



CÔTE D'IVOIRE

June 4, 2018

STAFF REPORT FOR THE 2018 ARTICLE IV CONSULTATION AND THIRD REVIEWS UNDER THE ARRANGEMENT UNDER THE EXTENDED CREDIT FACILITY AND EXTENDED ARRANGEMENT UNDER THE EXTENDED FUND FACILITY, AND REQUEST FOR MODIFICATION OF A PERFORMANCE CRITERION—DEBT SUSTAINABILITY ANALYSIS UPDATE

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Prepared by the International Monetary Fund and the International Development Association

This debt sustainability analysis (DSA) update reflects new information since the last DSA completed in December 2017, prepared for the second ECF and EFF reviews (Country Report 17/372).¹ This update concludes that Côte d'Ivoire remains at moderate risk of debt distress, in line with the December 2017 DSA. All external debt burden indicators under baseline conditions lie below their thresholds. However, under the worst-case stress scenarios, solvency and liquidity indicators breach their respective thresholds, reflecting vulnerability to adverse domestic and external shocks. Under the baseline scenario, total public debt is projected to stabilize only in the long-term. Stress test scenarios confirm the existence of considerable risks to overall public debt sustainability. The authorities are making efforts to address data gaps on public enterprises debt. Further progress would allow treatment of related contingent liabilities in the new Debt Sustainability Framework for Low-Income Countries, which will become effective from July 1, 2018.

¹ In the LIC-DSA framework Côte d'Ivoire is classified as having weak policy performance with a Country Policy and Institutional Assessment (CPIA) average of 3.29 for the period 2014–16 (http://databank.worldbank.org/data/download/CPIA_excel.zip). It should be noted that as from July 1, 2018, the DSA will be conducted using the new Debt Sustainability Framework (DSF) for Low-income Countries. In the new DSF, the country classification is no longer based exclusively on the CPIA score. Rather, it will be based on a composite measure covering the CPIA score, growth, reserve coverage, remittances and global growth. The DSF Guidance Note is available at <http://www.imf.org/~media/Files/Publications/PP/2017/pp122617guidance-note-on-lic-dsf.ashx>.

BACKGROUND

1. External debt in 2018 is projected to rise by more than 5 percent of GDP. This increase reflects the recent Eurobond issuance, and the government-guaranteed loan to restructure the debt of the state-owned oil refining company (SIR). In addition, other multilateral loans are expected to materialize in 2018. The end-2017 actual external debt stock turned out to be less than projected. Postponed contracting of the government-guaranteed loan for the SIR debt restructuring and delayed disbursements of project-related loans limited the external debt stock to 23.9 percent of GDP at end-2017.² However, for end-2018, external debt is projected to reach 29.5 percent of GDP (see Figure 1 and Table 1).

UNDERLYING ASSUMPTIONS

2. This DSA update is consistent with the macroeconomic framework underlying the Staff Report prepared for the third reviews of the three-year EFF/ECF blended arrangements. The macro framework projects a gradually increasing contribution of domestic demand to GDP in the medium term, a gradual moderation of investment offset by an increase in private consumption, with the government meeting its fiscal targets consistent with Côte d'Ivoire's WAEMU membership commitments.

Text table 1. Côte d'Ivoire: LIC DSA Macroeconomic Assumptions: Comparison with the 2016 LIC DSA
(Percent of GDP, unless otherwise indicated)

	Previous DSA			Current DSA		
	2017-22	2023-28	2029-37	2018-23	2024-29	2030-38
Nominal GDP (USD Billion) 1/	52.0	83.4	147.3	61.3	99.5	172.5
Real GDP (y/y % change)	7.0	6.0	5.5	6.9	5.8	5.5
Fiscal (central government)						
Revenue and grants 2/	20.0	20.5	21.7	19.4	20.0	21.2
of which: grants	1.4	0.7	0.3	0.9	0.3	0.1
Primary expenditure	22.1	22.8	23.3	22.0	22.6	23.0
Primary basic balance (excluding C2D grants)	0.8	2.2	1.9	1.3	2.1	1.8
Balance of payments						
Exports of goods and services	28.3	32.1	35.6	26.6	29.4	32.2
Imports of goods and services	28.2	29.5	32.4	26.1	26.8	29.3
Non-interest current account deficit 3/	1.4	0.3	0.4	1.0	0.2	0.1
New foreign direct investment (net inflows)	3.2	3.1	2.4	3.1	2.7	2.0

Sources: Ivorian authorities, and IMF staff estimates

1/ Changes from the 8th review DSA reflects an updated nominal GDP series and revised CFA/USD exchange rate assumptions.

2/ C2D grants are excluded from revenue and grants.

3/ C2D grants are excluded from official transfers.

² In this DSA, Public and Publicly Guaranteed external debt covers only the central government as defined in the TMU. It excludes French claims under C2D debt-for-development swaps, which were cancelled in the context of beyond HIPC debt relief. Under the C2D mechanism, debt service due on these claims is returned in the form of grants to the government to finance development projects. In the staff report the flows associated with the C2D process are included in the external and fiscal accounts so as to capture the gross cash flows (debt service and grants). See IMF Country Report n°14/358 and Supp.1, 11/21/2014 for a detailed discussion. The figure also excludes CFAF-denominated external debt.

- **GDP over the medium term.** Real GDP growth is expected to be broadly unchanged on average during the first five years of the projection compared to the last DSA. In the short-term, real GDP growth is supported initially by robust investment growth and increasingly by net exports. Real GDP is projected to grow by almost 6 percent over 2024–29 on average and 5.5% over 2030–38 as investment normalizes and net trade contribution tapers off.
- **The primary fiscal balance is expected to gradually improve over the projection horizon.** The expected trajectory of the primary basic balance remains anchored on a convergence to the WAEMU fiscal deficit target of 3 percent of GDP in 2019, and continued consolidation thereafter.
- **The non-interest current account deficit is projected to narrow over the long term.** The deficit is projected to stabilize at about 0.1 percent of GDP, reflecting an improvement in trade, and, to a lesser extent, the services' balances. These assumptions are subject to downside risks including weaker-than-expected global growth and changes in commodity prices that may trigger unfavorable terms-of-trade shocks. In the long term, exports are projected to become larger in percent of GDP as the country is expected to increase extraction of its natural resources, to do deeper processing of the commodities it currently exports, and to increase its role as a regional service hub (in terms of transportation, communications, and financial services). Net FDI inflows are projected to increase in nominal terms, but at a lower rate compared to nominal GDP.
- **Finally, in the medium term the country is projected to rely more on commercial debt and less on concessional debt as it makes the transition toward an emerging market economy.** As a result, the grant element is projected to follow a downward trend over the medium term. Initially the decline of the grant element is projected to be very gradual, as in the short term the government is expected to continue relying on concessional and semi-concessional lending, in addition to non-concessional lending, to satisfy its financing needs. Then in the medium to long term, the government is expected to rely increasingly more on non-concessional debt and less on concessional and semi-concessional lending.

EXTERNAL DEBT SUSTAINABILITY ANALYSIS

3. The results confirm the 2017 DSA assessment according to which Côte d'Ivoire remains at moderate risk of debt distress. The present values of the debt-to-GDP ratio, debt-to-exports ratio, debt-to-revenue ratio, and nominal liquidity measures of debt service to exports and revenues (excluding grants) all remain below their respective policy-dependent thresholds in the baseline scenario (Figure 1).³ However, the debt service-to-revenues indicator is projected to reach to 15.6 percent at its peak in 2025, up from 15 percent in the December 2017 DSA.

³ For 2018, the grant element of new disbursements is projected to be at 11 percent, reflecting the large new non—concessional debt disbursements linked to the Eurobond issuance.

4. The external DSA incorporates the March 2018 Eurobond issuance. In March 2018, the country issued a 12-year euro-denominated Eurobond, with a coupon rate of 5.25 percent, and a 30-year euro-denominated Eurobond (one of the longest maturities among sub-Saharan Africa issuers), with a coupon rate of 6.625 percent. Both Eurobonds have principal repayments spread over the last three years of their maturities, helping to ease re-financing pressures often associated with “bullet” repayment. This operation raised EUR 1.7 billion (equivalent to nearly US\$ 2.1 billion, or about 4.2 percent of GDP). F

5. The external DSA does not include CFAF-denominated external debt. Rather, CFAF-denominated external debt is included in the domestic debt. The total amount of public debt as a percentage of GDP does not change; only the composition of debt does.⁴ In principle single-currency transactions within a currency union between residents and non-residents have a balance of payments impact.⁵ However, it may not be always possible to identify external and domestic debt on a residency basis. Thus, in line with what was done in past DSAs, external and domestic debt are defined on a currency of denomination basis.⁶

6. The external DSA also incorporates the expected foreign bank loan guaranteed by the government for the debt restructuring of the national oil refinery (Société Ivoirienne de Raffinage, SIR). The loan has not yet materialized, but the authorities expect that it may be contracted by August 2018. The DSA highlights that external debt is projected to increase by about 5 percentage points of GDP by the end of 2018, reflecting primarily the Eurobond issuances and the expected debt restructuring of SIR. The authorities are also monitoring public enterprises’ debt stocks, which amounted to 4.17 percent of GDP at end-2017, which is not included in the baseline government debt projection. Of this amount, only 0.17 percent of GDP is guaranteed by the government.

7. It is assumed that all existing Eurobonds will be rolled over during the projection horizon of the DSA. Bullet Eurobonds would be rolled over in the year they mature, while Eurobonds whose principal is amortized over three years would be rolled over in the first year of principal amortization. The assumption of external debt rollover implies that, going forward, Côte d’Ivoire will increasingly rely on commercial debt and less on concessional loans to finance its public investment projects. This is reflected in the variation of the grant element during the projection period (Figure 1, Panel a).

8. All debt indicators breach respective thresholds under the most extreme shock scenarios. Under the most severe shock hitting the country in the first two years of the projections—consisting of a combination of lower real GDP growth, exports, foreign inflation, current transfers and FDI inflows—substantial and prolonged breaches for the PV of debt-to-GDP and the PV of debt-to-export ratios would occur. The PV of debt-to-GDP ratio would reach 43 percent in 2020, before returning to more sustainable levels after 2027. The PV of debt-to-exports ratio is projected to reach 169 percent in 2020,

⁴ If CFAF-denominated external debt were included in external debt, the 2017 external debt stock would have been 24.5 percent of GDP (instead of 23.9 percent), while domestic debt stock would have been 18.2 percent of GDP (instead of 18.8 percent). Total public debt at end-2017 would have remained unchanged at 42.7 of GDP.

⁵ See IMF (2017): Program Design in Currency Unions, (paragraph 13).

⁶ See IMF (2013): Staff Guidance Note on The Application of The Joint Bank-Fund Debt Sustainability Framework for Low-Income Countries, (paragraph 32).

before declining below the threshold in 2029. Debt service measures, which are sensitive to principal repayments of maturing Eurobonds, also breach thresholds under the most extreme shock scenarios. These results underscore the considerable downside risks for debt sustainability originating from external shocks (such as U.S. dollar appreciation vis-à-vis the euro, or negative terms of trade shocks), which may hit the economy.

PUBLIC DEBT SUSTAINABILITY ANALYSIS

9. Under the baseline scenario, the PV of the total public debt-to-GDP ratio (external plus domestic) in 2018 is projected to reach 44.7 percent. The projected increase in external debt is partially compensated by the projected reduction in domestic debt, which is due to the partial utilization of the Eurobond receipts to buy back short-term domestic debt. In subsequent years, the PV of the debt-to-GDP ratio is projected to reach 36 percent in the outer years of the projection. The trend reflects a gradual decline through time of the foreign currency-denominated component of debt, partially offset by an increase in the domestic currency-denominated component of public debt. Similarly, the PV of debt-to-revenue ratio starts at about 227 percent in 2018 and approaches about 160 percent only in the long run. Finally, the debt service-to-revenue ratio deteriorates as it is projected to reach 19.7 percent in 2025, before stabilizing at around 13 percent in the long-term (Figure 2).

10. Stress tests highlight several potential vulnerabilities. In the scenario of a fixed primary balance, all debt indicators increase over the long-term. Similarly, the most extreme shock scenario (real GDP growth at its historical average minus one standard deviation in the first two years of the projection) suggests rising public debt vulnerability for all debt burden indicators. In this most extreme shock scenario, the PV of debt-to-GDP ratio would reach 80 percent at the end of the projection horizon.

11. The results of the public DSA highlight the need for careful monitoring of debt indicators and implementation of prudent macroeconomic policies. The public debt stock and flow indicators illustrate non-negligible risks to public debt sustainability under the baseline in the short- and medium-term. In the outer years, the PV of the public debt-to GDP ratio and the PV of public debt-to-exports ratio are projected to decline, though, only modestly. The public debt service-to-revenue ratio is the most volatile public debt indicator under all scenarios—reflecting the amortization of medium- and long-term debt—and does not decline over the medium term. Therefore, every effort should be made to ensure fiscal prudence—including by raising revenue yields, prioritizing spending and improving investment efficiency—with a view to keep the debt dynamics in check.

CONCLUSIONS

12. Côte d'Ivoire remains at moderate risk of external debt distress as in the December 2017 DSA. However, in 2018 new external debt is projected to rise by more than 5 percent of GDP compared to 2017. While in the baseline scenario, all debt burden indicators remain under their respective debt distress thresholds, in the most extreme stress test scenarios, all the debt stock and debt service indicators breach the thresholds of debt distress. In this context, the authorities' efforts should be geared to mobilize

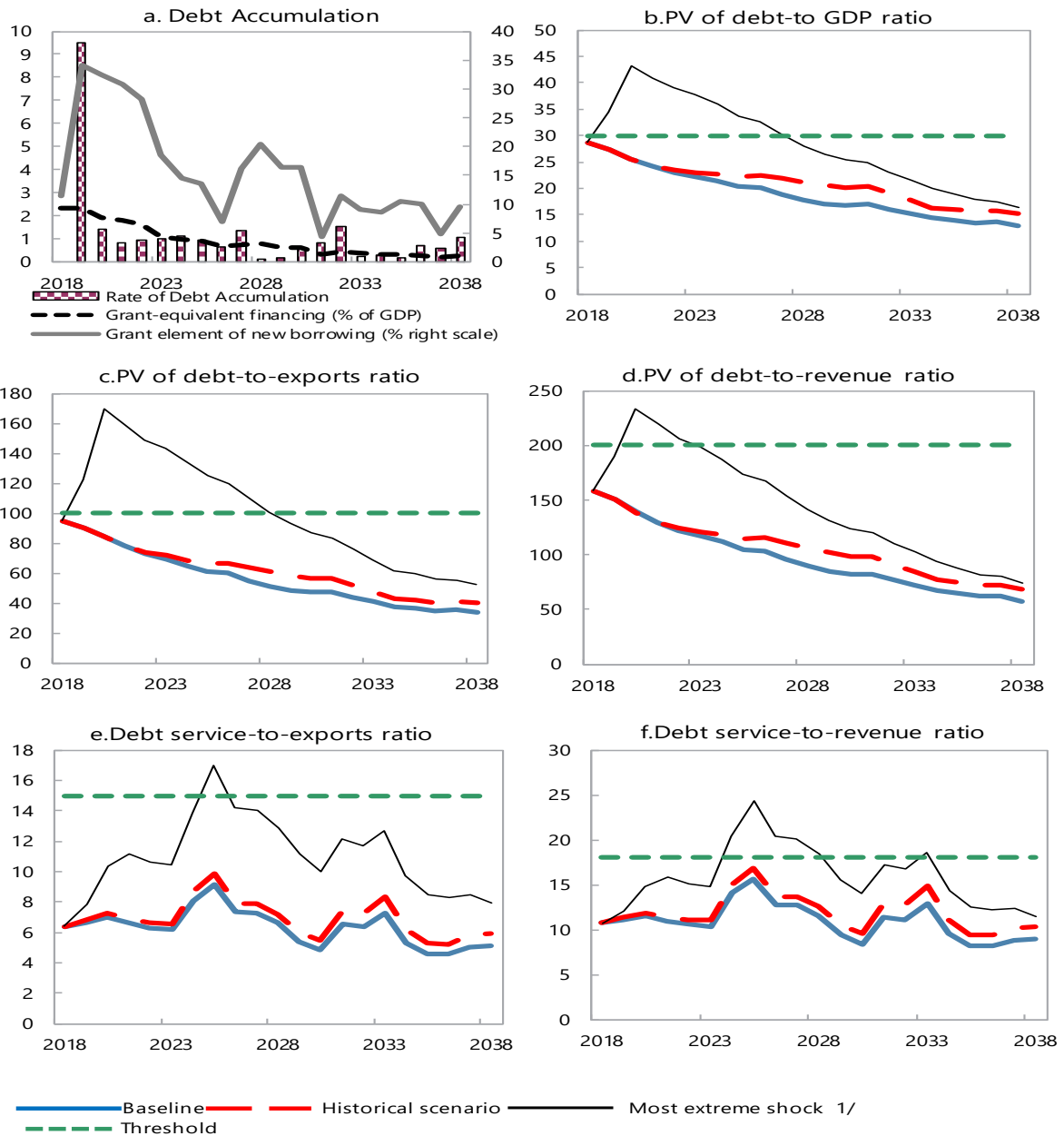
revenues and contain public expenditure—including that on the wage bill and subsidies—to create fiscal space. In 2017, the authorities have been conducting liability management operations to lower debt service and smooth its profile over the short- and medium-terms. Yet, the limited distance between the debt service-to-revenue ratio and its risk threshold over the medium-term (Figure 1) constrains the available fiscal space, and calls for greater efforts on revenue mobilization as well as careful debt management.⁷

13. Against this background, sound macroeconomic policies and an effective debt management strategy continue to be essential in maintaining a sustainable external position. Policies to maintain a sustainable fiscal position are also essential to stabilize debt over time, and enhanced mobilization of domestic revenues would help achieve this goal. In addition, the medium-term debt management strategy aimed at developing the domestic bond market, managing exchange rate risk, and avoiding a concentration of maturities is expected to support a more balanced debt portfolio. Regarding financial market development, the authorities are seeking to attract more international asset managers to participate in the domestic bond market. To manage exchange rate risk, the authorities noted that the latest euro-denominated Eurobond issuance diversified the currency composition of their debt portfolio.

14. The authorities of Côte d'Ivoire broadly concur with the main conclusions of this DSA, particularly that Côte d'Ivoire's risk of external debt distress is moderate. They noted with satisfaction that, in the context of the Fund's new debt limits policy, staff considers Côte d'Ivoire's debt monitoring capacity to be adequate. They agreed that it was important to continue to strengthen debt management, to refine the database for public enterprises, and to maintain a prudent borrowing policy. They concurred with staff on the importance of fostering private sector development to preserve high and sustained growth while maintaining a sound macroeconomic environment. That said, the authorities stressed that they considered the baseline macroeconomic assumptions used in this report too conservative and that these assumptions do not sufficiently reflect the future dividends of recent strong economic performance and of the reforms undertaken since 2012. In particular, they noted that the political stability following the peaceful presidential election of October 2015 and constitutional referendum of October 2016 augurs well for the upcoming presidential elections in 2020. In this context, the authorities would have appreciated the inclusion of another scenario based on higher growth rates driven by a stronger level of private investment.

⁷ The new Debt Sustainability Framework for Low-Income Countries, due to be operational in July 2018, will include a methodology to assess the availability of fiscal space.

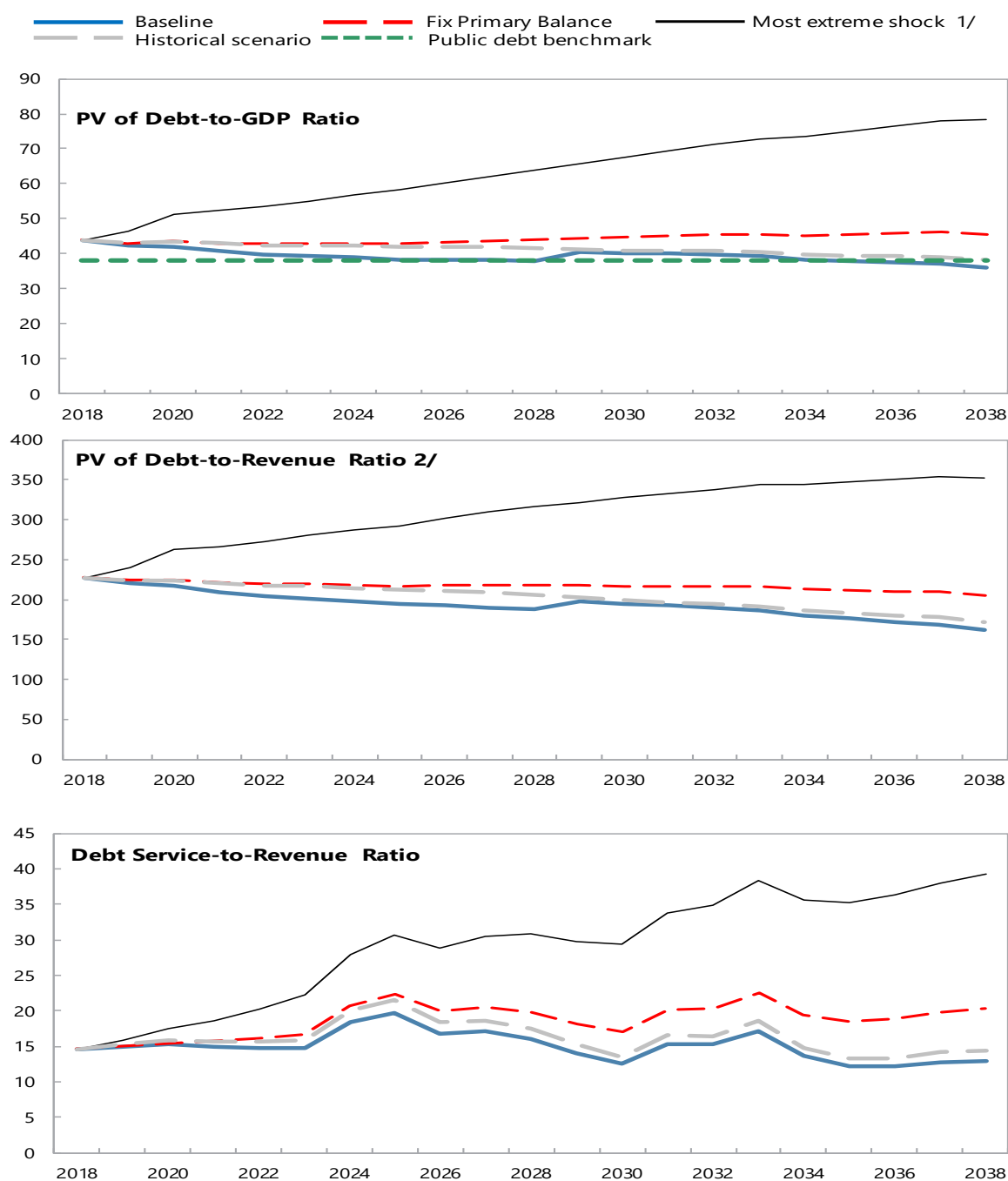
Figure 1. Côte d'Ivoire: Indicators of Public and Publicly Guaranteed External Debt under Alternative Scenarios, 2018–38^{1/}



Sources: Country authorities; and staff estimates and projections.

^{1/} The most extreme stress test is the test that yields the highest ratio on or before 2027. In figure b. it corresponds to a Combination shock; in c. to a Exports shock; in d. to a Combination shock; in e. to a Exports shock and in figure f. to a Combination shock

Figure 2. Côte d'Ivoire: Indicators of Public and Publicly Guaranteed External Debt under Alternative Scenarios, 2018–38^{1/}



Sources: Country authorities; and staff estimates and projections.
 1/ The most extreme stress test is the test that yields the highest ratio on or before 2027.
 2/ Revenues are defined inclusive of grants.

**Table 1. Côte d'Ivoire: External Debt Sustainability Framework,
Baseline Scenario, 2015–38^{1/}**

(Percent of GDP, unless otherwise indicated)

	Actual			Historical ^{6/} Standard ^{6/}		Projections						2018-2038			
	2015	2016	2017	Average	Deviation	2018	2019	2020	2021	2022	2023	Average	2028	2038	Average
External debt (nominal) 1/	37.1	37.3	36.4			42.9	40.7	39.7	39.0	38.8	37.6		33.4	27.9	
<i>of which: public and publicly guaranteed (PPG)</i>	22.2	22.7	23.9			29.5	28.8	27.7	26.7	25.9	25.2		21.1	15.8	
Change in external debt	2.8	0.2	-0.9			6.5	-2.2	-1.0	-0.7	-0.2	-1.2		-1.2	-1.0	
Identified net debt-creating flows	1.5	-3.9	-3.4			-1.2	-1.7	-1.5	-1.8	-2.2	-2.3		-2.3	-2.0	
Non-interest current account deficit	-0.9	-0.4	0.6	-3.2	4.3	0.9	1.3	1.3	1.0	0.8	0.8		0.5	-1.2	0.7
Deficit in balance of goods and services	-3.5	-2.6	-2.7			-1.2	-0.7	-0.8	-1.1	-1.7	-1.9		-2.7	-2.8	
Exports	37.7	31.3	31.1			30.2	30.2	30.2	30.8	31.8	32.1		34.9	38.5	
Imports	34.2	28.8	28.4			29.1	29.5	29.4	29.7	30.1	30.2		32.2	35.7	
Net current transfers (negative = inflow)	1.0	0.8	1.4	1.4	0.5	1.0	1.1	1.1	1.3	1.5	1.6		1.9	2.1	1.9
<i>of which: official</i>	-0.5	-1.4	-0.9			-1.2	-1.1	-1.0	-0.9	-0.6	-0.5		-0.3	0.0	
Other current account flows (negative = net inflow)	1.5	1.3	1.9			1.1	0.9	1.0	0.9	0.9	1.0		1.3	-0.5	
Net FDI (negative = inflow)	-1.4	-1.7	-1.8	-1.5	0.3	-1.6	-2.0	-2.0	-2.1	-2.3	-2.3		-2.4	-0.5	-2.4
Endogenous debt dynamics 2/	3.8	-1.8	-2.3			-0.5	-1.0	-0.8	-0.7	-0.6	-0.7		-0.4	-0.3	
Contribution from nominal interest rate	1.6	1.5	1.5			1.7	1.7	1.7	1.7	1.7	1.6		1.4	1.2	
Contribution from real GDP growth	-3.2	-2.8	-2.6			-2.3	-2.7	-2.5	-2.5	-2.4	-2.3		-1.8	-1.5	
Contribution from price and exchange rate changes	5.5	-0.5	-1.2			...	...	...	...	...	...		...	...
Residual (3-4) 3/	1.3	4.0	2.6			7.7	-0.5	0.5	1.2	2.0	1.1		1.2	1.0	
<i>of which: exceptional financing</i>	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
PV of external debt 4/	...	...	...			42.1	39.1	37.6	36.6	36.0	34.7		30.1	25.0	
In percent of exports	...	...	...			139.2	129.4	124.7	118.6	113.3	108.0		86.4	64.8	
PV of PPG external debt	...	...	...			28.7	27.2	25.6	24.2	23.1	22.3		17.8	12.8	
In percent of exports	...	...	...			94.8	90.0	84.8	78.4	72.5	69.4		51.0	33.3	
In percent of government revenues	...	...	...			158.4	150.0	138.8	129.7	121.9	117.0		89.4	57.8	
Debt service-to-exports ratio (in percent)	9.1	17.1	10.8			11.6	11.3	11.5	11.0	10.5	10.2		10.1	7.7	
PPG debt service-to-exports ratio (in percent)	3.5	4.6	5.3			6.4	6.6	7.0	6.6	6.3	6.2		6.6	5.1	
PPG debt service-to-revenue ratio (in percent)	7.0	8.0	9.1			10.7	11.1	11.4	11.0	10.5	10.4		11.5	8.9	
Total gross financing need (Billions of U.S. dollars)	2.1	2.2	1.9			1.7	2.2	1.7	1.6	1.6	2.1		2.5	4.1	
Non-interest current account deficit that stabilizes debt ratio	-3.7	-0.6	1.5			-5.6	3.5	2.4	1.7	1.0	2.0		1.7	-0.2	
Key macroeconomic assumptions															
Real GDP growth (in percent)	8.8	8.3	7.8	5.0	4.6	7.4	7.0	6.9	6.8	6.6	6.5		6.9	5.4	5.7
GDP deflator in US dollar terms (change in percent)	-13.8	1.3	3.2	2.6	8.7	10.3	3.1	2.9	2.6	2.5	1.8		3.9	1.8	1.9
Effective interest rate (percent) 5/	4.3	4.6	4.4	3.3	1.1	5.7	4.5	4.7	4.8	4.8	4.6		4.8	4.2	4.4
Growth of exports of G&S (US dollar terms, in percent)	-9.9	-8.9	10.5	2.7	9.0	15.3	10.4	9.7	11.9	12.7	9.6		11.6	8.7	9.1
Growth of imports of G&S (US dollar terms, in percent)	-6.7	-7.8	9.9	4.8	12.0	21.3	12.1	9.4	10.7	10.8	8.9		12.2	8.9	9.0
Grant element of new public sector borrowing (in percent)	...	...	...	...	...	11.5	34.2	32.5	30.8	28.2	18.6		26.0	20.4	11.5
Government revenues (excluding grants, in percent of GDP)	18.5	18.0	18.1			18.1	18.1	18.4	18.6	18.9	19.1		19.9	22.2	20.5
Aid flows (in Billions of US dollars) 7/	0.5	0.5	0.5			1.3	1.5	1.6	1.7	1.6	1.3		1.3	1.4	
<i>of which: Grants</i>	0.5	0.5	0.5			0.6	0.6	0.6	0.6	0.4	0.4		0.3	0.1	
<i>of which: Concessional loans</i>	0.0	0.0	0.0			0.8	1.0	1.0	1.1	1.1	0.9		1.1	1.3	
Grant-equivalent financing (in percent of GDP) 8/	...	...	2.4			2.3	1.9	1.8	1.6	1.1	1.0		0.6	0.0	0.5
Grant-equivalent financing (in percent of external financing) 8/	...	...	20.0			51.7	52.3	50.6	46.5	35.0	26.8		25.2	100.0	23.8
<i>Memorandum items:</i>															
Nominal GDP (Billions of US dollars)	33.1	36.4	40.5			48.0	52.9	58.2	63.8	69.7	75.5		110.1	226.9	
Nominal dollar GDP growth	-6.2	9.8	11.3			18.5	10.4	10.0	9.5	9.3	8.4		11.0	7.4	7.7
PV of PPG external debt (in Billions of US dollars)	...	...	10.0			13.8	14.5	14.9	15.5	16.1	16.9		19.6	29.2	
(PVt-PVt-1)/GDPT-1 (in percent)	...	...	...			9.5	1.4	0.8	0.9	1.0	1.1		2.5	0.2	0.6
Gross workers' remittances (Billions of US dollars)	-0.5	-0.7	-0.8			-0.9	-1.0	-1.1	-1.2	-1.3	-1.4		-2.1	-4.0	
PV of PPG external debt (in percent of GDP + remittances)	...	...	...			29.2	27.7	26.1	24.6	23.5	22.7		18.1	13.1	
PV of PPG external debt (in percent of exports + remittances)	...	...	...			101.2	96.1	90.5	83.7	77.2	73.8		54.0	35.0	
Debt service of PPG external debt (in percent of exports + remittances)	...	...	5.6			6.8	7.1	7.5	7.1	6.7	6.5		7.0	5.4	

Sources: Country authorities; and staff estimates and projections.

1/ Includes both public and private sector external debt.

2/ Derived as $[r - g - p(1+g)] / (1+g+p+gp)$ times previous period debt ratio, with r = nominal interest rate; g = real GDP growth rate, and p = growth rate of GDP deflator in U.S. dollar terms.

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

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

6/ Historical averages and standard deviations are generally derived over the past 10 years, subject to data availability.

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

8/ 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).

Table 2. Côte d'Ivoire: Sensitivity Analysis for Key Indicators of Public and Publicly Guaranteed External Debt, 2018–38^{1/}

(Percent)

	Projections						2028	2038
	2018	2019	2020	2021	2022	2023		
PV of debt-to-GDP ratio								
Baseline	29	27	26	24	23	22	18	13
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2017-2037 1/	29	27	26	24	23	23	21	15
A2. New public sector loans on less favorable terms in 2017-2037 2	29	28	27	26	26	26	25	25
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2018-2019	29	29	29	27	26	25	20	14
B2. Export value growth at historical average minus one standard deviation in 2018-2019 3/	29	32	37	36	34	34	26	15
B3. US dollar GDP deflator at historical average minus one standard deviation in 2018-2019	29	30	31	29	28	27	22	16
B4. Net non-debt creating flows at historical average minus one standard deviation in 2018-2019 4/	29	29	29	27	26	25	19	13
B5. Combination of B1-B4 using one-half standard deviation shocks	29	34	43	41	39	38	28	16
B6. One-time 30 percent nominal depreciation relative to the baseline in 2018 5/	29	39	36	34	33	32	25	18
PV of debt-to-exports ratio								
Baseline	95	90	85	78	73	69	51	33
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2017-2037 1/	95	90	85	78	74	71	61	40
A2. New public sector loans on less favorable terms in 2017-2037 2	95	93	89	86	83	82	71	65
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2018-2019	95	91	85	79	73	70	51	33
B2. Export value growth at historical average minus one standard deviation in 2018-2019 3/	95	123	169	159	149	143	101	52
B3. US dollar GDP deflator at historical average minus one standard deviation in 2018-2019	95	91	85	79	73	70	51	33
B4. Net non-debt creating flows at historical average minus one standard deviation in 2018-2019 4/	95	96	95	88	81	78	56	34
B5. Combination of B1-B4 using one-half standard deviation shocks	95	117	150	139	129	123	84	45
B6. One-time 30 percent nominal depreciation relative to the baseline in 2018 5/	95	91	85	79	73	70	51	33
PV of debt-to-revenue ratio								
Baseline	158	150	139	130	122	117	89	58
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2017-2037 1/	158	150	138	130	124	120	106	69
A2. New public sector loans on less favorable terms in 2017-2037 2	158	155	146	142	139	138	125	112
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2018-2019	158	160	156	146	137	131	100	65
B2. Export value growth at historical average minus one standard deviation in 2018-2019 3/	158	174	202	191	182	176	128	66
B3. US dollar GDP deflator at historical average minus one standard deviation in 2018-2019	158	166	169	158	148	142	109	70
B4. Net non-debt creating flows at historical average minus one standard deviation in 2018-2019 4/	158	159	155	145	136	131	98	59
B5. Combination of B1-B4 using one-half standard deviation shocks	158	190	234	219	206	198	141	74
B6. One-time 30 percent nominal depreciation relative to the baseline in 2018 5/	158	213	196	184	172	165	126	82

Table 2. Côte d'Ivoire: Sensitivity Analysis for Key Indicators of Public and Publicly Guaranteed External Debt, 2018–38^{1/} (concluded)

(Percent)

Debt service-to-exports ratio									
Baseline	6	7	7	7	6	6	7	5	
A. Alternative Scenarios									
A1. Key variables at their historical averages in 2017-2037 1/	6	7	7	7	7	7	7	6	
A2. New public sector loans on less favorable terms in 2017-2037 2	6	7	5	5	5	5	6	7	
B. Bound Tests									
B1. Real GDP growth at historical average minus one standard deviation in 2018-2019	6	7	7	7	6	6	7	5	
B2. Export value growth at historical average minus one standard deviation in 2018-2019 3/	6	8	10	11	11	10	13	8	
B3. US dollar GDP deflator at historical average minus one standard deviation in 2018-2019	6	7	7	7	6	6	7	5	
B4. Net non-debt creating flows at historical average minus one standard deviation in 2018-2019 4/	6	7	7	7	7	6	7	5	
B5. Combination of B1-B4 using one-half standard deviation shocks	6	7	9	10	9	9	11	7	
B6. One-time 30 percent nominal depreciation relative to the baseline in 2018 5/	6	7	7	7	6	6	7	5	
Debt service-to-revenue ratio									
Baseline	11	11	11	11	11	10	12	9	
A. Alternative Scenarios									
A1. Key variables at their historical averages in 2017-2037 1/	11	11	12	11	11	11	13	10	
A2. New public sector loans on less favorable terms in 2017-2037 2	11	11	9	8	8	8	11	12	
B. Bound Tests									
B1. Real GDP growth at historical average minus one standard deviation in 2018-2019	11	12	13	12	12	12	13	10	
B2. Export value growth at historical average minus one standard deviation in 2018-2019 3/	11	11	12	13	13	13	16	10	
B3. US dollar GDP deflator at historical average minus one standard deviation in 2018-2019	11	12	14	13	13	13	14	11	
B4. Net non-debt creating flows at historical average minus one standard deviation in 2018-2019 4/	11	11	12	12	11	11	13	9	
B5. Combination of B1-B4 using one-half standard deviation shocks	11	12	15	16	15	15	18	11	
B6. One-time 30 percent nominal depreciation relative to the baseline in 2018 5/	11	16	16	15	15	15	16	13	
<i>Memorandum item:</i>									
Grant element assumed on residual financing (i.e., financing required above baseline) 6/	7	7	7	7	7	7	7	7	

Sources: Country authorities; and staff estimates and projections.

1/ Variables include real GDP growth, growth of GDP deflator (in U.S. dollar terms), non-interest current account in percent of GDP, and non-debt creating flows.

2/ Assumes that the interest rate on new borrowing is by 2 percentage points higher than in the baseline, while grace and maturity periods are the same as in the baseline.

3/ Exports values are assumed to remain permanently at the lower level, but the current account as a share of GDP is assumed to return to its baseline level after the shock (implicitly assuming an offsetting adjustment in import levels).

4/ Includes official and private transfers and FDI.

5/ Depreciation is defined as percentage decline in dollar/local currency rate, such that it never exceeds 100 percent.

6/ Applies to all stress scenarios except for A2 (less favorable financing) in which the terms on all new financing are as specified in footnote 2.

**Table 3. Côte d'Ivoire: Public Sector Debt Sustainability Framework,
Baseline Scenario, 2015–38^{1/}**

(Percent of GDP, unless otherwise indicated)

	Actual			Average ^{5/}	Standard Deviation ^{5/}	Estimate					Projections			
	2015	2016	2017			2018	2019	2020	2021	2022	2023	2018-23 Average	2028	2038	2024-38 Average
Public sector debt 1/	40.7	41.8	42.7			44.7	44.0	44.2	43.4	42.8	42.4		41.1	36.4
<i>of which: foreign-currency denominated</i>	22.2	22.7	23.9			29.5	28.8	27.7	26.7	25.9	25.2		21.1	15.8
Change in public sector debt	3.8	1.1	0.9			2.0	-0.7	0.2	-0.8	-0.7	-0.4		-0.2	-1.2
Identified debt-creating flows	0.5	0.7	-1.9			-0.2	-1.4	-0.8	-0.8	-0.7	-0.4		-0.2	-0.4
Primary deficit	1.3	2.2	2.5	1.1	1.3	1.7	1.0	1.0	0.9	1.0	1.0	1.1	1.0	0.7
Revenue and grants	20.0	19.4	19.2			19.3	19.2	19.4	19.5	19.5	19.6		20.2	22.3
<i>of which: grants</i>	1.4	1.4	1.1			1.2	1.1	1.0	0.9	0.6	0.5		0.3	0.0
Primary (noninterest) expenditure	21.3	21.6	21.7			21.0	20.2	20.4	20.5	20.5	20.6		21.1	23.0
Automatic debt dynamics	-0.6	-1.4	-4.3			-2.0	-2.1	-1.8	-1.8	-1.6	-1.4		-1.2	-1.2
Contribution from interest rate/growth differential	-2.2	-2.0	-1.8			-1.6	-1.9	-1.6	-1.6	-1.5	-1.5		-1.2	-1.2
<i>of which: contribution from average real interest rate</i>	0.8	1.1	1.2			1.4	1.1	1.2	1.2	1.2	1.1		0.9	0.8
<i>of which: contribution from real GDP growth</i>	-3.0	-3.1	-3.0			-2.9	-2.9	-2.8	-2.8	-2.7	-2.6		-2.1	-2.0
Contribution from real exchange rate depreciation	1.6	0.6	-2.5			-0.4	-0.2	-0.2	-0.2	-0.1	0.1		0.0	0.0
Other identified debt-creating flows	-0.2	-0.1	-0.1			0.0	-0.4	0.0	0.0	0.0	0.0		0.0	0.0
Privatization receipts (negative)	-0.2	-0.1	-0.1			0.0	-0.4	0.0	0.0	0.0	0.0		0.0	0.0
Recognition of implicit or contingent liabilities	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 (specify, 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
Residual, including asset changes	3.3	0.4	2.8			2.2	0.7	1.0	0.1	0.0	0.0		0.0	-0.7
Other Sustainability Indicators														
PV of public sector debt	...	47.9	42.0			43.9	42.4	42.1	41.0	40.0	39.5		37.8	36.0
<i>of which: foreign-currency denominated</i>	...	28.8	23.2			28.7	27.2	25.6	24.2	23.1	22.3		17.8	13.8
<i>of which: external</i>	...	28.8	23.2			28.7	27.2	25.6	24.2	23.1	22.3		17.8	13.8
PV of contingent liabilities (not included in public sector debt)	...	...	...			...	...	...	...	...	...		...	...
Gross financing need 2/	6.5	8.1	9.0			7.1	6.3	6.4	6.5	6.6	6.6		7.2	6.4
PV of public sector debt-to-revenue and grants ratio (in percent)	...	247.4	218.9			227.6	220.6	216.6	209.7	204.5	201.6		187.6	161.6
PV of public sector debt-to-revenue ratio (in percent)	...	266.1	232.6			242.7	233.6	228.7	219.8	211.3	207.2		190.1	161.9
<i>of which: external 3/</i>	...	159.9	128.6			158.4	150.0	138.8	129.7	121.9	117.0		89.4	62.2
Debt service-to-revenue and grants ratio (in percent) 4/	12.8	12.0	14.1			14.6	15.0	15.3	15.0	14.8	14.7		16.1	12.9
Debt service-to-revenue ratio (in percent) 4/	13.8	12.9	15.0			15.6	15.9	16.2	15.7	15.3	15.1		16.3	12.9
Primary deficit that stabilizes the debt-to-GDP ratio	-2.5	1.1	1.6			-0.3	1.8	0.8	1.7	1.6	1.4		1.2	1.9
Key macroeconomic and fiscal assumptions														
Real GDP growth (in percent)	8.8	8.3	7.8	5.0	4.6	7.4	7.0	6.9	6.8	6.6	6.5	6.9	5.4	5.6
Average nominal interest rate on forex debt (in percent)	4.3	4.1	4.2	2.5	1.5	5.4	4.3	4.3	4.4	4.3	4.2	4.5	3.6	4.2
Average real interest rate on domestic debt (in percent)	1.3	3.3	4.3	1.4	2.0	4.5	4.0	4.2	3.7	3.7	3.9	4.0	3.3	2.5
Real exchange rate depreciation (in percent, + indicates depreciation)	24.2	3.0	-11.5	-0.3	10.2	-1.7	-0.7	-0.6	-0.6	-0.4	0.2	...	...	...
Inflation rate (GDP deflator, in percent)	3.1	1.6	1.1	3.3	2.1	0.5	2.0	1.8	1.9	1.8	1.8	1.6	1.8	1.9
Growth of real primary spending (deflated by GDP deflator, in percent)	16.8	10.0	8.1	3.5	6.0	4.2	3.1	7.8	7.0	6.8	7.0	6.0	6.0	6.6
Grant element of new external borrowing (in percent)	...	...	0.0	0.0	...	11.5	34.2	32.5	30.8	28.2	18.6	26.0	20.4	9.6

Sources: Country authorities; and staff estimates and projections.

1/ Includes general government debt.

2/ 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.

3/ Revenues excluding grants.

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

5/ Historical averages and standard deviations are generally derived over the past 10 years, subject to data availability.

Table 4. Côte d'Ivoire: Sensitivity Analysis for Key Indicators of Public Debt 2018–38^{1/}

	Projections							
	2018	2019	2020	2021	2022	2023	2028	2038
PV of Debt-to-GDP Ratio								
Baseline	44	42	42	41	40	39	38	36
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	44	43	44	43	43	42	42	38
A2. Primary balance is unchanged from 2017	44	43	44	43	43	43	44	46
A3. Permanently lower GDP growth 1/	44	43	43	43	43	44	51	79
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2018-2019	44	46	51	52	53	55	64	78
B2. Primary balance is at historical average minus one standard deviations in 2018-2019	44	43	44	43	42	41	40	35
B3. Combination of B1-B2 using one half standard deviation shocks	47	47	48	48	48	49	55	63
B4. One-time 30 percent real depreciation in 2018	44	54	53	51	49	48	46	42
B5. 10 percent of GDP increase in other debt-creating flows in 2018	44	52	51	50	48	48	45	39
PV of Debt-to-Revenue Ratio 2/								
Baseline	228	221	217	210	205	202	188	162
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	228	224	223	220	217	216	206	172
A2. Primary balance is unchanged from 2017	228	224	224	221	219	219	218	205
A3. Permanently lower GDP growth 1/	228	223	223	221	221	224	254	355
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2018-2019	228	240	262	266	272	280	316	352
B2. Primary balance is at historical average minus one standard deviations in 2018-2019	228	226	228	221	215	212	196	156
B3. Combination of B1-B2 using one half standard deviation shocks	241	245	243	244	246	251	270	282
B4. One-time 30 percent real depreciation in 2018	228	280	271	260	252	248	228	189
B5. 10 percent of GDP increase in other debt-creating flows in 2018	228	270	264	255	248	243	223	174
Debt Service-to-Revenue Ratio 2/								
Baseline	15	15	15	15	15	15	16	13
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	15	15	16	16	16	16	17	14
A2. Primary balance is unchanged from 2017	15	15	15	16	16	17	20	20
A3. Permanently lower GDP growth 1/	15	15	16	16	16	17	23	37
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2018-2019	15	16	18	19	20	22	31	39
B2. Primary balance is at historical average minus one standard deviations in 2018-2019	15	15	16	16	17	17	17	14
B3. Combination of B1-B2 using one half standard deviation shocks	15	16	17	17	18	19	26	30
B4. One-time 30 percent real depreciation in 2018	15	17	20	20	20	21	26	25
B5. 10 percent of GDP increase in other debt-creating flows in 2018	15	15	18	23	23	23	21	17

Sources: Country authorities; and staff estimates and projections.

1/ Assumes that real GDP growth is at baseline minus one standard deviation divided by the square root of the length of the projection period.

2/ Revenues are defined inclusive of grants.