INTERNATIONAL MONETARY FUND

CÔTE D'IVOIRE

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SECOND REVIEWS UNDER AN ARRANGEMENT UNDER THE EXTENDED CREDIT FACILITY AND THE EXTENDED ARRANGEMENT UNDER THE EXTENDED FUND FACILITY—DEBT SUSTAINABILITY ANALYSIS

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This debt sustainability analysis (DSA) concludes that Côte d'Ivoire remains at a moderate risk of debt distress, in line with the DSA carried out in June 2017 for the requests for an arrangement under the Extended Fund Facility and an arrangement under the Extended Credit Facility (Country Report 17/165). [1] *All external debt burden indicators lie below their thresholds under the baseline. However, under the worst-case stress scenarios, all solvency and liquidity indicators breach their respective thresholds (as was the case in the June 2017 DSA update), reflecting vulnerability to adverse domestic and external shocks. Under the baseline scenario, total public debt stabilizes only in the long term. Stress tests scenarios confirm the existence of non-negligible risks to public debt sustainability. Finally, existing data gaps on public enterprises debt remain a challenge which is being gradually addressed under the program, and further progress would allow treatment of related contingent liabilities in the DSA.*

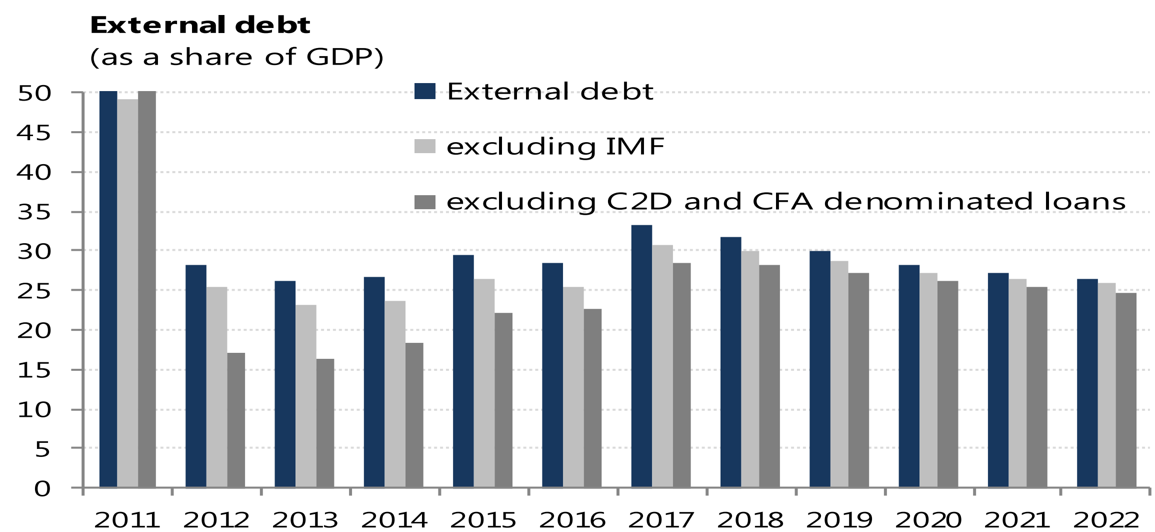
[1] In the LIC-DSA framework Côte d'Ivoire is classified as having weak policy performance with a Country Policy and Institutional Assessment (CPIA) average of 3.29 for the period 2014–16 (http://databank.worldbank.org/data/download/CPIA_excel.zip). With the progress in the CPIA score (the 3-year average for the period 2013–15 stood at 3.24), Côte d'Ivoire is on the cusp of a medium policy performance category, which would raise from 30 to 40 percent the threshold of the PV of external debt-to-GDP ratio, from 100 to 150 the threshold for the PV of external debt-to-exports ratio, and from 200 to 250 the threshold for the PV of external debt-to-revenue ratio. In addition, the threshold for the external debt service-to-exports ratio would raise from 15 to 20 percent, and the threshold for the external debt service-to-revenues ratio would raise from 18 to 20 percent.

BACKGROUND

1. **External public and publicly guaranteed debt stock marginally declined in 2016 (as a percentage of GDP), but is projected to increase in 2017.**[2] Excluding concessional lending from the IMF, CFA-denominated loans, and the Caisse Française de Development claims (not counted as external liabilities since the HIPC Initiative completion point), total public and publicly guaranteed external debt has increased from 22.2 percent of GDP in 2015 to 22.7 percent of GDP in 2016 (see Figure 1). However, in 2017, total public and publicly guaranteed external debt is projected to rise to 28.5 percent of GDP. The projected increase in external debt reflects the issuance of two Eurobonds in June 2017, which allowed raising a gross amount of nearly US$ 2 billion (net amount of about US$ 1.2 billion).[3] In addition, the new external debt includes a US$ 600 million bank loan, guaranteed by the government, to be used to restructure the debt of the state-owned oil-refining company (Société Ivoirienne de Raffinage, SIR).

Figure 1. Côte d'Ivoire: Stock of External Public Debt, 2011–22

(Percent of GDP)



Sources: Ivoirien authorities and IMF staff estimates.

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[2] In this DSA, PPG external debt covers only the central government. 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.

[3] Part of the proceeds raised from the bond issuance was used to buy back portions of two outstanding Eurobonds: USD 520 million were used to buy back part of the Brady bond maturing in 2032, and USD 260 million were used to buy back part of the bullet Eurobond maturing in 2024.

2. The composition of external debt was little changed in 2016. The share of multilateral creditors in Côte d'Ivoire's external debt increased from 24.2 percent in 2015 to 26.2 percent in 2016. During the same period, the share of official bilateral creditors increased from 16.1 percent to 19.6 percent. By contrast, the share of commercial creditors has declined from 59.8 percent of the total in 2015 to 54.2 percent in 2016. Despite this decline, the figure confirms the high reliance of Côte d'Ivoire on commercial debt for external financing (Text Table 1).

Text Table 1. Côte d'Ivoire: Composition of External Debt per Creditor Group

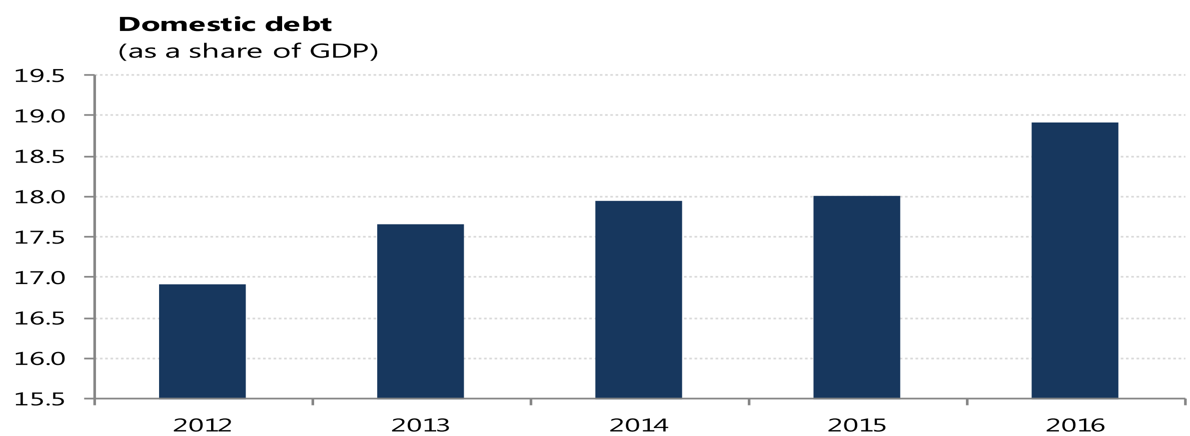
	2015	2016			2017	2018	2019	2020	2021	2022
		Million USD	Percent of total	Percent of GDP	Million USD					
Total	**7233.8**	**7867.4**	**100.0**	**22.7**	**11621.9**	**12871.6**	**13655.7**	**14259.8**	**14889.8**	**15649.6**
including C2D and FCFA-denominated loans	9580.5	9818.3	124.8	28.3	13531.1	14529.4	14999.7	15290.6	15900.4	16638.4
Multilateral creditors	**1748.5**	**2064.2**	**26.2**	**6.0**	**2084.5**	**1957.4**	**1765.6**	**1556.7**	**1297.3**	**1064.4**
IMF	983.8	991.8	12.6	2.9	963.4	847.5	697.2	541.5	353.7	200.6
World Bank	394.5	522.0	6.6	1.5	562.4	576.6	573.7	567.8	548.9	520.3
AfDB group	47.0	45.5	0.6	0.1	49.2	50.9	51.1	51.0	50.6	50.1
Other multilaterals	323.2	505.0	6.4	1.5	509.5	482.4	443.5	396.4	344.1	293.5
Official bilateral creditors	**1161.4**	**1541.0**	**19.6**	**4.4**	**1584.5**	**1550.5**	**1472.0**	**1377.3**	**1289.4**	**1228.3**
Paris Club	307.0	241.5	3.1	0.7	189.6	124.6	55.3	19.6	18.3	17.5
Non-Paris Club	854.4	1299.6	16.5	3.8	1394.9	1425.9	1416.8	1357.7	1271.1	1210.8
Commercial creditors	**4323.9**	**4262.2**	**54.2**	**12.3**	**3753.9**	**3780.0**	**3684.5**	**3571.0**	**3444.3**	**3309.6**
London Club	4272.8	4219.7	53.6	12.2	3716.7	3751.1	3663.9	3559.0	3444.3	3309.6
Other commercials	51.0	42.5	0.5	0.1	37.2	29.0	20.6	12.1	0.0	0.0
New debt					4199.0	5583.7	6733.6	7754.7	8858.7	10047.3

Sources: Ivoirien authorities; and IMF staff estimates.

3. The domestic public debt has recorded a modest but steady increase. From 16.9 percent of GDP in 2012, the stock of public debt has increased by two percentage points to 18.9 percent in 2016. More than 80 percent of the government domestic debt consists of government securities issued in the regional bond market.

Figure 2. Côte d'Ivoire: Stock of Domestic Public Debt[1/], 2012-16

(Percent of GDP)



1/ Central government only.

Sources: Ivoirien authorities; and IMF staff estimates.

4. The government has started monitoring fiscal risks stemming from public enterprises and public-private partnerships (PPPs). The development of a centralized database on public enterprises and government guaranteed debt is an important tool to prevent an unsustainable accumulation of debt by public sector entities (see list of Structural Benchmarks for 2017–18, page 64 of the Staff Report). Most recent available data show that as of end-June 2017, the debt stock of public enterprises amounted to 3 percent of GDP, of which only about 0.2 percent of GDP is directly guaranteed by the government and thus included in the government debt stock.[4] The authorities are also developing a PPPs database which will include key information on contingent liabilities (see paragraph 15 of the Staff Report). They intend to present an analysis of fiscal risks stemming from PPPs in the 2018-2020 medium-term budget framework document. In addition, both the IMF and the World Bank have been providing technical assistance on PPPs, to better identify the contingent liabilities' fiscal risks for the central government.

5. The previous DSA assessed Côte d'Ivoire's risk of debt distress to be at a moderate level. All external debt burden indicators were below their thresholds under the baseline. Under worst-case stress scenarios, however, all solvency and liquidity indicators in the framework breached their respective thresholds, largely reflecting the legacy of macroeconomic volatility that disrupted the Ivoirian economy prior to 2012 coupled with the fast pickup in economic activity thereafter. In the previous DSA, the probability approach to risk assessment showed that Côte d'Ivoire remained below threshold levels under the baseline, confirming the moderate risk of external debt distress rating. Total public debt indicators (including domestic liabilities) showed a projected deterioration in Côte d'Ivoire's public debt in the short-term. In the outer years of the projection period, however, public debt stabilized around 20 percent of GDP.

[4] It should be noted that the absence of consolidated fiscal accounts for the public enterprise sector and central government precludes the integration of non-government guaranteed public enterprise debt in the DSA.

UNDERLYING ASSUMPTIONS AND BORROWING PLANS

Text Table 2. Côte d'Ivoire: LIC DSA Macroeconomic Assumptions: Comparison with the 2016 LIC DSA
(Percent of GDP, unless otherwise indicated)

	Previous DSA			Current DSA		
	2016-21	2022-27	2028-36	2017-22	2023-28	2029-37
Nominal GDP (USD Billion) 1/	46.4	77.3	134.4	52.0	83.4	143.7
Real GDP (y/y % change)	7.5	6.3	5.5	7.0	6.0	5.5
Fiscal (central government)						
Revenue and grants 2/	21.3	22.1	23.0	20.0	20.5	21.7
of which: grants	1.6	0.9	0.3	1.4	0.7	0.3
Primary expenditure	23.2	23.3	23.8	22.1	22.8	23.3
Primary basic balance (excluding C2D grants)	1.8	1.2	0.9	0.8	2.2	1.9
Balance of payments						
Exports of goods and services	37.2	39.2	43.5	28.3	32.1	35.6
Imports of goods and services	36.7	37.4	40.4	28.2	29.5	32.4
Non-interest current account deficit 3/	0.9	0.5	0.5	1.4	0.3	0.4
New foreign direct investment (net inflows)	3.6	3.6	2.9	3.2	3.1	2.4

Source: Ivoirien 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.

6. **This DSA is consistent with the macroeconomic framework underlying the Staff Report prepared for the second review of the three-year EFF/ECF blended arrangements.** Côte d'Ivoire has been adversely affected by a terms of trade shock as well as domestic shocks. At the WAEMU level, with the monetary policy tightening by the regional central bank, BCEAO, the cost of funds has increased. The macro framework assumes a gradual convergence towards a more sustainable growth path in the long run, an increasing contribution of domestic demand to GDP, a gradual moderation of investment (offset by an increase in private consumption), and steady progress towards the fiscal target of the government, consistent with Côte d'Ivoire's WAEMU membership commitments.

7. **Key macroeconomic assumptions are as follows:**

- **Global environment.** The external demand from Côte d'Ivoire's trading partners is projected to gradually increase in the long term. This assumption is subject to the downside risk of continued sluggish recovery in global demand.

- **GDP over the medium term.** In the current DSA, real GDP growth is expected to be slower on average during the first five years of the projection (7 percent) than in the last DSA (7.5 percent). This reflects the impact of the terms of trade shock involving a decline in cocoa prices and higher uncertainty originating from the episodes of social unrest at the beginning of 2017. In the short-term, real GDP growth is supported initially by robust investment growth and increasingly by private consumption. Real GDP is projected to grow by 6 percent over 2023–28 on average and 5.5% over 2029–37 as investment normalizes and net trade contribution becomes more negative.
- **The primary fiscal balance is expected to gradually improve over the baseline horizon.** In the current DSA, the primary fiscal balance is assumed to be lower on average during the first five years of the projection than in the last DSA, reflecting the adverse impacts of the external and internal shocks on government finances. The expected trajectory of the fiscal position remains anchored on a convergence of the fiscal deficit to the 3 percent of GDP target in 2019 and continued consolidation thereafter. A steady improvement in the primary fiscal balance is expected in the medium-to-long term.
- **The non-interest current account deficit is projected to widen to 1.4 percent of GDP (from 0.9 percent in the previous DSA) on average in the first five years of the projection, reflecting the unfavorable terms-of-trade shock.** The current account deficit is projected to shrink and stabilize at about 0.4 percent of GDP over the longer term, 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 economic growth and changes in commodity prices, which 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 more of the processing of the commodities it currently exports, as well as to increase its role as a regional service hub (in terms of transportation, communication, and financial services).

DEBT STRATEGY AND COMPOSITION

8. **The authorities' Medium Term Debt Strategy (MTDS) aims to keep debt at a sustainable level.** The MTDS objectives for the domestic bond market are to lengthen the average maturity of domestic debt securities, contribute to the development of the domestic bond market, and reduce the cost of local issuance. Regarding external debt, the MTDS objectives are to increase semi-concessional borrowing while at the same time tapping the international sovereign debt market if necessary, limit foreign exchange risk and channel external financing primarily towards infrastructure investment. A set of ongoing initiatives will support the achievement of this strategy and help make debt management operations more efficient. These include the finalization of the operational restructuring of the debt policy directorate (Front, Middle and Back Office), reinforcement of cash management operations, the setting-up of a network of Primary Dealers to promote the issuance and secondary market trading of CFA-denominated debt issued in the regional market, broadening the investor base, and issuing CFA-denominated debt securities in the international market.

DEBT SUSTAINABILITY ANALYSIS

A. External Debt Sustainability Analysis

9. The external DSA incorporates the June 2017 Eurobond issuance, net of buy back operations, which covered most of the 2017 budget financing needs and improved debt repayment profile. In June 2017, Côte d'Ivoire issued a long-term US dollar-denominated bond, with principal repayments spread over three years and a medium-term euro-denominated bond, one of the first among frontier markets. A part of the proceeds was used to buy back a portion of outstanding bonds maturing in 2024 and 2032. In net terms, these operations raised about US$ 1.2 billion (about 3 percent of GDP).

10. The external DSA also incorporates the expected bank loan guaranteed by the government for the debt restructuring of the state-owned oil refining company (*Société Ivoirienne de Raffinage*, SIR). The loan will likely be contracted by December 2017. The DSA highlights that external debt is projected to increase by about 6 percentage points at the end of 2017, reflecting primarily Eurobond issuance and the expected debt restructuring of SIR. The authorities are also closely monitoring the rising gross debts of the public enterprises, which amounted to 3 percent of GDP at mid-2017. Of this amount, less than 0.2 percent of GDP is guaranteed by the government and included in the government debt stock.

11. The external DSA assumes that all existing Eurobonds would be rolled over during the whole horizon of the DSA. Specifically, bullet Eurobonds would be rolled over in the year they mature, while Eurobonds whose principal is amortized over two or 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 rely 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 3, panel a).

12. The results of the external DSA confirm that Cote d'Ivoire's debt dynamics are sustainable under the baseline scenario. The present values of the debt-to-GDP ratio, debt-to-exports ratio, debt-to-revenue ratio, and liquidity measures of debt service to exports and revenues (excluding grants) all remain under the debt distress thresholds in the baseline scenario (Figure 3). However, the debt service-to-revenues indicator is anticipated to increase toward the threshold in 2025, the maturity year of the euro-denominated bullet Eurobond issued in June 2017.

13. The debt indicators breach the thresholds in the most extreme shock scenario. Under the latter—i.e., a shock hitting the country in the first two years of the projection consisting in 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 occur. Specifically, the PV of debt-to-GDP ratio would reach 42.2 percent in 2019, before returning to more sustainable levels in 2027. The PV of debt-to-exports ratio would reach 150 percent in 2019, before declining below the threshold in 2025. Debt service measures, which are sensitive to the repayment of the principal of maturing Eurobonds, also breach the thresholds under the most extreme shock scenario. These results underscore the considerable downside risks for debt sustainability originating from higher (domestic and external) macroeconomic volatility which may hit the economy.

B. Fiscal Debt Sustainability Analysis

14. Under the baseline scenario, the PV of the public debt-to-GDP ratio in 2017 is projected to reach 43.8 percent. This implies that in each year between 2017 and 2026, the PV of total public debt is projected to be on average higher than its prudential benchmark by 2.8 percent of GDP. The level of the PV of total public debt in 2017 reflects an increase originating from new official bilateral debt contracted (mainly Non-Paris Club debt) and new commercial lending (Eurobond issuance and the expected bank loan guaranteed by the government for the debt restructuring of SIR). In subsequent years, the PV of debt-to-GDP ratio declines gradually moving below 38 percent in 2027 and reaching 32 percent in the long run. The trend reflects a gradual decline through time of both components of total public sector debt (foreign and domestic currency-denominated components).[5] Similarly, the PV of debt-to-revenue ratio starts at 224 percent in 2017 and declines gradually below 150 percent only in the long run. By contrast, the debt service to revenue ratio deteriorates as it is projected to reach 19.6 percent in 2025, before stabilizing around 13 percent in the long run.

15. Stress tests highlight a number of potential vulnerabilities. In the scenario of constant primary balance, all debt indicators increase over the long run. 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.

16. The results of the fiscal DSA highlight the need of prudence and careful monitoring of public debt stock and flow indicators, as they illustrate non-negligible risks to public debt sustainability under the baseline in the short- and medium-term. In the outer years of the projections, under the baseline, the PV of the public debt-to GDP ratio and the PV of public debt-to-exports ratio are projected to gradually decline over time. 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.

CONCLUSIONS

17. Côte d'Ivoire remains at moderate risk of external debt distress in 2017, as in the 2016 DSA. However, importantly, in 2017 new external debt is projected to rise by almost 6 percent of GDP compared to 2016. While in the baseline scenario, all debt burden indicators remain under their respective debt distress thresholds, in the most extreme stress test scenario, all the debt stock and debt service indicators breach the thresholds of debt distress. In this context, the authorities' efforts are geared to mobilize revenues and contain public expenditure—including that on the wage bill and subsidies—to create fiscal space. The authorities are also conducting liability management operations to lower the debt service and smooth its profile over the short-and medium-term. Yet, the limited distance between the debt service-to-

[5] It should be noted that if the fiscal perimeter included also the debt of state-owned enterprises, the PV of the public debt-to-GDP ratio would reach 46.8 percent.

(continued)

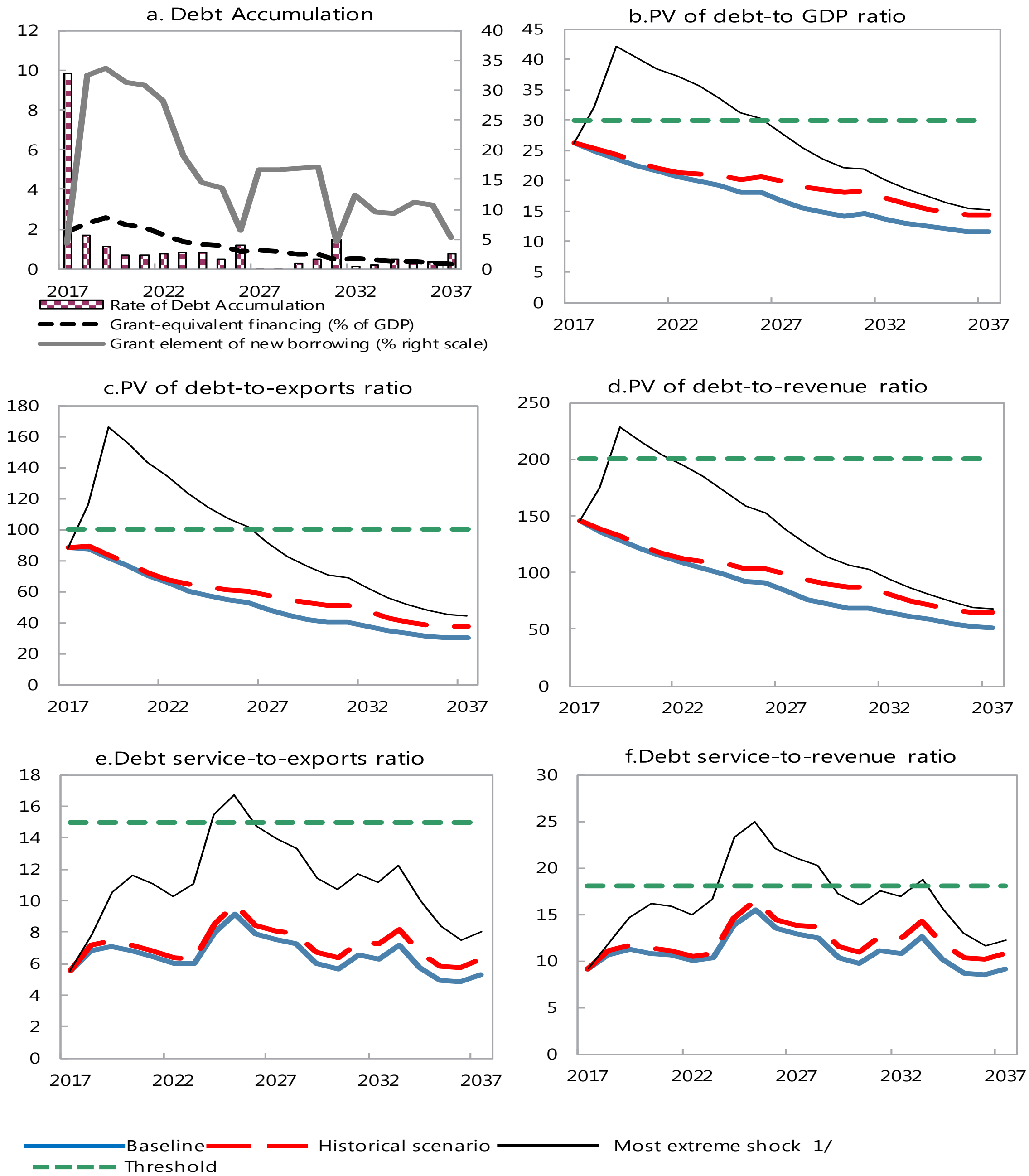
revenue ratio and its risk threshold over the medium-term (see Figure 3) poses a constraint on the available fiscal space, and calls for greater efforts on revenue mobilization as well as careful debt management.[6]

18. 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 an essential prerequisite to stabilizing debt over time, and enhanced mobilization of domestic revenues would help to achieve this goal. In addition, the medium-term debt management strategy aimed at increasing reliance on domestic sources of financing, smoothing out the pattern of debt amortization by avoiding too large refinancing spikes, and optimizing the cost of funding of the sovereign would help maintain a sustainable debt position. Measures aimed at increasing the liquidity of the primary and secondary markets of regionally-issued domestic debt (e.g., the creation of a network of primary dealers) would contribute to a more cost-effective pricing of Ivoirian sovereign securities. An effective management and monitoring of public enterprises debt and PPPs will also help contain fiscal risk and contingent liabilities. Data gaps on public enterprise debt, PPPs and related contingent liabilities remain a challenge. These gaps are being gradually addressed under the program, and further progress would allow treatment of related contingent liabilities in the DSA.

19. 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 taken since 2012. In particular, they posit the confirmation of political stability following the peaceful presidential election of October 2015 and constitutional referendum of October 2016 to have very positive impacts on growth. 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.

[6] It should be added that 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.

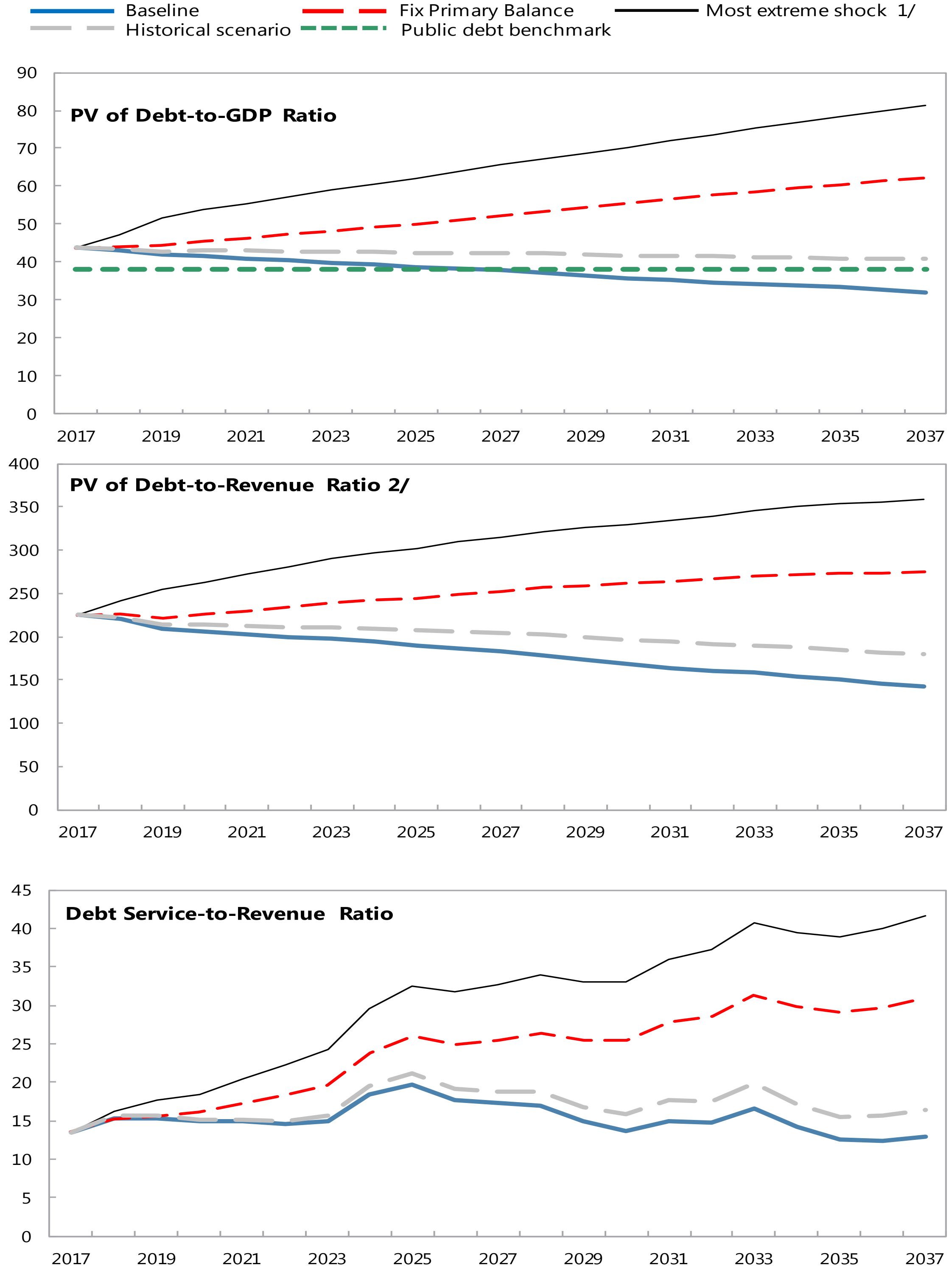
Figure 3. Côte d'Ivoire: Indicators of Public and Publicly Guaranteed External Debt under Alternative Scenarios, 2017–37[1/]



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 4. Côte d'Ivoire: Indicators of Public and Publicly Guaranteed Debt Under Alternative Scenarios, 2017–37[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, 2017–37[1/]

(Percent of GDP, unless otherwise indicated)

	Actual			Historical [6/]	Standard [6/]	Projections									
				Average	Deviation							2017-2022			2023-2037
	2014	2015	2016			2017	2018	2019	2020	2021	2022	Average	2027	2037	Average
External debt (nominal) 1/	**34.3**	**37.1**	**36.9**			**42.0**	**41.3**	**40.5**	**39.3**	**38.5**	**37.5**		**34.2**	**28.3**	
of which: public and publicly guaranteed (PPG)	18.3	22.2	22.7			28.2	27.7	27.2	26.2	25.4	24.9		20.7	14.9	
Change in external debt	2.6	2.8	-0.2			5.2	-0.8	-0.8	-1.2	-0.7	-1.0		-1.6	0.4	
Identified net debt-creating flows	-6.3	1.5	-3.9			-2.1	-1.8	-2.3	-2.3	-2.4	-2.5		-2.6	-2.1	
Non-interest current account deficit	**-2.8**	**-0.9**	**-0.4**	**-3.5**	**4.1**	**0.5**	**1.0**	**0.7**	**0.7**	**0.7**	**0.6**		**0.2**	**-0.3**	0.6
Deficit in balance of goods and services	-4.8	-3.5	-2.6			-1.8	-1.0	-1.0	-1.1	-1.4	-1.8		-2.6	-2.9	
Exports	39.2	37.7	31.2			29.8	28.5	29.0	29.6	30.6	31.8		34.7	38.8	
Imports	34.4	34.2	28.6			28.0	27.5	28.0	28.5	29.3	30.0		32.0	36.0	
Net current transfers (negative = inflow)	0.8	1.0	0.8	1.3	0.5	0.8	1.0	0.6	0.6	0.8	1.1		1.5	2.0	1.7
of which: official	-0.7	-0.5	-1.4			-1.5	-1.2	-1.6	-1.5	-1.4	-1.1		-0.6	-0.1	
Other current account flows (negative = net inflow)	1.2	1.5	1.4			1.5	1.0	1.2	1.2	1.3	1.3		1.3	0.5	
Net FDI (negative = inflow)	**-1.2**	**-1.4**	**-1.7**	**-1.5**	**0.3**	**-1.7**	**-1.9**	**-2.0**	**-2.0**	**-2.1**	**-2.3**		**-2.4**	**-1.5**	-2.4
Endogenous debt dynamics 2/	**-2.4**	**3.9**	**-1.8**			**-0.9**	**-0.9**	**-1.0**	**-1.0**	**-0.9**	**-0.8**		**-0.4**	**-0.2**	
Contribution from nominal interest rate	1.3	1.6	1.5			1.6	1.8	1.6	1.6	1.5	1.5		1.4	1.2	
Contribution from real GDP growth	-2.5	-3.2	-2.8			-2.5	-2.7	-2.7	-2.6	-2.4	-2.3		-1.8	-1.5	
Contribution from price and exchange rate changes	-1.2	5.5	-0.5			...	...	...	...	...	...		...	...	
Residual (3-4) 3/	**8.9**	**1.3**	**3.7**			**7.3**	**1.0**	**1.5**	**1.1**	**1.6**	**1.6**		**1.0**	**2.5**	
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	
PV of external debt 4/	...	...	34.6			40.0	38.4	37.0	35.6	34.5	33.4		30.2	24.8	
In percent of exports	...	...	110.9			134.1	135.0	127.6	120.1	112.7	105.1		87.2	64.0	
PV of PPG external debt	**...**	**...**	**20.5**			**26.2**	**24.8**	**23.7**	**22.5**	**21.5**	**20.7**		**16.8**	**11.5**	
In percent of exports	**...**	**...**	**65.5**			**87.8**	**87.2**	**81.8**	**76.0**	**70.1**	**65.1**		**48.4**	**29.6**	
In percent of government revenues	**...**	**...**	**113.5**			**145.0**	**135.3**	**128.4**	**120.5**	**113.8**	**108.0**		**83.2**	**51.0**	
Debt service-to-exports ratio (in percent)	**6.7**	**9.1**	**17.1**			**11.6**	**12.6**	**12.3**	**11.7**	**11.2**	**10.5**		**11.4**	**7.0**	
PPG debt service-to-exports ratio (in percent)	**2.5**	**3.5**	**4.6**			**5.5**	**6.8**	**7.1**	**6.8**	**6.5**	**6.0**		**7.5**	**5.3**	
PPG debt service-to-revenue ratio (in percent)	**5.7**	**7.0**	**8.0**			**9.1**	**10.6**	**11.2**	**10.7**	**10.5**	**10.0**		**12.9**	**9.1**	
Total gross financing need (Billions of U.S. dollars)	0.3	2.1	2.2			1.8	2.1	2.0	2.0	1.9	1.8		3.3	3.4	
Non-interest current account deficit that stabilizes debt ratio	-5.4	-3.7	-0.2			-4.6	1.8	1.5	1.9	1.4	1.6		1.8	-0.7	
Key macroeconomic assumptions															
Real GDP growth (in percent)	8.8	8.8	8.3	5.1	4.7	7.6	7.3	7.1	6.9	6.6	6.5	7.0	5.5	5.6	5.7
GDP deflator in US dollar terms (change in percent)	4.0	-13.9	1.3	2.7	8.9	2.9	5.6	2.1	1.8	1.4	1.2	2.5	1.7	1.8	1.7
Effective interest rate (percent) 5/	4.7	4.3	4.5	3.3	1.1	4.9	4.8	4.3	4.2	4.2	4.1	4.4	4.3	4.7	4.4
Growth of exports of G&S (US dollar terms, in percent)	6.8	-9.9	-9.1	2.3	8.8	5.8	8.1	11.5	11.1	11.9	11.7	10.0	9.2	6.8	9.0
Growth of imports of G&S (US dollar terms, in percent)	0.7	-6.7	-8.2	3.8	12.0	8.5	10.9	11.3	10.9	11.0	10.5	10.5	8.4	6.8	8.8
Grant element of new public sector borrowing (in percent)	...	...	...	...	...	4.3	32.4	33.6	31.3	30.8	28.2	26.8	16.6	5.3	12.3
Government revenues (excluding grants, in percent of GDP)	17.1	18.5	18.0			18.1	18.3	18.5	18.7	18.9	19.1		20.1	22.5	20.9
Aid flows (in Billions of US dollars) 7/	0.6	0.5	0.5			1.0	1.3	1.6	1.6	1.8	1.7		1.5	1.3	
of which: Grants	0.6	0.5	0.5			0.6	0.5	0.8	0.8	0.8	0.7		0.6	0.2	
of which: Concessional loans	0.0	0.0	0.0			0.4	0.7	0.8	0.8	1.0	1.0		0.9	1.1	
Grant-equivalent financing (in percent of GDP) 8/	...	...	...			1.9	2.3	2.5	2.2	2.1	1.7		1.0	0.2	0.7
Grant-equivalent financing (in percent of external financing) 8/	...	...	...			16.7	50.0	56.8	58.9	56.6	50.7		36.0	9.3	24.8
Memorandum items:															
Nominal GDP (Billions of US dollars)	35.4	33.1	36.4			40.3	45.7	49.9	54.3	58.7	63.3		92.4	188.1	
Nominal dollar GDP growth	13.1	-6.3	9.7			10.8	13.3	9.3	8.8	8.1	7.8	9.7	7.3	7.5	7.5
PV of PPG external debt (in Billions of US dollars)			7.1			10.7	11.4	11.9	12.2	12.6	13.1		15.4	21.6	
(PVt-PVt-1)/GDPt-1 (in percent)						9.9	1.7	1.1	0.7	0.7	0.8	2.5	0.0	0.8	0.5
Gross workers' remittances (Billions of US dollars)	-0.5	-0.5	-0.7			-0.8	-0.9	-1.0	-1.0	-1.1	-1.2		-1.8	-3.6	
PV of PPG external debt (in percent of GDP + remittances)	...	...	20.9			26.7	25.3	24.2	23.0	21.9	21.1		17.1	11.7	
PV of PPG external debt (in percent of exports + remittances)	...	...	69.8			94.3	93.5	87.6	81.3	74.7	69.3		51.2	31.1	
Debt service of PPG external debt (in percent of exports + remittanc	...	...	4.9			5.9	7.3	7.6	7.2	6.9	6.4		7.9	5.6	

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)]/(1+g+ρ+gρ) times previous period debt ratio, with r = nominal interest rate; g = real GDP growth rate, and ρ = 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, 2017–37[1/]

(Percent)

	Projections							
	2017	2018	2019	2020	2021	2022	**2027**	2037
PV of debt-to GDP ratio								
Baseline	26	25	24	23	21	21	**17**	11
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2017-2037 1/	26	25	24	23	22	21	**20**	14
A2. New public sector loans on less favorable terms in 2017-2037 2	26	26	25	25	24	24	**23**	21
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2018-2019	26	27	27	26	24	24	**19**	13
B2. Export value growth at historical average minus one standard deviation in 2018-2019 3/	26	29	35	33	32	31	**23**	13
B3. US dollar GDP deflator at historical average minus one standard deviation in 2018-2019	26	28	29	28	26	25	**20**	14
B4. Net non-debt creating flows at historical average minus one standard deviation in 2018-2019 4/	26	26	27	26	25	24	**19**	12
B5. Combination of B1-B4 using one-half standard deviation shocks	26	32	42	40	38	37	**28**	15
B6. One-time 30 percent nominal depreciation relative to the baseline in 2018 5/	26	35	33	31	30	29	**23**	16
PV of debt-to-exports ratio								
Baseline	88	87	82	76	70	65	**48**	30
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2017-2037 1/	88	89	84	78	72	67	**57**	37
A2. New public sector loans on less favorable terms in 2017-2037 2	88	90	87	83	79	76	**65**	55
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2018-2019	88	87	82	76	70	65	**48**	30
B2. Export value growth at historical average minus one standard deviation in 2018-2019 3/	88	116	166	155	143	134	**91**	44
B3. US dollar GDP deflator at historical average minus one standard deviation in 2018-2019	88	87	82	76	70	65	**48**	30
B4. Net non-debt creating flows at historical average minus one standard deviation in 2018-2019 4/	88	93	95	88	81	75	**54**	30
B5. Combination of B1-B4 using one-half standard deviation shocks	88	111	150	140	130	121	**83**	40
B6. One-time 30 percent nominal depreciation relative to the baseline in 2018 5/	88	87	82	76	70	65	**48**	30
PV of debt-to-revenue ratio								
Baseline	145	135	128	120	114	108	**83**	51
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2017-2037 1/	145	138	132	124	117	112	**99**	64
A2. New public sector loans on less favorable terms in 2017-2037 2	145	140	137	132	128	126	**113**	95
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2018-2019	145	145	147	137	130	123	**95**	58
B2. Export value growth at historical average minus one standard deviation in 2018-2019 3/	145	156	189	178	169	161	**114**	56
B3. US dollar GDP deflator at historical average minus one standard deviation in 2018-2019	145	153	158	148	139	132	**102**	62
B4. Net non-debt creating flows at historical average minus one standard deviation in 2018-2019 4/	145	144	148	139	132	125	**93**	52
B5. Combination of B1-B4 using one-half standard deviation shocks	145	175	228	215	204	194	**138**	67
B6. One-time 30 percent nominal depreciation relative to the baseline in 2018 5/	145	189	180	168	159	151	**116**	71

Table 2. Côte d'Ivoire: Sensitivity Analysis for Key Indicators of Public and Publicly Guaranteed External Debt, 2017–37[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	6	**8**	6
A2. New public sector loans on less favorable terms in 2017-2037 2	6	7	5	5	5	4	**6**	6
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	11	12	11	10	**14**	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	7	**8**	5
B5. Combination of B1-B4 using one-half standard deviation shocks	6	8	10	10	10	9	**13**	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	9	11	11	11	11	10	**13**	9
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2017-2037 1/	9	11	12	11	11	11	**14**	11
A2. New public sector loans on less favorable terms in 2017-2037 2	9	11	8	7	7	7	**10**	11
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2018-2019	9	11	13	12	12	11	**15**	10
B2. Export value growth at historical average minus one standard deviation in 2018-2019 3/	9	11	12	13	13	12	**17**	10
B3. US dollar GDP deflator at historical average minus one standard deviation in 2018-2019	9	12	14	13	13	12	**16**	11
B4. Net non-debt creating flows at historical average minus one standard deviation in 2018-2019 4/	9	11	12	12	11	11	**14**	9
B5. Combination of B1-B4 using one-half standard deviation shocks	9	12	15	16	16	15	**21**	12
B6. One-time 30 percent nominal depreciation relative to the baseline in 2018 5/	9	15	16	15	15	14	**18**	13
Memorandum item:								
Grant element assumed on residual financing (i.e., financing required above baseline) 6/	4	4	4	4	4	4	**4**	4

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, 2017–37[1/]

(Percent of GDP, unless otherwise indicated)

	Actual					Estimate	Projections								
	2014	2015	2016	Average 5/	Standard Deviation 5/	2017	2018	2019	2020	2021	2022	2017-22 Average	2027	2037	2023-37 Average
Public sector debt 1/	36.2	40.3	41.6			45.9	46.0	45.4	45.4	45.0	44.6		41.8	35.6	
of which: foreign-currency denominated	18.3	22.2	22.7			28.2	27.7	27.2	26.2	25.4	24.9		20.7	14.9	
Change in public sector debt	2.3	4.0	1.4			4.3	0.1	-0.6	0.1	-0.4	-0.4		-0.5	-0.6	
Identified debt-creating flows	0.2	0.6	0.8			-0.5	-0.8	-1.2	-0.6	-0.5	-0.5		-0.5	-0.6	
Primary deficit	1.0	1.3	2.2	1.0	1.2	2.6	1.6	1.1	1.1	1.1	1.0	1.4	0.7	0.5	0.6
Revenue and grants	18.9	20.0	19.4			19.5	19.5	20.1	20.2	20.2	20.2		20.8	22.6	
of which: grants	1.7	1.4	1.4			1.5	1.2	1.6	1.5	1.4	1.1		0.6	0.1	
Primary (noninterest) expenditure	19.8	21.3	21.6			22.2	21.1	21.1	21.3	21.3	21.2		21.4	23.1	
Automatic debt dynamics	-0.7	-0.5	-1.3			-3.1	-2.4	-1.8	-1.7	-1.6	-1.5		-1.1	-1.1	
Contribution from interest rate/growth differential	-2.5	-2.2	-2.0			-1.6	-1.7	-1.9	-1.8	-1.7	-1.7		-1.2	-1.2	
of which: contribution from average real interest rate	0.3	0.8	1.1			1.4	1.5	1.2	1.1	1.1	1.1		1.0	0.8	
of which: contribution from real GDP growth	-2.7	-2.9	-3.1			-3.0	-3.1	-3.0	-2.9	-2.8	-2.7		-2.2	-1.9	
Contribution from real exchange rate depreciation	1.7	1.6	0.6			-1.5	-0.7	0.0	0.1	0.2	0.2		...	...	
Other identified debt-creating flows	-0.1	-0.2	-0.1			-0.1	0.0	-0.4	0.0	0.0	0.0		0.0	0.0	
Privatization receipts (negative)	-0.1	-0.2	-0.1			-0.1	0.0	-0.4	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	2.1	3.4	0.6			4.8	0.8	0.5	0.7	0.1	0.0		0.0	0.0	
Other Sustainability Indicators															
PV of public sector debt	...	...	39.4			43.8	43.1	41.9	41.7	41.0	40.4		37.8	32.1	
of which: foreign-currency denominated	...	...	20.5			26.2	24.8	23.7	22.5	21.5	20.7		16.8	11.5	
of which: external	...	...	20.5			26.2	24.8	23.7	22.5	21.5	20.7		16.8	11.5	
PV of contingent liabilities (not included in public sector debt)	...	...	...			...	...	...	...	...	...		...	...	
Gross financing need 2/	4.3	6.5	8.1			9.1	6.8	6.8	7.0	7.1	7.0		7.2	6.1	
PV of public sector debt-to-revenue and grants ratio (in percent)	...	...	203.3			224.7	221.0	209.1	206.4	203.0	199.8		182.3	142.0	
PV of public sector debt-to-revenue ratio (in percent)	...	...	218.6			242.9	235.2	226.8	223.3	217.6	210.9		187.9	142.7	
of which: external 3/	...	...	113.5			145.0	135.3	128.4	120.5	113.8	108.0		83.2	51.0	
Debt service-to-revenue and grants ratio (in percent) 4/	10.3	12.8	12.0			13.6	15.3	15.3	14.9	14.9	14.6		17.3	12.9	
Debt service-to-revenue ratio (in percent) 4/	11.4	13.8	12.9			14.7	16.3	16.6	16.1	15.9	15.4		17.8	13.0	
Primary deficit that stabilizes the debt-to-GDP ratio	-1.3	-2.7	0.9			-1.6	1.5	1.7	1.0	1.5	1.5		1.1	1.1	
Key macroeconomic and fiscal assumptions															
Real GDP growth (in percent)	8.8	8.8	8.3	5.1	4.7	7.6	7.3	7.1	6.9	6.6	6.5	7.0	5.5	5.6	5.7
Average nominal interest rate on forex debt (in percent)	3.6	4.3	4.1	2.4	1.5	4.5	4.4	3.9	3.7	3.6	3.6	3.9	3.7	3.9	3.7
Average real interest rate on domestic debt (in percent)	0.1	1.5	3.5	1.0	1.7	4.5	5.0	4.2	4.2	3.9	3.8	4.3	3.4	2.5	3.0
Real exchange rate depreciation (in percent, + indicates depreciation)	11.3	9.3	3.0	0.5	6.9	-6.9	...	...	...	...	...	...	...	...	...
Inflation rate (GDP deflator, in percent)	3.9	3.1	1.6	3.6	2.0	1.0	1.2	1.6	1.6	1.7	1.7	1.5	1.7	1.8	1.7
Growth of real primary spending (deflated by GDP deflator, in percent)	5.3	16.8	10.0	3.3	5.8	10.3	2.3	7.0	7.8	6.6	6.1	6.7	6.5	6.7	6.3
Grant element of new external borrowing (in percent)	...	...	...	...	...	4.3	32.4	33.6	31.3	30.8	28.2	26.8	16.6	5.3	...

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 2017–37[1/]

	Projections							
	2017	2018	2019	2020	2021	2022	2027	2037
PV of Debt-to-GDP Ratio								
Baseline	44	43	42	42	41	40	38	32
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	44	43	43	43	43	43	42	41
A2. Primary balance is unchanged from 2017	44	44	44	46	46	47	52	62
A3. Permanently lower GDP growth 1/	44	44	43	44	44	45	52	81
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2018-2019	44	47	52	54	55	57	66	81
B2. Primary balance is at historical average minus one standard deviations in 2018-2019	44	44	44	43	43	42	39	33
B3. Combination of B1-B2 using one half standard deviation shocks	44	45	46	47	48	49	54	62
B4. One-time 30 percent real depreciation in 2018	44	53	51	50	49	48	45	41
B5. 10 percent of GDP increase in other debt-creating flows in 2018	44	53	51	51	50	49	45	38
PV of Debt-to-Revenue Ratio 2/								
Baseline	225	221	209	206	203	200	182	142
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	225	222	213	213	212	211	203	180
A2. Primary balance is unchanged from 2017	225	226	222	226	230	234	252	275
A3. Permanently lower GDP growth 1/	225	224	215	217	219	222	248	356
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2018-2019	225	242	255	263	272	280	315	359
B2. Primary balance is at historical average minus one standard deviations in 2018-2019	225	224	217	214	211	207	189	147
B3. Combination of B1-B2 using one half standard deviation shocks	225	230	228	233	237	242	259	274
B4. One-time 30 percent real depreciation in 2018	225	272	255	249	244	239	218	180
B5. 10 percent of GDP increase in other debt-creating flows in 2018	225	271	256	252	247	243	219	168
Debt Service-to-Revenue Ratio 2/								
Baseline	14	15	15	15	15	15	17	13
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	14	16	16	15	15	15	19	16
A2. Primary balance is unchanged from 2017	14	15	16	16	17	18	26	31
A3. Permanently lower GDP growth 1/	14	15	16	15	16	16	24	39
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2018-2019	14	16	18	18	20	22	33	42
B2. Primary balance is at historical average minus one standard deviations in 2018-2019	14	15	15	16	16	16	18	14
B3. Combination of B1-B2 using one half standard deviation shocks	14	16	17	16	17	18	26	30
B4. One-time 30 percent real depreciation in 2018	14	17	20	19	20	20	27	26
B5. 10 percent of GDP increase in other debt-creating flows in 2018	14	15	18	23	23	23	22	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.