INTERNATIONAL MONETARY FUND

CÔTE D'IVOIRE

REQUESTS FOR AN EXTENDED ARRANGEMENT UNDER THE EXTENDED FUND FACILITY AND AN ARRANGEMENT UNDER THE EXTENDED CREDIT FACILITY—DEBT SUSTAINABILITY ANALYSIS

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Prepared by the International Monetary Fund and the International Development Association

This debt sustainability analysis (DSA) concludes that Côte d'Ivoire[1] remains at moderate risk of debt distress, in line with the previous DSA carried out in June 2015 for the 8th review under the Extended Credit Facility arrangement (Country Report 15/341). All external debt burden indicators lie below their thresholds under the baseline. Under worst-case stress scenarios, however, all solvency and liquidity indicators in the framework breach their respective thresholds (as was the case in 2015), largely reflecting the legacy of macroeconomic volatility that disrupted the Ivoirien economy prior to 2012 coupled with the fast pickup in economic activity thereafter. The probability approach to risk assessment shows that Côte d'Ivoire remains safely below threshold levels under the baseline, confirming a moderate risk of external debt distress.[2] Total public debt indicators (including domestic liabilities), while indicative of a deterioration in Côte d'Ivoire's debt position, point toward a stabilization of public debt in the outer years of the projection period.

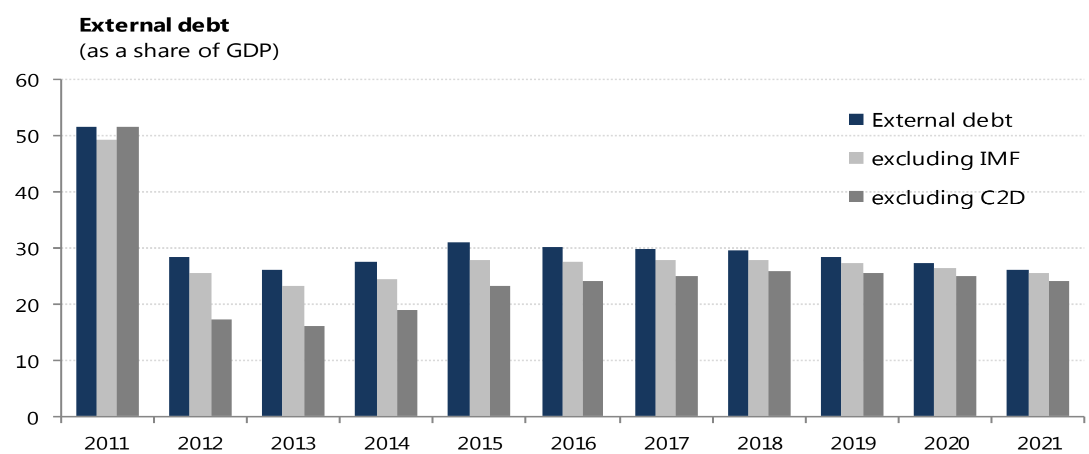
[1] In the LIC-DSA framework Côte d'Ivoire is adjudged as having weak policy performance with a Country Policy and Institutional Assessment (CPIA) average of 3.24 for 2013–15. With the recent progress in the CPIA score (the 3-year average in the last DSA stood at 3.17), Côte d'Ivoire is on the cusp of a medium policy performance category, which would raise the PV policy threshold from 30 to 40 percent of GDP, from 100 to 150 for PV of debt to exports, and from 200 to 250 for the PV to revenue ratio. With a moderate CPIA rating only one indicator would breach the policy threshold (the most extreme shock for the PV of debt to GDP ratio).

[2] The probability approach, recommended for cases where one or more debt indicators come to stand within a ±5 percent band around threshold under the baseline scenario ("borderline cases"), performs an assessment using country-specific CPIA metric indicators (rather than a peer group average).

BACKGROUND

1. **External public and publicly guaranteed debt stock increased in 2015, reflecting the government's strategy to seek further external financing and donor support for large capital investment projects, in particular for infrastructure development, in the context of its National Development Strategy.**[3] Following the large improvement in its external debt position after the HIPC in 2012, external borrowing has increased from about 28 percent of GDP in 2012 to 31 percent of GDP in 2015. Excluding concessional lending from the IMF 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 modestly from 17.2 percent of GDP in 2012 to 23.4 percent of GDP in 2015. In terms of composition, the external debt has seen the share of multilateral creditors diminish in the total from 25.5 percent in 2014 to 24.1 percent in 2015. The share of official bilateral creditors has also recorded a decline from 18.9 percent of the total to 16 percent. Conversely, the share of commercial creditors has recorded a marked increase, rising from 55.5 percent of the total in 2014 to 60 percent in 2015. It reflected essentially the impact of the US$1 billion Eurobond issuance in 2015 and the gradual shift towards a larger reliance on the private sector for external financing, in a context of stable debt ratings, positive prospects for the Ivoirien economy and attractive funding opportunities (with yields on external issuance similar to those on the WAEMU CFA franc denominated medium-term domestic issuance).

Figure 1. Côte d'Ivoire: Stock of External Public Debt, 2011–21
(Percent of GDP)



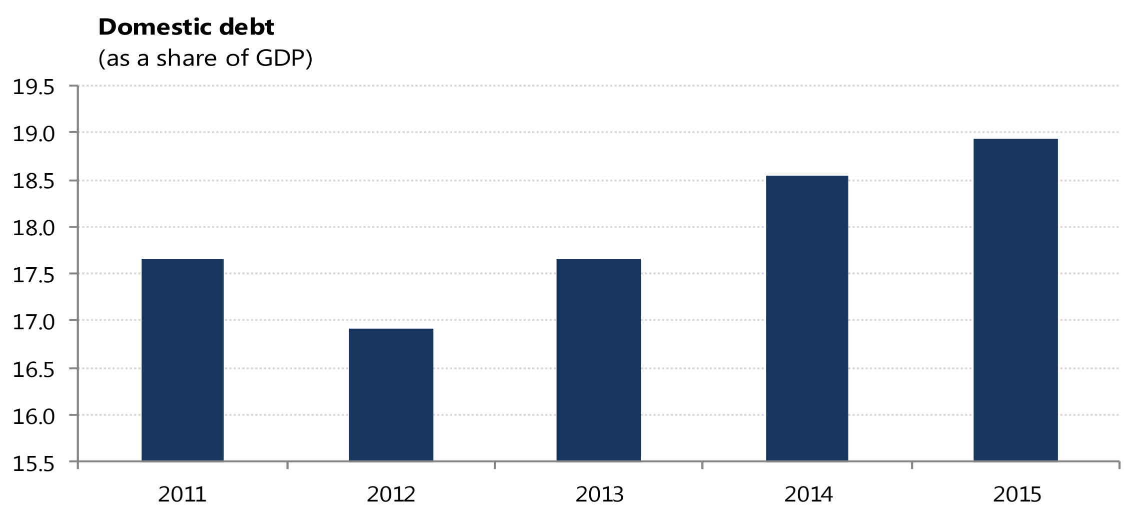
[3] In this DSA, PPG external debt covers only the central government. It excludes French claims under C2D debt-for-development swaps, which were cancelled in the context of beyond HIPC debt relief. Under the C2D mechanism, debt service due on these claims is returned in the form of grants to the government 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.

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

	2014	2015			2016	2017	2018	2019	2020	2021
		Million USD	Percent of total	Percent of GDP	Million USD					
Total	**5884.3**	**7241.9**	**100.0**	**23.4**	**8484.1**	**9594.6**	**10872.9**	**11967.9**	**12860.8**	**13511.5**
including C2D and FCFA-denominated loans	8638.2	9580.6	132.3	31.0	12521.6	13110.0	13746.4	14508.9	15467.9	16294.7
Multilateral creditors	**1502.4**	**1748.5**	**24.1**	**5.6**	**1744.6**	**1587.6**	**1409.2**	**1238.6**	**1054.1**	**875.6**
IMF	996.9	983.8	13.6	3.2	971.3	853.2	715.2	577.5	430.1	296.6
World Bank	154.2	394.5	5.4	1.3	410.7	404.4	402.7	402.2	398.2	392.4
AfDB group	43.6	47.0	0.6	0.2	49.2	48.7	49.0	49.4	49.5	49.4
Other multilaterals	307.7	323.2	4.5	1.0	313.4	281.3	242.3	209.6	176.3	137.2
Official bilateral creditors	**1113.8**	**1161.4**	**16.0**	**3.8**	**1396.5**	**1555.8**	**1740.7**	**1671.1**	**1578.8**	**1253.8**
Paris Club	545.9	307.0	4.2	1.0	500.2	683.3	878.3	816.4	749.3	457.5
Non-Paris Club	567.9	854.4	11.8	2.8	896.2	872.5	862.4	854.7	829.5	796.2
Commercial creditors	**3268.1**	**4323.9**	**59.7**	**14.0**	**4275.2**	**4139.2**	**4051.5**	**3974.9**	**3849.1**	**3695.4**
London Club	3209.7	4272.9	59.0	13.8	4221.7	4094.7	4015.3	3947.0	3829.7	3695.4
Other commercials	58.4	51.0	0.7	0.2	53.5	44.5	36.2	27.9	19.4	0.0
New debt					1067.9	2312.0	3671.6	5083.2	6378.8	7686.8
CHECK	***0.0***		***100***		***0.0***	***0.0***	***0.0***	***0.0***	***0.0***	***0.0***

2. The domestic public debt has also recorded a steady but modest increase. From about 17 percent of GDP in 2012, the domestic debt has risen by 2 percentage points to 19 percent of GDP in 2015. About 80 percent of the government domestic liabilities consists of government securities issued to the regional bond market.

Figure 2. Côte d'Ivoire: Stock of Domestic Public Debt[1/], 2011–15
(Percent of GDP)



Sources: Ivoirien authorities; and IMF staff estimates
1/ Central government only.

UNDERLYING ASSUMPTIONS AND BORROWING PLANS

Text Table 2. Côte d'Ivoire: LIC DSA Macroeconomic Assumptions: Comparison with the 2015 LIC DSA

(Percent of GDP, unless otherwise indicated)

	Previous DSA			Current DSA		
	2016-21	2022-27	2028-36	2016-21	2022-27	2028-36
Nominal GDP (USD Billion) 1/	44.9	75.4	134.1	46.4	77.3	134.4
Real GDP (y/y % change)	7.6	6.3	5.5	7.5	6.3	5.5
Fiscal (central government)						
Revenue and grants 2/	21.9	22.8	23.3	21.3	22.1	23.0
of which: grants	1.9	1.4	0.5	1.6	0.9	0.3
Primary expenditure	23.6	24.3	24.7	23.2	23.3	23.8
Primary fiscal deficit (excluding C2D grants)	1.7	1.4	1.4	1.8	1.2	0.9
Balance of payments						
Exports of goods and services	42.7	45.1	57.9	37.2	39.2	43.5
Imports of goods and services	42.5	45.7	59.4	36.7	37.4	40.4
Non-interest current account deficit 3/	1.4	3.3	5.8	0.9	0.5	0.5
New foreign direct investment (net inflows)	3.6	3.6	2.9	3.6	3.6	2.9

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.

3. **This DSA is consistent with the macroeconomic framework underlying the Staff Report prepared for the request for three-year EFF/ECF blended arrangements.** 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. A sustainable budget deficit level alongside the implementation of the structural reforms outlined in the 2016-20 National Development Plan (NDP) will allow a steady expansion of the economy throughout the baseline horizon, and the accumulation of the risk buffers necessary to cushion the effects of external shocks.

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

- **Global environment.** The nominal exchange rate (CFA/USD) is assumed to appreciate slightly by about 3 percent over the baseline horizon and stabilize in the medium and long term. The external demand from Côte d'Ivoire's trading partners is projected to be stable.

- **GDP over the medium term.** Growth assumptions have remained roughly stable relative to the last DSA. Nominal GDP is expected to grow on average by 7.5 percent over the horizon 2016-2021, supported initially by a robust investment growth and increasingly by private consumption. Growth is assumed to gradually decelerate to 6.4 percent in 2022–27 as investment normalizes and net trade contribution becomes more negative. Growth is expected to stabilize at 5.5 percent in the long run.

- **The primary fiscal deficit is expected to gradually improve over the baseline.** Somewhat larger than in the 2015 DSA over the horizon 2016–21, its trajectory remains anchored by the gradual convergence towards the 3 percent of GDP target in 2019 and to continue declining thereafter. A steady improvement in the primary fiscal deficit is expected in the medium (1.2 percent) and long run (0.9 percent).

- **The current account deficit is projected to remain relatively stable over time**. As assumed in the previous DSA, the current account deficit is projected to increase in the short run as Côte d'Ivoire transitions gradually to a more domestic driven growth path and later stabilize in the medium and long run.

Debt strategy and composition

5. The authorities' Medium Term Debt Strategy (MTDS) aims at keeping debt at sustainable level consistent with the general objective of public finance of converging to a budget deficit of 3 percent of GDP by 2019. Optimizing the cost-risk trade off should guide the mobilization of external resources necessary to achieve the NDP objectives. More specifically, for the MDTS objectives for the domestic market are to: lengthen the average duration of the domestic debt, contribute to the development of the domestic debt market, and reduce the cost of local issuance. Regarding external debt, the MTDS objectives are to: increase the share of semi-concessional financing, achieve a regular presence in international markets, 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, including: the finalization of the operational restructuring of the debt policy directorate (merger of the external and domestic debt units), reinforcement of cash management operations, and setting-up of a network of Primary Dealers to promote the issuance and secondary market trading of the CFA debt issued in the regional market. The operational establishment of the National Council of Public debt will also permit an undertaking of regular reviews of the MTDS including all stakeholders.

6. The MTDS assumes gradual growth of the domestic share for new financing over the coming years. Although the breakdown of the debt stock between external and domestic financing will remain relatively stable, the strategy aims to increase the role of domestic financing to support the development of the local market. From 50 percent in 2016, the share of external financing of new loans should decrease to 40 percent in 2020, with concessional and semi concessional loans' share declining from 26 percent to 20 percent, and non-concessional from 25 percent to 20 percent. Conversely, domestic issuance to the regional market is expected to increase from 50 percent to 60 percent of total debt, with long-term debt representing 36 percent of this share and medium-term and short-term debt 24 percent.

DEBT SUSTAINABILITY ANALYSIS

A. External Debt

7. The results of the external DSA confirm that Côte d'Ivoire's debt dynamics are sustainable under the baseline scenario. The PV of debt-to-GDP ratio, debt-to exports ratio, debt-to-revenue ratio and debt-service to exports ratio remain safely under the debt distress threshold under the baseline with the exception of the debt service-to-revenue ratio. Owing to a spike in debt-service in 2025, which relates to the amortization of a large Eurobond issued in 2015, the debt service-to-revenue ratio gets close to the threshold (Figure 3) in 2025, before moving back decisively below in following years. Although the "historical" scenario in all cases remains well below the threshold, it also surpasses the threshold marginally in 2025 and 2027, before receding. The historical scenario paints a relatively benign picture of debt sustainability, with one caveat: debt creating flows under the historical scenario are driven by the positive current account developments recorded during the crisis, where current account balances were artificially supported by sudden stops in imports (due to foreign exchange shortage and/or sanctions), while agricultural exports continued at a relatively steady pace.[4] The more extreme stress test scenarios, where cumulative shocks of one standard deviation are applied to key macro variables, go above the distress threshold, highlighting not only the legacy of macroeconomic volatility experienced by Côte d'Ivoire prior to 2012 and the rapid pick up in performance since 2012, but also its vulnerability to a repeat of similar episodes. Owing to the temporary breach of the debt service-to-revenue threshold, the probability approach was used to assess whether the risk of debt distress remains moderate.

8. The probability approach to risk assessment shows that Côte d'Ivoire remains safely below threshold levels under the baseline, confirming a moderate risk of external debt distress. The probability approach uses a calculated probability of debt distress (expressed in percentage terms) for each debt burden indicator. This probability is compared to a probability threshold of debt distress, which is specific and different from the thresholds used in the traditional approach as they are calculated using more country-specific information to refine the analysis of traditional indicators. Although the distress probability is derived from the same equation used to estimate the traditional external debt thresholds, the probability approach uses individual CPIA scores and average GDP growth rates. The probability approach shows that under the baseline, probability of distress corresponding to each debt burden indicator remains safely below the threshold of debt distress probability.

9. The baseline scenario depicts external debt vulnerabilities largely similar to the 2015 DSA. The bunching of maturities corresponding to the Eurobond issuance creates spikes in the debt service indicators (both to exports and revenues) that gradually fade going forward as the total debt burden (stock and service) shrinks gradually as a fraction of GDP in the outer years. This highlights that smoother debt flow patterns, supported by a more active management of the debt stock and issuance strategy would be beneficial for the debt service profile.

[4] In the current (and last DSA) an adjustment to the real GDP and non-interest current account averages of the past 10 years is (was) made to take into account the political crisis in 2011, the mid-point of the averaging period; but this did not involve the complete exclusion of the crisis year from the calculated averages. If the crisis year is excluded, the debt indicators improve under the baseline because past average growth would be higher. For most extreme shock scenarios, the indicators would also improve reflecting lower standard deviations as well as the higher growth average. Under the historical scenario (permanent shock) the indicators would deteriorate reflecting a higher average current account deficit (in the crisis year the current account deficit was lower reflecting collapsed imports).

B. Total Public Debt

10. Under the baseline, the addition of domestic public debt to the analysis leads to a slight deterioration of Côte d'Ivoire's debt position. A slight increase to the stock of domestic public debt in 2015 generated an upward shift of all three debt burden indicators over the first few years of the baseline. The PV of debt-to-GDP ratio, slightly over 40 percent under the baseline, records a gradual decrease after a short-term upward spike in 2022, moving below 40 percent thereafter and towards 30 percent in the long run. Similarly, the PV of debt-to-revenue ratio, starting at 200 in 2016 gradually declines towards 150 in 2026 before settling slightly above 100 percent in the long run. The debt service to revenue ratio, conversely, does not record any improvement going forward, and stabilizes at about 12 percent in the long run. The historical scenario suggests a similar picture of declining debt burden over the long run, and the scenario of constant primary balance a somewhat less favorable, but showing still a picture of stabilizing debt burden over the long run. The most extreme shock scenario, conversely, suggests a clear worsening of the debt vulnerability picture across debt burden indicators.

11. The PV of total public debt-to-GDP indicator under the baseline breaches its threshold value during the first seven years of the projection period, but vulnerabilities in domestic public debt remain moderate. The upward revision of domestic public debt stock for 2015 (to 43 percent relative to 40 percent in 2014's DSA), brought about by a revision of the scope of public sector debt is one more step towards a more transparent reporting framework and progress towards a more comprehensive reporting of the overall perimeter of the domestic public debt.[5] The trend in terms of PV of the total public debt shows that beyond 2025, the horizon under which the large bunching of amortization related to recent Eurobond issues will start normalizing, is largely unchanged, pointing towards a stabilization of debt burden indicators (debt service-to-revenue) or an improvement (PV of debt-to-GDP and PV of debt-to-revenue).

CONCLUSION

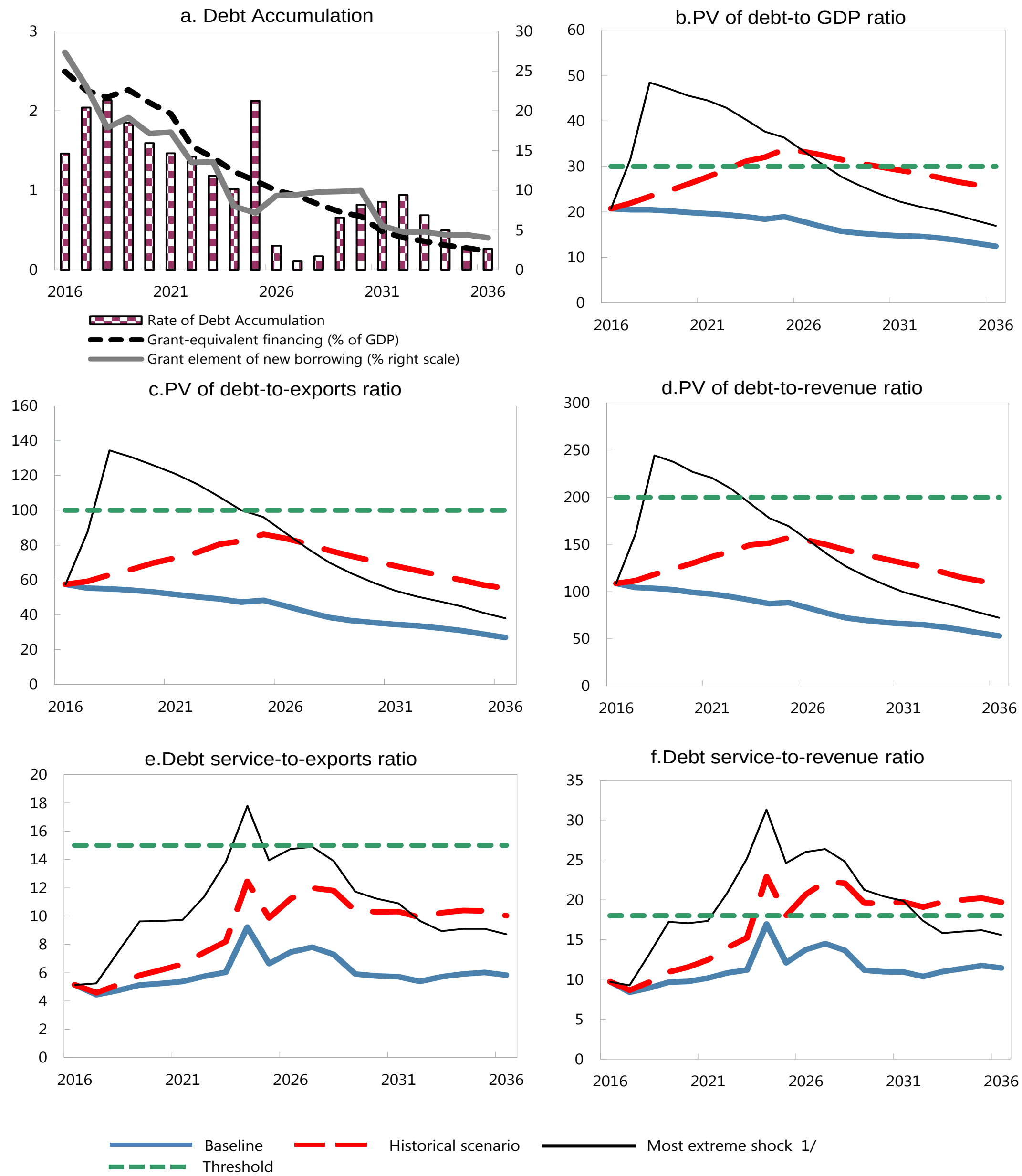
12. Côte d'Ivoire remains at moderate risk of debt distress in 2016, as in the 2015 DSA. Under the baseline scenario, all debt burden indicators for external debt remain under their respective debt distress thresholds. The probability approach, used to assess the significance of the approaching of debt-service to revenue ratio close to its threshold in 2024 (though not formally constituting a "near breach") establishes that the debt distress probabilities—attached to Côte d'Ivoire's debt burden indicators—remain largely below threshold levels under the baseline scenario, underscoring that the risk of external debt distress remains moderate. The maximum stress test scenario, reflecting Côte d'Ivoire's legacy of substantial macro-economic volatility, points to vulnerability to a repeat of the political and security challenge of the years 2000–11 under both approaches (standard approach and probability approach). Meanwhile, total PPG debt (including domestic), while above the benchmark for the first 7 years of the baseline, and on a downward trend thereafter, reflects a more transparent reporting of some public sector contingent liabilities, and hence, progress towards a more effective reporting framework of the debt situation, leading to an overall assessment of moderate risk.

[5] The stock of domestic public debt has been revised significantly upward at end-2015 to reflect the recent inclusion of certain past arrears to the BCEAO, including payments to the Fund, other unbudgeted liabilities incurred prior to 2011 (see Debt Sustainability Analysis, Country Report No. 15/341).

13. Sound macroeconomic policies and an effective medium-term oriented debt management framework are essential to maintaining a sustainable external position. While the recent increase in external liabilities and domestic debt have served economic growth well, as testified by the large contribution of public investment to vibrant GDP growth in recent years, a more balanced contribution to growth from other expenditure component, like private consumption and private capital spending will help sustain recent gains, avoid growth bottlenecks and entrench debt sustainability. Policies to maintain a sustainable position are also an essential prerequisite to stabilizing debt over time, and enhanced mobilization of domestic revenues achieved through growth-friendly tax reform measures, as well as current spending control would help to achieve this goal. Finally, a medium-term debt management strategy aimed at increasing reliance on domestic source of financing, smoothing out the pattern of debt amortization by avoiding too large refinancing humps, and helping optimize 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 market of the regionally issued domestic debt, like the creation of a network of primary dealers, will contribute to a more cost-effective effective pricing of Ivoirien sovereign securities. An effective management and monitoring of PPPs will also help contain fiscal risk and contingent liabilities.

14. The authorities of Côte d'Ivoire broadly concur with the main conclusions of this DSA, and in particular that Côte d'Ivoire's risk of 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 that the baseline macroeconomic assumptions used in this report are too conservative and do not sufficiently reflect the future dividends of recent strong economic performance and of the reforms taken since 2012. In particular, they considered that the confirmation of political stability following the peaceful presidential election of October 2015 and constitututional referendum of October 2016 would have a very positive impact on growth. In this reagrd, the authorities would have appreciated the inclusion of another scenario based on higher growth rates driven by a stronger level of private investment.

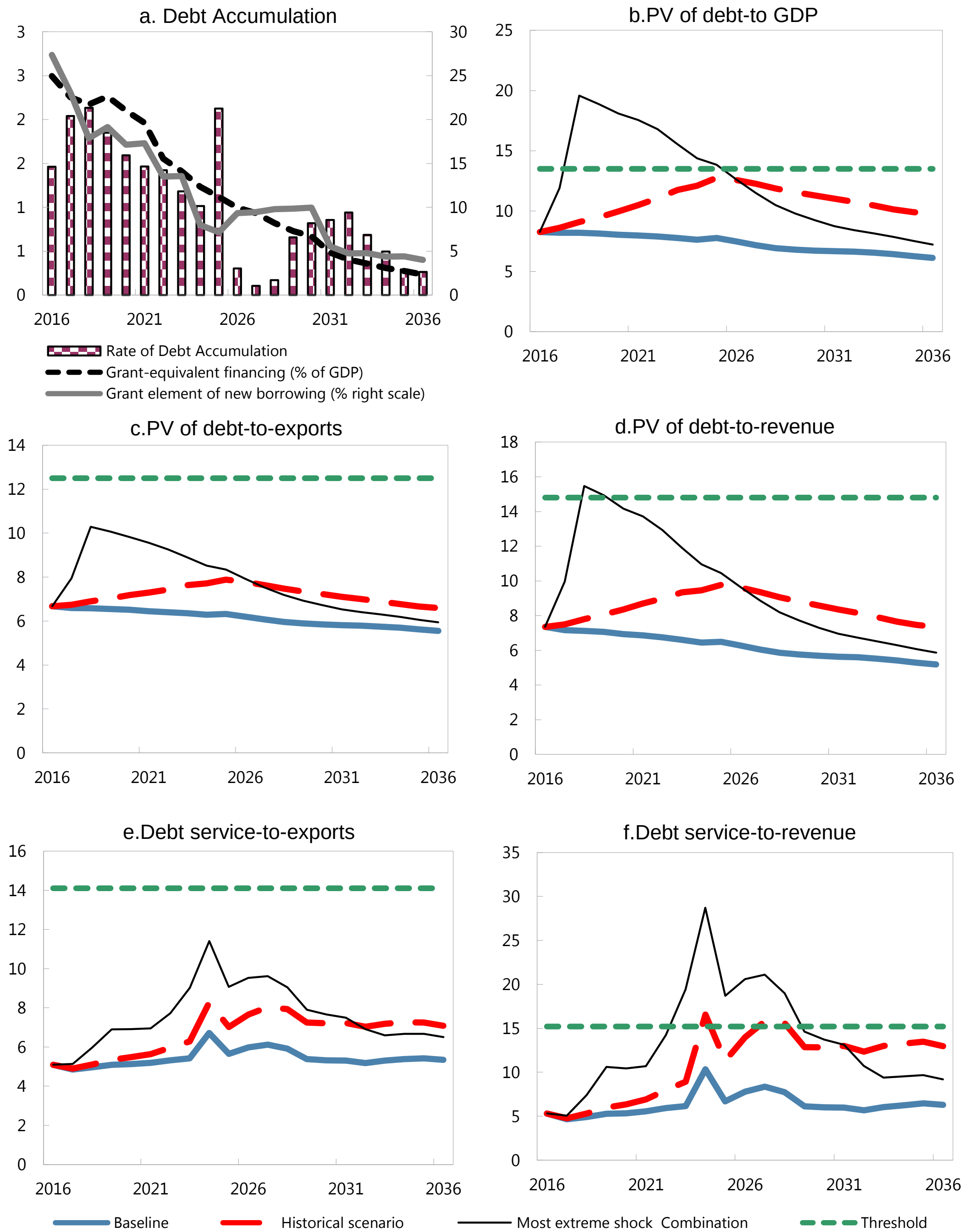
Figure 3. Côte d'Ivoire: Indicators of Public and Publicly Guaranteed External Debt under Alternatives Scenarios, 2016–36[1/]



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 2026. In figure b. it corresponds to a Combination shock; in c. to a Combination shock; in d. to a Combination shock; in e. to a Exports shock and in figure f. to a Combination shock

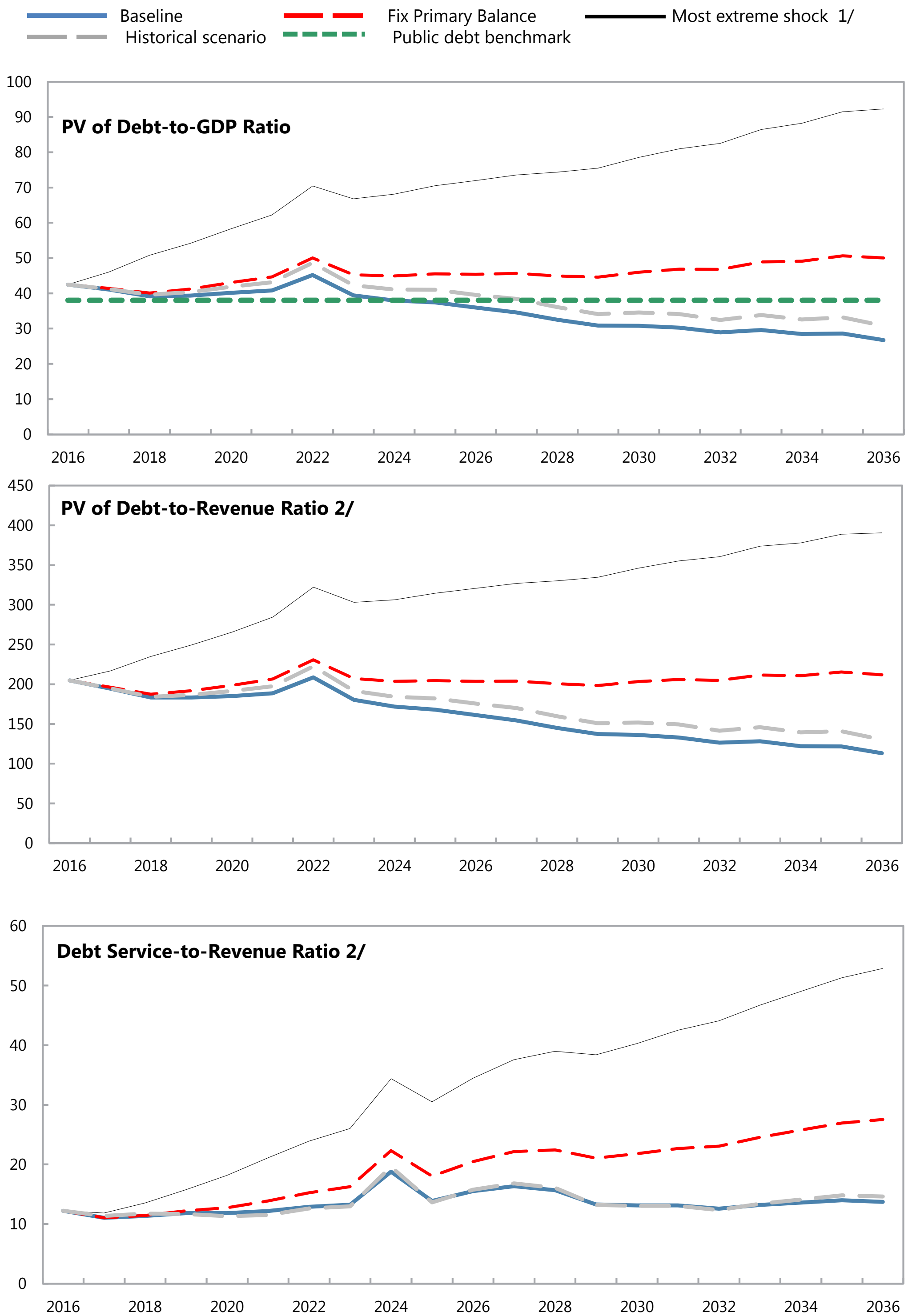
Figure 4. Côte d'Ivoire: Probability of Debt Distress of Public and Publicly Guaranteed External Debt under Alternatives Scenarios, 2016–36[1/]



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 2026. In figure b. it corresponds to a Combination shock; in c. to a Combination shock; in d. to a Combination shock; in e. to a Exports shock and in figure f. to a Combination shock

Figure 5. Côte d'Ivoire: Indicators of Public Debt Under Alternative Scenarios, 2016–36[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 2026.
2/ Revenues are defined inclusive of grants.

Table 1. Côte d'Ivoire: External Debt Sustainability Framework, Baseline Scenario, 2013–36[1/]

(Percent of GDP, unless otherwise indicated)

	Actual			Historical Average 6/	Standard Deviation 6/	Projections									
	2013	2014	2015			2016	2017	2018	2019	2020	2021	2016-2021 Average	2026	2036	2022-2036 Average
External debt (nominal) 1/	29.1	36.7	32.1			36.5	36.1	36.6	36.9	37.8	38.3	37.0	35.5	29.9	
of which: public and publicly guaranteed (PPG)	16.3	18.3	22.5			22.2	22.5	22.8	22.9	22.8	22.8	22.7	21.4	15.8	
Change in external debt	-7.8	7.6	-4.7			4.5	-0.5	0.5	0.3	0.9	0.5	1.0	-1.5	-0.6	
Identified net debt-creating flows	-5.3	-6.0	2.7			-3.2	-3.4	-3.5	-3.5	-3.8	-4.0	-3.6	-3.1	-3.0	
Non-interest current account deficit	0.1	-2.9	-0.3	-3.9	4.0	0.5	1.0	1.0	1.1	1.0	0.7	0.9	0.6	-0.1	0.5
Deficit in balance of goods and services	-2.9	-4.8	-2.0			-0.8	-0.5	-0.4	-0.2	-0.3	-0.7	-0.5	-2.2	-3.8	-2.6
Exports	41.5	39.3	38.2			36.0	37.0	37.3	37.3	37.4	38.0	37.2	39.7	46.1	41.8
Imports	38.6	34.4	36.1			35.2	36.5	36.8	37.1	37.1	37.4	36.7	37.5	42.3	39.2
Net current transfers (negative = inflow)	1.4	0.8	0.2	1.5	0.8	0.0	0.2	0.1	0.0	0.1	0.2	0.1	1.5	2.3	1.7
of which: official	-0.4	-0.7	-1.5			-1.7	-1.5	-1.6	-1.6	-1.6	-1.4	-1.6	-0.8	-0.1	
Other current account flows (negative = net inflow)	1.6	1.1	1.6			1.3	1.4	1.3	1.3	1.2	1.2	1.3	1.3	1.4	
Net FDI (negative = inflow)	-1.3	-1.2	-1.3	-1.5	0.3	-2.9	-3.3	-3.5	-3.7	-4.0	-4.0	-3.6	-3.2	-2.7	-3.2
Endogenous debt dynamics 2/	-4.0	-1.9	4.2			-0.7	-1.1	-1.0	-0.9	-0.8	-0.8	-0.9	-0.4	-0.2	
Contribution from nominal interest rate	1.3	1.4	1.3			1.6	1.5	1.5	1.6	1.6	1.6	1.6	1.6	1.4	
Contribution from real GDP growth	-2.9	-2.3	-3.6			-2.3	-2.6	-2.5	-2.4	-2.4	-2.4	-2.5	-2.0	-1.6	
Contribution from price and exchange rate changes	-2.4	-1.1	6.5			...	...	...	...	...	...		...	...	
Residual (3-4) 3/	-2.5	13.6	-7.4			7.7	2.9	4.0	3.8	4.7	4.5	4.6	1.6	2.4	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	0.0	
PV of external debt 4/	...	...	31.1			35.0	34.0	34.2	34.2	34.8	35.1	34.6	31.9	26.6	
In percent of exports	...	...	81.5			97.2	91.9	91.8	91.6	93.1	92.3	93.0	80.5	57.6	
PV of PPG external debt	...	...	21.5			20.7	20.5	20.5	20.2	19.9	19.6	20.2	17.9	12.5	
In percent of exports	...	...	56.5			57.5	55.3	54.9	54.2	53.2	51.6	54.4	45.0	27.0	
In percent of government revenues	...	...	114.8			108.7	104.4	103.3	101.9	99.1	97.3	102.4	82.9	53.1	
Debt service-to-exports ratio (in percent)	11.0	7.0	8.4			16.0	9.3	9.3	9.3	9.5	9.5	10.5	11.0	8.4	
PPG debt service-to-exports ratio (in percent)	2.2	2.5	3.5			5.1	4.4	4.7	5.1	5.2	5.4	5.0	7.5	5.8	
PPG debt service-to-revenue ratio (in percent)	5.0	5.7	7.0			9.7	8.4	8.9	9.6	9.8	10.2	9.4	13.7	11.4	
Total gross financing need (Billions of U.S. dollars)	2.1	-0.5	3.1			0.4	1.3	1.1	1.3	1.3	1.8	1.2	3.5	5.3	
Non-interest current account deficit that stabilizes debt ratio	7.9	-10.5	4.4			-4.0	1.5	0.5	0.8	0.1	0.2	-0.2	2.0	0.5	
Key macroeconomic assumptions															
Real GDP growth (in percent)	9.3	8.8	8.9	4.4	4.7	7.9	7.9	7.8	7.3	7.2	6.9	7.5	5.9	5.5	5.9
GDP deflator in US dollar terms (change in percent)	6.8	3.9	-15.0	2.7	9.1	1.7	2.3	2.4	2.6	2.8	1.7	2.2	1.6	1.7	1.7
Effective interest rate (percent) 5/	4.0	5.6	3.3	3.1	1.1	5.4	4.6	4.7	4.7	4.8	4.8	4.8	4.7	4.9	4.7
Growth of exports of G&S (US dollar terms, in percent)	-0.9	7.0	-10.0	4.2	8.1	3.6	13.4	11.1	10.4	10.5	10.6	9.9	9.1	8.9	9.1
Growth of imports of G&S (US dollar terms, in percent)	0.7	0.9	-2.8	5.3	10.9	7.0	14.3	11.4	11.1	10.0	9.6	10.6	8.6	8.7	8.6
Grant element of new public sector borrowing (in percent)	...	...	...	...	...	27.4	23.1	17.9	19.2	17.1	17.3	20.3	9.3	4.0	7.9
Government revenues (excluding grants, in percent of GDP)	18.4	17.1	18.8			19.1	19.6	19.8	19.8	20.1	20.2		21.6	23.5	22.1
Aid flows (in Billions of US dollars) 7/	0.4	0.6	0.5			0.6	0.6	0.7	0.8	0.8	0.8		0.7	0.2	
of which: Grants	0.4	0.6	0.5			0.6	0.6	0.7	0.8	0.8	0.8		0.7	0.2	
of which: Concessional loans	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Grant-equivalent financing (in percent of GDP) 8/	...	...	...			2.5	2.3	2.2	2.3	2.1	2.0		1.0	0.2	0.8
Grant-equivalent financing (in percent of external financing) 8/	...	...	...			53.3	46.8	43.9	45.9	45.8	44.2		29.7	9.2	21.5
Memorandum items:															
Nominal GDP (Billions of US dollars)	31.3	35.4	32.8			35.9	39.7	43.8	48.2	53.1	57.8		86.3	175.3	111.6
Nominal dollar GDP growth	16.7	13.1	-7.4			9.7	10.4	10.4	10.1	10.2	8.8	9.9	7.6	7.3	7.7
PV of PPG external debt (in Billions of US dollars)			6.9			7.4	8.1	9.0	9.8	10.6	11.3		15.4	21.8	
(PVt-PVt-1)/GDPt-1 (in percent)						1.5	2.0	2.1	1.9	1.6	1.5	1.8	0.3	0.3	0.8
Gross workers' remittances (Billions of US dollars)	0.0	-0.5	-0.5			-0.5	-0.6	-0.7	-0.7	-0.8	-0.9		-1.8	-3.9	
PV of PPG external debt (in percent of GDP + remittances)	...	...	21.9			21.0	20.8	20.8	20.5	20.2	19.9		18.2	12.7	
PV of PPG external debt (in percent of exports + remittances)	...	...	58.8			60.0	57.7	57.3	56.4	55.4	53.7		47.5	28.4	
Debt service of PPG external debt (in percent of exports + remittances)	...	...	3.6			5.4	4.6	4.9	5.3	5.5	5.6		7.9	6.1	

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, 2016–36
(Percent)

	Projections							
	2016	2017	2018	2019	2020	2021	**2026**	2036
PV of debt-to GDP ratio								
Baseline	21	20	20	20	20	20	**18**	12
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2016-2036 1/	21	22	23	25	26	28	**33**	26
A2. New public sector loans on less favorable terms in 2016-2036 2	21	21	22	23	23	23	**25**	25
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2017-2018	21	22	24	24	23	23	**21**	15
B2. Export value growth at historical average minus one standard deviation in 2017-2018 3/	21	26	36	35	34	33	**26**	14
B3. US dollar GDP deflator at historical average minus one standard deviation in 2017-2018	21	22	25	24	24	23	**21**	15
B4. Net non-debt creating flows at historical average minus one standard deviation in 2017-2018 4/	21	25	29	29	28	27	**22**	13
B5. Combination of B1-B4 using one-half standard deviation shocks	21	32	48	47	46	44	**33**	17
B6. One-time 30 percent nominal depreciation relative to the baseline in 2017 5/	21	29	29	29	28	28	**25**	18
PV of debt-to-exports ratio								
Baseline	57	55	55	54	53	52	**45**	27
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2016-2036 1/	57	59	63	66	70	73	**84**	55
A2. New public sector loans on less favorable terms in 2016-2036 2	57	58	59	61	61	61	**63**	54
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2017-2018	57	55	55	54	53	52	**45**	27
B2. Export value growth at historical average minus one standard deviation in 2017-2018 3/	57	84	132	128	124	119	**88**	40
B3. US dollar GDP deflator at historical average minus one standard deviation in 2017-2018	57	55	55	54	53	52	**45**	27
B4. Net non-debt creating flows at historical average minus one standard deviation in 2017-2018 4/	57	67	79	77	75	72	**56**	28
B5. Combination of B1-B4 using one-half standard deviation shocks	57	88	134	130	126	121	**87**	38
B6. One-time 30 percent nominal depreciation relative to the baseline in 2017 5/	57	55	55	54	53	52	**45**	27
PV of debt-to-revenue ratio								
Baseline	109	104	103	102	99	97	**83**	53
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2016-2036 1/	109	112	118	124	130	137	**154**	109
A2. New public sector loans on less favorable terms in 2016-2036 2	109	109	112	114	114	116	**116**	107
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2017-2018	109	113	121	120	116	114	**97**	62
B2. Export value growth at historical average minus one standard deviation in 2017-2018 3/	109	134	182	177	169	165	**119**	58
B3. US dollar GDP deflator at historical average minus one standard deviation in 2017-2018	109	114	124	123	118	116	**99**	63
B4. Net non-debt creating flows at historical average minus one standard deviation in 2017-2018 4/	109	127	148	145	139	136	**103**	56
B5. Combination of B1-B4 using one-half standard deviation shocks	109	161	245	237	227	220	**155**	72
B6. One-time 30 percent nominal depreciation relative to the baseline in 2017 5/	109	148	147	145	140	138	**117**	75

Table 2. Côte d'Ivoire: Sensitivity Analysis for Key Indicators of Public and Publicly Guaranteed External Debt, 2016–36 (concluded)

(Percent)

	Projections							
	2016	2017	2018	2019	2020	2021	**2026**	2036
Debt service-to-exports ratio								
Baseline	5	4	5	5	5	5	**7**	6
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2016-2036 1/	5	5	5	6	6	7	**11**	10
A2. New public sector loans on less favorable terms in 2016-2036 2	5	4	4	5	4	4	**7**	10
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2017-2018	5	4	5	5	5	5	**7**	6
B2. Export value growth at historical average minus one standard deviation in 2017-2018 3/	5	5	7	10	10	10	**15**	9
B3. US dollar GDP deflator at historical average minus one standard deviation in 2017-2018	5	4	5	5	5	5	**7**	6
B4. Net non-debt creating flows at historical average minus one standard deviation in 2017-2018 4/	5	4	5	6	6	6	**9**	6
B5. Combination of B1-B4 using one-half standard deviation shocks	5	5	7	9	9	10	**15**	8
B6. One-time 30 percent nominal depreciation relative to the baseline in 2017 5/	5	4	5	5	5	5	**7**	6
Debt service-to-revenue ratio								
Baseline	10	8	9	10	10	10	**14**	11
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2016-2036 1/	10	9	10	11	12	12	**21**	20
A2. New public sector loans on less favorable terms in 2016-2036 2	10	8	8	9	8	8	**14**	19
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2017-2018	10	9	10	11	11	12	**16**	13
B2. Export value growth at historical average minus one standard deviation in 2017-2018 3/	10	8	10	13	13	13	**20**	13
B3. US dollar GDP deflator at historical average minus one standard deviation in 2017-2018	10	9	11	12	12	12	**16**	14
B4. Net non-debt creating flows at historical average minus one standard deviation in 2017-2018 4/	10	8	10	12	12	12	**17**	12
B5. Combination of B1-B4 using one-half standard deviation shocks	10	9	13	17	17	17	**26**	16
B6. One-time 30 percent nominal depreciation relative to the baseline in 2017 5/	10	12	13	14	14	14	**19**	16
Memorandum item:								
Grant element assumed on residual financing (i.e., financing required above baseline) 6/	-1	-1	-1	-1	-1	-1	**-1**	-1

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, 2013–36

(Percent of GDP, unless otherwise indicated)

	Actual					Estimate	Projections								
	2013	2014	2015	Average 5/	Standard Deviation 5/	2016	2017	2018	2019	2020	2021	2016-21 Average	2026	2036	2022-36 Average
Public sector debt 1/	33.8	41.9	47.6			44.0	43.1	41.5	42.0	43.0	44.0		39.5	30.1	
of which: foreign-currency denominated	16.3	18.3	22.5			22.2	22.5	22.8	22.9	22.8	22.8		21.4	15.8	
Change in public sector debt	-2.8	8.1	5.7			-3.5	-0.9	-1.6	0.5	1.0	0.9		-1.4	-1.9	
Identified debt-creating flows	-2.6	0.1	0.4			-0.5	-0.5	-0.6	-0.8	-0.8	-0.6		-0.5	-0.1	
Primary deficit	1.2	1.3	1.6	1.0	1.2	2.5	2.2	1.9	1.5	1.4	1.5	1.8	1.0	0.9	1.0
Revenue and grants	19.7	18.9	20.2			20.7	21.1	21.4	21.5	21.7	21.6	21.3	22.3	23.6	22.6
of which: grants	1.3	1.7	1.5			1.7	1.5	1.6	1.6	1.6	1.4		0.8	0.1	
Primary (noninterest) expenditure	20.9	20.1	21.8			23.2	23.3	23.3	23.0	23.1	23.1	23.2	23.3	24.5	23.6
Automatic debt dynamics	-3.8	-1.1	-1.0			-2.8	-2.6	-2.5	-2.3	-2.2	-2.1		-1.5	-1.0	
Contribution from interest rate/growth differential	-2.9	-2.7	-3.0			-2.6	-2.4	-2.4	-2.1	-2.1	-2.1		-1.6	-1.0	
of which: contribution from average real interest rate	0.2	0.0	0.5			0.9	0.8	0.7	0.7	0.7	0.7		0.7	0.7	
of which: contribution from real GDP growth	-3.1	-2.7	-3.4			-3.5	-3.2	-3.1	-2.8	-2.8	-2.8		-2.3	-1.7	
Contribution from real exchange rate depreciation	-0.9	1.6	1.9			-0.3	-0.2	-0.1	-0.2	0.0	0.1		...	...	
Other identified debt-creating flows	0.0	-0.1	-0.2			-0.2	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Privatization receipts (negative)	0.0	-0.1	-0.2			-0.2	0.0	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	-0.2	8.0	5.3			-3.0	-0.4	-1.0	1.3	1.8	1.5		-1.0	-1.8	-0.5
Other Sustainability Indicators															
PV of public sector debt	...	...	46.6			42.5	41.1	39.2	39.3	40.1	40.8		36.0	26.8	
of which: foreign-currency denominated	...	...	21.5			20.7	20.5	20.5	20.2	19.9	19.6		17.9	12.5	
of which: external	...	...	21.5			20.7	20.5	20.5	20.2	19.9	19.6		17.9	12.5	
PV of contingent liabilities (not included in public sector debt)	...	...	...			...	...	...	...	...	...		...	...	
Gross financing need 2/	4.8	2.6	8.8			11.3	6.6	5.0	3.7	4.6	6.3		7.0	2.1	
PV of public sector debt-to-revenue and grants ratio (in percent)	...	...	230.4			204.9	194.6	183.2	183.2	185.1	188.7		161.2	113.3	
PV of public sector debt-to-revenue ratio (in percent)	...	...	248.3			222.9	209.4	197.8	198.3	199.7	202.2		166.8	114.0	
of which: external 3/	...	...	114.8			108.7	104.4	103.3	101.9	99.1	97.3		82.9	53.1	
Debt service-to-revenue and grants ratio (in percent) 4/	7.1	8.0	10.3			12.2	11.0	11.3	11.8	11.8	12.2	11.7	15.5	13.7	14.2
Debt service-to-revenue ratio (in percent) 4/	7.6	8.8	11.1			13.3	11.9	12.2	12.8	12.7	13.0	12.7	16.1	13.8	14.6
Primary deficit that stabilizes the debt-to-GDP ratio	4.0	-6.8	-4.0			6.0	3.1	3.5	1.0	0.4	0.5	2.4	2.5	2.8	1.9
Key macroeconomic and fiscal assumptions															
Real GDP growth (in percent)	9.3	8.8	8.9	4.4	4.7	7.9	7.9	7.8	7.3	7.2	6.9	7.5	5.9	5.5	5.9
Average nominal interest rate on forex debt (in percent)	4.2	3.7	4.3	2.2	1.4	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.3	4.5	4.3
Average real interest rate on domestic debt (in percent)	-1.2	-1.6	0.3	-1.8	1.8	1.8	1.8	1.4	1.5	1.3	1.0	1.5	1.1	1.9	1.4
Real exchange rate depreciation (in percent, + indicates depreciation)	-5.6	10.5	11.3	-0.5	7.8	-1.2	...	...	...	...	...	...	...	...	...
Inflation rate (GDP deflator, in percent)	3.4	3.9	1.8	3.5	2.1	1.0	1.4	1.9	1.9	2.0	1.9	1.7	1.6	1.7	1.7
Growth of real primary spending (deflated by GDP deflator, in percent)	5.8	4.8	18.2	2.9	5.8	14.7	8.0	7.8	6.0	7.6	7.1	8.5	5.3	6.3	6.3
Grant element of new external borrowing (in percent)	...	...	...	...	...	27.4	23.1	17.9	19.2	17.1	17.3	20.3	9.3	4.0	...

Sources: Country authorities; and staff estimates and projections.

1/ [Indicate coverage of public sector, e.g., general government or nonfinancial public sector. Also whether net or gross debt is used.]

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 2016–36

	Projections							
	2016	2017	2018	2019	2020	2021	2026	2036
PV of Debt-to-GDP Ratio								
Baseline	42	41	39	39	40	41	36	27
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	42	41	40	40	42	43	40	31
A2. Primary balance is unchanged from 2016	42	41	40	41	43	45	45	50
A3. Permanently lower GDP growth 1/	42	42	40	42	44	46	51	79
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2017-20	42	46	51	54	58	62	72	92
B2. Primary balance is at historical average minus one standard deviations in 2017-201	42	41	40	40	40	41	36	27
B3. Combination of B1-B2 using one half standard deviation shocks	42	43	43	45	48	51	57	69
B4. One-time 30 percent real depreciation in 2017	42	49	47	46	47	47	43	37
B5. 10 percent of GDP increase in other debt-creating flows in 2017	42	51	49	49	49	50	44	33
PV of Debt-to-Revenue Ratio 2/								
Baseline	205	195	183	183	185	189	161	113
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	205	195	184	187	191	197	176	130
A2. Primary balance is unchanged from 2016	205	196	188	192	199	207	204	212
A3. Permanently lower GDP growth 1/	205	197	189	193	200	210	226	333
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2017-20	205	217	235	249	266	284	321	391
B2. Primary balance is at historical average minus one standard deviations in 2017-201	205	195	185	185	187	190	163	114
B3. Combination of B1-B2 using one half standard deviation shocks	205	202	197	208	221	235	255	291
B4. One-time 30 percent real depreciation in 2017	205	233	218	216	216	219	191	156
B5. 10 percent of GDP increase in other debt-creating flows in 2017	205	242	229	227	227	229	195	140
Debt Service-to-Revenue Ratio 2/								
Baseline	12	11	11	12	12	12	16	14
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	12	11	12	12	11	12	16	15
A2. Primary balance is unchanged from 2016	12	11	11	12	13	14	20	28
A3. Permanently lower GDP growth 1/	12	11	12	12	13	14	22	42
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2017-20	12	12	14	16	18	21	34	53
B2. Primary balance is at historical average minus one standard deviations in 2017-201	12	11	11	12	12	12	16	14
B3. Combination of B1-B2 using one half standard deviation shocks	12	12	12	12	13	15	26	39
B4. One-time 30 percent real depreciation in 2017	12	13	15	16	17	18	26	29
B5. 10 percent of GDP increase in other debt-creating flows in 2017	12	11	14	19	19	20	21	18

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.