INTERNATIONAL MONETARY FUND
INTERNATIONAL DEVELOPMENT ASSOCIATION

CÔTE D'IVOIRE

Joint Debt Sustainability Analysis Under the Debt Sustainability Framework for Low-Income Countries[1]

Prepared by the Staffs of the International Monetary Fund and the World Bank

Approved by Sean Nolan and Peter Allum (IMF)
Jeffrey D. Lewis and Marcelo Giugale (IDA)

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Côte d'Ivoire remains at a moderate risk of debt distress. This debt sustainability analysis (DSA) updates the joint IMF/IDA DSA from June, 2012 to integrate some planned new external borrowing on nonconcessional terms. The baseline scenario includes almost US$250 million of additional nonconcessional borrowing over 2013–14 (0.57 percent of GDP in 2013, 0.35 percent of GDP in 2014), largely to finance infrastructure and energy projects.[2] All external debt indicators remain under their indicative thresholds[3] throughout the projection period, except the present value of debt-to-GDP, which breaches its threshold at the beginning of the projection period. The country remains vulnerable to macroeconomic shocks, including lower exports and GDP growth. The inclusion of domestic debt raises debt burden indicators somewhat, but does not alter the overall assessment.

A. Introduction

1. **The last LIC-DSA for Côte d'Ivoire, considered by the Board in June 2012 in the context of the HIPC completion point, assessed Côte d'Ivoire as being in moderate risk of debt distress**.[4][5] At that time, the country benefited from a substantial amount of debt relief

[1] The DSA was prepared jointly by the staffs of the International Monetary Fund and the World Bank, in collaboration with the authorities of Côte d'Ivoire. The fiscal year in Côte d'Ivoire is January–December.

[2] The additional nonconcessional borrowing will be allocated through two separate windows under the ECF program: one will be for up to a cumulative amount during 2013–14 of $200 million ($100 million in 2013 and a further $100 million in 2014), equivalent to 0.39 and 0.35 percent of GDP in 2013 and 2014, respectively, which will be limited to infrastructure and energy sector investment projects that are economically profitable (as assessed by an internationally reputable entity); and the other will be an increase of CFAF 25 billion (equivalent to 0.18 percent of GDP or about $50 million) in an existing program window for nonconcessional borrowing from the West African Development Bank (BOAD)—this window would then amount to CFAF 50 billion or slightly over $100 million in total.

[3] For the threshold for countries weak policy environment, see http://www.imf.org/external/np/pp/eng/2012/011212.pdf

[4] The last DSA can be found here: http://www.imf.org/external/pubs/cat/longres.aspx?sk=26061.0

[5] The DSAs presented in this document are based on the low-income countries (LIC) DSA framework. Under the Country Policy and Institutional Assessment (CPIA), Côte d'Ivoire is rated as a weak performer with an average rating of 2.79 in 2009–11, and the DSA uses the indicative threshold indicators for countries in this category. See "Debt Sustainability in Low-Income Countries: Proposal for an Operational Framework and

(continued)

that improved its debt situation from being in debt distress to being at moderate risk of debt distress. That assessment is unchanged in this DSA, notwithstanding a few changes in the assumptions in the present analysis (Box 1).

2. **As a result of the enhanced Highly Indebted Poor Countries (HIPC) Initiative and the Multilateral Debt Relief Initiative (MDRI), and additional bilateral assistance, Côte d'Ivoire's stock of external debt has declined significantly (Table 3)**. Côte d'Ivoire's stock of public and publicly guaranteed external debt is projected to decline by one-third from 55.1 percent of GDP at end-2011to 33.9 percent in 2012.[6] At end-2012, just over one-half of projected public external debt is owed to official bilateral creditors (55.9 percent), while commercial creditors account for 31.3 percent and multilateral creditors 12.8 percent. If the French ODA claims converted into C2D debt-for-development swaps are considered to be an effective cancellation of debt, the drop in the post-HIPC completion point debt stock in 2012 would be about two-thirds; these outstanding claims amount to some €2.9 billion or $3.6 billion at end-2012.

Box 1: **What Has Changed Compared to the LIC-DSA of June 2012?**

The main differences between the two DSAs are:

- A new discount rate is used for calculating present values that is smaller than before: a reduction from 4 percent to 3 percent. This decrease is mandated by Fund policy, which calls for adjusting the discount rate used in the LIC DSF if the six-month average of the long-term CIRR deviates from the rate in the template by more than 100 basis points for a period of six months or more. Everything else equal, the lower discount rate raises the present value of debt.
- Higher GDP growth rates are now projected, reflecting the authorities' effort to step up public investment and create a better business environment (see Box 2). Public investment is expect to rise from about 3 percent of GDP in 2010–11 to 5.4 percent in 2012, 7.5 percent of GDP in 2013, and 8.0 percent of GDP by 2017. This is expected to catalyze private investment and spur growth.

For the remaining period (2013–14) of the ECF arrangement, the current DSA includes almost US$250 million of new nonconcessional borrowing primarily to finance infrastructure and energy projects (0.57 percent of GDP in 2013, 0.35 percent of GDP in 2014). The terms on this borrowing are assumed to be an interest rate of 8 percent and a maturity of 6 years including a grace period of 1 year.

Policy Implications" (http://www.imf.org/external/np/pdr/sustain/2004/020304.htm and IDA/SECM2004/0035, (2/3/04) and "Debt Sustainability in Low-Income Countries: Further Considerations on an Operational Framework, Policy Implications" http://www.imf.org/external/np/pdr/sustain/2004/091004.htm and IDA/SECM2004/0629, 9/10/04) and "A Review of Some Aspects of the Low-Income Country Debt Sustainability Framework" (http://www.imf.org/external/np/pp/eng/2009/080509a.pdf) and "Staff Guidance Note on the Application of the Joint Bank-Fund Debt Sustainability Framework for Low-Income Countries" (http://www.imf.org/external/np/pp/eng/2010/012210.pdf

[6] The projected level of the debt stock at end-2012, is somewhat higher than previously projected because: (i) pre-cutoff ODA claims of the French Development Agency (*Agence France de Développement*, (AFD) which previously had been assumed to be cancelled were instead included with post-cutoff ODA claims eligible for the C2D debt for development swap program, in which debt service is paid and Côte d'Ivoire receives an equivalent amount of grants to be used for development expenditures; and (ii) the estimates of accumulated late interest on Eurobond arrears and on arrears to Sphynx and Standard Bank-BNI creditors were revised up.

Box 2. Côte d'Ivoire: Key Baseline Macroeconomic Assumptions

The baseline macroeconomic framework assumes a stable political and social situation and that important structural reforms in the financial and real sector are brought to fruition, accelerating output growth and attracting additional foreign direct investment over the medium term.

Real GDP growth: It is expected to rebound to around 8.6 percent in 2012 following the 4.7 percent decline induced by the post-election crisis in 2011. Investor confidence is assumed to rise with political normalization over the next few years. Higher public investment (mainly in infrastructure) and reforms to improve the business climate are expected to stimulate private investment across various sectors of the economy and drive growth. Growth is expected to average 7.1 percent over 2013–17 and 5.3 percent over 2018–32.

Inflation: Inflation, as measured by the GDP deflator (in U.S. dollars), is expected to stabilize around 3 percent. This is in line with CPI inflation, which by WAEMU rules should not exceed 3 percent.

Fiscal policy: In the medium term, the government expects to achieve a primary basic surplus of 0.2 percent of GDP on average. Total revenues (excluding grants) are projected to increase to 20.8 percent of GDP in 2017 and 23.0 percent of GDP by 2032. Government expenditures are projected to increase to 25.3 percent of GDP in 2017 and 26.0 percent of GDP by 2032.

External financing: The level of new external financing needs is broadly the same as in the June 2012 LIC-DSA. Grants are expected to decline from 1.8 percent of GDP in 2013 to 1.6 percent of GDP 2017, before stabilizing around 0.4 percent of GDP in the long run, as income per capita grows. The residual external financing needs are assumed to be covered by concessional borrowing (from multilateral and bilateral creditors) and commercial borrowing. During the remaining period of the ECF arrangement there is almost US$250 million of new nonconcessional borrowing over 2013–14 primarily to finance infrastructure and energy projects (0.57 percent of GDP in 2013, 0.35 percent of GDP in 2014). For 2015–17 the main source of new borrowing continues to be concessional, but thereafter it gradually declines to zero by 2029 while nonconcessional borrowing steadily rises to about 3 percent of GDP during 2027–32.

External current account: The balance (excluding official transfers) is expected to decline from a surplus of 8.1 percent of GDP in 2011 to a deficit of 5.4 percent of GDP in 2017. The deficit would reach 6.5 percent in 2032, with an average of 5.7 percent of GDP over the period 2018–32. After declining by 3.9 percent in 2011, export volumes are expected to increase on average by 8.2 percent per year thereafter. Import volumes are expected to grow on average by 6.9 percent over the long term, after declining by 23.9 percent in 2011. Import dynamics reflect essentially the higher levels of investment.

All external arrears to official bilateral creditors are assumed to be cleared over 2012–14 and those to commercial creditors restructured. Debt service projections assume HIPC completion point, MDRI and beyond-HIPC debt relief. FDI is assumed to rise rapidly over the medium term, in response to the authorities' efforts to attract external investors. Net inflows of FDI are projected to rise from 1.1 percent of GDP in 2011 to 3.1 percent in 2016, and 3.3 percent in 2032.

B. Baseline Assumptions

3. **The assumptions of the LIC-DSA (Box 2 above) are broadly consistent with those used in the June 2012 LIC-DSA**. There are three differences, as described in Box 1 above: a lower discount rate used in the DSA, a higher projected growth rate, and a nonconcessional borrowing window in 2013–14. FDI is expected to rise rapidly over the medium term. Notably reflecting an improved investment climate and rising confidence in the economy, FDI is expected to rise rapidly o the medium term, and gradually increase over the long term. The recent political change in Côte d'Ivoire has resulted in a more favorable approach from donors, which is expected to result in significantly higher flows of grants and borrowing to finance public investment and jumpstart growth (this is already visible in the 2012 growth performance). While an improved investment climate and rising confidence in the economy has led to strong interest in Côte d'Ivoire among potential private sector investors, including for PPP projects, whether this results in actual investment is subject to uncertainty.

C. External Debt Sustainability Analysis

4. **Under the baseline scenario, Côte d'Ivoire's external debt and debt service indicators remain below their relevant indicative thresholds throughout the projection period (Table 1a, Figure 1) with one short-lived exception: the PV of public and publicly guaranteed (PPG) debt relative to GDP declines over the projection period and after 2013 stays below the threshold.** In 2012 this debt burden indicator is 4 percentage points above the policy threshold, whereas in the June 2012 LIC-DSA it was below. This reflects an upward revision in the end-2012 debt stock (see Section A, footnote 6), and the use of a lower discount rate (Box 1). The PVs of PPG debt relative to exports and to revenue also stay below their indicative threshold throughout the projection period, reflecting the projected debt relief and rising exports.

5. **Debt service ratios remain below their indicative thresholds over the projection period**. However, in the medium term they are projected to rise from their current exceptionally low levels and then stabilize through the remaining projection period. While the ratios are well below their indicative thresholds, the initial rise points to the importance of prudent debt management to ensure that debt service remains at a comfortable level. The dynamics of the debt service ratios reflect mainly (i) the end of exceptional debt service relief from Paris Club creditors and the beginning of full debt service payments on remaining debt after the completion point;[7] (ii) the step-up profile of debt service on the Eurobonds, which begins to rise in 2012 for several years; (iii) repayment of arrears on the Eurobond; and (iv) debt service on an assumed restructuring of arrears to other commercial creditors.

6. **As a result of the broad consistency of the baseline assumptions with those of the June LIC-DSA and the small amount of additional nonconcessional borrowing during 2013–14, the baseline scenario is very similar to that in the June LIC-DSA**.

7. **Côte d'Ivoire's external debt outlook is subject to considerable vulnerabilities**, **especially until the middle of the projection period** (Table 1b, Figure 1). Given the impact of

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[7] These are for the most part ODA debt to France that will be converted into debt-for-development swaps over time, and existing debt service is assumed to be reprofiled over 15 years (2012–27) and the €350 million 2011 emergency loan from France.

distortions on trend values caused by the civil conflict in Côte d'Ivoire, the sensitivity analysis is based on regional averages and standard deviations for all relevant indicators. The sensitivity tests yield high levels of debt and debt service compared to the baseline scenario. Under the sensitivity tests, the debt-to-GDP indicator breaches the policy threshold under most of the stress tests, and less frequently for the debt-to-exports and debt-to–revenue indicators. For the most part the breaches are is temporary: the thresholds are breached up to the middle of the projection period but then fall well below them by the end of the projection period, in large part reflecting the full repayment of the emergency 2011 loan from France and of claims under the C2D debt for development program. However, when key variables are set at their historical averages for the entire projection period, and under a combination of one-half standard deviation shocks to real GDP growth, exports, GDP deflator, and net non-debt creating flows, the breach is more persistent for debt-to-GDP indicator. The debt service-to-revenue indicator, under the same two scenarios rises close to or breaches for about 10 years (combination shock) the indicative threshold.

8. **In light of the results from the baseline and the stress tests**, **IDA and IMF staffs conclude that Côte d'Ivoire is at a moderate risk of debt distress** (Figure 1). Although the breach of the debt-GDP ratio under the key variables set at historical averages test persists through 2022, and for the debt service-to revenue under the combination shock until 2027, staff does not consider this to justify a higher risk rating. Claims under C2D, which is akin to a cancellation, account for almost half of the existing debt stock. Furthermore, the share of debt service paid under C2D (returned in the form of a grant) while declining still accounts for almost 20 percent of total debt service in 2025. If Côte d'Ivoire was to face pressure on its ability to make these debt service payments because of rigidities in other spending, the C2D program provides some flexibility in the timing of projects to be financed and amounts of debt service (ultimately channeled into the projects) to be paid; the profile of C2D debt service is reviewed periodically by the authorities and AFD in order to take into account Côte d'Ivoire's capacity to pay and project implementation capacity.[8]

D. Public Sector Debt Sustainability

Baseline

9. **If domestic public debt is included in the analysis**, **Côte d'Ivoire's debt situation deteriorates modestly** (Table 2a, Figure 2). However, public debt ratios would fall over the long run owing to the projected improvement in the macroeconomic outlook. Under the baseline scenario, the PV of total public debt would gradually decline from 67.4 percent of GDP in 2011 to 26.2 percent of GDP at the end of the projection period. Debt service on total debt would increase throughout the projection period, reflecting the external debt service trend described earlier. However, the initial spike in debt service in 2013–14 is accentuated by large redemption payments on treasury bills and bonds issued in late 2011 and early 2012 in exchange of treasury bills that had been automatically rolled over with accrued interest during the post-election crisis. The authorities intend to replace these securities with ones with longer maturities to help smooth the profile of future domestic debt service payments.

[8] Under C2D the existing debt service claims are reprofiled over 15 years (2012–27), and when they are repaid they are channeled through matching grants into development spending.

Alternative Scenarios and Stress Tests

10. **Public debt dynamics are vulnerable to shocks** (Table 2b, Figure 2). Public debt indicators are most sensitive to the assumptions on GDP growth. If GDP growth were one standard deviation lower than its historical average, the PV of total debt-to-GDP, PV of total debt-to-revenue, and total debt service-to-revenue ratios would be higher than the baseline value by 50, 218, and 21 percentage points, respectively by the middle of the projection period. While the historical value scenarios may not be relevant for Côte d'Ivoire going forward, they point to the need to foster conditions that are conducive to sustained growth.

E. Conclusion

11. **This LIC-DSA shows that Côte d'Ivoire remains at moderate risk of debt distress**. This assessment is the same as the one obtained in the June 2012 LIC-DSA. Under the current baseline scenario all debt burden indicators remain below their policy-dependent thresholds throughout the projection period, except the present value of debt-to-GDP ratio, which breaches its threshold at the beginning of the projection period. Alternative scenarios and bound tests reveal the vulnerability of Côte d'Ivoire's external debt outlook, as the PV of debt-to-GDP breaches its threshold when key macroeconomic variables are set at their historical value, and most indicators briefly breach their thresholds under the most extreme shock scenarios, except the debt service-to revenue indicator for which the breach is for a longer period. The inclusion of domestic debt moderately weakens the debt outlook, but does not alter the assessment of Côte d'Ivoire's risk of debt distress.

12. **A sustainable external debt position can be maintained through sound macroeconomic policies and prudent debt management**. Access to some non-concessional financing would increase the ability of Côte d'Ivoire to address its significant public investment needs, crowd in private investment, and improve growth prospects. However, the ability to attract private investment and large-scale FDI will depend on continued implementation of sound macroeconomic policies and improvements in the business climate. To maintain debt sustainability, the authorities should exhaust sources of concessional financing before borrowing on nonconcessional terms, and improve project selection and implementation capacity. Moreover as demonstrated by the alternative scenarios and stress tests, sustained growth, strong investment in sound projects, solid export and fiscal revenue performance, and prudent debt management are important. Looking ahead, while the authorities intend to minimize large sovereign guarantees in future PPPs, these should be monitored and integrated into the authorities' debt management strategy.[9]

13. **The authorities broadly agreed with the DSA and the conclusions therein.** They noted the terms on new nonconcessional debt assumed for the DSA and emphasized their intention to seek any such financing on the most favorable terms possible in order to contain its impact on Côte d'Ivoire's debt burden. They also noted that the level of investment in the DSA's macroeconomic framework differed from that in their National Development Plan and for which they would be seeking financing at a Consultative Group meeting in early December 2012.

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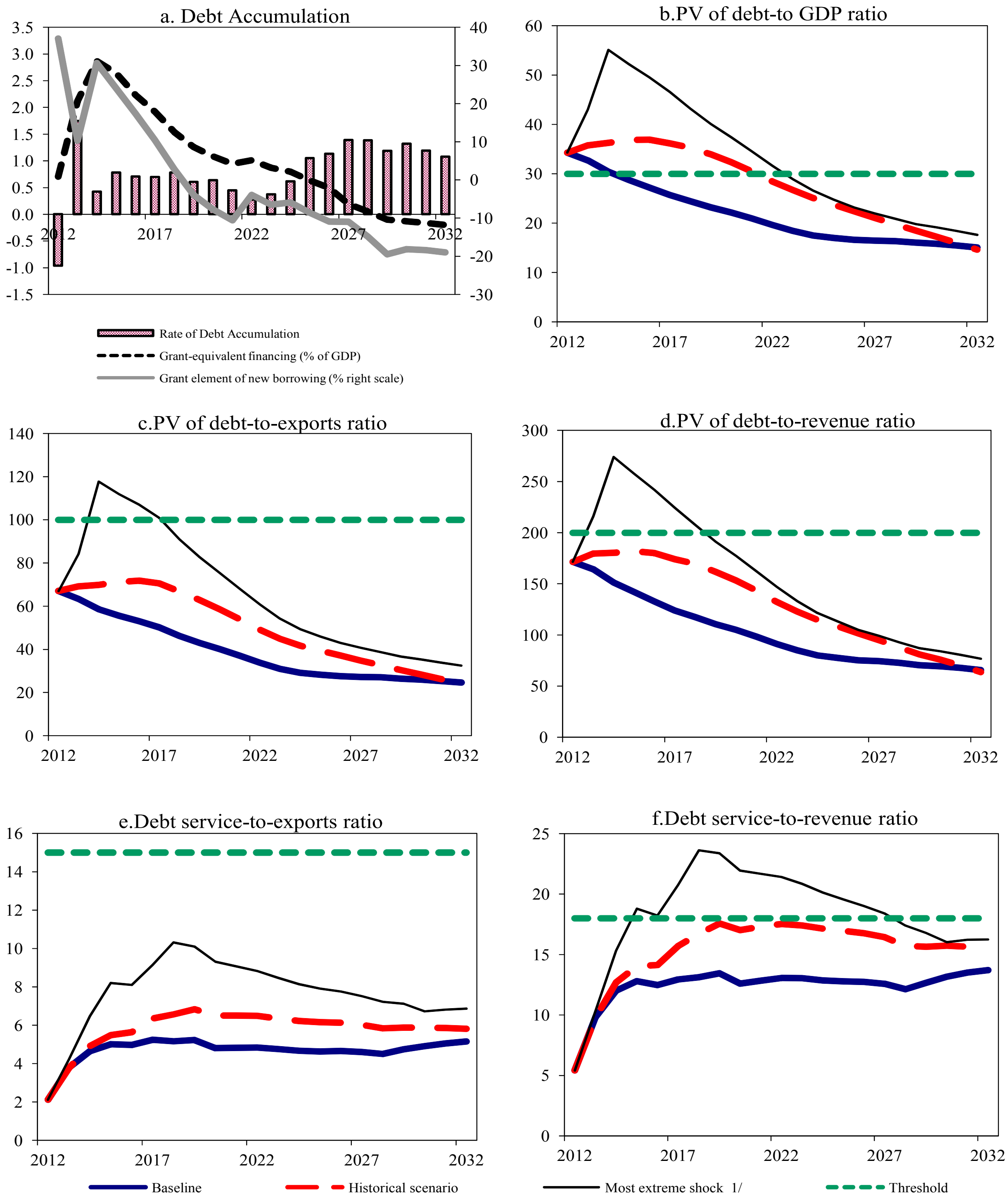
[9] To date no such guarantees exist.

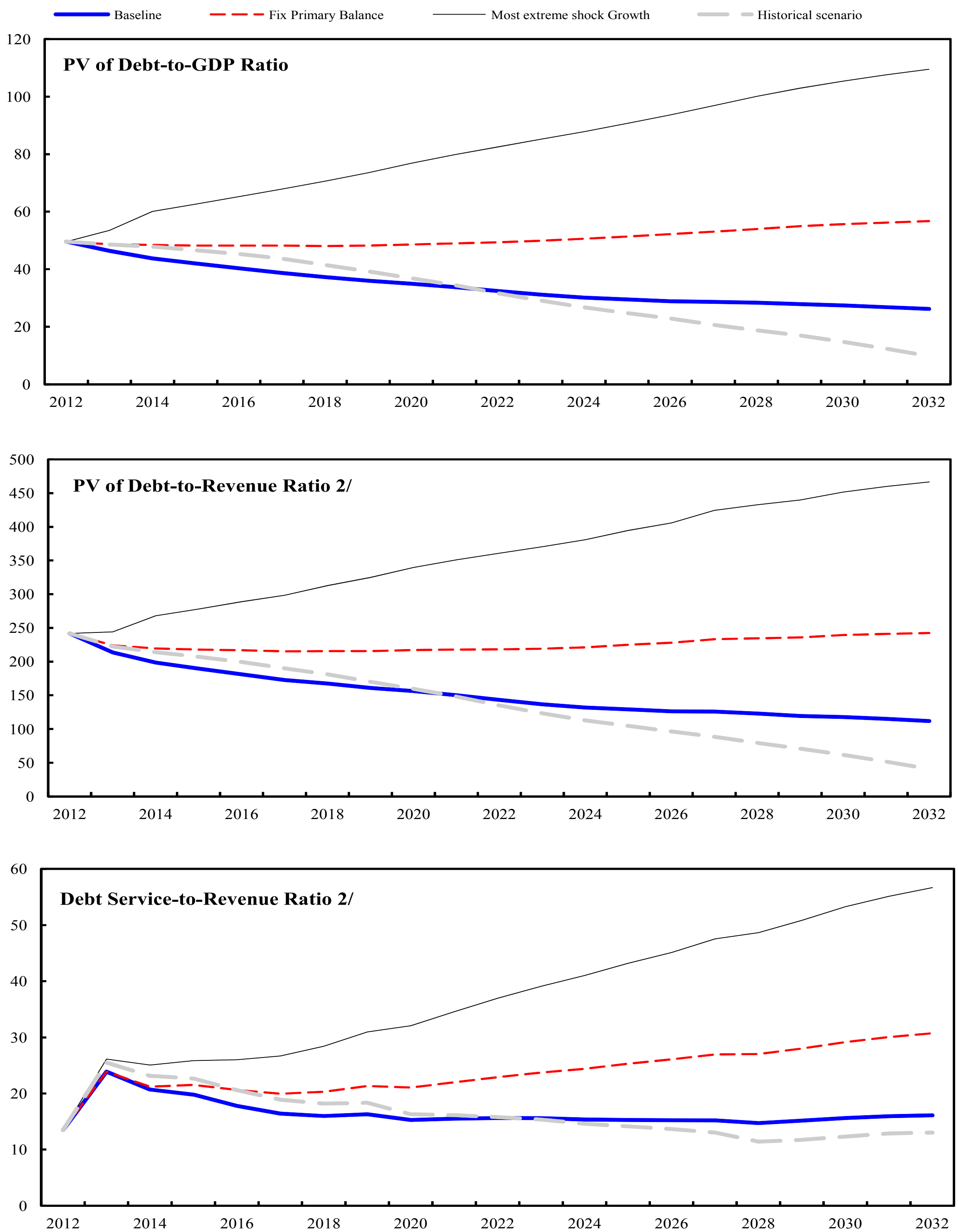
Figure 1. Côte d'Ivoire: Indicators of Public and Publicly Guaranteed External Debt
under Alternatives Scenarios, 2012-2032 1/



Sources: Country authorities; and staff estimates and projections.

1/ The most extreme stress test is the test that yields the highest ratio in 2022. In figure b. it corresponds to a Combination shock; in c. to a Exports shock; in d. to a Combination shock; in e. to a Exports shock and in figure f. to a Combination shock

Figure 2. Côte d'Ivoire: Indicators of Public Debt Under Alternative Scenarios, 2012-2032 1/



Sources: Country authorities; and staff estimates and projections.

1/ The most extreme stress test is the test that yields the highest ratio in 2022.

2/ Revenues are defined inclusive of grants.

Table 1a. Côte d'Ivoire: External Debt Sustainability Framework, Baseline Scenario, 2009-2032 1/
(In percent of GDP, unless otherwise indicated)

	Actual			Historical Average	0 0	Standard Deviation	Projections									
	2009	2010	2011				2012	2013	2014	2015	2016	2017	2012-2017 Average	2022	2032	2018-2032 Average
External debt (nominal) 1/	**81.2**	**76.3**	**79.3**				**57.3**	**54.0**	**50.6**	**47.8**	**44.9**	**41.9**		**28.4**	**16.2**	
o/w public and publicly guaranteed (PPG)	53.9	50.6	55.1				33.4	32.2	31.0	29.9	28.7	27.3		19.7	14.1	
Change in external debt	-8.2	-4.9	3.0				-22.1	-3.3	-3.3	-2.8	-2.9	-3.0		-2.4	-1.0	
Identified net debt-creating flows	-4.9	-5.3	-14.0				-6.2	-3.8	-2.8	-2.6	-1.9	-1.3		0.4	2.0	
Non-interest current account deficit	**-9.3**	**-4.1**	**-11.5**	**-6.5**		**3.0**	**1.4**	**1.4**	**1.8**	**2.1**	**2.6**	**3.2**		**4.3**	**5.6**	4.7
Deficit in balance of goods and services	-11.8	-8.2	-14.5				-2.8	-1.1	-1.4	-1.3	-0.8	-0.7		0.3	2.6	
Exports	50.9	54.1	54.9				51.2	51.7	51.9	51.7	51.4	51.3		58.0	61.1	
Imports	39.0	45.9	40.4				48.4	50.6	50.5	50.4	50.6	50.6		58.3	63.8	
Net current transfers (negative = inflow)	0.0	1.6	0.8	2.2		1.3	1.8	0.5	1.3	1.3	1.3	1.6		2.1	2.3	2.1
o/w official	-2.6	-0.7	-1.3				-0.3	-1.6	-0.9	-0.9	-0.9	-0.9		-0.6	-0.3	
Other current account flows (negative = net inflow)	2.5	2.6	2.1				2.4	2.0	2.0	2.2	2.2	2.2		2.0	0.7	
Net FDI (negative = inflow)	**-1.7**	**-1.4**	**-1.1**	**-1.7**		**0.3**	**-2.7**	**-3.1**	**-3.1**	**-3.2**	**-3.2**	**-3.2**		**-3.5**	**-3.7**	-3.6
Endogenous debt dynamics 2/	**6.1**	**0.1**	**-1.3**				**-5.0**	**-2.1**	**-1.5**	**-1.5**	**-1.3**	**-1.3**		**-0.4**	**0.1**	
Contribution from nominal interest rate	2.1	1.8	2.3				1.9	2.2	2.1	1.7	1.6	1.4		1.1	0.9	
Contribution from real GDP growth	-3.5	-1.9	3.4				-6.8	-4.3	-3.6	-3.2	-3.0	-2.7		-1.5	-0.8	
Contribution from price and exchange rate changes	7.5	0.3	-7.0				…	…	…	…	…	…		…	…	
Residual (3-4) 3/	**-3.3**	**0.4**	**17.0**				**-15.9**	**0.5**	**-0.5**	**-0.3**	**-1.0**	**-1.7**		**-2.8**	**-3.0**	
o/w exceptional financing	-5.3	-2.6	-0.1				-20.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
PV of external debt 4/	...	...	75.6				58.2	54.5	50.1	46.6	43.4	40.3		28.3	17.2	
In percent of exports	...	...	137.7				113.7	105.4	96.5	90.1	84.4	78.7		48.8	28.1	
PV of PPG external debt	**...**	**...**	**51.4**				**34.3**	**32.7**	**30.4**	**28.8**	**27.2**	**25.7**		**19.6**	**15.1**	
In percent of exports	**...**	**...**	**93.6**				**67.0**	**63.3**	**58.6**	**55.6**	**53.0**	**50.2**		**33.8**	**24.7**	
In percent of government revenues	**...**	**...**	**344.6**				**171.6**	**164.3**	**151.3**	**142.0**	**132.8**	**124.0**		**91.2**	**65.5**	
Debt service-to-exports ratio (in percent)	**18.8**	**14.4**	**9.6**				**7.5**	**8.7**	**8.7**	**9.0**	**9.2**	**9.2**		**7.5**	**6.5**	
PPG debt service-to-exports ratio (in percent)	**4.6**	**3.4**	**5.3**				**2.1**	**3.8**	**4.7**	**5.0**	**5.0**	**5.2**		**4.8**	**5.2**	
PPG debt service-to-revenue ratio (in percent)	**12.3**	**9.5**	**19.5**				**5.4**	**9.8**	**12.0**	**12.8**	**12.5**	**12.9**		**13.1**	**13.7**	
Total gross financing need (Billions of U.S. dollars)	0.8	1.6	-0.8				1.6	1.7	1.9	2.0	2.3	2.6		3.5	8.1	
Non-interest current account deficit that stabilizes debt ratio	-1.1	0.8	-14.6				23.5	4.7	5.2	5.0	5.5	6.2		6.7	6.6	
Key macroeconomic assumptions																
Real GDP growth (in percent)	3.7	2.4	-4.7	0.6		2.5	8.6	8.0	7.3	7.0	6.7	6.5	7.3	5.1	5.1	5.3
GDP deflator in US dollar terms (change in percent)	-7.8	-0.3	10.1	8.3		8.3	-8.1	0.0	1.6	1.4	1.5	1.8	-0.3	2.9	4.9	3.5
Effective interest rate (percent) 5/	2.2	2.2	3.1	3.4		1.1	2.4	4.1	4.2	3.7	3.7	3.4	3.6	3.9	6.0	4.5
Growth of exports of G&S (US dollar terms, in percent)	-0.1	8.6	6.4	11.9		9.1	-6.9	9.2	9.5	8.1	7.5	8.2	5.9	10.9	10.2	10.2
Growth of imports of G&S (US dollar terms, in percent)	-9.4	20.0	-7.6	11.3		12.6	19.4	13.0	9.0	8.3	8.5	8.5	11.1	11.7	10.6	10.6
Grant element of new public sector borrowing (in percent)	...	...	...	...		...	37.1	10.3	30.6	24.0	17.4	10.5	21.6	-3.9	-18.9	-10.4
Government revenues (excluding grants, in percent of GDP)	18.9	19.2	14.9				20.0	19.9	20.1	20.3	20.5	20.8		21.5	23.0	22.0
Aid flows (in Billions of US dollars) 6/	0.1	0.1	0.1				0.2	0.8	1.1	1.1	1.0	1.0		0.8	0.5	
o/w Grants	0.1	0.1	0.1				0.1	0.5	0.5	0.6	0.6	0.6		0.6	0.5	
o/w Concessional loans	0.0	0.0	0.0				0.1	0.3	0.5	0.5	0.4	0.4		0.2	0.0	
Grant-equivalent financing (in percent of GDP) 7/	...	...	...				0.7	2.1	2.9	2.6	2.2	1.9		1.0	-0.2	0.6
Grant-equivalent financing (in percent of external financing) 7/	...	...	...				66.5	42.8	57.6	51.7	48.1	42.7		29.0	-5.7	14.6
Memorandum items:																
Nominal GDP (Billions of US dollars)	22.5	23.0	24.1				24.1	26.0	28.3	30.7	33.3	36.1		53.1	130.4	
Nominal dollar GDP growth	-4.3	2.1	4.9				-0.2	8.1	9.0	8.5	8.3	8.4	7.0	8.2	10.2	8.9
PV of PPG external debt (in Billions of US dollars)			11.7				8.1	8.5	8.6	8.8	9.0	9.3		10.4	19.4	
(PVt-PVt-1)/GDPt-1 (in percent)							-15.1	1.7	0.4	0.8	0.7	0.7	-1.8	0.3	1.1	0.9
Gross remittances (Billions of US dollars)	-0.6	-0.5	-0.5				-0.5	-0.6	-0.6	-0.7	-0.7	-0.9		-1.4	-3.3	
PV of PPG external debt (in percent of GDP + remittances)	...	...	52.5				35.1	33.5	31.1	29.4	27.8	26.4		20.2	15.5	
PV of PPG external debt (in percent of exports + remittances)	...	...	97.4				70.0	66.1	61.2	58.1	55.3	52.8		35.5	25.7	
Debt service of PPG external debt (in percent of exports + remittances)	...	...	5.5				2.2	4.0	4.9	5.2	5.2	5.5		5.1	5.4	

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/ Defined as grants, concessional loans, and debt relief.
7/ 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 1b. Côte d'Ivoire: Sensitivity Analysis for Key Indicators of Public and Publicly Guaranteed External Debt, 2012-2032
(In percent)

	Projections							
	2012	2013	2014	2015	2016	2017	**2022**	2032
PV of debt-to GDP ratio								
Baseline	34	33	30	29	27	26	**20**	15
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2012-2032 1/	34	36	36	37	37	36	**28**	15
A2. New public sector loans on less favorable terms in 2012-2032 2	34	33	33	32	31	31	**26**	21
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2013-2014	34	34	34	32	30	28	**21**	16
B2. Export value growth at historical average minus one standard deviation in 2013-2014 3/	34	39	49	46	44	41	**28**	16
B3. US dollar GDP deflator at historical average minus one standard deviation in 2013-2014	34	34	33	31	29	28	**21**	16
B4. Net non-debt creating flows at historical average minus one standard deviation in 2013-2014 4/	34	38	40	38	36	34	**24**	15
B5. Combination of B1-B4 using one-half standard deviation shocks	34	43	55	52	50	47	**32**	18
B6. One-time 30 percent nominal depreciation relative to the baseline in 2013 5/	34	46	43	40	38	36	**27**	21
PV of debt-to-exports ratio								
Baseline	67	63	59	56	53	50	**34**	25
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2012-2032 1/	67	69	70	71	72	71	**49**	24
A2. New public sector loans on less favorable terms in 2012-2032 2	67	64	63	62	61	60	**45**	35
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2013-2014	67	63	58	55	52	49	**32**	24
B2. Export value growth at historical average minus one standard deviation in 2013-2014 3/	67	84	118	112	107	101	**61**	32
B3. US dollar GDP deflator at historical average minus one standard deviation in 2013-2014	67	63	58	55	52	49	**32**	24
B4. Net non-debt creating flows at historical average minus one standard deviation in 2013-2014 4/	67	74	78	74	70	66	**41**	25
B5. Combination of B1-B4 using one-half standard deviation shocks	67	85	109	104	99	93	**56**	30
B6. One-time 30 percent nominal depreciation relative to the baseline in 2013 5/	67	63	58	55	52	49	**32**	24
PV of debt-to-revenue ratio								
Baseline	172	164	151	142	133	124	**91**	66
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2012-2032 1/	172	180	180	182	180	174	**132**	64
A2. New public sector loans on less favorable terms in 2012-2032 2	172	165	162	157	152	147	**120**	92
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2013-2014	172	173	167	156	145	135	**98**	70
B2. Export value growth at historical average minus one standard deviation in 2013-2014 3/	172	196	243	229	215	199	**131**	69
B3. US dollar GDP deflator at historical average minus one standard deviation in 2013-2014	172	170	165	154	143	133	**97**	69
B4. Net non-debt creating flows at historical average minus one standard deviation in 2013-2014 4/	172	192	200	188	176	163	**111**	66
B5. Combination of B1-B4 using one-half standard deviation shocks	172	216	274	258	242	224	**147**	77
B6. One-time 30 percent nominal depreciation relative to the baseline in 2013 5/	172	233	213	199	185	172	**125**	89

Table 1b. Côte d'Ivoire: Sensitivity Analysis for Key Indicators of Public and Publicly Guaranteed External Debt, 2012-2032 (continued)
(In percent)

Debt service-to-exports ratio

Baseline	2	4	5	5	5	5	**5**	5
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2012-2032 1/	2	4	5	5	6	6	**6**	6
A2. New public sector loans on less favorable terms in 2012-2032 2	2	4	5	5	5	5	**4**	8
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2013-2014	2	4	5	5	5	5	**5**	5
B2. Export value growth at historical average minus one standard deviation in 2013-2014 3/	2	4	6	8	8	9	**9**	7
B3. US dollar GDP deflator at historical average minus one standard deviation in 2013-2014	2	4	5	5	5	5	**5**	5
B4. Net non-debt creating flows at historical average minus one standard deviation in 2013-2014 4/	2	4	5	6	6	7	**6**	5
B5. Combination of B1-B4 using one-half standard deviation shocks	2	4	6	8	7	9	**8**	6
B6. One-time 30 percent nominal depreciation relative to the baseline in 2013 5/	2	4	5	5	5	5	**5**	5

Debt service-to-revenue ratio

Baseline	5	10	12	13	12	13	**13**	14
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2012-2032 1/	5	10	13	14	14	16	**18**	15
A2. New public sector loans on less favorable terms in 2012-2032 2	5	10	12	12	12	12	**10**	23
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2013-2014	5	10	13	14	14	14	**14**	15
B2. Export value growth at historical average minus one standard deviation in 2013-2014 3/	5	10	13	17	16	18	**19**	15
B3. US dollar GDP deflator at historical average minus one standard deviation in 2013-2014	5	10	13	14	14	14	**14**	15
B4. Net non-debt creating flows at historical average minus one standard deviation in 2013-2014 4/	5	10	13	15	14	16	**16**	14
B5. Combination of B1-B4 using one-half standard deviation shocks	5	10	15	19	18	21	**21**	16
B6. One-time 30 percent nominal depreciation relative to the baseline in 2013 5/	5	14	17	18	18	18	**18**	19
Memorandum item:								
Grant element assumed on residual financing (i.e., financing required above baseline) 6/	-22	-22	-22	-22	-22	-22	**-22**	-22

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 2a. Côte d'Ivoire: Public Sector Debt Sustainability Framework, Baseline Scenario, 2009-2032
(In percent of GDP, unless otherwise indicated)

	Actual			Average	Standard Deviation	Estimate	Projections								
	2009	2010	2011			2012	2013	2014	2015	2016	2017	2012-17 Average	2022	2032	2018-32 Average
Public sector debt 1/	66.5	66.4	71.2			48.7	45.9	44.3	43.1	41.8	40.2		32.5	25.1	
o/w foreign-currency denominated	53.9	50.6	55.1			33.4	32.2	31.0	29.9	28.7	27.3		19.7	14.1	
Change in public sector debt	-8.8	0.0	4.7			-22.5	-2.8	-1.5	-1.2	-1.4	-1.6		-1.5	-0.8	
Identified debt-creating flows	-7.6	-1.0	4.3			-18.8	-1.7	-1.0	-0.4	-0.4	-0.3		0.1	0.3	
Primary deficit	0.7	1.3	2.5	0.3	1.1	3.1	1.2	1.1	1.7	1.6	1.6	1.7	1.4	1.2	1.4
Revenue and grants	19.5	19.7	15.2			20.5	21.7	22.0	22.1	22.2	22.4		22.6	23.4	
of which: grants	0.6	0.5	0.3			0.5	1.8	1.9	1.9	1.7	1.6		1.1	0.4	
Primary (noninterest) expenditure	20.2	21.0	17.7			23.6	22.9	23.1	23.8	23.8	24.0		24.0	24.6	
Automatic debt dynamics	-3.0	0.4	1.9			-1.9	-2.9	-2.1	-2.1	-1.9	-2.0		-1.3	-1.0	
Contribution from interest rate/growth differential	-2.4	-1.5	3.2			-5.5	-2.7	-2.1	-2.1	-2.0	-2.0		-1.1	-0.6	
of which: contribution from average real interest rate	0.3	0.1	-0.1			0.1	1.0	1.0	0.8	0.7	0.5		0.6	0.7	
of which: contribution from real GDP growth	-2.7	-1.6	3.3			-5.6	-3.6	-3.1	-2.9	-2.7	-2.5		-1.6	-1.3	
Contribution from real exchange rate depreciation	-0.7	1.9	-1.3			3.6	-0.2	-0.1	0.0	0.1	0.1		...	...	
Other identified debt-creating flows	-5.3	-2.6	-0.1			-20.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Privatization receipts (negative)	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
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)	-5.3	-2.6	-0.1			-20.0	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	-1.2	0.9	0.4			-3.7	-1.1	-0.5	-0.8	-1.0	-1.2		-1.6	-1.1	
Other Sustainability Indicators															
PV of public sector debt	...	...	67.4			49.6	46.4	43.8	42.0	40.3	38.7		32.4	26.2	
o/w foreign-currency denominated	...	...	51.4			34.3	32.7	30.4	28.8	27.2	25.7		19.6	15.1	
o/w external	...	...	51.4			34.3	32.7	30.4	28.8	27.2	25.7		19.6	15.1	
PV of contingent liabilities (not included in public sector debt)	...	...	...			...	...	...	...	...	...		...	...	
Gross financing need 2/	3.6	4.2	6.8			5.9	6.4	5.7	6.0	5.5	5.3		4.9	5.0	
PV of public sector debt-to-revenue and grants ratio (in percent)	…	…	443.4			241.8	213.6	198.7	189.7	181.3	172.8		143.2	111.8	
PV of public sector debt-to-revenue ratio (in percent)	…	…	452.0			247.8	232.8	217.8	207.2	196.6	186.2		150.6	113.7	
o/w external 3/	…	…	344.6			171.6	164.3	151.3	142.0	132.8	124.0		91.2	65.5	
Debt service-to-revenue and grants ratio (in percent) 4/	14.9	14.6	28.0			13.5	23.9	20.7	19.8	17.8	16.4		15.6	16.1	
Debt service-to-revenue ratio (in percent) 4/	15.3	15.0	28.5			13.8	26.1	22.7	21.6	19.3	17.7		16.4	16.4	
Primary deficit that stabilizes the debt-to-GDP ratio	9.5	1.4	-2.2			25.6	4.0	2.6	2.8	2.9	3.2		2.8	2.0	
Key macroeconomic and fiscal assumptions															
Real GDP growth (in percent)	3.7	2.4	-4.7	0.6	2.5	8.6	8.0	7.3	7.0	6.7	6.5	7.3	5.1	5.1	5.3
Average nominal interest rate on forex debt (in percent)	0.8	0.8	1.9	1.8	0.6	1.0	3.0	3.2	2.6	2.6	2.3	2.4	3.1	6.1	4.1
Average real interest rate on domestic debt (in percent)	3.0	2.9	0.0	0.7	1.8	3.4	3.3	3.9	4.0	3.9	3.6	3.7	2.9	1.0	2.4
Real exchange rate depreciation (in percent, + indicates depreciation)	-1.1	3.5	-2.5	-1.5	7.8	7.1	...	...	...	...	...	...	...	...	...
Inflation rate (GDP deflator, in percent)	0.0	1.9	5.0	3.3	2.4	1.0	2.2	2.0	1.9	1.9	2.2	1.9	2.9	4.9	3.5
Growth of real primary spending (deflated by GDP deflator, in percent)	0.1	0.1	-0.2	0.0	0.1	0.4	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Grant element of new external borrowing (in percent)	...	...	...	…	…	37.1	10.3	30.6	24.0	17.4	10.5	21.6	-3.9	-18.9	...

Sources: Country authorities; and staff estimates and projections.

1/ The public sector includes the central government and select public enterprises.

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.

Table 2b. Côte d'Ivoire: Sensitivity Analysis for Key Indicators of Public Debt 2012-2032

	Projections							
	2012	2013	2014	2015	2016	2017	2022	2032
PV of Debt-to-GDP Ratio								
Baseline	50	46	44	42	40	39	32	26
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	50	49	48	47	45	44	32	10
A2. Primary balance is unchanged from 2012	50	49	48	48	48	48	49	57
A3. Permanently lower GDP growth 1/	50	47	45	43	42	42	41	54
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2013-2014	50	53	60	63	65	68	82	110
B2. Primary balance is at historical average minus one standard deviations in 2013-2014	50	47	44	43	41	39	33	27
B3. Combination of B1-B2 using one half standard deviation shocks	50	50	50	52	54	57	69	93
B4. One-time 30 percent real depreciation in 2013	50	60	57	54	52	50	44	42
B5. 10 percent of GDP increase in other debt-creating flows in 2013	50	58	55	53	51	49	42	33
PV of Debt-to-Revenue Ratio 2/								
Baseline	242	214	199	190	181	173	143	112
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	242	223	214	207	200	190	135	41
A2. Primary balance is unchanged from 2012	242	224	220	218	217	215	218	242
A3. Permanently lower GDP growth 1/	242	215	202	196	190	185	181	232
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2013-2014	242	244	268	278	289	299	361	467
B2. Primary balance is at historical average minus one standard deviations in 2013-2014	242	215	201	192	184	175	145	113
B3. Combination of B1-B2 using one half standard deviation shocks	242	228	225	233	242	250	302	395
B4. One-time 30 percent real depreciation in 2013	242	278	258	246	235	225	197	178
B5. 10 percent of GDP increase in other debt-creating flows in 2013	242	268	250	240	230	220	185	142
Debt Service-to-Revenue Ratio 2/								
Baseline	14	24	21	20	18	16	16	16
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	14	26	23	23	21	19	16	13
A2. Primary balance is unchanged from 2012	14	24	21	22	21	20	23	31
A3. Permanently lower GDP growth 1/	14	24	21	20	18	17	19	29
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2013-2014	14	26	25	26	26	27	37	57
B2. Primary balance is at historical average minus one standard deviations in 2013-2014	14	24	21	20	18	17	16	16
B3. Combination of B1-B2 using one half standard deviation shocks	14	26	24	22	21	22	31	48
B4. One-time 30 percent real depreciation in 2013	14	26	26	25	24	23	26	32
B5. 10 percent of GDP increase in other debt-creating flows in 2013	14	24	23	26	24	21	21	20

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.

Table 3: Côte d'Ivoire: Structure of External Public Debt, 2011–12

	US $ million		Percent of GDP		Share of total debt	
	End-2011	End-2012 1/	End-2011	End-2012 1/	End-2011	End-2012 1/
Total	12,586	7,991	55.1	33.9	100.0	100.0
Multilateral	2,987	1,026	13.1	4.4	23.7	12.8
IMF	602	524	2.6	2.2	4.8	6.6
World Bank	1,725	128	7.6	0.5	13.7	1.6
AfDB Group	317	42	1.4	0.2	2.5	0.5
Other multilaterals	343	332	1.5	1.4	2.7	4.2
Official bilateral	6,874	4,466	30.1	19.0	54.6	55.9
Paris Club	6,744	4,351	29.5	18.5	53.6	54.4
Non-Paris Club	130	115	0.6	0.5	1.0	1.4
Commercial debt	2,725	2,500	11.9	10.6	21.6	31.3
Euro Bonds	2,420	2,300	10.6	9.8	19.2	28.8
Other commercial cre(	305	199	1.3	0.8	2.4	2.5

Sources: Ivoirien Authorities, AfDB, World Bank and IMF staff estimates.

1/ Projections, for 2012 numbers.