WORLD BANK GROUP

July 2023

ZAMBIA

JOINT WORLD BANK-IMF DEBT SUSTAINABILITY ANALYSIS

Approved by:

Asad Alam and Manuela Francisco (IDA);
Costas Christou and Jarkko Turunen (IMF)

Prepared by the staff of the International Development Association (IDA) and the International Monetary Fund (IMF).

ZAMBIA: JOINT BANK-FUND DEBT SUSTAINABILITY ANALYSIS	
Risk of external debt distress	In debt distress
Overall risk of debt distress	In debt distress
Granularity in the risk rating	Unsustainable
Application of judgment	No

Zambia remains in debt distress. The accumulation of external arrears continued in 2022 and reached 11 ½ percent of GDP. Despite significant fiscal adjustment, in the absence of a signed agreement on a deep debt restructuring, Zambia is in overall and external debt distress, and public debt remains unsustainable. Under the baseline, all four external debt burden indicators would breach their indicative thresholds by large margins through the medium term.[1] The authorities have reached an agreement with official bilateral creditors on a debt treatment under the G20 Common Framework and are in ongoing discussions towards signing an MOU. They also have a credible restructuring strategy in place to treat commercial creditors on comparable terms. Under an alternative scenario, where the treatment agreed with the official bilateral creditors is applied to the baseline, and commercial claims are treated on comparable terms, debt would be assessed to be sustainable.

[1] Zambia's debt-carrying capacity is currently rated as weak based on the composite indicator (CI). The composite indicator is calculated using data from the April 2023 WEO and the latest available 2021 CPIA.

PUBLIC DEBT COVERAGE

1. **The coverage of Zambia's public and publicly guaranteed (PPG) debt for the purpose of the DSA includes the following:** i) central government domestic and external debt, including $1.5 billion of arrears to external suppliers (fuel and contractors) and central government guaranteed external debt; ii) the nonguaranteed external debt of Zambia Electricity Supply Company (ZESCO), the fiscally important state-owned utility;[2] and iii) the domestic and external arrears of the same enterprise. Central bank external debt (including outstanding Fund credit), together with the debt of social security funds guaranteed by the central government,[3] are also included in the coverage.

2. **The DSA incorporates non-guaranteed SOE debt in the baseline.** In accordance with the LIC-DSF Guidance Note, given the significant fiscal risks posed by ZESCO, its non-guaranteed external debt ($93 million at end-2022)[4] and outstanding payables to domestic ($1.33 billion at end-2022) and external ($139 million at end-2022) independent power producers (IPPs), are included in the DSA perimeter. The authorities are taking steps to restore ZESCOs' financial viability over the medium term. As progress is made, the inclusion of its non-guaranteed debt in the DSA debt perimeter will be reassessed. The authorities reported no other outstanding non-guaranteed external debt of nonfinancial SOEs that staff consider to pose a contingent fiscal risk warranting inclusion in the DSA. Local governments in Zambia currently do not have the capacity to borrow without the central government's guarantee. The authorities confirmed that no extrabudgetary funds with outstanding debt currently exist.

3. **The 2021 General SDR allocation has been incorporated into the DSA in line with the staff guidance note.**[5] The authorities are using the SDR allocation (approved by the IMF in August 2021) to finance the budget over 2022-24;[6] in line with their plans, they used 50 percent of the allocation, and plan to use 25 percent in each of 2023 and 2024.

4. **The DSA is conducted on a residency basis. In line with the LIC-DSF Guidance Note, while recognizing the underlying measurement challenges, nonresident holdings of domestic-currency debt (as recorded by the authorities) are treated as external debt for the purpose of this DSA.** The stock of such holdings at end-2021 was about 54.1 billion kwacha or $3.2 billion (28 percent of outstanding domestic-currency government securities), equivalent to 12.8 percent of GDP. End-December 2022 data indicates this stock had declined to 47.4 billion kwacha or about $2.6 billion (23 percent of outstanding domestic-currency government securities).

---

[2] The government guaranteed debt of ZESCO and other SOEs has always been included in the DSA and is now also part of the authorities' officially published debt metric. ZESCO's contingent risks to the sovereign relate to its persistent and large cash deficits. See Guidance Note on the Bank-Fund Debt Sustainability Framework for Low Income Countries, 2018, https://www.imf.org/en/Publications/Policy-Papers/Issues/2018/02/14/pp122617guidance-note-on-lic-dsf

[3] As of end-December 2022, this debt consists solely of an outstanding government guaranteed external loan to the Public Service Pension Fund of $52.7 million.

[4] ZESCO generated sufficient revenues in 2022 to continue servicing its nonguaranteed external debt.

[5] See Guidance Note for Fund Staff on the Treatment and Use of SDR Allocations, August 2021, https://www.imf.org/en/Publications/Policy-Papers/Issues/2021/08/19/Guidance-Note-for-Fund-Staff-on-the-Treatment-and-Use-of-SDR-Allocations-464319.

[6] Equivalent to about $1.3 billion

Text Table 1. Zambia: Public Debt Coverage and Magnitude of Contingent Liability Tailored Stress Test

	Subsectors of the public sector	Sub-sectors covered
1	Central government	X
2	State and local government	
3	Other elements in the general government	
4	o/w: Social security fund	X
5	o/w: Extra budgetary funds (EBFs)	
6	Guarantees (to other entities in the public and private sector, including to SOEs)	X
7	Central bank (borrowed on behalf of the government)	X
8	Non-guaranteed SOE debt	X

	The country's coverage of public debt	The central government plus social security, central bank, government-guaranteed debt, non-guaranteed SOE debt			
		Default		Used for the analysis	Reasons for deviations from the default settings
2	Other elements of the general government not captured in 1.	0	percent of GDP	0.0	
3	SoE's debt (guaranteed and not guaranteed by the government) 1/	2	percent of GDP	12.0	ZCCM-IH purchase of Mopani from Glencore.
4	PPP	35	percent of PPP stock	1.4	
5	Financial market (the default value of 5 percent of GDP is the minimum value)	5	percent of GDP	5.0	
	Total (2+3+4+5) (in percent of GDP)			18.4	

1/ The default shock of 2% of GDP will be triggered for countries whose government-guaranteed debt is not fully captured under the country's public debt definition (1.). If it is already included in the government debt

BACKGROUND ON DEBT

5. In the 2022 DSA,[7] **Zambia's debt was assessed as in debt distress.** This followed a default on their sovereign Eurobonds in 2020 and the accumulation of arrears to both official bilateral and other commercial external creditors. By end-2022, interest and principal arrears on external debt reached $4.2 billion, or 15 percent of GDP. Note the accumulation of arrears in 2022 only relates to claims in the debt restructuring perimeter. To help address their debt sustainability challenge, the authorities requested a debt treatment under the G20 Common Framework (CF) in January 2021.

6. Following the staff-level agreement on a new ECF-supported program with the IMF in December 2021, the Official Creditor Committee (OCC) under the CF was formed in June 2022. The OCC delivered the necessary financing assurances to support the program request in July 2022. This was followed by a series of technical workshops with OCC creditors and a further five meetings of the OCC. In parallel, the authorities engaged in good faith negotiations with its Eurobond holders, facilitated by the bondholder committee that was established in July 2020, and other external private creditors.

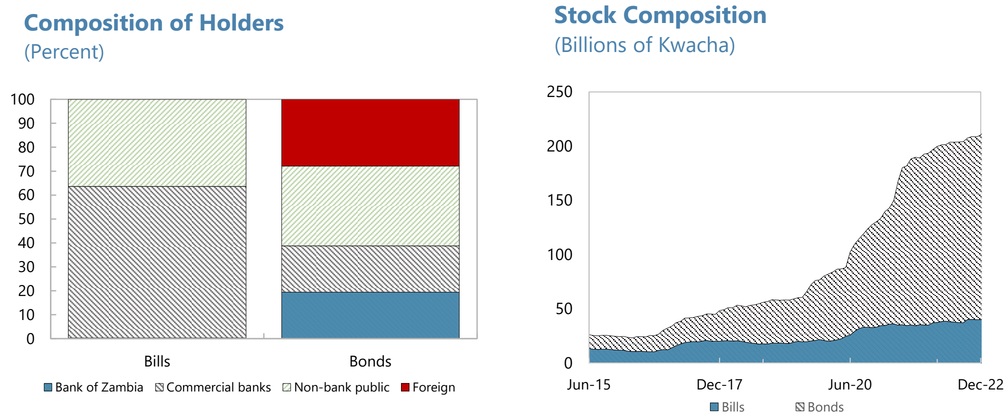
7. Zambia's external PPG debt increased to $20.9 billion in 2022.[8] This reflected close to $1.17 billion in new foreign-currency denominated external debt disbursements to the central government—principally by the IMF and World Bank—and an increase in interest arrears on foreign currency-denominated external PPG debt of about $397 million in 2022. The stock of expenditure arrears due to non-resident suppliers (fuel and contractors), together with the stock of ZESCO's arrears to external IPPs was broadly unchanged at $1.7 billion at end-December 2022. However, the stock of non-resident holdings of domestic-currency debt declined significantly to $2.6 billion by end-2022. In parallel, while further interest arrears (of $62 million) also accumulated on government guaranteed external debt, ZESCO's non-guaranteed external debt declined by $42.5 million as it generated sufficient revenues in 2022 to continue

[7] Zambia: Request for an Arrangement Under the Extended Credit Facility-Press Release; Staff Report; Staff Supplement; Staff Statement; and Statement by the Executive Director for Zambia (imf.org). The 38-month ECF-arrangement was approved on August 31, 2022.

[8] The creditor composition of external debt (see text Table 1) has been adjusted to reflect the representation of official creditors in the OCC that some claims backed by an official export-credit agency should be classified as commercial claims. Given this re-classification, commercial creditors share in total external debt has increased from 4½ percent to 9¾ percent in this DSA update.

servicing it. As a result, external PPG debt ended the year about $896 million higher (see text Table 1). In parallel, the outstanding stock of domestically-issued government securities stood at 210 billion kwacha at end-2022 (or 44 percent of GDP), up from 193 billion a year ago. With domestic budget arrears declining, and ZESCO domestic IPP arrears remaining flat, total PPG debt ended 2022 at $33.4 billion (or 119.6 percent of GDP).

Text Figure 1. Profile of Central Government Domestically Issued Securities (end-December 2022)



Sources: Zambia authorities and IMF staff estimates.

8. Zambia remains shut out from international capital markets and funding pressures in the domestic debt market have risen. After a period of elevated spreads that averaged 6,400 since the beginning of 2023, spreads on Zambia's Eurobonds dropped to 2,332 as of June 23, 2023, following the announcement of an agreement with the OCC on a debt treatment. However, this remains, amongst the highest in EM and frontier markets. Reflecting a combination of tighter global financial conditions and uncertainty around the debt restructuring process, non-resident investors withdrew from the domestic debt market in 2022—they did not reinvest proceeds of maturing holdings, engaged in some secondary market sales, and did not provide new inflows of funds to the market. As a consequence, the share of non-resident holders of domestic debt stood at 23 percent as at end-2022, down from a peak of around 29 percent earlier in the year (see Text Figure 1). The lack of these flows led to a drop in demand at bond auctions and domestic yields began to trend upwards, after a period of rapid decline post-SLA announcement. Financing risks remain elevated consistent with the DSF market-financing module, although the signal of this module is currently less relevant given Zambia is currently shut-out from international markets (Figure 5).

Text Table 2. Zambia: Public and Publicly Guaranteed Debt Stock—Creditor Composition and Contracted Debt Service[1] (as of end-2022)

	Debt stock (end of period) [2]			Debt service [3]			
	2022			2023	2024	2023	2024
	(In US$)	*(Percent total debt)*	*(Percent GDP)* [10]	*(In US$)*		*(Percent GDP)*	
Total	33,365	100.0	119.6	5,474	6,453	18.4	21.7
External foreign-currency debt	18,340	55.0	65.7	2,458	3,335	8.3	11.2
Multilateral creditors[4]	3,568	10.7	12.8	140	149	0.5	0.5
IMF	186	0.6	0.7				
World Bank	2,078	6.2	7.4				
ADB/AfDB/IADB	886	2.7	3.2				
Other Multilaterals	418	1.3	1.5				
o/w EIB	195	0.6	0.7				
o/w IFAD	136	0.4	0.5				
Bilateral creditors[5]	6,327	19.0	22.7	1,058	1,031	3.6	3.5
Paris Club	1,477	4.4	5.3	302	291	1.0	1.0
o/w: Israel	473	1.4	1.7				
o/w: UK	238	0.7	0.9				
Non-Paris Club	4,850	14.5	17.4	756	740	2.5	2.5
o/w: China	4,174	12.5	15.0				
o/w: India	331	1.0	1.2				
Eurobonds	3,517	10.5	12.6	451	1,408	1.5	4.7
Commercial creditors	3,235	9.7	11.6	809	746	2.7	2.5
Fuel arrears	721	2.2	2.6	n/a	n/a	n/a	n/a
Arrears to external contractors	832	2.5	3.0	n/a	n/a	n/a	n/a
ZESCO external IPP arrears	139	0.4	0.5	n/a	n/a	n/a	n/a
Domestic-currency debt	15,025	45.0	53.9	3,016	3,118	10.1	10.5
Held by residents, total	8,993	27.0	32.2	2,572	3,375	8.6	11.3
Held by non-residents, total	2,621	7.9	9.4	445	320	1.5	1.1
T-Bills	2,211	6.6	7.9	2,017	2,017	6.8	6.8
Bonds	9,403	28.2	33.7	999	1,101	3.4	3.7
Loans	-	-	-				
Domestic budget arrears and ZESCO domestic IPP arrears	3,412	10.2	12.2				
Memo items:							
Collateralized debt[6]	2,428	7.3	6.8				
o/w: Related							
o/w: Unrelated							
Contingent liabilities	n/a	n/a	n/a				
o/w: Public guarantees							
o/w: Other explicit contingent liabilities[7]							
SOE guaranteed external debt[8]	1,517	4.5	4.2				
SOE non-guaranteed external debt (ZESCO)[8]	93	0.3	0.3				
Total external PPG debt[9]	20,961	62.8	58.7				
Nominal GDP	29,742						

1/ Based on end-December 2022 data from the authorities (before the application of the debt treatment) and IMF staff estimates. It includes arrears on principal and interest. It does not include any penalty fees or interest on the arrears.
2/ Includes direct debt to central government, SOE guaranteed debt and non-guaranteed debt of ZESCO
3/ Contracted debt service; creditor classification according to the OCC representation.
4/ "Multilateral creditors" are simply institutions with more than one sovereign as a shareholder and may not necessarily align with creditor classification under other IMF policies (e.g. Lending Into Arrears).
5/ Includes loans to central government and loans backed by guarantee from an official export-credit agencies, except Sinosure backed commercial claims.
6/ Based on latest available data, as of end-December 2022, there was around $2.5 billion of disbursed external foreign-currency debt (inlcuding non-guaranteed debt of ZESCO) with some form of security or escrow arrangement that could be considered as collateralized debt, including debt with a government guarantee or third-party (exporter) guarantee as security. Almost all this debt is in arrears and, where the security or escrow provides for a claim on funds in a specific account, the authorities have reported zero balances in those accounts. The exception is the non-guaranteed external debt of ZESCO which is collateralized with receivables and which is being serviced. Debt is collateralized when the creditor has rights over an asset or revenue stream that would allow it, if the borrower defaults on its payment obligations, to rely on the asset or revenue stream to secure repayment of the debt. Collateralization entails a borrower granting liens over specific existing assets or future receivables to a lender as security against repayment of the loan. Collateral is "unrelated" when it has no relationship to a project financed by the loan. An example would be borrowing to finance the budget deficit, collateralized by oil revenue receipts. See the joint IMF-World Bank note for the G20 "Collateralized Transactions: Key Considerations
7/ Based on information received, there are no such contingent liabilities. Includes other-one off guarantees not included in publicly guaranteed debt (e.g. credit lines) and other explicit contingent liabilities not elsewhere classified (e.g. potential legal claims, payments resulting from PPP arrangements).
8/ Reflected in external foreign-currency public debt in this table.
9/ Total PPG external debt comprises total external foreign-currency debt, domestic-currency debt held by non-residents, fuel arrears, arrears to external contractors, and ZESCO non-guaranteed external debt and arrears.
10/ The debt-to-GDP ratios are calculated from the value in national currency by converting outstanding debt in US dollars at eop exchange rate, and nominal GDP at average period exchange rate.

Sources: Zambian authorities and IMF staff calculations.

MACROECONOMIC ASSUMPTIONS

The macroeconomic framework underpinning this DSA is consistent with the baseline in the First Review of the ECF program. Key changes from the previous DSA include a slight upward revision to real GDP growth, a slightly stronger current account balance on average, and a modestly weaker exchange rate.

9. Recent developments. Greater macroeconomic stability, boosted by the anticipation of the ECF-arrangement and World Bank supported programs, led to robust growth in 2022. Despite supply-chain and weather-related disruptions in the mining sector real GDP is estimated to have grown by 4.7 percent. Fiscal performance was strong with a 6.2 percentage point improvement in the primary balance (on a commitment basis), leading to surplus of 0.9 percent of GDP. In parallel, the primary balance on a cash basis improved by 0.5 percentage points of GDP to a deficit of 1.6 percent of GDP. This reflected in large part the removal of fuel subsidies and a reduction in the cost of the agricultural subsidy program. Electricity tariffs have also been increased to bring them more into line with cost-reflective levels. While external pressures re-emerged in the last quarter of 2022, they have subsided with news of the agreement on a debt treatment with the OCC, leading to a moderate appreciation in the exchange rate. Progress in public financial management, including to avoid the accumulation of new expenditure arrears, and debt management, with enhanced transparency on debt statistics and the enactment of the 2022 Public Debt Management Act, - The mandate and independence of the Bank of Zambia (BoZ) has also been strengthened through the 2022 Bank of Zambia Act.

10. Growth. Growth assumptions for 2022-27 have been revised slightly upward from the previous DSA, including to reflect the robust performance of 2022. Reflecting the perceived improvement in the business environment, Zambia Development Authority (ZDA) reported a significant increase in interest in direct investment opportunities in 2022. The authorities are close to finding a new strategic partner for Mopani Copper Mines, and hope to resolve the situation with Konkola Copper Mines in the near future, both of which would boost copper and cobalt production significantly. SMEs will benefit from new initiatives such as the World Bank-supported Off-Grid Loan Facility to support private sector renewable energy projects, especially to help electrify rural villages. Growth is expected to average around 4.7 percent over 2023-32, a slight improvement from the previous DSA. Structural, fiscal, and institutional reforms are projected to build the foundation for sustained growth over the longer run that is driven by a competitive private sector. For example, removal of market distortions should bring financial sustainability to the energy sector (electricity and petroleum) and, the removal of agricultural export bans should support a more productive agriculture sector. Business license simplification will reduce the costs that new firms face when entering markets. The reorienting of expenditure away from inefficient subsidies and toward investments in education, health, and social protection will help build human capital. Decentralization of public services to the communities is anticipated to increase the efficiency of spending and aid reforms to increase budget credibility and fight corruption

11. Inflation. Inflation projections remain broadly unchanged from the previous DSA. At the end of 2022, inflation dropped to 9.9 percent from the 24.6 percent peak in August 2021, despite the impact of the reintroduction of VAT and excise on fuel and the exchange rate depreciation in the final quarter of the year. The significant fiscal consolidation over 2022, the confidence impact of the new ECF program and the appreciation of the kwacha over the first nine months of 2022 helped stabilize inflation below 10 percent from May 2022. The Bank of Zambia tightened monetary conditions—increasing both the monetary policy rate and reserve requirements on deposits—in response to emerging inflationary pressures in the beginning of 2023, helping keep inflation capped at 10 percent Over the medium term, inflation is projected to stabilize around the mid-point of the Bank of Zambia target band, broadly unchanged from the previous DSA.

12. External. The outlook for the external position remains broadly unchanged from the previous DSA, with a significant improvement expected over the program period. The current account deteriorated by $1.1bn in 2022 on account of a significant decline in the trade balance. Export growth was lower than projected in the ECF-request on account of low copper prices in 2022H2 and weaker copper production. Economic recovery, high fuel and energy prices did lead to an increase in imports by $1.8bn, though $800mn less than projections in the ECF-request. The abrupt exit of non-resident holders from the domestic debt market led to a sharp decline in the financial account, despite an improvement in net FDI flows to $338mn, though still $737mn short of the projected level in the ECF-request. Despite these pressures, the Bank of Zambia was able to increase the level of gross reserves. Preliminary 2023 data show a 15 percent increase in trade flows through April over 2022 levels. The external position is projected to improve relative to historic levels following the debt restructuring and the continued implementation of policies under the program that will reduce the deficit, improve business confidence, and attract further foreign direct investment. For instance, ongoing efforts to streamline business licenses, strengthen the legal framework for public-private partnerships, and address key governance weaknesses and corruption vulnerabilities.[9] The current account balance is expected to register an average of 7.9 percent surplus for the period 2023-2032, a slight improvement from the previous DSA. The improved current and financial accounts are expected to support the build-up of FX reserves to the targeted five months of prospective imports by the end of the program.

13. Fiscal. Fiscal performance is expected to continue improving under the program. Building on the success in delivering a sharp consolidation in 2022, and to continue helping place public debt on a declining path, the primary balance (commitment basis) is targeted to further improve to a surplus of 3.3 percent of GDP by 2025 (an additional 2.5 percentage point adjustment) underpinned by further efforts to improve spending efficiency and by the authorities' medium-term revenue mobilization plan. Revenues (excluding grants and adjusted for arrears on VAT refunds) are projected to increase to 21.8 percent of GDP by 2025, compared to their 2019 (pre-COVID) level of 19.6 percent of GDP. This includes the impact of eliminating tax expenditures (implicit subsidies) on fuel worth about 1.2 percentage points of GDP, together with other measures to broaden the tax base and strengthen compliance. Overall, this is projected to translate into a further adjustment of 3.4 percentage points in the primary balance (cash basis). After the end of the program, the authorities are expected to maintain prudent fiscal policies.

14. Financing. Financing assumptions are guided by the debt conditionality under the program. Looking ahead, domestic borrowing will remain a key source of financing for Zambia, though concessional borrowing—primarily from the IMF, World Bank and African Development Bank—will comprise an important part of the financing mix (Text Figure 2). External financing during 2022-25 will come from the disbursements of $1.5 billion on contracted but undisbursed priority project loans, $1.4 billion of new financing from the World Bank (including grants), $1.3bn financing from the IMF, and $300 million from the African Development Bank.[10] Under the program, Zambia will not undertake any non-concessional

[9] As outlined in the government-endorsed IMF Diagnostic Report on Governance and Corruption – Zambia, January 2023.

[10] New financing from the World Bank refers to new operations approved since the staff-level agreement (SLA) was reached with Fund staff in December 2021 on the Extended Credit Facility. Beyond the IDA20 replenishment cycle (July 2022 through June 2025), IDA financing figures are based on assumptions. Actual financing will depend on IDA replenishment volumes, country performance, and other operational factors. Delivery of DPFs will be dependent on an agreement with the government on a strong program of policy and institutional reforms, and adequacy of the macroeconomic policy framework.

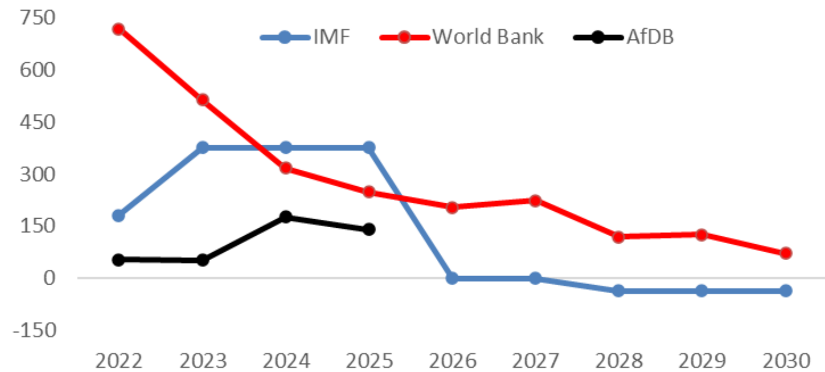
borrowing unless an exception is granted in line with the IMF's Debt Limits Policy or World Bank Sustainable Development Finance Policy. Access to international markets is assumed to be lost through the medium term, and non-residents participation in the domestic debt market is expected to remain limited, including due to the authorities' efforts to limit their participation in new issues over the program period in order to protect external debt sustainability.

Text Table 3. Zambia: Macro and Debt Assumptions

	2020	2021	2022	2023	2024	2025	2026	2027
	(Annual percentage change)							
Real GDP growth								
Program DSA	-2.8	3.6	3.0	3.9	4.1	4.5	4.7	5.0
Current DSA	-2.8	4.6	4.7	3.6	4.3	4.5	4.7	5.0
Inflation								
Program DSA	15.7	20.5	13.0	9.6	7.7	7.2	7.0	7.0
Current DSA	15.7	20.5	11.0	10.6	9.6	7.5	7.0	7.0
GDP deflator								
Program DSA	13.7	23.4	8.4	8.7	7.3	6.8	6.8	6.8
Current DSA	13.7	27.6	8.6	12.1	9.9	7.3	6.9	6.5
	(Percent of GDP)							
Primary deficit (on commitment basis)								
Program DSA	10.1	6.0	-0.7	-2.2	-2.7	-3.2	-3.2	-3.2
Current DSA	10.1	5.8	-0.8	-2.0	-2.9	-3.3	-2.4	-2.6
Non-interest current account balance								
Program DSA	16.8	11.3	5.2	4.4	6.4	6.8	6.9	8.9
Current DSA	15.0	13.3	3.5	7.5	9.7	10.8	10.8	11.1
Net FDI inflows								
Program DSA	-1.1	0.0	4.0	4.0	4.9	5.0	5.1	5.1
Current DSA	1.0	0.7	1.7	2.1	2.8	3.7	4.5	4.5
	(Percent)							
Avg. nominal interest rate on external debt								
Program DSA	4.2	3.0	4.3	4.3	4.3	4.4	4.5	4.5
Current DSA	5.8	4.8	3.0	3.7	3.7	3.9	3.9	4.0
	(Millions of dollars)							
Project loan disbursements (incl. guarantees)								
Program DSA	1424	522	468	445	363	265	200	377
Current DSA	1424	522	396	505	363	279	237	324

Source: IMF staff projections.

Text Figure 2. Net Financing from IFIs, 2022–30[1/]
($ millions)



1/ This figure only reflects financing flows on which there are explicit financing assurances. There are good prospects that AfDB net flows will continue beyond the end of the IMF-supported program.

Sources: IMF and World Bank staff estimates.

15. The restructuring strategy is presented as an alternative scenario of the DSA, as discussions with private sector creditors are still ongoing. Official creditors represented by the G20 Common Framework OCC have reached an agreement on a debt treatment for Zambia that is in line with the financing assurances provided in June 2022. This agreement entails a fully quantified two-stage approach subject to a review clause to be evaluated at the end of the program period. The elements of the review will be agreed with the authorities during the drafting of the MoU. Conditioned on the review, a state-contingent treatment will be triggered linked to Zambia's debt carrying capacity (DCC). In the base case that is consistent with Zambia remaining assessed as having a weak DCC, official creditors will significantly lengthen the maturity of their claims and reduce their interest costs consistent with the parameters of the ECF-arrangement. If the assessment of Zambia's economic performance and policy making warrants an upgrade to a medium DCC, the upside treatment will be triggered and there will be some acceleration of principal payments and higher interest payments to official creditors. This treatment will remain anchored in the LIC-DSF and meet the corresponding DSA thresholds at medium DCC, i.e., the PV of external debt-to-exports at "substantial space to absorb shocks" threshold at 108 percent by 2027 and maintain the external debt service-to-revenue ratio at or below the 18 percent threshold over 2026-31.

16. Private creditors are expected to deliver a treatment on comparable terms with the OCC. In line with the provisions of the G20 Common Framework, comparable treatment will be assessed taking into account the change in debt service, the NPV loss, and the change in the duration of the claims.[11]

17. At the operational level, debt sustainability will also be supported by the debt conditionality under the IMF program, which stipulates a zero ceiling on new non-concessional external borrowing

[11] As described in the Common Framework term sheet adopted by the G20 and endorsed by the Paris Club in November 2020.

during the program period, as well as a ceiling on the PV of new concessional external borrowing. The IT on the present value of new external borrowing is set in line with the expected borrowing plan for 2022-23 agreed at program approval, with the envisaged new borrowing from IFIs to be signed in the second half of 2023 rather than in 2022 (see Text Table 4). In 2024, no new external borrowing is expected to be contracted, except for World Bank and AfDB financing, and issuances on the domestic market.[12]

18. Downside risks to the outlook. Uncertainties around the outlook for copper prices and production is a key source of risk.[13] Rainfall variability also remains a key risk to Zambia's sustainable growth, affecting critical sectors like agriculture, electricity and mining, and also likely to aggravate external vulnerabilities, although the authorities' reform agenda aims to mitigate these risks over time. The materialization of these risks would increase debt vulnerabilities.

19. Upside risks. These stem mainly from a faster global and domestic growth, a speedy resolution of the remaining aspects of the debt restructuring, greater confidence effects, including from stronger and broader reform momentum, and higher copper production and prices.

20. Realism tools suggest that baseline scenario projections are reasonable. The DSA realism tools (Figure 3, 4) highlight the large size of the programmed fiscal adjustment relative to outcomes in other LIC programs, and the likelihood of a diminished growth contribution from public investment over the forecast period. However, the risk that the adjustment proves infeasible is mitigated by the demonstrated track record of the authorities to take needed measures.

Text Table 4. Zambia: Summary Table of Projected Borrowing Program[1]

January 1, 2023 to December 31, 2023

PPG external debt	Volume of new debt in 2023		PV of new debt in 2023 (program purposes)		PV of new debt in 2023 (including negative GEs)	
	USD million	Percent	USD million	Percent	USD million	Percent
By sources of debt financing	**175.0**	**100**	**71.9**	**100**	**71.9**	**100**
Concessional debt, of which	**175.0**	**100**	**71.9**	**100**	**71.9**	**100**
IFI debt	175.0	100	71.9	100	71.9	100
Other	0.0	0	0.0	0	0.0	0
Non-concessional debt, of which	**0.0**	**0**	**0.0**	**0**	**0.0**	**0**
By Creditor Type	**175.0**	**100**	**71.9**	**100**	**71.9**	**100**
IFI	175.0	100	71.9	100	71.9	100
Other	0.0	0	0.0	0	0.0	0
Uses of debt financing	**175.0**	**100**	**71.9**	**100**	**71.9**	**100**
Infrastructure	175.0	100	71.9	100	71.9	100
Memo Items						
Indicative projections						
Year 2	**0.0**		**0.0**		**0.0**	

1/ In line with the TMU definition of the debt ceilings, it does not include new financing from IMF, World Bank, AfDB and projected issuances of local-currency debt to non-residents

Source: IMF staff calculations based on authorities' reported data.

[12] The accumulation of new external debt through the issuance of new debt in the domestic market will be constrained by the authorities' decision to limit the participation of non-residents in primary auctions to five percent of issuance.

[13] The baseline is based on futures market prices, which suggest prices will remain at recent elevated levels, and are consistent with the assumptions under underpinning the April 2023 IMF World Economic Outlook.

COUNTRY CLASSIFICATION AND DETERMINATION OF SCENARIO STRESS TESTS

21. **Zambia's debt-carrying capacity under the Composite Indicator (CI) rating is assessed as weak, unchanged from the previous DSA.**[14] The latest CI score of 2.59 remains below the cut-off for medium debt-carrying capacity of 2.69,[15] so the assessment of debt sustainability is based on the thresholds for a weak debt-carrying capacity country.

Text Table 5. Zambia: Composite Indicator and Thresholds

Debt Carrying Capacity	Weak

Final	Classification based on current vintage	Classification based on the previous vintage	Classification based on the two previous vintages
Weak	Weak 2.59	Weak 2.38	Weak 2.59

Note: Until the April 2019 WEO vintage is released, the two previous vintages ago classification and corresponding score are based solely on the CPIA per the previous framework.

APPLICABLE	
EXTERNAL debt burden thresholds	
PV of debt in % of	
Exports	140
GDP	30
Debt service in % of	
Exports	10
Revenue	14

APPLICABLE	
TOTAL public de	
total public	35

Calculation of the CI Index

Components	Coefficients (A)	10-year average values (B)	CI Score components (A*B) = (C)	Contribution of components
CPIA	0.385	3.145	1.21	47%
Real growth rate (in percent)	2.719	3.311	0.09	3%
Import coverage of reserves (in percent)	4.052	30.879	1.25	48%
Import coverage of reserves^2 (in percent)	-3.990	9.535	-0.38	-15%
Remittances (in percent)	2.022	1.604	0.03	1%
World economic growth (in percent)	13.520	2.856	0.39	15%
CI Score			2.59	100%
CI rating			Weak	

New framework			
	Cut-off values		
Weak	CI <	2.69	
Medium	2.69	≤ CI ≤	3.05
Strong	CI >	3.05	

22. **The DSA includes stress tests that follow standardized and tailored settings.** The standardized stress tests indicate breaches of all debt thresholds for an extended period (Table 3 & 4 and Figures 1 & 2). Zambia has a significant reliance on commodity exports that triggers the commodity price shock, but the natural disasters shock does not apply. Given significant Eurobond issuance in the past, the market financing tool applies. The contingent liabilities shock is calibrated to Zambia, with an additional 10 percent of GDP added to the standard SOE shock to account for risks stemming from the debt of SOEs, as well as potential contingent risks arising from the 2020 acquisition of the Mopani mine by ZCCM-IH, a majority state-own investment holding company.[16] The rest of the components under the contingency liability shock are kept at their default settings.

[14] The composite indicator is calculated using data from the April 2023 WEO and 2021 CPIA (the latest available).

[15] The import coverage of reserves projections, which have an important contribution to the CI score (see text table) may be overestimated due to data quality and possible misclassification of items that should be recorded more accurately as imports rather than elsewhere in the financial account (e.g., in the case of multinational companies, intragroup provision of services). The ongoing technical assistance with the authorities is expected to address this weakness in the balance of payments statistics over the program period.

[16] Sensitivity analysis conducted by staff at the time of Staff Level Agreement in December 2021 showed that the Mopani mine would be financially viable even if copper prices fell to $7,070 per metric tonne and copper output only reached 86,000

EXTERNAL DSA ASSESSMENT

23. **Under the baseline, all four external debt burden indicators breach their respective thresholds** (Figure 1). The debt service-to-revenue ratio soars to a peak of 60 percent in 2024 given the large amount of debt service falling due and the relatively low revenue base, and remains well above the 14 percent threshold until 2033 (averaging about 34 percent in 2023-32). Similarly, the debt service-to-exports ratio peaks at around 27 percent in 2024 and only falls to the threshold of 10 percent in 2029 and breaches again in 2031 (averaging about 16 percent over 2023-32). On the stock side, the PV of PPG external debt-to-GDP averages about 55 percent from 20232-32, falling below the prudent threshold of 30 percent only in 2039,[17] while the PV of PPG external debt-to-exports indicator also breaches the 140 percent threshold in 2023 (averaging about 118 ½ percent over 2023-32).

24. **The thresholds for all four external debt indicators are breached by large margins under stress tests.** The standardized exports shock is the most extreme for all external debt indicators, except the debt service to revenues ratio for which the one-time depreciation shock is the most extreme. Under the standardized exports shock, the PV of PPG external debt-to-exports ratio peaks at 308 percent in 2025 and remains well above the threshold throughout the medium and long term. Under the one-time depreciation shock, the debt service-to-revenues ratio peaks at 76 percent in 2024 and remains well above the threshold throughout the entire projection period. The market financing tool also points to significant vulnerabilities debt vulnerabilities in Zambia, although the relevance of this signal is reduced given Zambia is currently shut-out from international markets.

PUBLIC DSA ASSESSMENT

25. **Under the baseline, the benchmark for the PV of total PPG debt-to-GDP is breached throughout the medium and long term (Figure 2).** After peaking at 112 percent in 2022, the ratio remains elevated (at an average of about 78 percent from 2023-32), before finally falling below the threshold in 2036. The most extreme shock for this indicator is also the standardized exports shock, which peaks at 116 percent in 2025. Similarly, the combined contingent liabilities shock, which accounts for risks from SOE debt, PPPs and the financial sector, peaks at 115 percent in 2024 and remains above the threshold throughout the long-term forecast horizon.

RISK RATING AND VULNERABILITIES

26. **Zambia remains in debt distress, and debt is deemed unsustainable in the absence of a debt treatment in line with program parameters.** This DSA update is based on the macroeconomic framework underpinning the first review, which entails significant fiscal adjustment and incorporates the

metric tonnes. In that scenario, it would take ZCCM-IH until 2040 to repay the debt due to Glencore. However, the net cash flow would remain marginally positive after royalties and capex. Note the authorities have been actively seeking a strategic investor for Mopani that would reduce any residual risks significantly.

[17] Note the measurement of this indicator is complicated by the fact that the authorities are currently working on rebasing GDP; however, this work is not expected to be concluded until end-2025 at the earliest.

expected new financing of around $3.0 billion from the IMF, World Bank (including grants), and the African Development Bank together over 2022-25.[18] Nevertheless, large financing gaps will remain over this period and would need to be filled through a debt restructuring operation in line with program parameters.

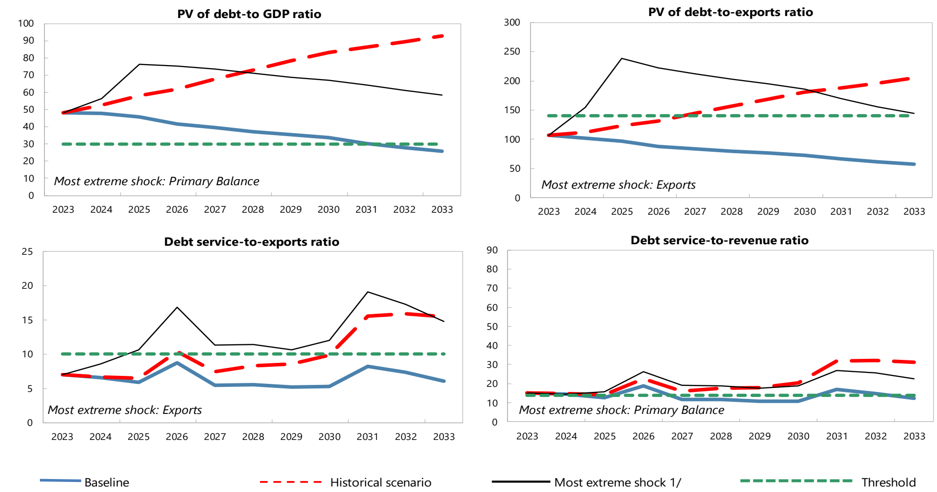
27. In the alternative restructuring scenario that takes into account the treatment agreed with the OCC, Zambia would remain in debt distress due to arrears to private creditors. However, taking into account the authorities' continuing good faith negotiations with private creditors on a treatment on comparable terms, Zambia's debt would be assessed as sustainable on forward-looking basis. Under the restructuring scenario that incorporates the delivery of the state-contingent debt relief agreed within the framework of the G20 Common Framework, two alternative baselines might materialize depending on the evaluation of Zambia's DCC at the end of the program period:

- Under the scenario where Zambia remains assessed as weak DCC, the base case treatment will prevail (Text Figure 3). Under this alternative baseline, the PV of external debt-to-exports falls steadily below the "substantial space to absorb shocks" threshold of 84 percent by 2027, while the debt service-to-revenue ratio drops below the 14 percent threshold by 2025 and remains at 14 percent on average over 2026-31. Therefore the targets under the IMF-supported program are met, and Zambia's debt would be assessed as sustainable with a moderate risk of debt distress over the medium term, despite the protracted and large breach of the threshold by the PV of PPG external debt-to-GDP ratio that averages about 39 percent from 2023-32, and only falls below the threshold of 30 percent in 2032. In parallel, the external debt service-to-exports indicator would remain well below its threshold, averaging 6½ percent over 2026-31.

- Under a scenario where the Zambia's economic performance and policy-making improves such that Zambia's debt-carrying capacity is upgraded to medium, the upside treatment will be triggered. Under this alternative baseline, risks to Zambia's deb sustainability are mitigated by the steady decline of the PV of external debt-to-exports that falls below the "substantial space to absorb shocks" threshold of 108 percent by 2027, while the external debt service-to-revenue ratio remains at 18 percent on average over 2026-31. Again, this mitigates the protracted and large breach of the threshold by the PV of PPG external debt-to-GDP ratio indicator, which averages about 45 percent from 2023-32, and only falls below the threshold of 40 percent in 2030. In parallel, the external debt service-to-exports indicator remains well below its threshold, averaging 8½ percent over 2026-31. Again, all external debt burden indicators do decline to levels consistent with Zambia reaching a moderate risk of external debt distress over the medium term (see Text Figure 4).

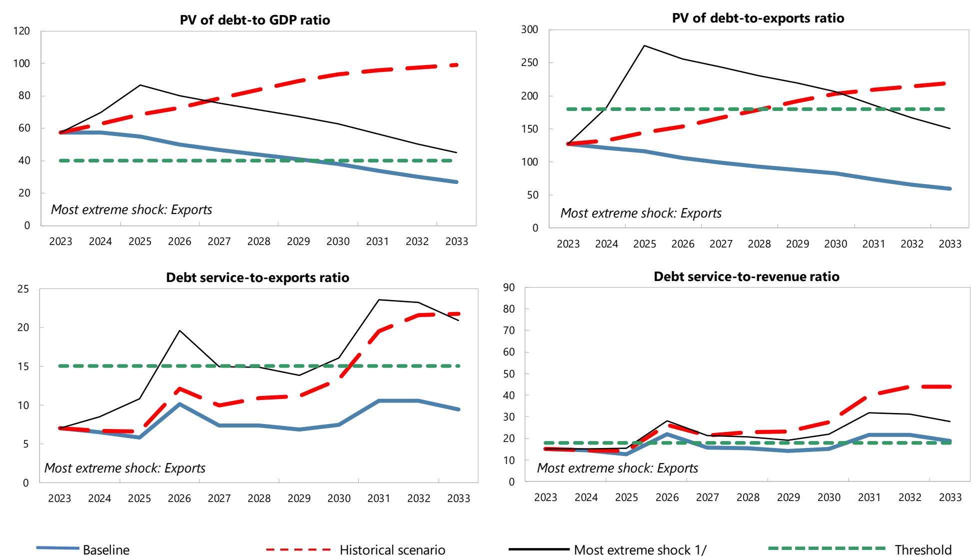
[18] Total financing from the World Bank amounts to about $2.1 billion over 2022-25. New financing from new operations that were approved after the SLA and which contribute to reducing the BoP financing gap amounts to $1.4 billion out of which about $278 million will be provided in grants.

Text Figure 3. Alternative Baseline, Base Case Treatment – Indicators of PPG External Debt, 2023–2033[1/]



1/ Includes the agreed OSI, and a treatment of private claims that is consistent with comparability of treatment.
Sources: IMF staff projections based on the main elements of the agreed OCC treatment.

Text Figure 4. Alternative Baseline, Upside Case Treatment–Indicators of PPG External Debt, 2023-2033[1/]



1/ Includes the agreed OSI, and a treatment of private claims that is consistent with comparability of treatment.
Sources: IMF staff projections based on the main elements of the agreed OCC treatment.

28. Risks to the debt outlook are significant. This DSA is predicated on the Zambian authorities' commitment under their program to undertake credible steps to restore medium-term debt sustainability, including to restore macroeconomic stability and achieve higher economic growth. Delays or slippages in fiscal policy adjustment, or external shocks that impact the macroeconomic framework, could significantly impact the debt trajectory. These risks are mitigated by the authorities' track record of implementing robust policy reforms since coming to power in August 2021.

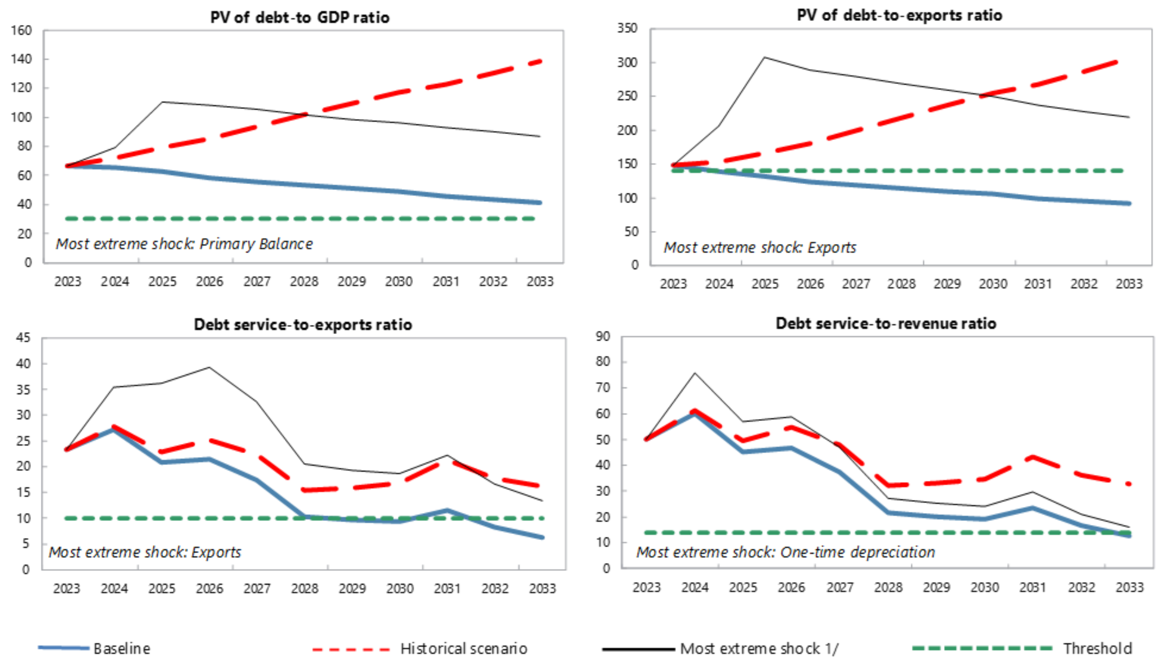
29. Other reforms to support debt sustainability following the debt restructuring are also underway or in the pipeline and will further mitigate risks. To strengthen the institutional framework, the authorities adopted a new Public Debt Management Act in August 2022.[19] This provides greater oversight on the contracting of debt. This will be supported by ongoing efforts to strengthen public financial management more broadly and to strengthen debt transparency, as well as plans to modernize and strengthen capacity of the debt management unit.

AUTHORITIES' VIEWS

30. The authorities shared staff's assessment of their debt sustainability and emphasized their commitment to restore debt sustainability by seeking a restructuring of their external debt. The authorities highlighted that an agreement has been reached with the OCC on a debt treatment consistent with the parameters of the IMF-supported program, and work on signing the MOU is advancing. The authorities also emphasized their commitment to reach restructuring agreements with other external creditors on comparable terms and consistent with IMF-program parameters. The authorities agreed that once these agreements are implemented debt sustainability would be restored.

[19] The adoption of the Public Debt Management Act was supported under the IMF program and IDA's Sustainable Debt Financing Policy.

Figure 1. Zambia: Indicators of Public and Publicly Guaranteed External Debt Under Alternatives Scenarios, 2023–33



Customization of Default Settings	Size	Interactions
Tailored Stress		
Combined CL	Yes	
Natural disaster	n.a.	n.a.
Commodity price 2/	No	No
Market financing	No	No

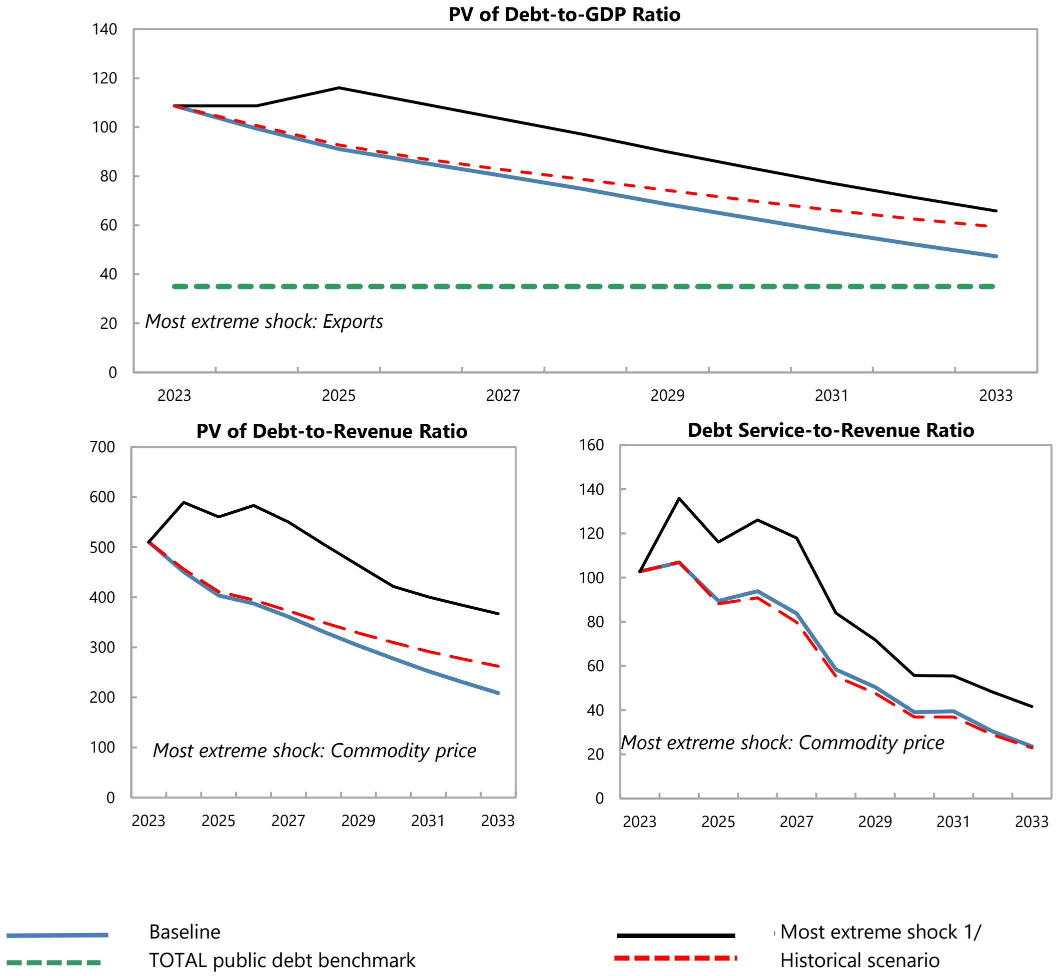
Note: "Yes" indicates any change to the size or interactions of the default settings for the stress tests. "n.a." indicates that the stress test does not apply.

Borrowing assumptions on additional financing needs resulting from the stress tests*	Default	User defined
Shares of marginal debt		
External PPG MLT debt	100%	
Terms of marginal debt		
Avg. nominal interest rate on new borrowing in USD	3.7%	3.7%
USD Discount rate	5.0%	5.0%
Avg. maturity (incl. grace period)	33	33
Avg. grace period	13	13

* Note: All the additional financing needs generated by the shocks under the stress tests are assumed to be covered by PPG external MLT debt in the external DSA. Default terms of marginal debt are based on baseline 10-year projections.

Sources: Country authorities; and staff estimates and projections.
1/ The most extreme stress test is the test that yields the highest ratio in or before 2033. The stress test with a one-off breach is also presented (if any), while the one-off breach is deemed away for mechanical signals. When a stress test with a one-off breach happens to be the most exterme shock even after disregarding the one-off breach, only that stress test (with a one-off breach) would be presented.
2/ The magnitude of shocks used for the commodity price shock stress test are based on the commodity prices outlook prepared by the IMF research department.

Figure 2. Zambia: Indicators of Public Debt Under Alternative Scenarios, 2023–33



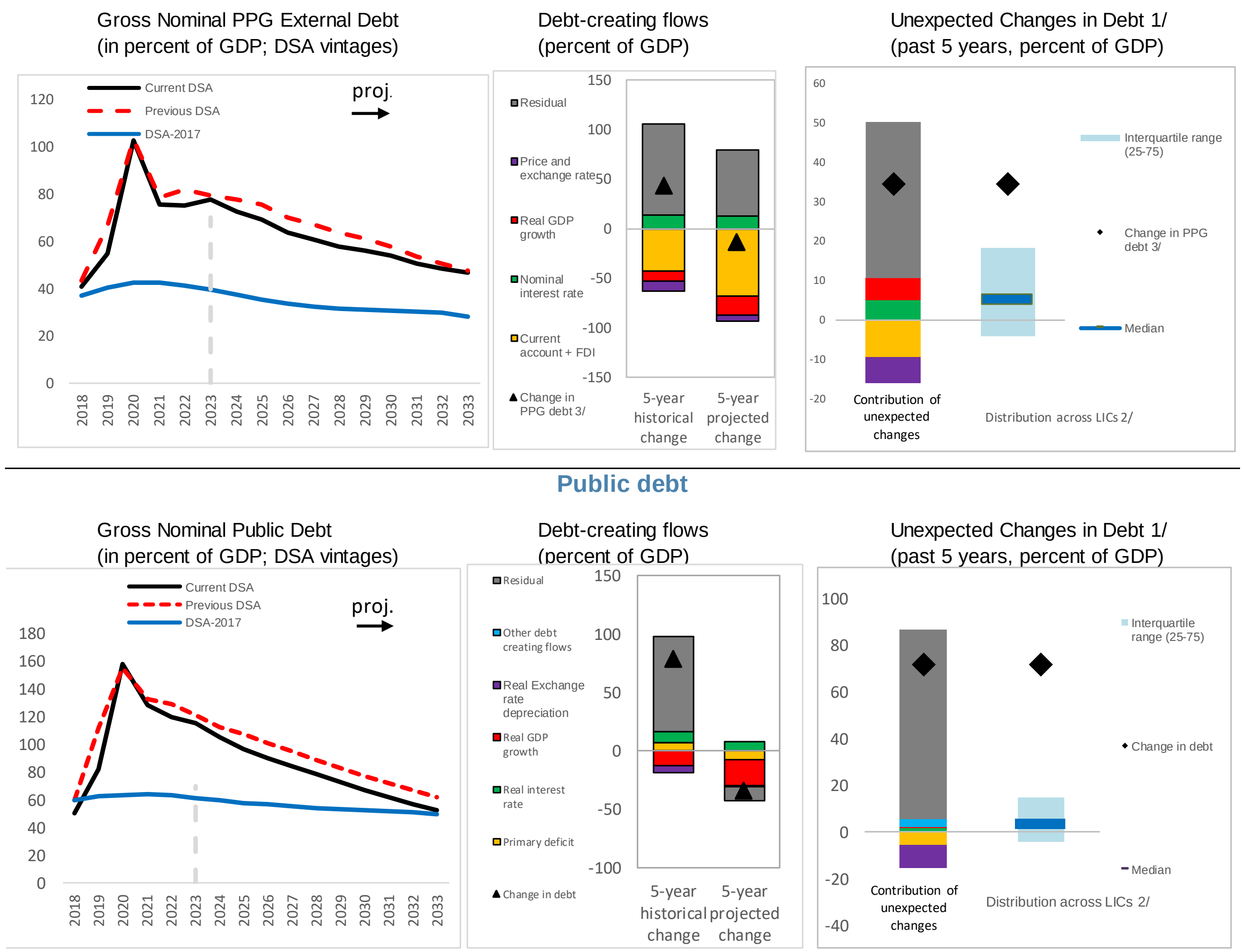
Borrowing assumptions on additional financing needs resulting from the stress tests*	Default	User defined
Shares of marginal debt		
External PPG medium and long-term	63%	63%
Domestic medium and long-term	15%	15%
Domestic short-term	22%	22%
Terms of marginal debt		
External MLT debt		
Avg. nominal interest rate on new borrowing in USD	3.7%	3.7%
Avg. maturity (incl. grace period)	33	33
Avg. grace period	13	13
Domestic MLT debt		
Avg. real interest rate on new borrowing	5.2%	5.2%
Avg. maturity (incl. grace period)	6	6
Avg. grace period	5	5
Domestic short-term debt		
Avg. real interest rate	1.5%	1.5%

* Note: The public DSA allows for domestic financing to cover the additional financing needs generated by the shocks under the stress tests in the public DSA. Default terms of marginal debt are based on baseline 10-year projections.

Sources: Country authorities; and staff estimates and projections.

1/ The most extreme stress test is the test that yields the highest ratio in or before 2033. The stress test with a one-off breach is also presented (if any), while the one-off breach is deemed away for mechanical signals. When a stress test with a one-off breach happens to be the most exterme shock even after disregarding the one-off breach, only that stress test (with a one-off breach) would be presented.

Figure 3. Zambia: Drivers of Debt Dynamics – Baseline Scenario



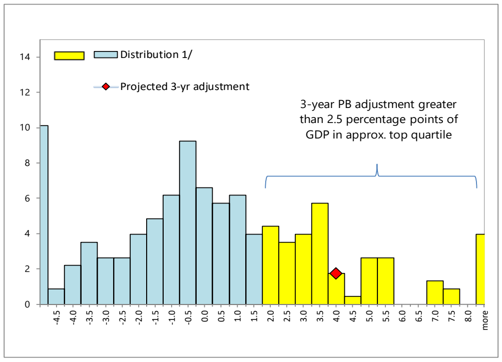
1/ Difference between anticipated and actual contributions on debt ratios.

2/ Distribution across LICs for which LIC DSAs were produced.

3/ Given the relatively low private external debt for average low-income countries, a ppt change in PPG external debt should be largely explained by the drivers of the external debt dynamics equation.

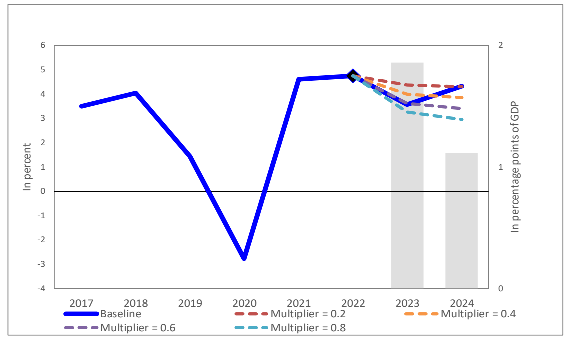
Figure 4. Zambia: Realism Tools

3-Year Adjustment in Primary Balance
(Percentage points of GDP)



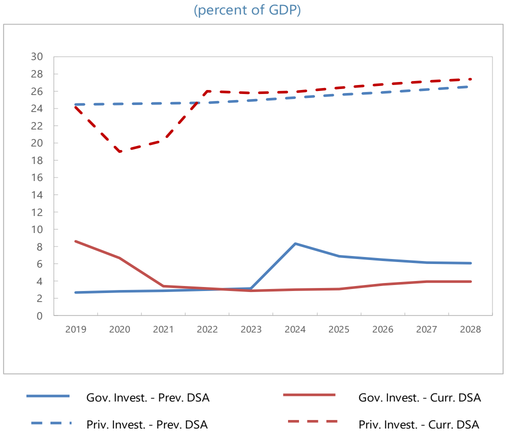
1/ Data cover Fund-supported programs for LICs (excluding emergency financing) approved since 1990. The size of 3-year adjustment from program inception is found on the horizontal axis; the percent of sample is found on the vertical axis.

Fiscal Adjustment and Possible Growth Paths 1/



1/ Bars refer to annual projected fiscal adjustment (right-hand side scale) and lines show possible real GDP growth paths under different fiscal multipliers (left-hand side scale).

Public and Private Investment Rates
(percent of GDP)



Contribution to Real GDP growth
(percent, 5-year average)

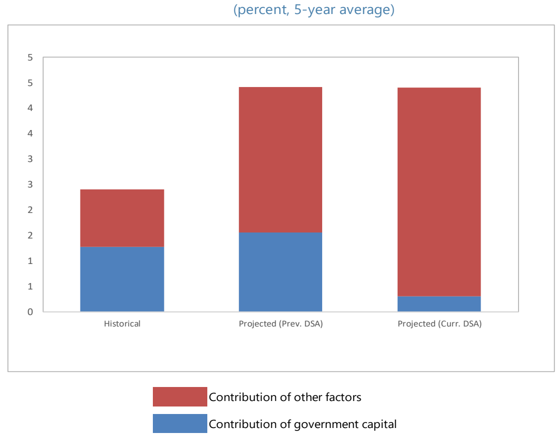
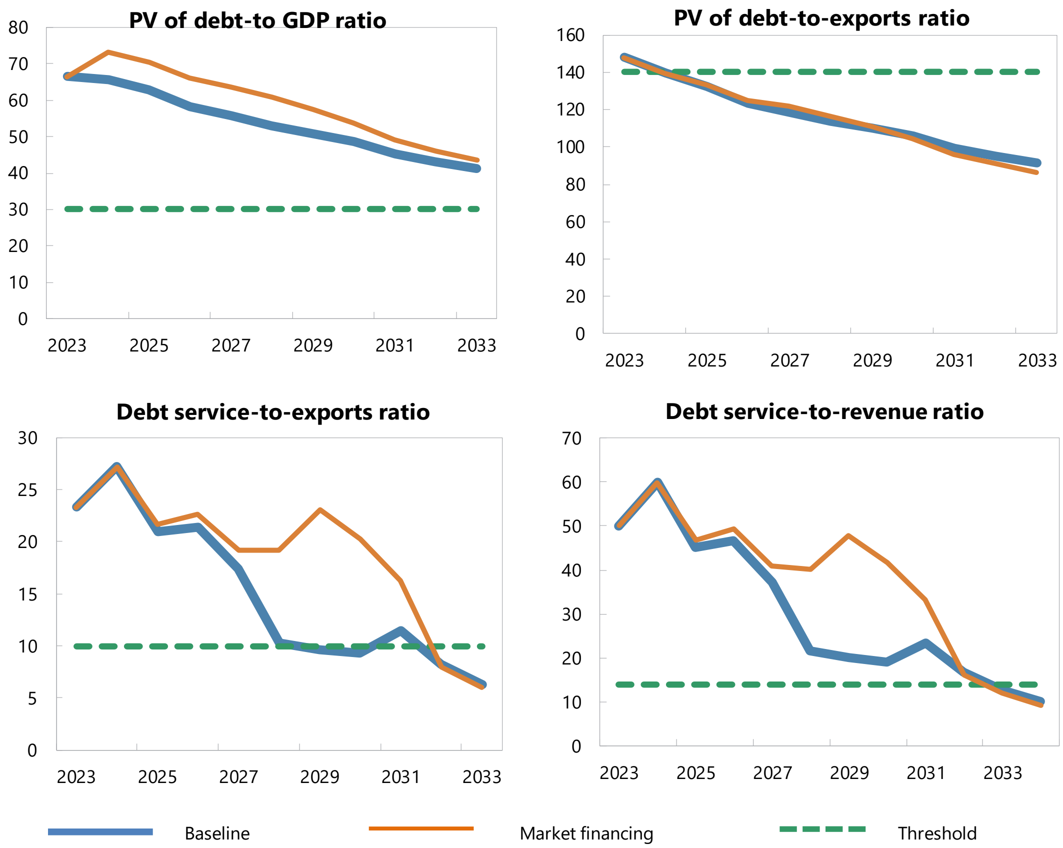


Figure 5. Zambia: Market-Financing Risk Indicators

	GFN 1/	EMBI 2/
Benchmarks	14	570
Values	22	5000
Breach of benchmark	Yes	Yes
Potential heightened liquidity needs	High	

1/ Maximum gross financing needs (GFN) over 3-year baseline projection horizon.
2/ EMBI spreads correspond to the latest available data.

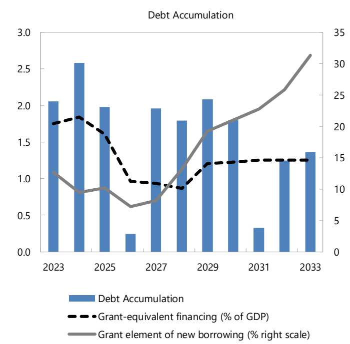


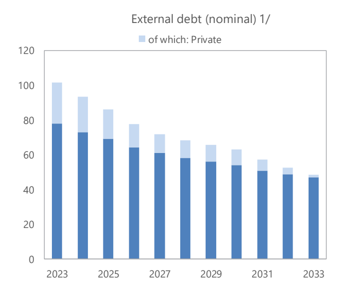
Sources: Country authorities; and staff estimates and projections.

Table 1. Zambia: External Debt Sustainability Framework, Baseline Scenario, 2020–38
(In Percent of GDP, unless otherwise indicated)

	Actual			Projections								Average 8/	
	2020	2021	2022	2023	2024	2025	2026	2027	2028	2033	2038	Historical	Projections
External debt (nominal) 1/	**150.2**	**112.3**	**100.6**	**101.4**	**93.3**	**86.1**	**77.6**	**71.6**	**68.1**	**48.5**	**48.3**	**78.7**	**71.4**
of which: public and publicly guaranteed (PPG)	**103.0**	**75.8**	**75.1**	**77.7**	**72.8**	**69.2**	**64.0**	**61.1**	**58.1**	**47.0**	**37.1**	**47.5**	**60.0**
Change in external debt	57.0	-37.9	-11.7	0.8	-8.1	-7.2	-8.5	-6.0	-3.5	-4.1	0.2		
Identified net debt-creating flows	**14.3**	**-38.4**	**-32.2**	**-10.6**	**-14.1**	**-15.8**	**-16.6**	**-16.9**	**-16.5**	**-15.0**	**-13.2**	**-8.1**	**-15.3**
Non-interest current account deficit	**-15.0**	**-13.5**	**-6.1**	**-7.5**	**-9.7**	**-10.8**	**-10.8**	**-11.1**	**-10.8**	**-9.8**	**-8.6**	**-3.3**	**-10.1**
Deficit in balance of goods and services	-15.0	-18.2	-8.2	-9.2	-12.2	-13.2	-13.4	-12.6	-12.4	-11.6	-10.1	**-3.7**	**-12.0**
Exports	47.3	53.0	41.8	44.9	47.1	47.4	47.3	46.9	46.6	45.2	38.1		
Imports	32.2	34.7	33.7	35.7	34.9	34.2	33.8	34.3	34.2	33.6	28.0		
Net current transfers (negative = inflow)	-1.2	-1.4	-1.0	-1.1	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-0.8	**-1.2**	**-1.0**
of which: official	0.0	0.0	0.0	-0.3	-0.3	-0.3	-0.2	-0.2	-0.2	-0.1	-0.1		
Other current account flows (negative = net inflow)	1.3	6.1	3.0	2.8	3.4	3.3	3.6	2.5	2.6	2.8	2.3	**1.5**	**2.9**
Net FDI (negative = inflow)	**-1.0**	**-0.7**	**-1.7**	**-2.1**	**-2.8**	**-3.7**	**-4.5**	**-4.5**	**-4.5**	**-4.5**	**-3.9**	**-3.6**	**-4.1**
Endogenous debt dynamics 2/	**30.3**	**-24.2**	**-24.3**	**-1.0**	**-1.6**	**-1.3**	**-1.2**	**-1.3**	**-1.1**	**-0.7**	**-0.8**		
Contribution from nominal interest rate	4.3	3.6	2.5	2.6	2.6	2.6	2.5	2.3	2.3	1.7	1.4		
Contribution from real GDP growth	3.3	-5.6	-4.0	-3.6	-4.2	-3.9	-3.7	-3.6	-3.4	-2.4	-2.2		
Contribution from price and exchange rate changes	22.6	-22.1	-22.9	...	...	...	...	...	...	...	...		
Residual 3/	**42.7**	**0.5**	**20.5**	**11.4**	**6.1**	**8.6**	**8.1**	**10.9**	**13.0**	**10.9**	**13.4**	**17.0**	**10.5**
of which: exceptional financing	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Sustainability indicators													
PV of PPG external debt-to-GDP ratio	**...**	**...**	**64.0**	**66.5**	**65.7**	**62.7**	**58.2**	**55.7**	**53.1**	**41.2**	**31.1**		
PV of PPG external debt-to-exports ratio	**...**	**...**	**152.9**	**148.0**	**139.4**	**132.4**	**123.2**	**118.6**	**113.8**	**91.3**	**81.6**		
PPG debt service-to-exports ratio	**26.9**	**24.4**	**10.6**	**23.3**	**27.2**	**20.9**	**21.4**	**17.4**	**10.3**	**6.3**	**4.6**		
PPG debt service-to-revenue ratio	**64.2**	**59.4**	**22.7**	**50.0**	**59.9**	**45.2**	**46.6**	**37.3**	**21.6**	**12.8**	**7.9**		
Gross external financing need (Million of U.S. dollars)	17.7	143.6	-357.7	946.9	914.9	-668.0	-946.0	-1938.1	-3404.4	-5667.1	-11250.2		
Key macroeconomic assumptions													
Real GDP growth (in percent)	-2.8	4.6	4.7	3.6	4.3	4.5	4.7	5.0	5.1	4.9	4.9	**3.2**	**4.7**
GDP deflator in US dollar terms (change in percent)	-20.1	16.9	28.2	-4.1	0.8	3.3	3.3	3.0	3.0	3.0	3.2	**-0.2**	**2.2**
Effective interest rate (percent) 4/	3.6	2.9	3.0	2.6	2.7	3.0	3.1	3.3	3.5	3.5	3.2	**2.3**	**3.2**
Growth of exports of G&S (US dollar terms, in percent)	3.6	37.0	6.1	6.7	10.3	8.5	7.8	7.4	7.6	7.4	0.3	**3.2**	**7.8**
Growth of imports of G&S (US dollar terms, in percent)	-42.7	31.8	30.2	5.3	2.8	5.8	6.9	9.6	8.0	7.4	0.0	**5.8**	**7.0**
Grant element of new public sector borrowing (in percent)	...	...	...	12.7	9.5	10.2	7.2	8.2	13.1	31.3	44.0	**...**	**16.4**
Government revenues (excluding grants, in percent of GDP)	19.8	21.8	19.6	20.9	21.4	21.9	21.7	21.9	22.2	22.4	22.2	**18.9**	**22.0**
Aid flows (in Million of US dollars) 5/	394.2	262.5	226.4	463.0	616.2	572.7	518.0	626.9	561.2	1201.0	1284.0		
Grant-equivalent financing (in percent of GDP) 6/	...	...	...	1.8	1.8	1.6	1.0	0.9	0.9	1.3	0.9	**...**	**1.3**
Grant-equivalent financing (in percent of external financing) 6/	...	...	...	15.5	13.9	15.9	11.7	11.6	18.8	37.5	53.6	**...**	**21.3**
Nominal GDP (Million of US dollars)	18,111	22,148	29,742	29,536	31,042	33,500	36,227	39,167	42,407	62,649	92,810		
Nominal dollar GDP growth	-22.3	22.3	34.3	-0.7	5.1	7.9	8.1	8.1	8.3	8.0	8.3	**3.2**	**7.0**
Memorandum items:													
PV of external debt 7/	...	...	89.4	90.1	86.2	79.6	71.8	66.2	63.0	42.8	42.4		
In percent of exports	...	...	213.8	200.6	182.8	168.0	152.0	141.0	135.2	94.7	111.1		
Total external debt service-to-exports ratio	34.0	28.0	15.8	28.6	32.9	26.5	26.9	22.9	15.7	11.7	0.9		
PV of PPG external debt (in Million of US dollars)			19020.8	19631.8	20394.6	21009.7	21090.3	21800.0	22502.2	25834.8	28890.5		
(PVt-PVt-1)/GDPt-1 (in percent)				2.1	2.6	2.0	0.2	2.0	1.8	1.4	0.6		
Non-interest current account deficit that stabilizes debt ratio	-72.0	24.4	5.6	-8.3	-1.6	-3.6	-2.3	-5.1	-7.3	-5.7	-8.8		

Definition of external/domestic debt	**Residency-based**
Is there a material difference between the two criteria?	**Yes**





Sources: Country authorities; and staff estimates and projections.

1/ Includes both public and private sector external debt.

2/ Derived as [r - g - ρ(1+g) + Εα (1+r)]/(1+g+ρ+gρ) times previous period debt ratio, with r = nominal interest rate; g = real GDP growth rate, ρ = growth rate of GDP deflator in U.S. dollar terms, Ε=nominal appreciation of the local currency, and α= share of local currency-denominated external debt in total external debt.

3/ Includes exceptional financing (i.e., changes in arrears and debt relief); changes in gross foreign assets; and valuation adjustments. For projections also includes contribution from price and exchange rate changes.

4/ Current-year interest payments divided by previous period debt stock.

5/ Defined as grants, concessional loans, and debt relief.

6/ Grant-equivalent financing includes grants provided directly to the government and through new borrowing (difference between the face value and the PV of new debt).

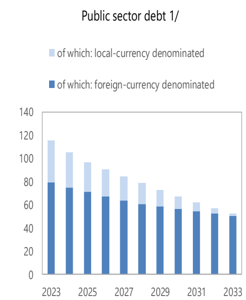
7/ Assumes that PV of private sector debt is equivalent to its face value.

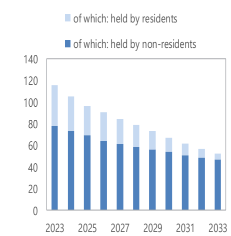
8/ Historical averages are generally derived over the past 10 years, subject to data availability, whereas projections averages are over the first year of projection and the next 10 years.

Table 2. Zambia: Public Sector Debt Sustainability Framework, Baseline Scenario, 2020–38
(In Percent of GDP, unless otherwise indicated)

	Actual			Projections												Average 6/	
	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2038	Historical	Projections
Public sector debt 1/	157.9	128.1	119.6	115.4	105.1	96.5	90.4	84.6	78.8	72.8	67.3	61.9	57.0	52.4	33.4	68.8	80.2
of which: external debt	103.0	75.8	75.1	77.7	72.8	69.2	64.0	61.1	58.1	56.1	54.0	50.7	48.7	47.0	37.1	47.5	60.0
Change in public sector debt	87.7	-29.7	-8.5	-4.2	-10.3	-8.7	-6.1	-5.8	-5.8	-6.0	-5.5	-5.4	-4.9	-4.6	-3.4		
Identified debt-creating flows	28.0	-45.7	-2.3	-1.6	-6.9	-5.4	-4.1	-4.7	-4.9	-5.0	-4.7	-4.6	-4.3	-4.3	-3.5	-0.2	-4.6
Primary deficit (cash basis)	3.6	2.0	1.6	-0.3	-1.4	-2.3	-1.5	-2.2	-2.5	-2.6	-2.5	-2.4	-2.2	-2.3	-1.6	1.4	-2.0
Revenue and grants	20.3	22.3	20.0	21.2	22.0	22.1	21.8	21.9	22.2	22.3	22.4	22.5	22.5	22.5	22.4	19.3	22.1
of which: grants	0.5	0.6	0.4	0.4	0.7	0.6	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3		
Primary (noninterest) expenditure	28.1	24.4	21.5	21.0	20.6	20.2	20.6	20.0	20.0	20.0	20.2	20.3	20.4	20.4	20.9	21.1	20.3
Automatic debt dynamics	24.4	-47.7	-3.8	-1.3	-5.5	-3.0	-2.6	-2.4	-2.4	-2.4	-2.3	-2.2	-2.1	-2.1	-1.8		
Contribution from interest rate/growth differential	5.5	-12.1	-5.1	-5.4	-3.1	-1.9	-1.8	-1.9	-1.8	-1.9	-1.8	-1.7	-1.6	-1.6	-1.4		
of which: contribution from average real interest rate	3.4	-5.2	0.7	-1.3	1.7	2.6	2.5	2.4	2.3	2.0	1.7	1.5	1.2	1.0	0.3		
of which: contribution from real GDP growth	2.0	-6.9	-5.8	-4.1	-4.8	-4.5	-4.3	-4.3	-4.1	-3.9	-3.5	-3.2	-2.9	-2.6	-1.7		
Contribution from real exchange rate depreciation	19.0	-35.6	1.3	...	...	...	...	...	...	...	...	...	...	...	...		
Other identified debt-creating flows	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Privatization receipts (negative)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Recognition of contingent liabilities (e.g., bank recapitalization)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Debt relief (HIPC and other)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Other debt creating or reducing flow (please specify)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Residual	59.6	15.9	-6.3	1.5	-5.8	-4.4	-2.8	-1.7	-1.5	-1.5	-1.3	-1.3	-1.0	-0.7	-0.3	10.8	-1.9
Sustainability indicators																	
PV of public debt-to-GDP ratio 2/	...	...	112.7	108.7	99.4	91.0	85.6	80.1	74.6	68.5	62.9	57.3	52.2	47.4	27.9		
PV of public debt-to-revenue and grants ratio	...	...	564.4	510.2	450.3	403.5	387.2	361.1	331.2	303.4	277.5	252.4	230.1	208.7	123.9		
Debt service-to-revenue and grants ratio 3/	110.8	100.2	89.3	102.8	106.9	89.4	93.8	83.8	58.3	50.4	39.0	39.5	30.4	23.5	4.2		
Gross financing need 4/	30.3	24.4	19.4	21.1	21.7	17.4	18.8	16.0	10.2	8.5	6.1	6.3	4.4	3.1	-0.7		
Key macroeconomic and fiscal assumptions																	
Real GDP growth (in percent)	-2.8	4.6	4.7	3.6	4.3	4.5	4.7	5.0	5.1	5.1	5.0	4.9	4.9	4.9	4.9	3.2	4.7
Average nominal interest rate on external debt (in percent)	5.8	4.8	3.0	3.7	3.7	3.9	3.9	4.0	4.2	4.1	4.1	4.0	3.8	3.8	3.3	4.1	3.9
Average real interest rate on domestic debt (in percent)	5.2	-13.6	0.4	-4.8	1.3	4.7	5.4	5.5	5.4	4.9	4.7	4.7	4.5	4.7	2.4	3.2	3.7
Real exchange rate depreciation (in percent, + indicates depreciation)	33.3	-37.1	2.1	...	...	...	...	...	...	...	...	...	...	...	...	7.1	...
Inflation rate (GDP deflator, in percent)	13.7	27.6	8.6	12.1	9.9	7.3	6.9	6.5	6.5	6.5	6.5	6.5	6.5	6.6	6.7	11.0	7.4
Growth of real primary spending (deflated by GDP deflator, in percent)	30.0	-9.4	-7.5	1.1	2.6	2.3	6.8	1.5	5.3	5.3	6.0	5.4	5.7	4.7	5.2	7.0	4.2
Primary deficit that stabilizes the debt-to-GDP ratio 5/	-84.1	31.8	10.1	3.9	8.9	6.3	4.6	3.6	3.3	3.4	3.1	3.0	2.7	2.3	1.7	-14.1	4.1
PV of contingent liabilities (not included in public sector debt)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		

Definition of external/domestic debt	**Residency-based**
Is there a material difference between the two criteria?	**Yes**





Sources: Country authorities; and staff estimates and projections.
1/ Coverage of debt: The central government plus social security, central bank, government-guaranteed debt, non-guaranteed SOE debt . Definition of external debt is Residency-based.
2/ The underlying PV of external debt-to-GDP ratio under the public DSA differs from the external DSA with the size of differences depending on exchange rates projections.
3/ Debt service is defined as the sum of interest and amortization of medium and long-term, and short-term debt.
4/ Gross financing need is defined as the primary deficit plus debt service plus the stock of short-term debt at the end of the last period and other debt creating/reducing flows.
5/ Defined as a primary deficit minus a change in the public debt-to-GDP ratio ((-): a primary surplus), which would stabilize the debt ratio only in the year in question.
6/ Historical averages are generally derived over the past 10 years, subject to data availability, whereas projections averages are over the first year of projection and the next 10 years.

Table 3. Zambia: Sensitivity Analysis for Key Indicators and Publicly Guaranteed External Debt, 2023–33
(In Percent)

	Projections 1/										
	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
PV of debt-to GDP ratio											
Baseline	**66**	**66**	**63**	**58**	**56**	**53**	**51**	**49**	**45**	**43**	**41**
A. Alternative Scenarios											
A1. Key variables at their historical averages in 2023-2033 2/	**66**	**72**	**78**	**84**	**92**	**100**	**108**	**115**	**121**	**129**	**137**
A2. Alternative Scenario : Contingent Liabilities + FX debt	**66**	**81**	**80**	**75**	**73**	**70**	**68**	**66**	**63**	**60**	**58**
B. Bound Tests											
B1. Real GDP growth	**66**	**69**	**70**	**65**	**62**	**59**	**57**	**54**	**51**	**48**	**46**
B2. Primary balance	**66**	**68**	**72**	**68**	**66**	**63**	**61**	**59**	**56**	**54**	**51**
B3. Exports	**66**	**79**	**97**	**91**	**87**	**83**	**80**	**76**	**72**	**69**	**66**
B4. Other flows 3/	**66**	**69**	**69**	**64**	**61**	**58**	**56**	**54**	**50**	**48**	**46**
B5. Depreciation	**66**	**81**	**79**	**73**	**70**	**67**	**64**	**61**	**57**	**54**	**52**
B6. Combination of B1-B5	**66**	**77**	**79**	**74**	**72**	**69**	**66**	**64**	**60**	**58**	**55**
C. Tailored Tests											
C1. Combined contingent liabilities	**66**	**76**	**75**	**71**	**68**	**66**	**63**	**62**	**59**	**56**	**54**
C2. Natural disaster	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
C3. Commodity price	**66**	**78**	**86**	**83**	**83**	**81**	**80**	**78**	**74**	**72**	**70**
C4. Market Financing	**66**	**73**	**70**	**66**	**64**	**61**	**57**	**54**	**49**	**46**	**44**
Threshold	30	30	30	30	30	30	30	30	30	30	30
PV of debt-to-exports ratio											
Baseline	**148**	139	132	123	119	114	110	106	99	95	91
A. Alternative Scenarios											
A1. Key variables at their historical averages in 2023-2033 2/	**148**	**152**	**166**	**179**	**197**	**214**	**233**	**250**	**265**	**283**	**303**
A2. Alternative Scenario : Contingent Liabilities + FX debt	**148**	**171**	**168**	**160**	**155**	**150**	**146**	**143**	137	132	128
B. Bound Tests											
B1. Real GDP growth	**148**	139	132	123	119	114	110	106	99	95	91
B2. Primary balance	**148**	**145**	**153**	**145**	**140**	136	132	128	122	118	114
B3. Exports	**148**	**207**	**308**	**289**	**279**	**268**	**259**	**250**	**237**	**228**	**219**
B4. Other flows 3/	**148**	**146**	**145**	136	130	125	121	117	110	105	101
B5. Depreciation	**148**	137	132	123	118	114	110	106	99	95	91
B6. Combination of B1-B5	**148**	**181**	**152**	**194**	**188**	**182**	**177**	**171**	**162**	**156**	**151**
C. Tailored Tests											
C1. Combined contingent liabilities	**148**	**161**	**158**	**150**	**146**	**141**	137	135	128	124	120
C2. Natural disaster	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
C3. Commodity price	**148**	**214**	**224**	**208**	**199**	**189**	**179**	**176**	**169**	**165**	**162**
C4. Market Financing	**148**	139	133	125	122	117	111	104	96	91	87
Threshold	140	140	140	140	140	140	140	140	140	140	140
Debt service-to-exports ratio											
Baseline	**23**	**27**	**21**	**21**	**17**	10	10	9	**11**	8	6
A. Alternative Scenarios											
A1. Key variables at their historical averages in 2023-2033 2/	**23**	**28**	**23**	**25**	**22**	**15**	**16**	**17**	**21**	**18**	**16**
A2. Alternative Scenario : Contingent Liabilities + FX debt	**23**	**27**	**22**	**23**	**19**	**12**	**11**	**11**	**13**	10	8
B. Bound Tests											
B1. Real GDP growth	**23**	**27**	**21**	**21**	**17**	**10**	10	9	**11**	8	6
B2. Primary balance	**23**	**27**	**21**	**22**	**19**	**11**	**11**	**10**	**13**	9	7
B3. Exports	**23**	**35**	**36**	**39**	**33**	**21**	**19**	**19**	**22**	**17**	**13**
B4. Other flows 3/	**23**	**27**	**21**	**22**	**18**	**11**	**10**	10	**12**	9	7
B5. Depreciation	**23**	**27**	**21**	**21**	**17**	**10**	10	9	**11**	8	6
B6. Combination of B1-B5	**23**	**32**	**30**	**32**	**26**	**16**	**15**	**15**	**18**	**13**	**11**
C. Tailored Tests											
C1. Combined contingent liabilities	**23**	**27**	**22**	**22**	**19**	**11**	**11**	**10**	**13**	9	8
C2. Natural disaster	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
C3. Commodity price	**23**	**36**	**28**	**29**	**24**	**15**	**13**	**13**	**16**	**12**	10
C4. Market Financing	**23**	**27**	**22**	**23**	**19**	**19**	**23**	**20**	**16**	8	6
Threshold	10	10	10	10	10	10	10	10	10	10	10
Debt service-to-revenue ratio											
Baseline	**50**	**60**	**45**	**47**	**37**	**22**	**20**	**19**	**23**	**17**	13
A. Alternative Scenarios											
A1. Key variables at their historical averages in 2023-2033 2/	**50**	**61**	**49**	**55**	**48**	**32**	**33**	**34**	**43**	**36**	**32**
A2. Alternative Scenario : Contingent Liabilities + FX debt	**50**	**60**	**48**	**50**	**41**	**25**	**23**	**22**	**27**	**20**	**16**
B. Bound Tests	**50**	**60**	**48**	**50**	**41**	**25**	**23**	**22**	**27**	**20**	**16**
B1. Real GDP growth	**50**	**63**	**51**	**52**	**42**	**24**	**22**	**21**	**26**	**19**	**14**
B2. Primary balance	**50**	**60**	**46**	**49**	**40**	**24**	**22**	**21**	**26**	**19**	**15**
B3. Exports	**50**	**63**	**52**	**57**	**46**	**29**	**27**	**25**	**30**	**22**	**18**
B4. Other flows 3/	**50**	**60**	**46**	**48**	**38**	**23**	**21**	**20**	**24**	**18**	14
B5. Depreciation	**50**	**76**	**57**	**59**	**47**	**27**	**25**	**24**	**30**	**21**	**16**
B6. Combination of B1-B5	**50**	**63**	**53**	**56**	**45**	**28**	**26**	**25**	**29**	**22**	**17**
C. Tailored Tests											
C1. Combined contingent liabilities	**50**	**60**	**47**	**49**	**40**	**24**	**22**	**21**	**26**	**19**	**15**
C2. Natural disaster	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
C3. Commodity price	**50**	**76**	**61**	**67**	**52**	**31**	**28**	**26**	**31**	**23**	**19**
C4. Market Financing	**50**	**60**	**47**	**49**	**41**	**40**	**48**	**42**	**33**	**16**	12
Threshold	14	14	14	14	14	14	14	14	14	14	14

Sources: Country authorities; and staff estimates and projections.
1/ A bold value indicates a breach of the threshold.
2/ Variables include real GDP growth, GDP deflator (in U.S. dollar terms), non-interest current account in percent of GDP, and non-debt creating flows.
3/ Includes official and private transfers and FDI.

Table 4. Zambia: Sensitivity Analysis for Key Indicators of Public Debt, 2023–33
(In Percent)

	Projections 1/										
	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
	PV of Debt-to-GDP Ratio										
Baseline	109	99	91	86	80	75	69	63	57	52	47
A. Alternative Scenarios											
A1. Key variables at their historical averages in 2023-2033 2/	109	101	93	87	83	79	74	70	66	63	59
B. Bound Tests											
B1. Real GDP growth	109	105	103	99	95	91	86	82	78	74	71
B2. Primary balance	109	102	101	95	89	84	77	72	66	61	56
B3. Exports	109	109	116	110	103	97	90	83	77	71	66
B4. Other flows 3/	109	103	97	91	86	80	74	68	62	57	52
B5. Depreciation	109	113	102	95	88	81	74	68	61	56	50
B6. Combination of B1-B5	109	99	97	91	86	81	75	70	65	60	56
C. Tailored Tests											
C1. Combined contingent liabilities	109	115	105	99	93	87	81	75	69	64	59
C2. Natural disaster	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
C3. Commodity price	109	107	104	106	106	104	100	96	91	87	83
C4. Market Financing	109	99	91	86	82	76	69	62	56	50	45
TOTAL public debt benchmark	35	35	35	35	35	35	35	35	35	35	35
	PV of Debt-to-Revenue Ratio										
Baseline	510	450	404	387	361	331	303	277	252	230	209
A. Alternative Scenarios											
A1. Key variables at their historical averages in 2023-2033 2/	510	456	411	395	373	349	329	310	292	276	262
B. Bound Tests											
B1. Real GDP growth	510	474	455	446	427	403	382	362	343	328	313
B2. Primary balance	510	462	448	430	402	371	342	316	290	268	246
B3. Exports	510	492	514	496	465	430	398	368	340	314	290
B4. Other flows 3/	510	465	431	414	387	355	327	300	274	251	229
B5. Depreciation	510	513	453	428	395	361	329	299	271	246	222
B6. Combination of B1-B5	510	451	429	414	389	360	333	309	285	264	245
C. Tailored Tests											
C1. Combined contingent liabilities	510	520	465	447	419	387	358	331	304	282	260
C2. Natural disaster	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
C3. Commodity price	510	589	561	583	550	506	464	422	401	384	367
C4. Market Financing	510	450	405	391	368	337	306	274	246	222	199
	Debt Service-to-Revenue Ratio										
Baseline	103	107	89	94	84	58	50	39	40	30	24
A. Alternative Scenarios											
A1. Key variables at their historical averages in 2023-2033 2/	103	107	88	91	80	55	48	37	37	29	23
B. Bound Tests											
B1. Real GDP growth	103	113	101	109	99	71	63	51	53	44	37
B2. Primary balance	103	107	95	103	90	63	55	45	46	36	28
B3. Exports	103	107	91	98	88	63	54	43	43	34	27
B4. Other flows 3/	103	107	90	95	85	59	51	40	40	31	24
B5. Depreciation	103	109	99	106	94	65	56	45	48	37	29
B6. Combination of B1-B5	103	105	92	103	90	64	56	44	46	37	29
C. Tailored Tests											
C1. Combined contingent liabilities	103	107	110	103	90	64	56	51	47	36	29
C2. Natural disaster	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
C3. Commodity price	103	136	116	126	118	84	72	56	55	48	42
C4. Market Financing	103	107	91	96	87	77	78	61	49	30	23

Sources: Country authorities; and staff estimates and projections.
1/ A bold value indicates a breach of the benchmark.
2/ Variables include real GDP growth, GDP deflator and primary deficit in percent of GDP.
3/ Includes official and private transfers and FDI.