EXECUTIVE BOARD MEETING

EBS/20/77
Supplement 1

April 24, 2020

To: Members of the Executive Board

From: The Secretary

Subject: **The Federal Democratic Republic of Ethiopia—Requests for Purchase Under the Rapid Financing Instrument, Debt Relief Under the Catastrophe Containment and Relief Trust, Rephasing of Access Under the Three-Year Arrangements Under Extended Credit Facility and the Extended Fund Facility, and Reduction of Access Under the Extended Fund Facility Arrangement—Debt Sustainability Analysis**

Board Action:	Executive Directors' **consideration** (Formal)
Prepared By:	The staffs of the Fund and the International Development Association
Tentative Board Date:	**Thursday, April 30, 2020**
Publication:	Yes*
Questions:	Ms. Coelho, AFR (ext. 30758) Mr. Gupta, SPR (ext. 37941) Mr. Leichter, AFR (ext. 36177) Mr. Raman, AFR (ext. 34689) Mr. Saborowski, AFR (ext. 36436) Mr. Yamamoto, MCM (ext. 39060)
Document Transmittal in the Absence of an Objection and in accordance with Board policy:	After Board Consideration—African Development Bank, Common Market for Eastern and Southern Africa, Organisation for Economic Cooperation and Development, World Trade Organization

***The authorities have indicated that they consent to the Fund's publication of this paper.**

INTERNATIONAL MONETARY FUND

THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA

April 24, 2020

REQUESTS FOR PURCHASE UNDER THE RAPID FINANCING INSTRUMENT, DEBT RELIEF UNDER THE CATASTROPHE CONTAINMENT AND RELIEF TRUST, REPHASING OF ACCESS UNDER THE THREE-YEAR ARRANGEMENTS UNDER THE EXTENDED CREDIT FACILITY AND THE EXTENDED FUND FACILITY, AND REDUCTION OF ACCESS UNDER THE EXTENDED FUND FACILITY ARRANGEMENT—DEBT SUSTAINABILITY ANALYSIS

Approved By
Zeine Zeidane (AFR), Seán Nolan (SPR), and Marcello Estevão (IDA)

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

Ethiopia: Joint Bank—Fund Debt Sustainability Analysis[1]	
Risk of external debt distress	*High*
Risk of overall debt distress	*High*
Granularity in the risk rating	*Sustainable*
Application of judgement	*None*
Macroeconomic projection	*Near-term growth projections were revised downward on account of the domestic and external impact of COVID-19. Exports, in particular services exports, will contract significantly in 2019/20.*
Financing strategy	*Urgent balance of payments needs will be covered by Fund financing, donor support, debt relief, and reserves draw down. The World Bank recently approved US$82.6 million for a COVID-19 project and is exploring modalities for additional support.*
Realism tools flagged	*Growth, exports, fiscal adjustments, and financing needs have downside risks.*
Mechanical risk rating under the external DSA	*High*
Mechanical risk rating under the public DSA	*High*

[1] This Debt Sustainability Analysis (DSA) was conducted using the Joint Bank-Fund Debt Sustainability Framework for Low-Income Countries (LIC-DSF) that was approved in 2017.

Ethiopia's public and publicly guaranteed debt is deemed sustainable, but downside risks and liquidity pressures have increased due to high uncertainty surrounding the intensity and duration of the COVID-19 outbreak and its implications for the economic outlook.[1, 2] *Ethiopia's debt vulnerabilities stem from rising debt servicing needs, an overvalued exchange rate, and a small export base. The authorities have taken steps to reduce vulnerability by controlling external borrowing, debt service reprofiling, and committing to move toward market-based exchange rate and FX market liberalization, both of which should improve FX availability and boost private sector activity and exports. Under the baseline, two external debt indicators breach their thresholds. As a result, Ethiopia continues to be assessed at "high" risk of debt distress. The authorities have committed to undertaking additional reprofiling by the first review under the ECF-EFF arrangements to reduce external debt servicing needs relative to exports, with an aim of achieving a "moderate" risk of external debt distress rating. However, against the backdrop of the pandemic, the capacity to absorb shocks has declined indicating liquidity pressures. As such, a larger or more persistent impact of the COVID-19 shock than presently assumed could threaten debt sustainability. Steadfast implementation of FX reforms would reduce these pressures over the medium term and safeguard Ethiopia's capacity to repay the Fund. Monitoring of contingent liabilities, the main vulnerability of overall public debt, and continued improvement in debt management and reporting are recommended.*

Macroeconomic Outlook. In the context of a rapidly changing global situation due to COVID-19, the near-term macroeconomic outlook has been revised since the 2019 Article IV DSA. Growth is revised down to 3.2 percent and to 3.7 percent in 2019/20 and 2020/21, respectively, because of the expectation that the COVID-19 outbreak, including the related global slowdown, will have a significant impact on economic activity. The authorities have already put in place social distancing and other containments measures. Real GDP growth will converge to 8 percent over the medium term. Against this challenging global backdrop, exports and remittances are projected to contract significantly, but weak domestic demand and a decline in foreign direct investment will also lead to a contraction in imports. Improved terms of trade (e.g., higher coffee and lower oil prices) will also help the trade balance. Exports of services, the main source of Ethiopia's export earnings, are expected to be severely impacted by travel restrictions, but a concomitant reduction in services imports will cushion the impact on the services balance. Thus, the current account deficit is projected to modestly improve relative to a year ago. In 2020/21, exports are expected to recover on the back of a global recovery. Over the DSA projection horizon, staff has revised down export growth given changes in global assumptions, but significant downside risks remain. Inflation is expected to remain elevated in

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[1] Public debt data includes Ethiopian Airlines, but this information is excluded from the DSA. Ethio-Telecom is included, in line with the December 2019 DSA, although the authorities view it as meeting the criteria for exclusion.

[2] As reported earlier, Ethiopia owes arrears to Libya, Bulgaria, Russia, and former Yugoslavia, totaling about US$538 million, which are deemed away under the policy on arrears to official bilateral creditors, as the underlying Paris Club agreement is adequately representative, and the authorities are making best efforts to resolve the arrears. Furthermore, there are about US$8.2 million worth of external arrears (principal and interest payments combined) to commercial creditors, all pre-dating the1990s, from former Czechoslovakia, India, Italy, and former Yugoslavia. The authorities are continuing to make a good faith effort to reach a collaborative agreement with these creditors.

2020/21 and will moderate to the central bank's single-digit objective by late 2021. The fiscal deficit is now projected to temporarily widen in 2019/20 and 2020/21 as the economic slowdown impacts revenues, while spending needs increase to respond to the COVID-19 shock.

Financing Strategy. Urgent balance of payments needs have arisen due to the COVID-19 shock, which are expected to be covered by Fund financing—which includes requests for assistance under the Rapid Financing Instrument (100 percent of quota or SDR 300.7 million) and for debt relief under the Catastrophe Containment and Relief Trust (included under exceptional financing in Table 1 and under debt relief in Table 2)—concessional financing from donors, and lower reserves. Given delays in the first review discussions under the ECF-EFF arrangements resulting from COVID-19 and to comply with applicable normal access limits, the authorities have also requested the Fund to rephase access under the ECF-EFF arrangements and to reduce the second and third EFF purchases, resulting in a reduction of overall access by 50 percent of quota under the EFF arrangement. Under the ECF-EFF arrangements, Ethiopia is subject to continuous performance criteria applicable to contracting or guaranteeing of concessional (a non-zero limit) and non-concessional (a zero limit) external debt. Financing needs will be revisited during the first review under the ECF-EFF arrangements. The World Bank recently approved a COVID-19 project for US$82.6 million and is exploring modalities for additional support.

Realism Tool. The realism tool indicates that the assumed fiscal adjustments could have downside risks. One of the objectives of the ECF/EFF-supported program is to address vulnerabilities arising from nonfinancial public sector balance sheets and there are implementation risks. However, the authorities have demonstrated in recent years that they are aware of external debt vulnerabilities and have reined in borrowing by public enterprises. On the growth projections, the realism tool implies upside risks to staff projections in the near term, but these results reflect past high debt-financed rates of growth that have now become unsustainable, and do not account for the COVID-19 shock. Given the considerable uncertainty around the impact of COVID-19, staff believes there are downside risks to growth in the near term.

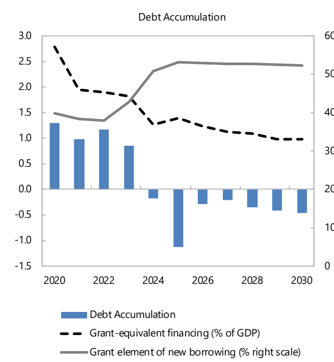
DSA Baseline and Alternative Scenarios. The DSA baseline includes the first phase of debt reprofiling under the ECF-EFF arrangements for which firm assurances were received at the time of the approval of the arrangements in December 2019. This phase of reprofiling is expected to generate savings of about US$1.65 billion over 2019/20–2022/23. The authorities intend to request debt service relief under the G20 initiative, but these are not yet included in the DSA baseline, pending a formal request and clarification on the underlying technical details. Similarly, the second phase of debt reprofiling under the ECF-EFF arrangements will be included once specific and credible assurances are received, expected by the first review of the ECF-EFF arrangements.

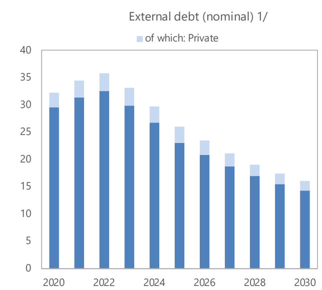
Table 1. Ethiopia: External Debt Sustainability Framework, Baseline Scenario, 2017–39

(In percent of GDP, unless otherwise indicated)

	Actual			Projections								Average 8/	
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2030	2039	Historical	Projections
External debt (nominal) 1/	**30.6**	**34.3**	**31.1**	**32.2**	**34.4**	**35.8**	**33.1**	**29.7**	**26.0**	**16.1**	**10.9**	**27.3**	**26.2**
of which: public and publicly guaranteed (PPG)	**28.2**	**31.6**	**28.3**	**29.5**	**31.3**	**32.6**	**29.9**	**26.7**	**23.1**	**14.3**	**10.1**	**24.7**	**23.6**
Change in external debt	-0.8	3.7	-3.2	1.1	2.2	1.4	-2.7	-3.4	-3.8	-1.3	-0.3		
Identified net debt-creating flows	**-0.5**	**0.9**	**-2.2**	**1.6**	**-0.9**	**-2.8**	**-3.0**	**-3.4**	**-3.6**	**-1.2**	**-0.4**	**0.1**	**-2.0**
Non-interest current account deficit	**7.3**	**5.6**	**4.4**	**3.7**	**4.0**	**4.1**	**3.9**	**3.1**	**2.7**	**2.8**	**3.3**	**5.9**	**3.3**
Deficit in balance of goods and services	-31.1	-31.2	-28.7	-21.8	-25.8	-30.3	-31.3	-30.5	-29.8	-26.7	-22.2	**-38.7**	**-28.1**
Exports	7.6	8.4	7.9	5.8	7.6	9.6	10.2	10.3	10.3	9.3	7.6		
Imports	-23.5	-22.8	-20.8	-16.0	-18.1	-20.7	-21.1	-20.2	-19.5	-17.4	-14.5		
Net current transfers (negative = inflow)	-8.5	-8.7	-8.4	-6.6	-6.8	-7.3	-7.4	-6.9	-6.5	-5.0	-3.6	**-10.9**	**-6.3**
of which: official	-1.7	-1.5	-2.2	-2.0	-1.3	-1.4	-1.4	-1.2	-1.2	-0.9	-0.8		
Other current account flows (negative = net inflow)	46.9	45.5	41.6	32.0	36.6	41.7	42.6	40.5	39.1	34.5	29.0	**55.5**	**37.6**
Net FDI (negative = inflow)	**-5.1**	**-4.4**	**-3.1**	**-1.7**	**-4.0**	**-4.1**	**-4.3**	**-4.6**	**-4.5**	**-3.6**	**-3.3**	**-3.5**	**-3.9**
Endogenous debt dynamics 2/	**-2.7**	**-0.4**	**-3.5**	**-0.3**	**-0.9**	**-2.8**	**-2.6**	**-1.9**	**-1.8**	**-0.4**	**-0.4**		
Contribution from nominal interest rate	0.7	0.6	0.7	0.6	0.3	0.2	0.1	0.5	0.4	0.6	0.1		
Contribution from real GDP growth	-2.9	-2.3	-2.7	-0.9	-1.2	-3.0	-2.7	-2.4	-2.1	-1.0	-0.5		
Contribution from price and exchange rate changes	-0.5	1.4	-1.5	...	...	...	...	...	...	...	...		
Residual 3/	**-0.3**	**2.8**	**-0.9**	**-0.5**	**3.1**	**4.2**	**0.2**	**0.0**	**-0.2**	**-0.1**	**0.1**	**1.6**	**0.6**
of which: exceptional financing	-0.1	-0.1	-0.1	1.4	1.6	1.9	1.5	0.1	0.0	-0.2	0.0		
Sustainability indicators													
PV of PPG external debt-to-GDP ratio	**...**	**...**	**19.4**	**18.6**	**19.8**	**21.4**	**21.1**	**18.8**	**15.9**	**8.6**	**5.9**		
PV of PPG external debt-to-exports ratio	**...**	**...**	**244.9**	**320.7**	**259.8**	**223.3**	**206.4**	**182.7**	**153.7**	**93.1**	**77.9**		
PPG debt service-to-exports ratio	**20.3**	**18.5**	**24.5**	**26.3**	**20.3**	**15.7**	**14.0**	**15.9**	**23.0**	**14.0**	**4.9**		
PPG debt service-to-revenue ratio	**11.0**	**12.6**	**16.8**	**14.2**	**12.7**	**11.2**	**10.2**	**11.3**	**16.5**	**8.9**	**2.5**		
Gross external financing need (Million of U.S. dollars)	3366.7	2638.9	3442.3	4107.3	2015.7	1961.4	1587.6	651.2	1311.3	1574.3	2247.2		
Key macroeconomic assumptions													
Real GDP growth (in percent)	10.2	7.7	9.0	3.2	3.7	8.7	8.0	8.0	8.0	6.0	5.0	**9.6**	**6.6**
GDP deflator in US dollar terms (change in percent)	1.7	-4.3	4.7	7.9	-4.8	-9.7	-2.2	3.2	2.7	2.9	2.9	**2.1**	**1.0**
Effective interest rate (percent) 4/	2.4	1.9	2.3	2.0	0.8	0.6	0.4	1.6	1.4	3.8	1.0	**1.7**	**1.6**
Growth of exports of G&S (US dollar terms, in percent)	2.9	13.1	7.9	-18.5	30.0	23.2	12.5	12.1	11.7	6.9	5.4	**8.9**	**9.8**
Growth of imports of G&S (US dollar terms, in percent)	-4.8	0.2	4.1	-14.3	11.7	11.9	7.6	7.1	6.8	7.0	6.0	**8.6**	**6.1**
Grant element of new public sector borrowing (in percent)	...	...	...	39.8	38.4	37.9	42.9	50.8	53.0	52.3	50.2	**...**	**47.8**
Government revenues (excluding grants, in percent of GDP)	14.1	12.3	11.5	10.7	12.2	13.4	14.0	14.4	14.4	14.7	15.3	**13.7**	**13.8**
Aid flows (in Million of US dollars) 5/	556.8	686.4	1198.8	3528.8	2398.2	2224.2	2457.3	2045.0	2552.4	2898.8	4812.2		
Grant-equivalent financing (in percent of GDP) 6/	...	...	...	2.8	1.9	1.9	1.8	1.3	1.4	1.0	0.8	**...**	**1.5**
Grant-equivalent financing (in percent of external financing) 6/	...	...	...	60.6	54.8	53.1	59.8	70.4	72.9	69.7	67.3	**...**	**66.0**
Nominal GDP (Million of US dollars)	81,788	84,298	96,140	107,120	105,716	103,685	109,513	122,089	135,345	215,299	446,414		
Nominal dollar GDP growth	12.1	3.1	14.0	11.4	-1.3	-1.9	5.6	11.5	10.9	9.1	8.1	**11.9**	**7.7**
Memorandum items:													
PV of external debt 7/	...	...	22.2	21.3	22.9	24.7	24.3	21.8	18.8	10.4	6.8		
In percent of exports	...	...	280.4	367.6	300.1	257.5	237.6	212.4	181.7	112.1	89.0		
Total external debt service-to-exports ratio	24.9	22.7	28.7	32.0	24.8	19.4	17.7	19.8	26.8	16.7	6.7		
PV of PPG external debt (in Million of US dollars)			18651.7	19901.9	20956.1	22193.6	23083.0	22896.0	21523.4	18615.3	26541.1		
(PVt-PVt-1)/GDPt-1 (in percent)				1.3	1.0	1.2	0.9	-0.2	-1.1	-0.5	0.3		
Non-interest current account deficit that stabilizes debt ratio	8.1	2.0	7.6	2.6	1.8	2.7	6.7	6.5	6.5	4.0	3.6		

Definition of external/domestic debt	**Residency-based**
Is there a material difference between the two criteria?	**No**





Sources: Country authorities; and staff estimates and projections.

1/ Includes both public and private sector external debt. Presented on fiscal year basis (e.g., 2020 referes to fiscal year ending in June 2020).

2/ Derived as $[r - g - \rho(1+g) + \varepsilon\alpha (1+r)]/(1+g+\rho+g\rho)$ 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, Ɛ=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.

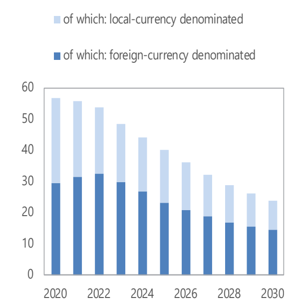
Table 2. Ethiopia: Public Sector Debt Sustainability Framework, Baseline Scenario, 2017–39

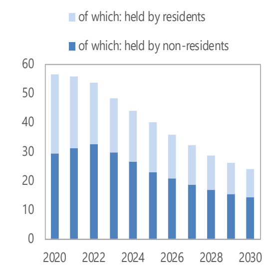
(In percent of GDP, unless otherwise indicated)

	Actual			Projections								Average 6/	
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2030	2039	Historical	Projections
Public sector debt 1/	56.5	60.8	56.9	56.6	55.7	53.7	48.5	44.2	40.0	23.9	9.7	49.3	40.5
of which: external debt	28.2	31.6	28.3	29.5	31.3	32.6	29.9	26.7	23.1	14.3	10.1	24.7	23.6
Change in public sector debt	2.1	4.3	-3.9	-0.4	-0.8	-2.1	-5.2	-4.3	-4.2	-2.1	-1.5		
Identified debt-creating flows	-1.5	0.2	-4.5	-3.7	-4.1	-4.3	-4.5	-3.6	-3.5	-1.6	-1.2	-3.7	-3.3
Primary deficit	4.5	4.0	3.3	4.1	2.9	0.3	-0.2	-0.4	-0.8	-1.0	-0.8	2.4	0.0
Revenue and grants	14.7	13.1	12.8	12.3	13.1	14.3	14.9	15.2	15.2	15.2	15.7	15.2	14.6
of which: grants	0.7	0.8	1.2	1.6	0.9	0.9	0.9	0.7	0.8	0.5	0.4		
Primary (noninterest) expenditure	19.2	17.0	16.1	16.4	16.0	14.6	14.7	14.8	14.4	14.2	14.9	17.5	14.6
Automatic debt dynamics	-5.4	-3.4	-7.8	-7.8	-5.9	-4.3	-4.3	-3.2	-2.7	-0.6	-0.4		
Contribution from interest rate/growth differential	-16.9	-11.0	4.6	-7.8	-5.9	-4.3	-4.3	-3.2	-2.7	-0.6	-0.4		
of which: contribution from average real interest rate	-11.9	-6.9	9.6	-6.0	-3.9	0.2	-0.3	0.4	0.6	0.9	0.1		
of which: contribution from real GDP growth	-5.0	-4.0	-5.0	-1.8	-2.0	-4.4	-4.0	-3.6	-3.3	-1.5	-0.5		
Contribution from real exchange rate depreciation	11.5	7.6	-12.5	...	...	...	...	...	...	...	...		
Other identified debt-creating flows	-0.6	-0.4	0.0	0.0	-1.1	-0.4	0.0	0.0	0.0	0.0	0.0	-0.2	-0.1
Privatization receipts (negative)	-0.6	-0.4	0.0	0.0	-1.1	-0.4	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		
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		
Other debt creating or reducing flow (liquid financial asset)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Residual	3.7	4.2	0.6	3.3	3.2	2.3	-0.6	-0.7	-0.7	-0.6	-0.3	6.4	0.3
Sustainability indicators													
PV of public debt-to-GDP ratio 2/	...	...	48.6	47.6	46.4	44.3	40.2	36.7	33.3	18.5	5.7		
PV of public debt-to-revenue and grants ratio	...	...	380.0	386.4	353.5	309.4	269.0	242.3	218.7	121.4	36.4		
Debt service-to-revenue and grants ratio 3/	78.0	93.8	102.1	29.9	39.6	39.3	56.9	55.6	64.1	49.3	1.8		
Gross financing need 4/	15.4	15.8	16.4	7.8	7.0	5.5	8.3	8.0	8.9	6.5	-0.5		
Key macroeconomic and fiscal assumptions													
Real GDP growth (in percent)	10.2	7.7	9.0	3.2	3.7	8.7	8.0	8.0	8.0	6.0	5.0	9.6	6.6
Average nominal interest rate on external debt (in percent)	2.5	1.8	2.3	1.9	0.6	0.4	0.1	1.5	1.2	4.0	0.8	1.6	1.5
Average real interest rate on domestic debt (in percent)	-2.4	-5.2	-6.7	-12.9	-11.0	-2.6	-1.3	0.9	2.0	3.3	4.6	-7.6	-1.0
Real exchange rate depreciation (in percent, + indicates depreciation)	78.7	36.9	-30.8	...	...	...	...	...	...	...	...	16.1	...
Inflation rate (GDP deflator, in percent)	7.9	11.5	12.5	20.4	18.8	9.5	8.5	8.4	7.9	8.1	8.1	12.6	10.4
Growth of real primary spending (deflated by GDP deflator, in percent)	9.8	-4.6	3.1	5.3	1.0	-0.7	8.6	8.6	5.2	7.9	5.2	9.5	5.5
Primary deficit that stabilizes the debt-to-GDP ratio 5/	2.3	-0.4	7.2	4.4	3.7	2.4	4.9	3.9	3.3	1.2	0.7	3.1	3.0
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		

Definition of external/domestic debt	**Residency-based**
Is there a material difference between the two criteria?	**No**

Public sector debt 1/





Sources: Country authorities; and staff estimates and projections.

1/ Coverage of debt: general government, SOEs (excl. Ethiopian airlines), and the central bank . Definition of external debt is Residency-based. Presented on fiscal year basis (e.g., 2020 referes to fiscal year ending in June 2020).

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.

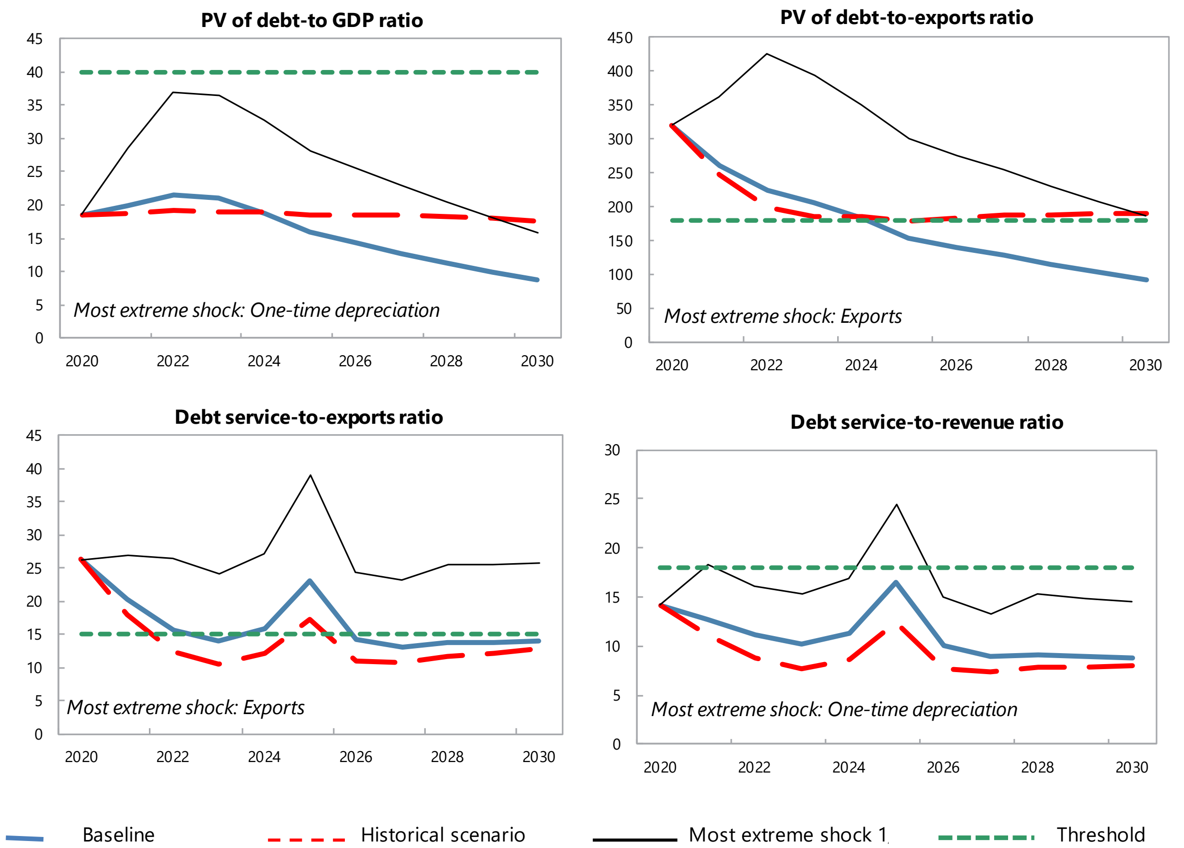
3/ Debt service is defined as the sum of interest and amortization of medium and long-term, and short-term debt.

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 stabilizes 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.

Figure 1. Ethiopia: Indicators of Public and Publicly Guaranteed External Debt, Baseline Scenario, 2020–30



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

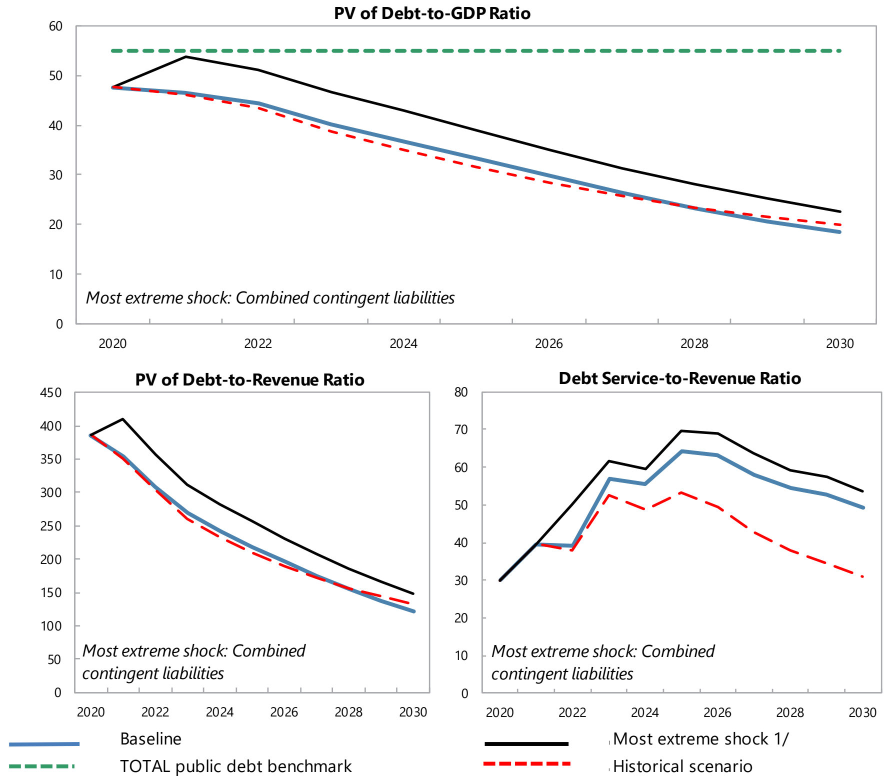
Note: "Yes" indicates any change to the size or interactions of the default settings for the stress tests. "n.a." indicates that the stress test does not apply.

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	0.9%	0.9%
USD Discount rate	5.0%	5.0%
Avg. maturity (incl. grace period)	33	33
Avg. grace period	5	5

* 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.

Figure 2. Ethiopia: Indicators of Public Debt, Baseline Scenario, 2020–30

(In percent)



Borrowing assumptions on additional financing needs resulting from the stress tests*	Default	User defined
Shares of marginal debt		
External PPG medium and long-term	21%	34%
Domestic medium and long-term	14%	54%
Domestic short-term	65%	12%
Terms of marginal debt		
External MLT debt		
Avg. nominal interest rate on new borrowing in USD	0.9%	0.9%
Avg. maturity (incl. grace period)	33	33
Avg. grace period	5	5
Domestic MLT debt		
Avg. real interest rate on new borrowing	3.5%	3.5%
Avg. maturity (incl. grace period)	10	10
Avg. grace period	3	3
Domestic short-term debt		
Avg. real interest rate	1.0%	1.0%

* 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 2030. 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.

Table 3. Ethiopia: Sensitivity Analysis for Key Indicators of Public and Publicly Guaranteed External Debt, Baseline Scenario, 2020–30

(In percent)

	Projections 1/										
	2020	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**
PV of debt-to GDP ratio											
Baseline	19	20	21	21	19	16	14	13	11	10	9
A. Alternative Scenarios											
A1. Key variables at their historical averages in 2020-2030 2/	19	19	19	19	19	18	19	18	18	18	18
B. Bound Tests											
B1. Real GDP growth	19	20	22	22	19	17	15	13	12	10	9
B2. Primary balance	19	20	22	22	20	17	15	14	12	11	9
B3. Exports	19	21	25	24	22	19	17	15	13	12	10
B4. Other flows 3/	19	22	25	25	23	19	18	16	14	12	11
B5. Depreciation	19	29	37	36	33	28	25	23	20	18	16
B6. Combination of B1-B5	19	22	26	25	23	19	18	16	14	12	11
C. Tailored Tests											
C1. Combined contingent liabilities	19	21	23	23	21	18	16	15	13	12	11
C2. Natural disaster	...	...	...	...	...	...	...	...	...	...	...
C3. Commodity price	...	...	...	...	...	...	...	...	...	...	...
C4. Market Financing	19	22	24	24	21	18	16	14	12	11	10
Threshold	40	40	40	40	40	40	40	40	40	40	40
PV of debt-to-exports ratio											
Baseline	**321**	**260**	**223**	**206**	**183**	154	140	128	116	104	93
A. Alternative Scenarios											
A1. Key variables at their historical averages in 2020-2030 2/	**321**	**247**	**199**	**186**	**185**	178	**183**	**187**	**189**	**189**	**189**
B. Bound Tests											
B1. Real GDP growth	**321**	**260**	**223**	**206**	**183**	154	140	128	116	104	93
B2. Primary balance	**321**	**263**	**234**	**216**	**192**	162	149	137	124	113	101
B3. Exports	**321**	**362**	**426**	**394**	**351**	**299**	**276**	**254**	**230**	**208**	**186**
B4. Other flows 3/	**321**	**285**	**266**	**246**	**219**	**188**	174	160	145	131	117
B5. Depreciation	**321**	**260**	**267**	**247**	**220**	**189**	174	161	146	132	119
B6. Combination of B1-B5	**321**	**359**	**261**	**361**	**322**	**276**	**254**	**234**	**212**	**191**	172
C. Tailored Tests											
C1. Combined contingent liabilities	**321**	**281**	**244**	**226**	**202**	173	161	149	138	127	116
C2. Natural disaster	...	...	...	...	...	...	...	...	...	...	...
C3. Commodity price	...	...	...	...	...	...	...	...	...	...	...
C4. Market Financing	**321**	**260**	**224**	**207**	**183**	154	140	127	115	103	92
Threshold	180	180	180	180	180	180	180	180	180	180	180

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 3. Ethiopia: Sensitivity Analysis for Key Indicators of Public and Publicly Guaranteed External Debt, Baseline Scenario, 2020–30 (concluded)

(In percent)

	Projections 1/										
	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Debt service-to-exports ratio											
Baseline	**26.3**	**20.3**	**15.7**	14.0	**15.9**	**23.0**	14.2	13.0	13.7	13.9	14.0
A. Alternative Scenarios											
A1. Key variables at their historical averages in 2020-2030 2/	**26**	**18**	12	11	12	**17**	11	11	12	12	13
B. Bound Tests											
B1. Real GDP growth	**26**	**20**	**16**	14	**16**	**23**	14	13	14	14	14
B2. Primary balance	**26**	**20**	**16**	14	**16**	**23**	15	13	14	14	15
B3. Exports	**26**	**27**	**26**	**24**	**27**	**39**	**24**	**23**	**26**	**26**	**26**
B4. Other flows 3/	**26**	**20**	**16**	15	**16**	**24**	15	14	**16**	**16**	**16**
B5. Depreciation	**26**	**20**	**16**	15	**16**	**24**	15	14	**16**	**16**	**16**
B6. Combination of B1-B5	**26**	**25**	**24**	**22**	**25**	**35**	**22**	**21**	**23**	**23**	**23**
C. Tailored Tests											
C1. Combined contingent liabilities	**26**	**20**	**16**	14	**16**	**23**	15	13	14	14	14
C2. Natural disaster	...	...	...	...	...	...	...	...	...	...	...
C3. Commodity price	...	...	...	...	...	...	...	...	...	...	...
C4. Market Financing	**26**	**20**	**16**	14	**16**	**24**	**16**	14	14	13	14
Threshold	15	15	15	15	15	15	15	15	15	15	15
Debt service-to-revenue ratio											
Baseline	14	13	11	10	11	17	10	9	9	9	9
A. Alternative Scenarios											
A1. Key variables at their historical averages in 2020-2030 2/	14	11	9	8	9	12	8	7	8	8	8
B. Bound Tests											
B1. Real GDP growth	14	13	12	11	12	17	10	9	9	9	9
B2. Primary balance	14	13	11	10	12	17	10	9	9	9	9
B3. Exports	14	13	11	11	12	17	10	9	10	10	10
B4. Other flows 3/	14	13	11	11	12	17	10	10	11	10	10
B5. Depreciation	14	**18**	16	15	17	**24**	15	13	15	15	15
B6. Combination of B1-B5	14	13	12	11	12	17	11	10	11	10	10
C. Tailored Tests											
C1. Combined contingent liabilities	14	13	11	10	11	17	10	9	9	9	9
C2. Natural disaster	...	...	...	...	...	...	...	...	...	...	...
C3. Commodity price	...	...	...	...	...	...	...	...	...	...	...
C4. Market Financing	14	13	11	10	11	17	11	10	9	9	9
Threshold	18	18	18	18	18	18	18	18	18	18	18

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. Ethiopia: Sensitivity Analysis for Key Indicators of Public Debt, Baseline Scenario, 2020–30

(In percent)

	Projections 1/										
	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
PV of Debt-to-GDP Ratio											
Baseline	48	46	44	40	37	33	30	26	23	21	18
A. Alternative Scenarios											
A1. Key variables at their historical averages in 2020-2030 2/	48	46	43	39	35	32	28	26	23	21	20
B. Bound Tests											
B1. Real GDP growth	48	47	46	43	39	36	33	30	27	24	22
B2. Primary balance	48	48	47	43	39	35	32	28	25	22	20
B3. Exports	48	48	48	43	40	36	32	29	26	23	20
B4. Other flows 3/	48	49	49	44	41	37	33	30	26	23	21
B5. Depreciation	48	49	46	41	36	32	28	24	21	17	15
B6. Combination of B1-B5	48	45	43	39	36	32	29	25	22	19	17
C. Tailored Tests											
C1. Combined contingent liabilities	48	54	51	47	43	39	35	31	28	25	23
C2. Natural disaster	...	...	...	...	...	...	...	...	...	...	...
C3. Commodity price	...	...	...	...	...	...	...	...	...	...	...
C4. Market Financing	48	46	44	40	37	33	30	26	23	21	18
TOTAL public debt benchmark	55	55	55	55	55	55	55	55	55	55	55
PV of Debt-to-Revenue Ratio											
Baseline	386	354	309	269	242	219	197	175	154	137	121
A. Alternative Scenarios											
A1. Key variables at their historical averages in 2020-2030 2/	386	351	304	261	232	210	190	172	156	144	132
B. Bound Tests											
B1. Real GDP growth	386	361	324	285	259	237	217	196	177	161	147
B2. Primary balance	386	362	328	285	257	233	210	187	166	148	132
B3. Exports	386	362	333	290	261	236	214	191	168	150	133
B4. Other flows 3/	386	370	340	297	268	243	219	196	173	154	137
B5. Depreciation	386	372	322	275	242	212	186	160	136	115	96
B6. Combination of B1-B5	386	342	304	263	236	212	189	167	146	128	112
C. Tailored Tests											
C1. Combined contingent liabilities	386	410	358	312	282	256	232	208	185	166	149
C2. Natural disaster	...	...	...	...	...	...	...	...	...	...	...
C3. Commodity price	...	...	...	...	...	...	...	...	...	...	...
C4. Market Financing	386	354	310	269	243	219	196	174	153	136	121
Debt Service-to-Revenue Ratio											
Baseline	30	40	39	57	56	64	63	58	54	53	49
A. Alternative Scenarios											
A1. Key variables at their historical averages in 2020-2030 2/	30	40	38	52	49	53	49	43	38	35	31
B. Bound Tests											
B1. Real GDP growth	30	40	41	60	58	67	67	62	58	57	54
B2. Primary balance	30	40	41	59	57	66	65	60	56	54	51
B3. Exports	30	40	39	57	56	64	63	59	55	54	50
B4. Other flows 3/	30	40	40	57	56	64	64	59	56	54	50
B5. Depreciation	30	38	39	55	54	63	60	55	52	50	47
B6. Combination of B1-B5	30	38	39	57	55	63	62	57	53	51	48
C. Tailored Tests											
C1. Combined contingent liabilities	30	40	50	62	59	70	69	64	59	57	54
C2. Natural disaster	...	...	...	...	...	...	...	...	...	...	...
C3. Commodity price	...	...	...	...	...	...	...	...	...	...	...
C4. Market Financing	30	40	39	57	56	65	64	59	54	52	49

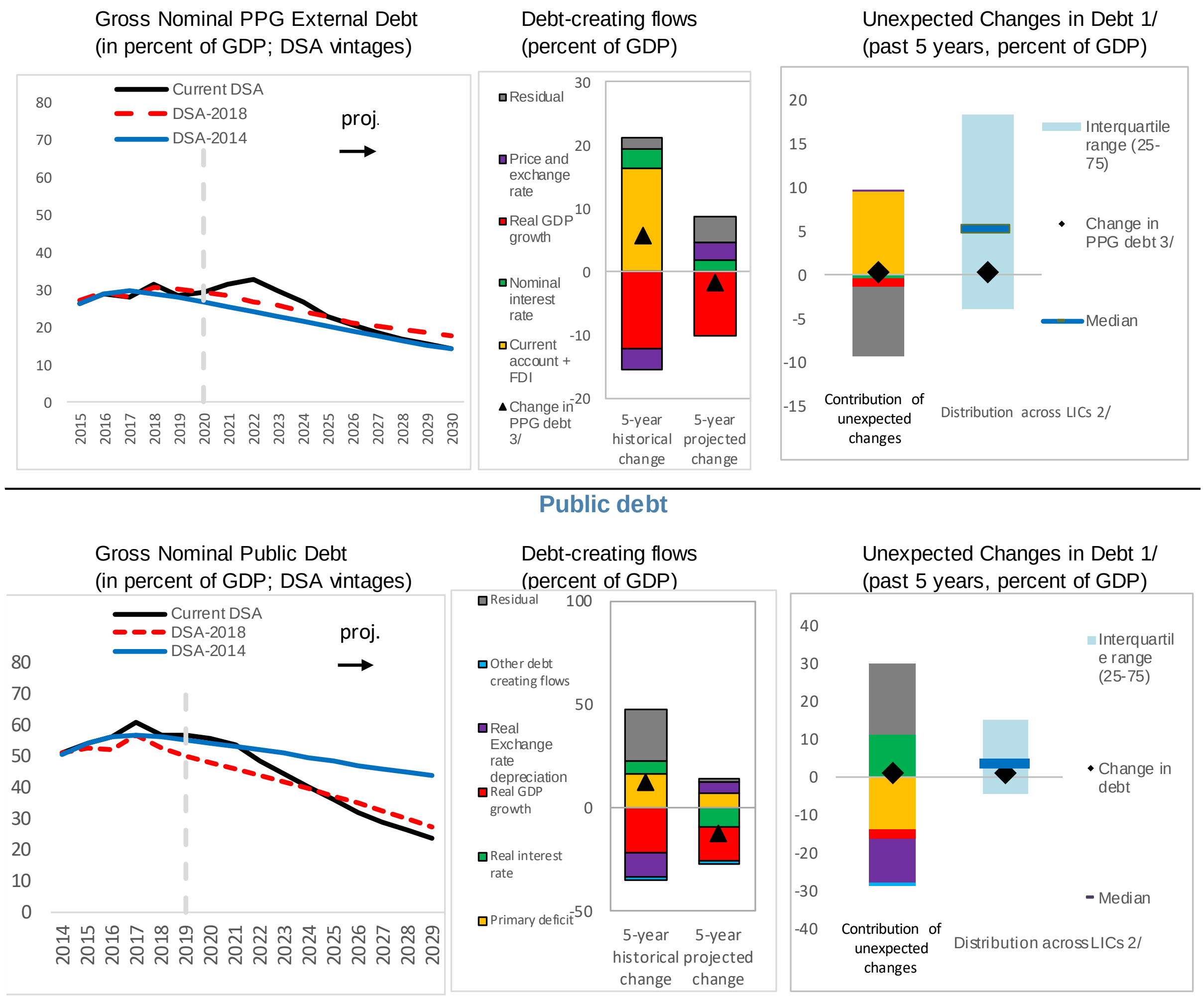
Sources: Country authorities; and staff estimates and projections.

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.

Figure 3. Ethiopia: Drivers of Debt Dynamics - Baseline Scenario, External Debt



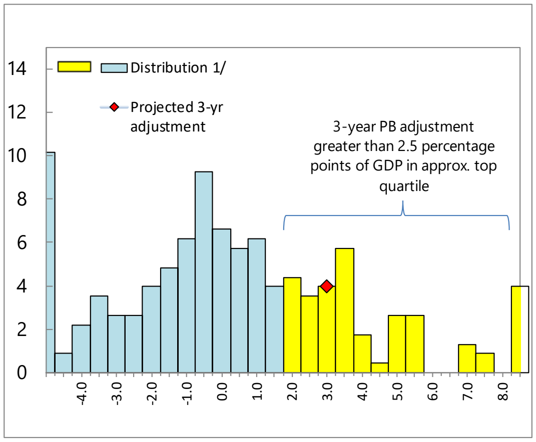
1/ Difference between anticipated and actual contributions on debt ratios.

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.

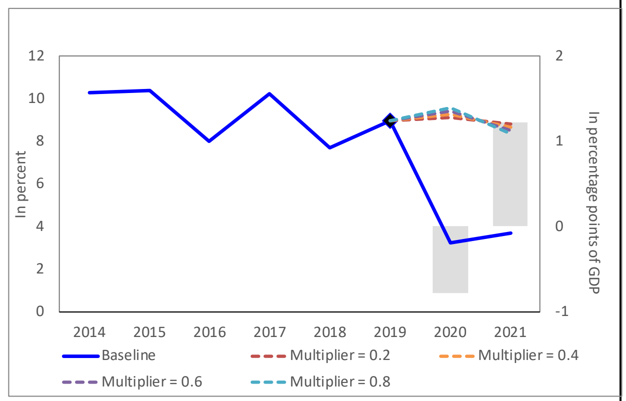
Figure 4. Ethiopia: Realism Tools, Baseline Scenario

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



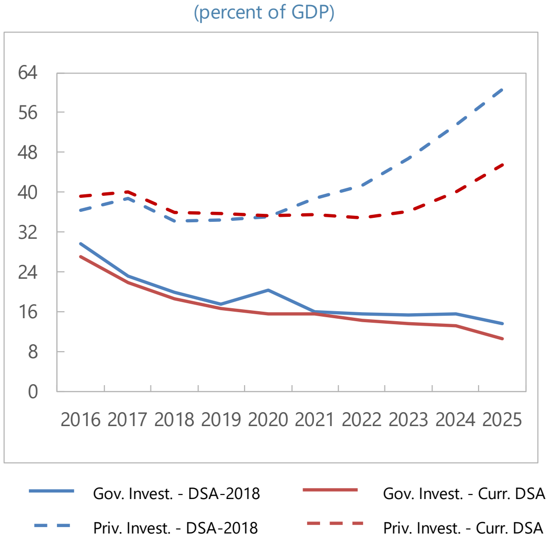
1/ Data cover Fund-supported programs for LICs (excluding emergency financing) approved since 1990. The size of 3-year adjustment from program inception is found on the horizontal axis; the percent of sample is found on the vertical axis.

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)

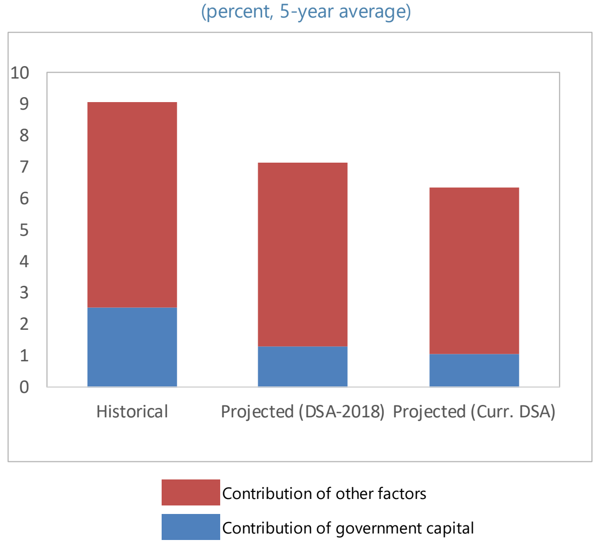
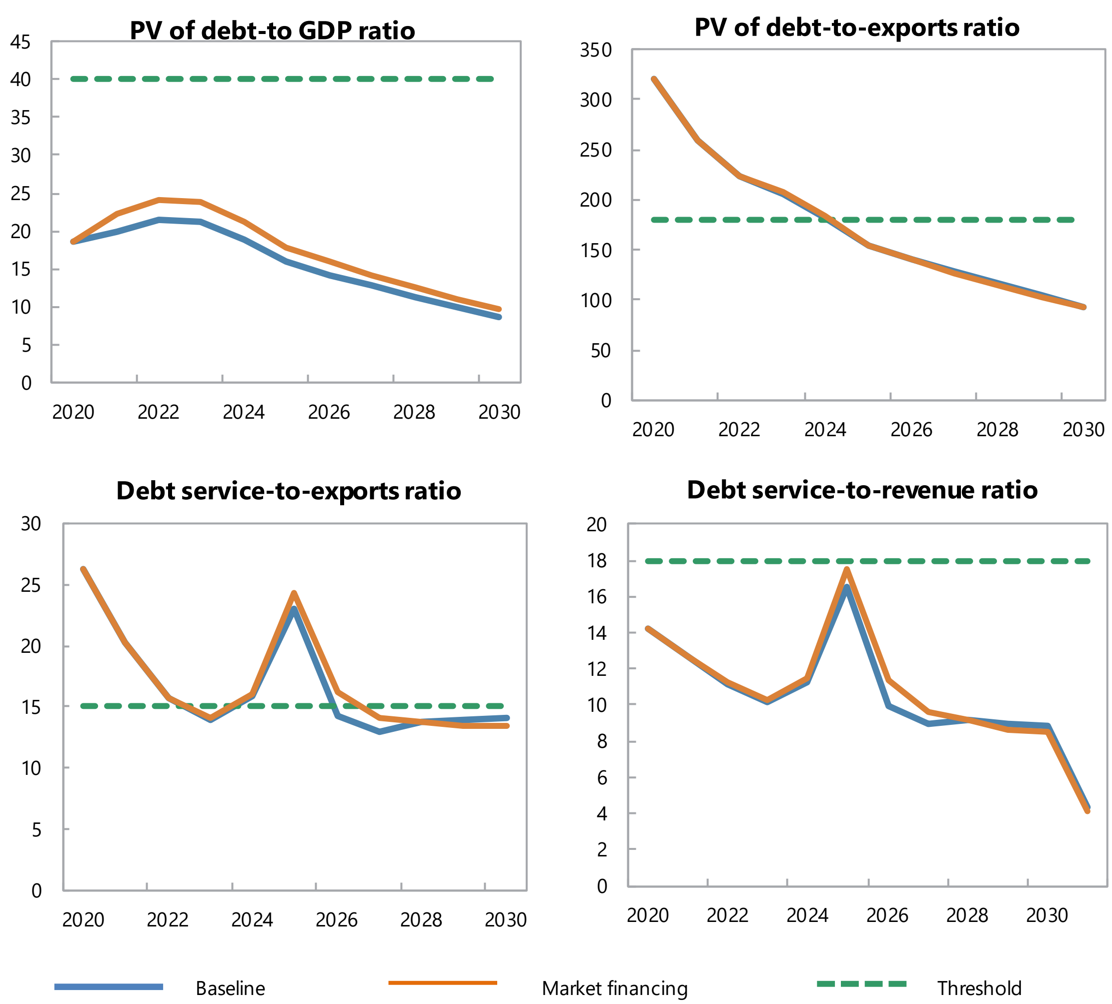


Figure 5. Ethiopia: Market-Financing Risk Indicators, Baseline Scenario

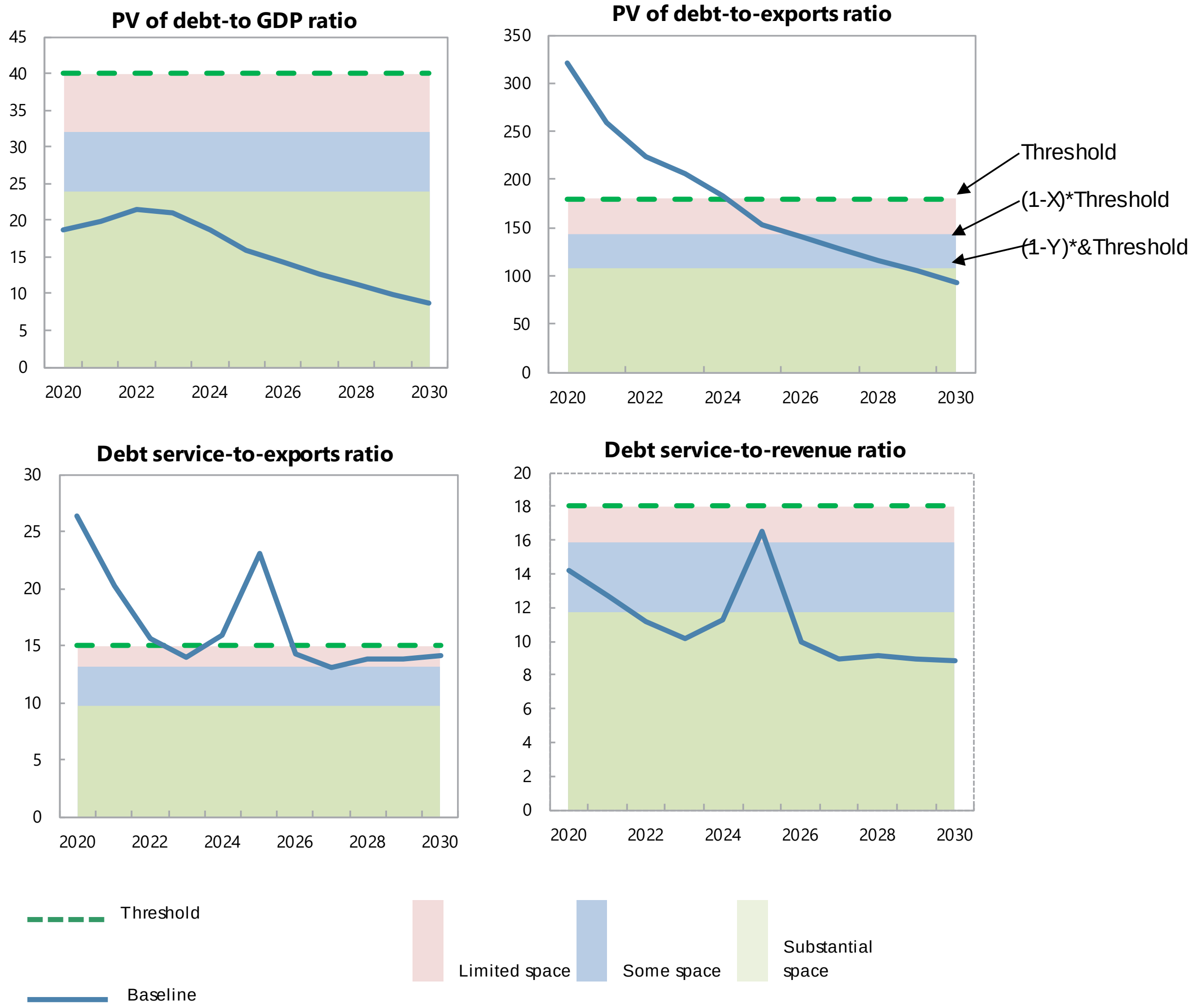
	GFN 1/	EMBI 2/
Benchmarks	14	570
Values	8	869
Breach of benchmark	No	Yes
Potential heightened liquidity needs	Moderate	

1/ Maximum gross financing needs (GFN) over 3-year baseline projection horizon.
2/ EMBI spreads are as of April 20, 2020.



Sources: Country authorities; and staff estimates and projections.

Figure 6. Ethiopia: Qualification of Moderate Category, Baseline Scenario, 2020–30[1/]



Sources: Country authorities; and staff estimates and projections.

1/ For the PV debt/GDP and PV debt/exports thresholds, x is 20 percent and y is 40 percent. For debt service/Exports and debt service/revenue thresholds, x is 12 percent and y is 35 percent.