange inflows, mounting trade and fiscal deficits in Zambia. Economic growth which was 7.6% in 2012, decelerated to 5.1% in 2013, 4.7% in 2014 and 2.9% in 2015. The particularly notable economic slowdown in 2014 and 2015 were because copper prices dropped by 11.1% and 13.6%, respectively. This prompted the authorities to go back to issue the second Eurobond in 2014 and the third in 2015.

The international copper prices do not, however, tell the whole story. As early as 2011, "inadequate electricity supply and operational constraints" were cited as reasons for a decline in copper output in that year[10]. The World Bank first called attention to the looming electricity supply crisis in Zambia as far back as 2008[11]. This came to a head in 2015 exacerbated by low water levels in the nation's dams given the fact that hydropower accounts for 98% of the country's total electricity output. The deteriorating energy situation contributed to severely reduced output and productivity in the nation's manufacturing factories and other businesses and increased costs as firms and households had to find alternative strategies to cope with the crisis.

On the fiscal side, in 2013, there was a very large expansion in the fiscal deficit which was mostly driven by a swelling of the wage bill. This was as a result of wage increases and a reform of the pay scale. Personal emoluments as a share of GDP breached the "8% psychological barrier" and reached 8.2% of GDP in 2013, and jumped further to 11.1% of GDP in 2014.

The swelling of the public sector wage bill was accompanied by increases in other spending, particularly agriculture and energy subsidies. In its quest to prioritise public infrastructure and its rehabilitation, the Government's spending on non-financial assets – mainly investments in road infrastructure - doubled to 6.7% of GDP in 2013 from 3.4% of GDP in 2011. While the Government planned to spend K2.5 billion in 2013, the actual spending increased to K3.6 billion[12]. Despite not budgeting for fuel subsidies, the Government spent K1.6 billion on the subsidies in 2013. It continued to spend more than the allocated budget on the Farmer Input Support Programme and the Food Reserve Agency's strategic food reserves. During the 2013/2014 agricultural season, the Government purchased more maize than the planned 500,000 strategic food reserves thereby putting more pressure on the Treasury (instead of the approved K1 billion, Government ended up releasing K1.5 billion[13]).

Closely related to the issue of unplanned expenditure is the perceived over-pricing of infrastructure projects without due regard to debt sustainability. While there is need to address the infrastructure gaps, Government has often been criticised for procuring goods and services for infrastructure at exorbitant costs casting doubt on the project appraisal, selection and procurement processes. For the first Eurobond, the 2013 Auditor General's report suggested a "business as usual" and imprudent use of the Eurobond proceeds[14]. Other than boosting construction activity, the debt-financed and often poorly- managed infrastructure investments have resulted in the build-up of debt which may soon become unsustainable.

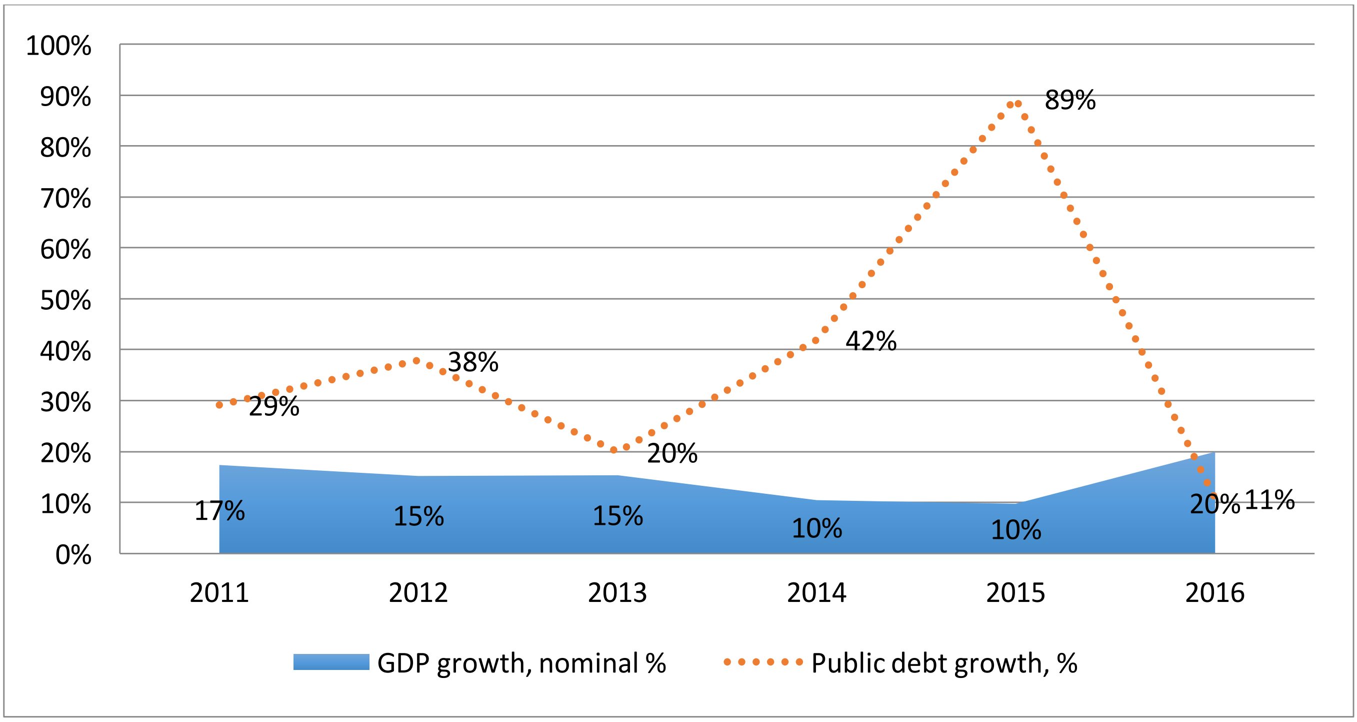
All this economic malaise was manifested in the performance of the Kwacha, Zambia's currency, which weakened sharply against the major convertible currencies. Being import-dependent, the prices of most consumer goods and services sky-rocketed leading to an inflation spiral. Inflation increased from 7.7% in September 2015 to

21.1% by December 2015. It peaked at 22.9% in February 2016 before slowing down to single digit by December 2016[15]. These and other factors shaped the performance of the Zambian economy leading to slow economic growth which hit a trough of 2.9% in 2015 - the slowest growth since the 1990s. An economist estimated that the electricity supply constraints would result in a 16% reduction in the estimated 2015 nominal GDP[16] . Indeed, about US$6 billion was wiped from the nominal GDP in 2015 when nominal GDP which stood at US$27.2 billion in 2014 reduced to US$21.2 billion in 2015[17].

The decline in copper prices during 2014-2016 resulted in lower export receipts and lower budget revenues, resulting in fiscal and external imbalances. The revenue shortfalls were met by increased borrowing, both from the domestic markets and from abroad. As a result, Zambia's public debt swelled to US$12.5 billion by August 2017; the external debt stock increased to US$7.6 billion by end-August 2017[18].

These slippages have resulted in the country incurring higher-than-planned expenditure which is financed by higher borrowing. Since 2011 when the external debt stock was just under US$2 billion, the country added nearly US$1 billion to the debt stock during each of the last five years. During this period, the growth in total public debt far surpassed growth in nominal GDP – while GDP grew at 15% in nominal terms, public debt grew by 38%[19] as shown in Figure 1. The growth in public debt was particularly highest during 2013-2015 predominantly due to the Eurobond issues. The rapid debt accumulation has also resulted in a surge in interest payments on debt, particularly following the issuing of three Eurobonds during 2012-2015 collectively amounting to US$3 billion largely for infrastructure development.

Figure 1: Comparing nominal growth in GDP and nominal growth in public debt, 2011-2016



Source: World Economic Outlook Database, April 2017

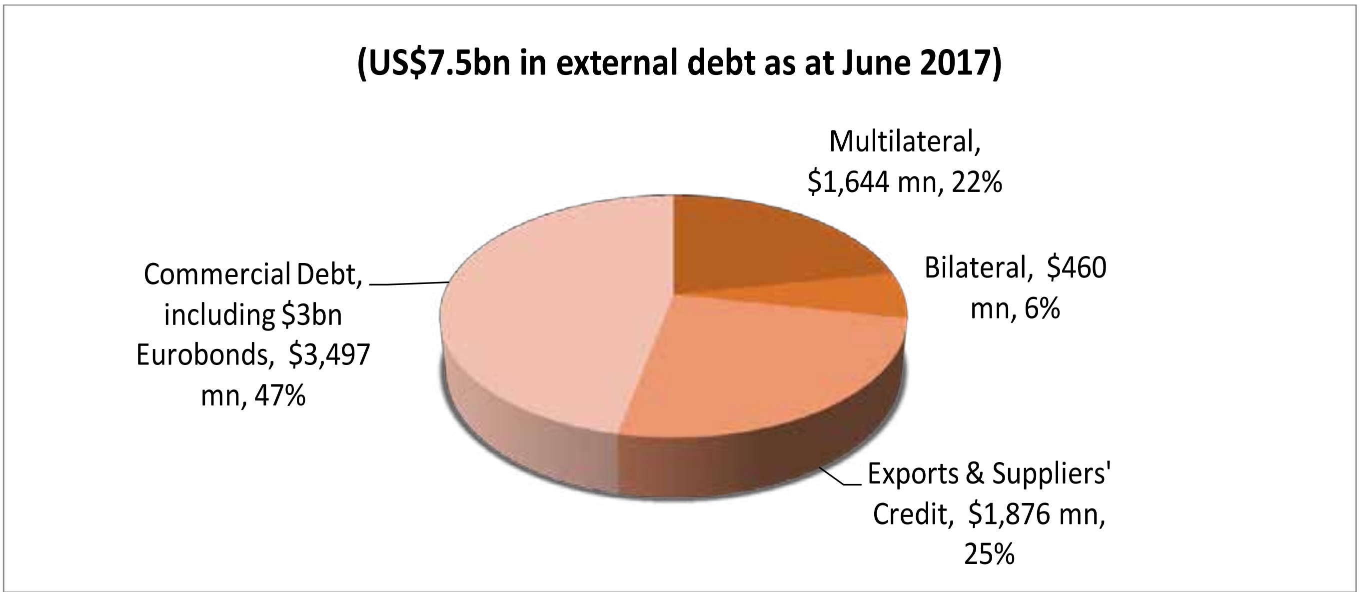
3 Risks associated with Zambia's Eurobond debt problem

Eurobond debt in itself is not a bad thing but the quantum of the debt way is cause for concern as it exposes the country to a number of risks. In this report, we consider some of the major risks.

Risk # 1: Eurobond debt takes up the largest proportion of external debt

The largest portion of our foreign debt is owed to commercial creditors and accounts for nearly half (47%) of the total external debt stock – of this US$3.5 billion commercial debt, US$3.0 billion was Eurobond debt as at June 2017. This composition in which nearly half of the external debt is Eurobond debt is akin to the proverbial 'putting all eggs in one basket'. Unlike bilateral and multilateral concessional or semi-concessional debts, we cannot negotiate for debt forgiveness or relief in the same way that we did under the HIPC programme.

Figure 2 shows who the creditors of the Zambia's external debt are as at June 2017.



Source: Ministry of Finance, 2017 Mid-Year Economic Review

Risk # 2: Eurobonds carry significantly higher borrowing costs than concessional debt does

The three Eurobonds issued by Zambia have an average maturity of 10 years and an average coupon rate of 7.6%. By contrast, the average maturity on non-commercial external debt commitments in 2016 was 27.2 years with a grace period of 7.2 years and an average interest rate of 2.7%. There has been a surge in interest payments on debt following the issuing of three Eurobonds during 2012-2015 collectively amounting to US$3 billion. Interest payments on external debt increased from US$130 million in 2014 to US$173 million in 2015 and then to US$315 million in 2016[20]. The interest payments on external debt are too heavy for a poor country like Zambia to afford. They risk disrupting social infrastructure programme spending since we cannot get debt forgiveness and cannot default without serious litigation, thus exacerbating the poverty situation. The US$315 million spent on interest payments on external debt is about 3 times larger than the allocation to social protection in 2016. Table 2 compares the commercial and non-commercial debt interests, grace periods and maturities.

Table 2: Comparing the interest, grace period and maturities of various debt types

Type of loan	Interest (%)	Grace Period (years)	Maturity (years)
IDA/ADF/IFAD/NDF	0.75	10	40
ADB/IDA Blend /other Multilateral (Fixed rate)	2	5	25
ADB/IDA Blend /other Multilateral (Variable rate)	6 mth LIBOR+/-1.5	5	25
ADB/IDA Blend /other Multilateral	2	5	25
Bilateral	0	15	40
Non-Concessional	5 year US treasury bond +/-7	3	8
Eurobonds	7.6	0	10

Source: Ministry of Finance

Risk # 3: Exchange rate risk still looms ominously on the horizon

Zambia's external debt is exposed to exchange rate risks. External debt is mainly denominated in United States Dollars which accounts for 73% of the total external debt portfolio; Special Drawing Rights account for 14% and the Chinese Yuan accounts for 9%[21]. By definition, Eurobonds are a form of debt security issued by a national Government within a given country and denominated in a foreign currency (usually the United States dollar). Consequently, the depreciation of the Kwacha against the US dollar has had and can have a significant impact on the budget.

Memories of when the Kwacha depreciated by about 70% against the US dollar in 2015 are still fresh. This depreciation had immediate and substantial impacts on the fiscal position as the cost of debt service increased substantially in Kwacha terms. External debt service as a percentage of domestic revenue increased from 5.0% in 2014 to 10.0% in 2015 and, with the commencement of interest payments on the 2015 Eurobond at the beginning of 2016, debt service payments increased to 13.0% in 2016[22].

4 Reheating the recommendations from a similar study

In the October 2017 IMF Executive Board Article IV Consultation with Zambia, the Directors expressed concern at the pace at which public debt, especially external debt, has increased and now put Zambia at high risk of debt distress. This implies that Zambia has moved from a low risk country as reported in the 2014 DSA to a high risk country. This shows that Zambia is more likely to default than it was three years ago when the 2014 DSA was conducted.

In the 2015 study titled "A Cautionary Tale of Zambia's Sovereign Bond Issuances", ZIPAR made three main recommendations which we reconsider in this paper.

1) Address fiscal performance challenges through fiscal consolidation:

The paper advocated for improving revenue mobilisation measures by prioritising the broadening of the tax base through streamlining incentives; reducing exemptions; enhancing SME and informal sector taxation; strengthening tax administration through modernisation and continuous enhancement of the technical capacity of the Zambia Revenue Authority; tax-payer education; curbing of tax evasion; and redesigning of the mining fiscal regime. These measures would improve efficiency in tax administration and thereby increase compliance by the tax payers. The report also called for the need to improve poorly performing tax types such as corporate income tax and domestic VAT.

Some of the measures taken towards this recommendation include the proposed removal of the five-year tax holiday. We also recognise efforts made by Government in 2017 to institute revenue mobilisation measures by strengthening tax administration such as fiscal devices and withholding of VAT at source that have led to the turnaround in domestic VAT collections. Additionally the redesigned mining fiscal regime has helped to improve collections in mining company tax and mineral royalties. However, compliance challenges in tax types such as Pay As You Earn and non-mining company income tax remain.

The paper also called for the need for Government to rein in spending by prioritising expenditure on growth-enhancing programmes with parliament offering proper oversight to root out all forms of unplanned government spending. Considering that capital expenditures are a significant part of the national budget and the implementation of infrastructure projects usually span over a number of years, the paper called for devising a stand-alone long-term infrastructure investment plan to address the historic problems of short-term decision making, uncertainty in funding and financing of infrastructure projects.

While we note that Government has set up an Infrastructure Development Fund for financing of infrastructure projects in the 2018 Budget, fiscal slippages have remained largely unabated due in part to the slow pace of implementing the required pieces of legislation and systems to improve fiscal governance. For example, the revision of the Public Finance Act and the enactment of the Planning and Budgeting Bill have not happened. It is also unclear if the roll-out of the IFMIS and TSA has been completed. Even though slated for 2017, the planned revision of the Loans and Guarantees Act to, among other things, enhance the oversight role of Parliament is set to be tabled in 2018. Having these pieces of legislation in place is central to keeping in check unplanned expenditures and should be top priority going into 2018.

The revision of these pieces of legislation should take into consideration a legal framework that establishes quantitative fiscal rules which are quantitative restrictions on borrowing, fiscal deficit financing, expenditure, etc. Such rules would also protect the Minister of Finance from succumbing to undue political pressures and improve the ability to apply the "new" punitive measures aimed at in the forthcoming Public Finance Act revisions.

2) Institute measures to address the existing institutional and legal bottlenecks in debt management:

With regard to addressing legal and institutional bottlenecks, the report recommended finalising the Medium Term Debt Management Strategy in the short term, reorganising the debt office by functional lines and enhancing Parliament's oversight role over loan contraction. The 2017-2019 Medium Term Debt Management Strategy has since been finalised and will be used as a basis for managing Zambia's debt in the next three years. The Strategy includes efforts to improve debt management capacity by restructuring the debt office to ensure adequate and qualified staffing levels as well as the comprehensive reconciliation of debt data to ensure data credibility.

While the Strategy states that borrowing will be considered after assessment of the effect of borrowing on debt sustainability and limited to projects with high economic return, it is unclear how projects of high economic return will be determined. Further, there are no fiscal rules for limiting public debt. As a result, while international best practice recommends that a country that is a medium performer with regard to the CPIA index, as Zambia is, should not have public debt exceeding 56% of GDP, there is nothing that compels Government to stick to this limit within the legal framework.

To strengthen the implementation of the MTDS, Government plans to present a Bill to repeal the Loans and Guarantees (Authorisation) Act before the National Assembly. The Bill will, among other things, enhance the oversight role of the National Assembly by approving public loans before they are contracted by the Executive in line with the 2016 amended Constitution. This Act should also have a provision for the development of a debt management strategy as well as fiscal rules that will govern borrowing.

3) Consider various available financing options:

Specifically, three options were put on the table: i) either set up a joint sinking fund for the Eurobonds to insulate against future adverse macroeconomic conditions; or ii) refinance the bonds, by obtaining another bond with lower coupon rates and longer maturities; and iii) widening creditor sources to reduce the appetite for Eurobonds.

Despite recent fiscal consolidation measures, the country remains at a high risk of debt distress, underlining the importance of continuing to contain debt interest costs which will account for at least 20% of the total expenditure in the medium term. A key factor affecting the risk of debt distress is the country's vulnerability to exchange rate movements, particularly given its dependence on copper exports and high oil imports.

Given persistently high current account deficits, and the limited availability of concessional loans and volatility of aid, Government has sometimes felt the need to rely on domestic issuance or external borrowing from non-traditional sources to meet expenditure needs. As such during 2017, there has been an increased push for domestic financing through Government securities.

However, the domestic financial market is shallow with limited institutional investors, limiting its ability to smooth the impact of temporary budgetary shocks (which may include weather-related events) that regularly impact the fiscal and balance of payments position, again potentially resulting in unanticipated financing needs. In addition, the impact of rising food and fuel prices poses an additional challenge with respect to containing domestic financing costs, and pressure on the real exchange rate. Overall, this suggests a need to develop access to a diverse range of financing sources to help mitigate potential expenditure volatility.

4.1 Setting up a Sinking Fund

As provided for in the Loans and Guarantees Act of the Laws of Zambia, the Minister of Finance announced the establishment of a Sinking Fund to insulate against future adverse macroeconomic conditions and ensure timely repayment of the principal amounts for the three Eurobonds. Further, the 2017-2019 MTDS states that "In order to deal with the refinancing risk posed by the maturing of the Eurobonds between 2022 and 2027, Government will proactively initiate mechanisms aimed at redeeming the Eurobond debt *including implementing the sinking fund*."

A sinking fund is a fund formed by periodically setting aside money for the gradual repayment of a debt. However, due to the high costs involved, the Sinking Fund has not been actualised or operationalised to date. Suffice to say, Government plans to allocate K100 million to the Sinking Fund in 2018[23], K800.0 million in 2019 and K3.97 billion in 2020[24]. Table 3 considers what will be required to be allocated to the sinking fund in order to pay off each of the three Eurobonds at maturity. The funds for each Eurobond are determined by adding the interest payments to the principal payment divided by the number of years to maturity. For example, setting aside US$190.3 million each year from 2018 to 2022 will enable the country pay off the US$40.3 million interest *plus* US$150 million (US$750 million/5 years) set aside for principal payments.

Table 3: Equal distribution of funds in the Sinking Fund to pay both principal and interest, 2018-2027

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	TOTAL
Eurobond I	190.3	190.3	190.3	190.3	190.3						951.5
Eurobond II	221.8	221.8	221.8	221.8	221.8	221.8	221.8				1,552.5
Eurobond III	225.9	225.9	225.9	225.9	225.9	225.9	225.9	225.9	225.9	225.9	2,258.9
Total	**638.0**	**638.0**	**638.0**	**638.0**	**638.0**	**447.7**	**447.7**	**225.9**	**225.9**	**225.9**	**4,762.9**

This means that between 2018 and 2022, Government needs to set aside US$638 million (or about K6.2 billion) per year towards the Sinking Fund; this will reduce to US$447.7 million during 2023-2024, and US$225.9 million during 2025-2027. Clearly, setting aside such colossal sums of money is a tall order for Government given the many competing needs.

4.1.1 Where will the money come from?

The most favoured option for amortisation of debt is from government revenue if it can be met out of a real revenue surplus. Based on the recent fiscal performance, this is not a viable option as we are unlikely to have a revenue surplus any time soon. Therefore, in the short term, a small part of the revenue receipts need to be earmarked for this fund.

The macroeconomic situation has not greatly improved since the economic dip in 2015 so it is not immediately clear if Government will actually set up the Fund in 2018 in which an allocation of K100 million has been set aside or in 2019 and 2020 as outlined in the 2018-2020 Medium Term Expenditure Framework (MTEF). What is certain is that the principal payments to bondholders and institutional investors in the Eurobond fall due starting in 2022, a year after a general election in 2021.

The prospect of Government putting US$638 million per annum during the next five years in a Sinking Fund seems remote. This is about the same amount that Government plans to spend in interest payments on external debt for 2017 (ZMW6, 497.23 million).

a) **Build reserve fund from mineral royalties:** Copper prices on the international market have surged to breach US$7,000 per metric tonne, their highest since 2014. China is expected to drive half the demand over the next five years. Further, rising electric vehicle sales are expected to play a significant part, as electric vehicles use a substantial amount of copper, such as in lithium-ion batteries and rotary motors. An average pure battery-powered electric car uses about four times the amount of copper than conventional internal combustion engines.

   The current sliding-scale mineral royalty regime is based on the price of copper. According to the 2017 Practice Notes from the Zambia Revenue Authority, mining houses are subjected to a three-tier mineral royalty regime: they pay 4% on the value of production when the price is below US$4,500/metric tonne, 5% when the price ranges between US$4,500 and US$6,000/metric tonne, and 6% when the price is US$6,000/metric tonne and above. To project revenues from mineral royalties, Government used conservative estimates for the average price of copper in the medium term. According to the 2018-2020 Medium Term Expenditure Framework, copper prices in 2017 are expected to average US$5,827/mt, US$5,957/mt in 2018, US$5,991/mt in 2019 and US$6,003/mt in 2020 (The World Bank has similar price projections). That is nowhere near the current prices that have breached the US$7,000/mt mark. Government did not therefore anticipate collecting more than 5% from mineral royalties until 2020.

   It is therefore proposed that Government takes advantage of the surging price and allocate the extra funds raised from mineral royalties beyond US$6,000/mt to the sinking fund account. For the near term, Goldman Sachs, a leading global investment banking, securities and investment management firm, has raised its average 12-month price target to US$7,050/mt from US$5,500/mt[25]. In 2017, Government expects the production of copper to be higher than the 770,000 mt recorded in 2016. Assuming a 10% increase in copper production in 2018, production will increase to 847,000 mt. Priced at US$5,957/mt, and therefore 5% mineral royalty, this would yield mineral royalties worth K2.5 billion. Priced at US$7,050/mt, and therefore 6% mineral royalty, this would yield mineral royalties worth K3.6 billion. Therefore, the extra income of K1.1 billion, which the Government was not anticipating anyway, could be reallocated to the Sinking Fund for 2018. Table 4 illustrates these assumptions.

Table 4: Assumptions on building a reserve fund from mineral royalties

Year	Projected Copper price	Mineral royalty rate	Projected copper production (mt)	Projected copper production value (US$)	Mineral royalty (US$)	Mineral royalty (ZMW)
2018	5,957 (MTEF)	5%	847,000	5,045,579,000	252,278,950	2,522,789,500
2018	7,050 (Goldman Sachs)	6%	847.000	5,971,350,000	358,281,000	3,582,810,000
				925,771,000	106,002,050	1,060,020,500

b) **Tapping into small investors:** Learning from the experience of Kenya (Text Box I), Zambia could develop a bond market for small investors using mobile phones. Target groups should include retirees, small and medium enterprises, schools, churches, workers, traders and individuals. These are the most active on the mobile money platform. The potential is there: in 2016, the volume of transactions processed through the mobile money platform increased by 60.9% to 102,971,002. The value also increased by 13.3% to K2.8 billion. By removing restrictive requirements (high minimum threshold and a bank account), making it very attractive (such as the 10% tax-free interest as is the case in Kenya), and lowering the minimum value to purchase the bonds, the Government could target raising a significant amount of the value of mobile money transactions. A target of, say, 25%, could potentially raise over K700 million in 2018. Government could leverage on the existing infrastructure of the Lusaka Securities Exchange for the small investors to buy and sell these bonds via their smart phones or basic features phone. The coupon could be paid directly to the phone automatically on the maturity dates.

Box I: Kenya opens bond market to small investors

In March 2017, Kenya became the first country in the world to issue a mobile phone-based bond, which can be bought by phone users without the need for them to have a bank account. Investors can use mobile phone networks' financial platforms like M-Pesa to send money and receive interest payments on the M-Akiba bonds, which can be traded in the secondary market on the Nairobi Securities Exchange. Kenya's first such three-year infrastructure bond raised its target of 150 million shillings (about US$1.5 million) within days ahead of the main launch of US$97.1 million in June 2017. Kenya has a vibrant conventional bond market, which the government relies on to raise the bulk of its financial borrowing requirements, but it is pushing through mobile phone bonds to tap into a wider pool of retail investors. Only a few ordinary Kenyans bought traditional government bonds, scared off by the minimum investment of 50,000 shillings and the need for a commercial bank account. Investors can buy the M-Akiba bond for as little as 3,000 shillings (about US$30), earning a tax-free interest of 10%. (Source: Reuters)

c) Rationalising infrastructure spending: Capital projects take up a significant allocation of the national budget. Recognising the pressure that capital outlays put on the Treasury, Government has made a commitment to stick to finishing old projects and not take up new ones. However, a critical look at the 2018 Estimates of Revenue and Expenditure show that there are some infrastructure projects appearing for the first time in 2018. For example, under Head 21 (Loans and Investments), Programme 3101 Road "Infrastructure Upgrade" Activity 700 "Other road projects" is allocated K1.8 billion. These are unspecified road projects to be financed through loans from various foreign donors. This budget line could be postponed to save the K1.8 billion and reduce on the rate of debt accumulation.

d) **Borrowing from Government securities market**: In line with Government policy for increased domestic resource mobilisation, an option to contemplate is to deepen the domestic securities market and consider financing the Sinking Fund from mobilising domestic resources.

In the 2017 Budget Speech, Government set itself to borrow no more than K3.8 billion from the domestic market or below 2% of GDP. However, effective 29th November 2016, before the budget execution for 2017 commenced, Government announced the upward adjustment of tender sizes for Government Securities and the increase in frequency for government bond auctions. The tender size for Treasury bills was increased to K900 million from K700 million and the auction size for Government bonds was increased to K1 billion from K800 million. The frequency of the bond auctions was increased from quarterly to every two months[26]. This has prompted domestic borrowing to increase. Preliminary figures show that by June 2017, Government reached the K3.8 billion target in April and, by June, Government had borrowed about K6.6 billion, with yield rates averaging about 20% during this period[27].

The increased domestic borrowing has demonstrated the fact that the local financial sector is deepening and we are capable of raising funds domestically. The country is capable of raising at least US$1 billion from government securities in 2017. This perhaps explains Government's plan to raise K11.153 billion from domestic resources in 2018 to finance the Budget. With a carefully considered plan put in place, the government securities market can be used to pay back the Eurobonds.

However, concerns have arisen that the increased borrowing is likely to crowd out private sector investment. In the August 2017 Monetary Policy Committee statement, the Bank of Zambia expressed concern that increased reliance on domestic financing of the budget deficit continues to constrain private sector borrowing[28]. Further, domestic borrowing carries significantly higher costs compared to external borrowing. During January to August 2017, the ten-year government bond had yield rates averaging 20.6% while the three Eurobonds averaged 7.7%[29].

Deepening the government securities market provides several benefits including reducing the reliance on foreign borrowing and the risks linked to currency mismatch[30]. However, it is often argued that increased borrowing by Government in the domestic market crowds out private sector investment. The reasoning is that if the Government borrows one Kwacha more from the banking sector, the banks are left with one Kwacha less for the private sector.

Box II: The benefits and costs of deepening government securities market

While high debt levels create a drag on the economy, debt ownership matters: if debt is owned by outside investors it can be subject to a downgrade in the credit rating of the country's debt, and to an increase in interest rates, but if debt is owned by the population, this risk is less likely to materialise.

Consider Japan and Greece, two OECD countries with the highest and most unsustainable debt levels in the world. Japan, which had a gross debt/GDP ratio of 222% in 2015, is not in dire straits, while Greece, with a gross debt/GDP ratio of 182% , is struggling to repay its debt and has defaulted several times. The key is the composition of the debt portfolio in these two countries. Most of Japanese debt is domestic – it is owned by Japanese citizens and banks and is denominated in Yen. So if the value of the Yen falls, the debt is still basically the same. Most of Greece's debt, on the other hand, is held in a currency it has no control over – the Euro. The Germans own most of the Greek debt, so do other EU member states. They also owe the European Central Bank and the IMF. Developing the government securities market will reduce the pressure on having to borrow externally and will help reduce exchange rate risks. Further, issuing longer-term paper would increase average maturity and lower refinancing risk.

However, the cost of creating and deepening a local-currency securities market should also be recognised explicitly. Coupled with this are the direct (interest rates) and indirect (private sector crowding out) costs. As pointed out by the IMF , it is often the case that real interest costs of domestic issuance at longer maturities is high compared to foreign borrowing. At the moment, interest rates and inflation are on a downward trajectory but in the event that Government starts to struggle in meeting its obligations, domestic borrowing can lead to credit rationing and a reduced supply of funds for private investments.

The easing of monetary policy and the deceleration of inflation for the most part of 2017 has resulted in the reduction of yield rates for both treasury bills and bonds. During the first half of 2017, the weighted average Treasury bills yield rates declined to 14.9% from 23.7%, while Government bond yield rates declined to 18.1% from 25.0% . The participation of non-resident investors in Zambia's government securities is likely to wane as they move their money to other markets such as Nigeria and Egypt where the yield rates remain high. Egypt's yield rates on Treasury bills averages 18.1%, while bonds are 15.8% . Nigeria's yield rates on Treasury bills averages 18.8%, while Government Bonds averages 14.9% .

Policy makers should be aware of these costs and risks and consider sequencing of reform measures to minimise them. Deepening government securities markets should be paced carefully and must be based on the market's underlying capacity to absorb the supply of securities. So this measure needs to be supplemented by increased external credit flows otherwise we may end up with the crowding out effect.

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4.2. Refinancing the Eurobonds

It may not be possible to raise all the required funds from setting up a sinking fund. Therefore, refinancing should be considered as part of the options. Sovereign debt refinancing occurs when a country revises or negotiates a revision of a payment schedule for repaying debt. Mechanically, the old loan is paid off and replaced with a new loan offering different terms[36].

Ominously aware of Zambia's increasing risk of default on its external debt and the high debt servicing costs, Government on December 7, 2016, stated that in 2017 Zambia planned to refinance its Eurobonds issued between 2012 and 2015 in order to "reduce [debt service payments] from around 19 percent [of domestic revenues] to somewhere around 15 percent so that the release of resources can be used to support the vulnerable."[37]

The International Monetary Fund's Resident Representative disagreed with the Zambian Government's intention to refinance the bonds in 2017. He said Zambia did not need to rush into refinancing the Eurobonds which would only fall due in 2022, 2024 and 2025-2027 as the timing was not right. "We would caution the government not to tap into the international markets at this time… The financing conditions are pretty tight right now, and it will be very expensive."[38]

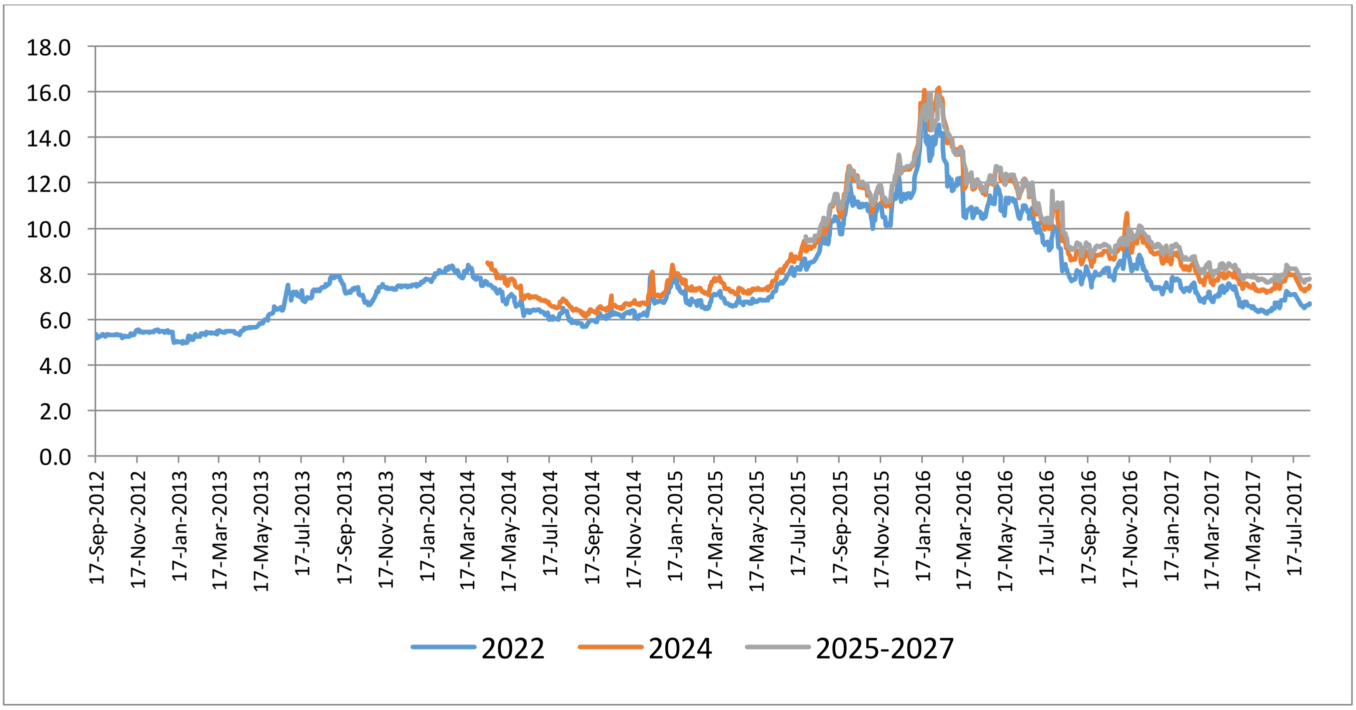
This begs the all-important question:

4.2.1 When is the right time to refinance?

At the time the IMF made the statement not to refinance, the yield rates for the 2022 bond was 8.1%, while for the 2024 bond it was 9.4%. For the 2025-2027 Eurobond, the yield rate was 9.7%. Perhaps, that was not the right time to borrow. But since then, the yield rates have been on the decline and by early August 2017, the yield rates had gone down to 6.6% for the first Eurobond, 7.3% for the second and 7.7% for the third Eurobond. If Zambia was to go into the market now to refinance, the country would make some good savings on the second and third Eurobonds.

Figure 3 shows the declining yield rates during the last few months. Further, Government is confident of obtaining a bail-out package from the IMF, and credit rating agencies have changed their outlook of the country from negative to stable. Now is a good time as any to refinance specifically through a bond buy-back scheme. If the IMF bail-out falls through, the country's outlook may become negative and yields may inch up higher.

Figure 3: Yield rates on Zambia's international sovereign bonds



Source: Bloomberg

A number of developing countries have refinanced their sovereign debt in the last decade and either made some significant savings or extended the maturity of the bonds, without having to necessarily wait for the "right time". Ghana, which has undergone similar macroeconomic challenges as Zambia in the last few years, is such an example.

The Ghanaian Cabinet and Parliament approved the measure to progressively retire its US$750 million Eurobond issued in 2007 with a package of "buyback and refinancing strategies as far back as 2013 to avoid retaining the full value to maturity in October 2017. Back then, Ghana faced significant "roll-over" risks since it did not set up a plan to repay the principal sum under the bond's half-yearly "interest-only" payment or "bullet" structure.

Ghana issued a ten-year US$750 million 8.5% coupon rate Eurobond in 2007, and its second US$750 million 7.875% ten-year Eurobond in 2013. Soon after the second issue, Ghana launched an invitation to holders of the existing 2017 bond to exchange their holdings for up to US$250 million of the new 7.875% notes due in 2023. The difference in interest costs between the Ghana 2017 bond (8.50%) and the new Ghana 2023 Bond (7.875%) translated into an estimated annual savings of US$1.375 million. In 2015, Ghana issued a 15-year US$1 billion bond, albeit at a high coupon rate of 10.75%, with a US$400 million World Bank guarantee, to refinance its existing debt, in particular the 2007 Eurobond set to mature in 2017. At maturity in October 2017, it also used US$200 million of its oil and gas resources from a Sinking Fund account, as well as proceeds from previous bond issues to "buyback" or redeem the last instalment of the 10-year Sovereign Bond to pay back the bond and thus avoid a default[39].

If Zambia's second and third Eurobonds were to be refinanced now for the same amounts, and assuming the coupon rate will be around the prevailing yield rates on the respective bonds, the difference in interest costs between the 2014 bond (8.50%) and a new ten year bond (at 7.3%) would translate into an estimated annual saving of US$12 million. Similarly, for the third Eurobond (8.97%), a new bond with the same amount and structure would potentially result into an estimated saving of US$15.875 million. The total potential savings will be US$27.875 million, almost equivalent to what has been budgeted for health infrastructure in the 2018 Budget. Additionally, refinancing will extend the maturity of the bonds.

However, the risk of refinancing remains heightened. This is the risk that the debt may be refinanced at an unusually high cost or, in extreme cases, cannot be refinanced at all. Zambia is presently in negotiations with the IMF to obtain a 3-year credit facility of up to US$1.6 billion. A decision to refinance its Eurobonds before an IMF deal may send signals of desperation to the market. Further, failure to obtain an IMF loan is likely to erode investor confidence. Both scenarios are likely to raise the cost of borrowing beyond what is currently obtaining in the market.

4.3 Appointing an agent to manage the fund/refinancing

To get rid of pervading weaknesses surrounding the internal management of any sinking fund (fungibility and lack of accountability and transparency), there has been a distinctive shift in global financial markets towards appointing an external fiduciary agent to oversee the Fund[40]. This could be the Bank of Zambia or an autonomous sinking fund management agency such as the ones set up in Cameroon[41] and Gabon[42].

Government should disburse the funds to the agent who will in turn purchase financial assets to build up and manage the ensuing portfolio till maturity. If the legal provisions of each issue of the Eurobonds allow, the agent, on behalf of Government, could buy back amounts of the Eurobond debt on the secondary market when opportunities arise. At maturity date, the sinking fund will have brought the principal to completion, and the fiduciary agent must pay it off to bondholders. The fiduciary's performance must be rated by a reliable and independent risk-rating company. The sinking fund, as well as its fiduciary relationship towards investors, will come to an end after paying off the principal and any adjustments needed for the settlement of the final balance.

The need to have an independent fund manager is reinforced by what happened in Mozambique. In April 2016, Mozambique went to the market to restructure US$850 million debt, which was issued in 2013 to finance Tuna Fishing but used by the Government to buy military equipment instead. The new bond worth US$727 million was issued at 10.5% with principal repayment at the maturity date of 2023. In January 2017, Mozambique defaulted on a US$59.8 million interest on the Eurobond.

The fund manager will have individuals with complementary skills required for managing a sinking fund and refinancing. These include expertise in economics, statistics, banking and finance, investments, stocks and bonds and corporate legal matters, among others.

The choice of this option far outweighs the associated costs.

5 Conclusion and recommendations

Zambia has moved from a moderate risk of debt distress in 2014 to a high risk of debt distress in 2017. How did we end up like this? The rush to narrow the infrastructure gaps, the decline in copper prices, electricity constraints, and fiscal slippages led to high fiscal deficits which were financed by increased external borrowing. Commercial debt, which carries significantly higher costs than concessional debt, now contributes almost half of the external debt; fiscal deficits remain persistently high and the Zambian economy is still undiversified and therefore continues to be vulnerable to commodity price shocks. The likelihood of a default on debt payments is more ominous than it has ever been.

In order to mitigate these risks, we revisited the recommendations made in the 2015 report "A Cautionary Tale of Zambia's International Sovereign Bond Issuances" which are still relevant to the present situation. We had made three main recommendations concerning fiscal consolidation, addressing legal and institutional bottlenecks and considering various financing options, including the setting up of a sinking fund and refinancing the bonds when the timing and market conditions are right.

We recognise efforts made by Government to institute revenue mobilisation measures by strengthening tax administration and redesigning the mining fiscal regime, as well as the turnaround in domestic VAT collections. We also recognise the setting up an Infrastructure Development Fund for financing of infrastructure projects as well as the planned revision of the Loans and Guarantees Act to, among other things, enhance the oversight role of Parliament.

We note that the 2017-2019 Medium Term Debt Management Strategy has since been finalised and used as a basis for managing Zambia's debt in the next three years. We also welcome Government plans to present a Bill to repeal the Loans and Guarantees (Authorisation) Act before the National Assembly to aid the implementation of the MTDS.

We also note Government's planned provision for the actualisation of a sinking fund in the MTEF 2018-2020. However, we are of the view that the provisions made for the sinking fund are inadequate and come a little too late.

For a start, K100 million has been allocated to the sinking fund in 2018. This should be supplemented by additional funds through a combination of extra proceeds from mineral royalties, domestic borrowing and rationalising of infrastructure investments. These measures could potentially raise up to K3.5 billion in 2018. We therefore recommend the following:

- *Government should take advantage of the surging copper price to build a reserve fund*. Copper price projections show that Government only anticipated the prices to hit US$6,000/mt in 2020. Having recently breached the US$7,000/mt, mineral royalties are being charged at 6% as per the 3-tier mining tax regime. The extra funds raised from mineral royalties beyond the price of US$6,000/mt (potentially K1 billion in 2018) can be channelled to the sinking fund account.
- *Government needs to rationalise infrastructure spending*: Based on Government's commitment not to start new infrastructure projects, acritical examination of the 2018 Estimates of Revenue and Expenditure revealed that that there are some infrastructure projects that were not in the 2017 Budget. For starters, Government could forego the K1.8 billion earmarked for unspecified road projects which it plans to borrow from various financiers or creditors.
- *Government could then issue a Government Bond of the same amount foregone for unspecified road projects to put into the sinking fund in 2018*. Though domestic borrowing reduces the foreign exchange risk, it crowds out private sector investment and increases the cost of borrowing. We therefore urge deepening of the local currency capital markets.
- *A local bond for small investors could be issued to widen domestic creditor sources*: This will help mitigate the risks associated with domestic borrowing. One way could be to develop a bond market for small investors as has been done in Kenya using mobile phone technology. With mobile money transactions valued at K2.8 billion in 2016, the potential to tap into small investors exist. By offering attractive tax-free return on their investment, Government could potentially raise at least a quarter of the mobile money transaction

(or K700 million) from small investors by tapping into the mobile money market. Through the mobile money platform, Government should explore options for investors to buy and sell these bonds using already existing infrastructure on the Lusaka Securities Exchange via their smart phones or basic features phones.

- *Government should appoint an independent fund manager:* To ensure transparency, accountability and minimise the risk of fungibility as was the case in Mozambique where "Tuna" bonds were diverted to military equipment, Government should disburse the initial funds (the K3.5 billion to be potentially raised from extra copper proceeds, Government bonds and small investors) to a fiduciary agent, as is the case in Gabon and Cameroon, who will in turn purchase financial assets to build up and manage the ensuing portfolio till maturity.

- *Government could consider refinancing, but there are risks:* Given the challenging macroeconomic conditions, it is unlikely that all the money for the sinking fund will be realised. Refinancing by means of a bond buy-back scheme remains an alternative option that could be used hand-in-hand with the sinking fund. At the time of writing this report, Government was confident of obtaining a bailout package from the IMF, and Standard and Poor's changed its rating outlook from negative to stable. Now is a good time as any to consider buying back part of the principal for the second and third Eurobonds, whose current yield rates are below their respective coupon rates. If Government was to buy back the full value of the second and third Eurobonds at the same tenor of 10 years and the current yield rates, the total potential savings in interest payments will be about US$27.875 million per annum, which is almost equivalent to what has been budgeted for building health infrastructure in the 2018 Budget. However, the country is likely to face refinancing risks if it decides to refinance before the successful negotiation of an IMF loan, or if it fails to obtain the loan.

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