



# NIGER

## FIRST REVIEW UNDER THE THREE-YEAR ARRANGEMENT UNDER THE EXTENDED CREDIT FACILITY AND REQUEST FOR A WAIVER OF NONOBSERVANCE OF PERFORMANCE CRITERION— DEBT SUSTAINABILITY ANALYSIS

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*The previous Debt Sustainability Analysis was conducted at the time of the 2011 Article IV Consultation (Country Report No. 11/357, December, 2011). The medium-term economic framework underpinning the analysis has been revised to reflect new information on the financing of large oil and mining projects, including the contracting of a new concessional loan to refinance an oil refinery. While the various debt measures remain below the relevant thresholds for the baseline scenario, the present value (PV) of debt to GDP ratio breach the threshold under the most extreme stress test. On the basis of this, Niger's risk of debt distress should continue to be considered as moderate.*

## BACKGROUND

**1. This debt sustainability analysis (DSA) was jointly prepared by the IMF and the World Bank and updates the 2011 DSA of the external and total public debt of Niger.** It uses the standard debt dynamics template for low-income countries and is based on end-2011 data. The debt data cover external and domestic debt of the central government, debt of public enterprises and parastatals, a state guarantee, and private external debt, derived from the projected debt flows linked to large oil and mining projects. Domestic debt includes arrears, debt to the central bank (BCEAO) for statutory advances and the SDR allocation, and government securities.

**2. Niger's debt ratios have been significantly reduced by debt relief, as discussed in the previous DSA.** The Enhanced HIPC Initiative, whose completion point was reached in 2004, together with the Multilateral Debt Relief Initiative (MDRI) assistance in 2006 from the African Development Fund, IDA, and the IMF, resulted in a significant decline in public nominal external debt, from more than 80 percent of GDP in 2002 to about 17 percent in 2010. In 2011, the government contracted a 650 million yuan loan for the financing of its share in the construction of the new Azelik uranium mine, and extended a guarantee of 40 percent of a US\$880 million loan to the Soraz oil refinery. As a result, the stock of public external debt, including guarantees, moved to 22 percent of GDP at end-2011. Looking ahead, the authorities' ambitious economic development program includes increased infrastructure spending in the next few years.

## UNDERLYING DSA ASSUMPTIONS

**3. Medium- and long-term projections for Niger have been updated since the last DSA in the light of recent developments and discussions with the authorities (Text Table 1).** The key differences from the previous analysis stem from the fact that a bad agricultural harvest in 2011, together with important start-up difficulties encountered in the new oil project and a significant shortfall in custom revenues in 2012 led to downward revisions in GDP growth, fiscal revenue and exports for both 2011 and 2012. At the same time, the start of operations of the new Imouraren uranium mine, currently under development and expected to double current uranium production capacity, has been postponed by about two years, resulting in the expected impact of this new project shifting from the medium to the longer term. Macroeconomic assumptions for the long-term in GDP growth, revenue, and exports, remain close to those made in the last DSA.

Text Table 1. Niger: Key Macroeconomic Assumptions (1)

	2011-12	2013-16	2017-32
<b>Text Table 1. Niger: Key Macroeconomic Assumptions (1)</b>			
<b>Real GDP growth (percent)</b>			
DSA 2012	6.7	6.1	6.3
DSA 2011	8.9	6.9	6.2
<b>Total Revenue (percent of GDP) /2</b>			
DSA 2012	15.1	17.7	20.3
DSA 2011	16.4	19.1	21.1
<b>Exports of goods and services (percent of GDP)</b>			
DSA 2012	23.8	25.9	33.8
DSA2011	24.5	28.9	33.3

Sources: Nigerien authorities; and IMF and World Bank staffs estimates

1. Previous DSA covers the period 2011-31

2. Total revenue, excluding grants

**4. Natural resources are expected to continue playing a key role in GDP growth in the longer term, together with a greater contribution from other sectors of the economy as the economy diversifies.** Our assumption remains that higher revenue will be used for productive public investment, which, together with progress in improving the business climate, will allow the economy to diversify. The inflation rate is projected to remain low and stable, averaging 1.9 percent over the projection period.

**5. The exports-to-GDP ratio is projected to increase through 2028 as the economy diversifies and develops.** A crude oil export project is currently under development, which might have an important impact on revenue and exports, but there is still too much uncertainty at this point in time to include it in the baseline framework.

**6. The current account deficit, excluding official transfers, is projected to improve, reflecting the coming onstream of petroleum production.** The current account deficit is financed by debt creating flows, foreign direct investment, and capital grants, which account for about 17 percent of exports of goods and services on average over the projection period in Niger.

**7. The macroeconomic outlook continues to be subject to various risks.** The country remains vulnerable to exogenous shocks, including climatic shocks that frequently result in food crises, commodity price fluctuations including through their impact on the return on public sector investment projects, and the security situation in the region, as demonstrated by the recent flooding and continued arrivals of migrants from neighboring countries.

## PUBLIC EXTERNAL DSA

**8. Niger's public debt exposure is expected to increase significantly due to the government's involvement in natural resource projects.** In particular, the authorities have reached understandings with EXIM Bank of China on the contracting of a concessional loan of US\$880 million (CFAF 435 billion, or 12 percent of GDP). This loan will refinance the existing non-concessional financing of the new refinery, which was initially provided by the Chinese investment partner (CNPC), with 40 percent guaranteed by the state. While the non-concessional 40 percent state guarantee will thus be terminated, causing a one-off spike in debt service ratios in 2013, the government is expected to assume liability for the total amount of the new loan, which will be on-lent to the refinery. As a result, the stock of public external debt is expected to reach about 33.5 percent of GDP in 2013, from 24 percent in 2012. As private external debt is expected to decrease by 60 percent in counterpart, as the previously contracted loan is terminated, the stock of total (public and private) external debt (in nominal terms) is not expected to be affected by this transaction. The rate of external public debt accumulation is subsequently expected to remain broadly stable over time (Figure 1a). While the grant element of the new borrowing in the short term has improved compared to the previous DSA, because the new loan for the refinery is now

concessional,<sup>1</sup> it is expected to gradually decline over time, as the country develops and thus will have less access to new borrowing on highly concessional terms.

**9. In the baseline scenario the external debt ratios remain below their policy-dependent thresholds throughout the projection period (2012-32),** as in the previous DSA. The present value (PV) of debt-to-GDP ratio is projected to increase sharply from 2012 to 2013 and will continue to move upward for the rest of the period. The PV of debt-to-export and debt-to-revenue ratios adopt similar trajectories, with a relatively more benign path for the PV of debt-to-export ratio thanks to the increasing projected exports over the projection period.<sup>2</sup> Because of the assumed termination of the 40 percent state guarantee of the SORAZ loan in 2013, the present value of debt service to export and debt service to revenue ratios breach their thresholds in 2013.

**10. As in the previous DSA, the historical scenario shows a relative improvement in debt ratios.** The scenario underlines that if the current account deficit, FDI inflows, real GDP growth and GDP deflator were at their historical averages, debt ratios would significantly improve. In comparison to the baseline scenario, lower debt ratios in this scenario mainly stem from a higher historical GDP deflator at about 8.5 percent compared to 2 percent in the projection period (Box 1).

**11. The debt-to-GDP threshold is breached in the case of a one-time 30 percent depreciation of the CFA franc.** Following a one-time 30 percent nominal depreciation relative to the baseline in 2013, the PV of debt-to-GDP ratio would breach its threshold as early as 2016, and remain above it until 2032. The breach of thresholds is large and protracted. In addition to a one-time nominal depreciation, Niger is also vulnerable to a worsening in its financing terms during the projected period, as the PV of debt-to-GDP ratio would also breach its threshold from 2020 onwards.

## PUBLIC DSA INCLUDING DOMESTIC DEBT

**12. As in the previous DSA, considering public debt does not change the analysis.** Domestic debt includes arrears, debt to the central bank (BCEAO) for statutory advances and the SDR allocation, and government securities. The public debt ratios remain relatively low under the different scenarios except for the most extreme shock. The most extreme shock (real GDP growth being set at its historical average minus one standard deviation in 2013-2014) is assumed to negatively affect nominal revenue while keeping the level of government spending the same as in the baseline, consequently leading to an increase in primary deficit and financing needs. This is

<sup>1</sup> The terms are expected to be 1.5 percent interest rate, 20 years maturity and 9 years grace period, compared to a 3 percent interest rate margin over LIBOR, 10 year maturity and one year grace period for the guarantee.

<sup>2</sup> As in the previous DSA, the large residuals shown in table 1a and 1b reflect capital grants that the country is projected to receive thanks to the more stable political and economic environment. The large 2013 residuals also result from the amortization of the previously non-concessional contracted debt from CNPC, a transaction reflected by large FDI outflows in that particular year.

reflected by the PV of debt-to-GDP and the PV of debt-to-revenue ratios more than doubling during the projection period.

## PRIVATE DEBT DYNAMICS

**13. The current DSA includes preliminary information on private debt provided by the authorities.** The main flows related to this category are linked to the large ongoing oil and uranium projects. The estimates incorporate the impact of the contracting of a loan by the refinery Soraz (60 percent privately owned) in 2011, and the expected gradual disbursement and subsequent repayment of a loan of about 1.4 billion euro from a foreign investor to finance the new uranium mine Imouraren. Including this debt, the stock of external debt would reach 56 percent of GDP in 2013. Amortization of this loan is projected to start from 2017 onwards, thus gradually decreasing the stock of private external debt.

## CONCLUSION

**14. On the basis of the updated DSA, Niger remains subject to moderate risk of debt distress.** Although the grant element of new borrowing is projected to improve compared to the previous DSA in the short run, the stock of public external debt is expected to increase significantly, following the refinancing of the \$880 million Soraz loan in 2013. This loan will replace the existing private non-concessional financing of the refinery, which was 40 percent guaranteed by the State, thereby substantially increasing the stock of public debt. The country's level of debt and the government's involvement in the financing of natural resources projects keep Niger very much vulnerable to adverse shocks, as demonstrated by the deterioration of the debt indicators in the extreme shock scenarios.

**15. Niger's continued risk of debt distress calls for a limited government involvement in financing natural resource projects.** It also underlines the need to remain vigilant in terms of seeking concessional new borrowing. Non-concessional borrowing should only be considered for well-assessed, high-yield commercial and infrastructure projects that will generate sufficient government revenue to cover debt service related to the projects.

**16. The Nigerian authorities have indicated their agreement with the conclusions reached in this DSA.** In particular, the authorities have stated that the result of moderate debt distress level, as well as staff recommendations in terms of limiting government involvement in financing natural resources projects, are consistent with a debt sustainability analysis the Technical Commission from the National Public Debt Committee conducted in October 2012.

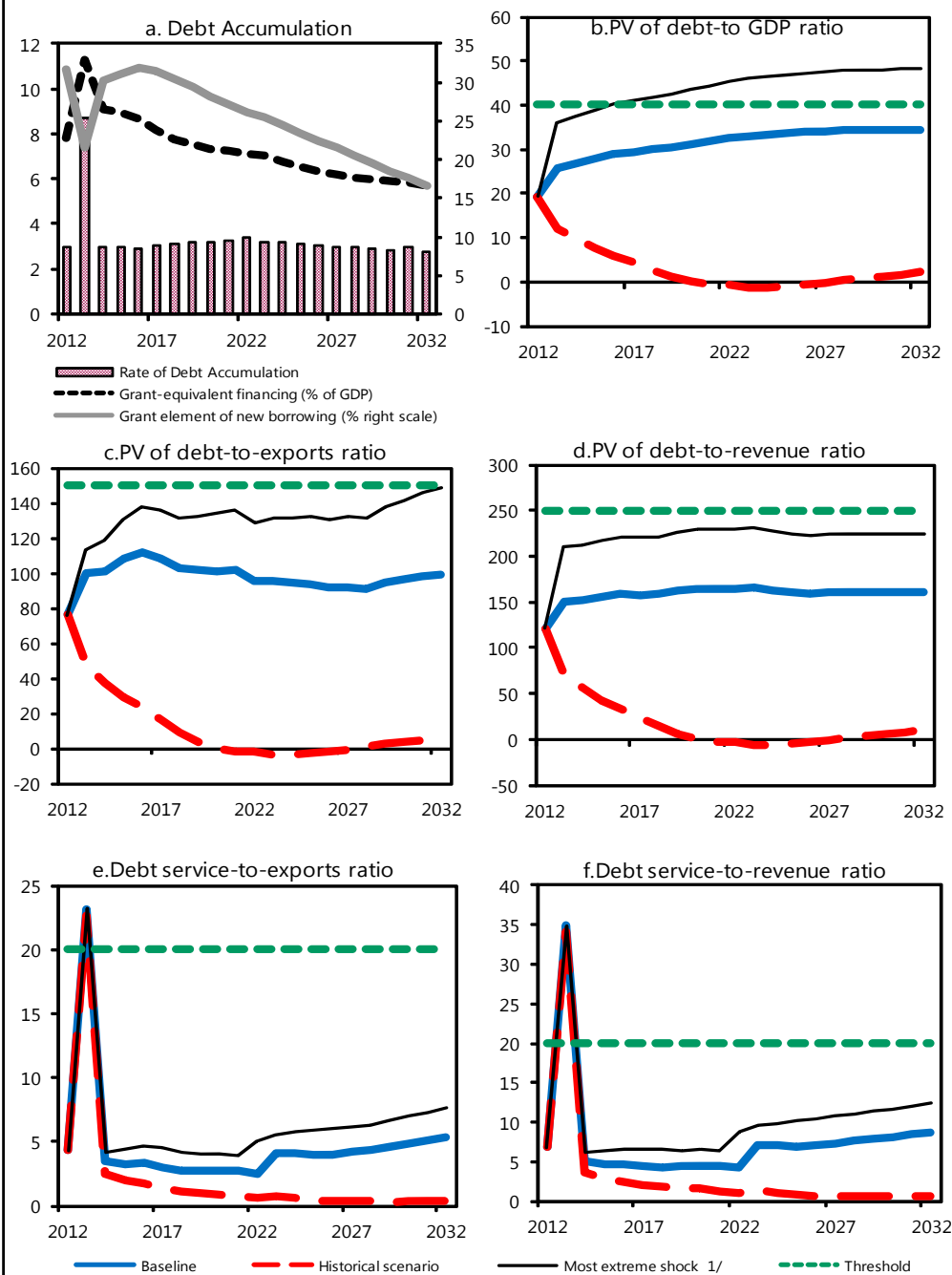
### Box 1: Baseline Scenario Assumptions

The baseline macroeconomic scenario for 2012-32 is based on the following assumptions:

- Real GDP growth is projected to increase to an average of about 6.2 percent a year during 2013-32, reflecting increasing production developments in the extractive industries and higher non-resource GDP growth as private sector expands and business climate is improved. Inflation is projected to remain stable at 1.8 percent over the projection period; compared to historical values, the lower projected inflation reflects lower expected international food price inflation and the recent average inflation of around 2 percent.<sup>1</sup>
- The revenue-to-GDP ratio is projected to rise from 16 percent in 2012 to 21.5 percent in 2032, reflecting revenue generating developments in the extractive industries, further structural reforms aiming at improving revenue collection and a more diversified private sector.
- Primary Expenditure is expected to increase from 25.3 percentage points of GDP in 2012 to 29.8 percent of GDP in 2032, mostly driven by capital expenditure that is projected to increase from 13.3 percent of GDP in 2012 to stabilize at around 17.2 in 2032. The ambitious government investment program is expected to result in an increase in infrastructure spending, including large transport and irrigation projects in the pipeline. Infrastructure projects that would be financed by non-concessional lending were assumed to be occurring only in the cases where sufficient government revenue can cover debt service related to the projects, but there is still too much uncertainty at this point in time to include it in the present DSA. The basic balance (the fiscal balance net of grants and externally-financed capital expenditure) remains in surplus from 2022 onward (complying with the WAEMU regional convergence criterion).
- The current account deficit is projected to significantly decline from 17.2 percent of GDP in 2012 to about only 9.5 percent of GDP in 2032. Exports are projected to increase from 25.4 percent of GDP to 34.7 percent in 2032, as oil and uranium exports expand and the economy diversifies. After a brief decline, imports would increase again before stabilizing, in line with foreign direct investment patterns.
- Following a few years of substantial FDI inflows linked mostly to the oil investment, net FDI is projected to decline from a peak of 17.5 percent of GDP in 2010 as the large investment projects come to completion, and in line with the delay in the large investment project related to Imouraren. A large FDI outflow in 2013 will be recorded due to the reclassification of the Soraz loan in that same year, previously considered an FDI, intra-company inflow now defined as public debt. Assuming the start of repayment of the Imouraren debt-creating FDI, FDI is reduced in 2018.
- Total external financing is expected to gradually decrease, from 10.7 percent of GDP in 2012 to about 8.8 percent of GDP in 2032. As in the previous DSA, this assumption relates to the reduction in Niger's borrowing needs and the expected increase in per capita GDP. Grants would represent about 62 percent of total external financing on average during the period. The discount rate is 3 percent, a lower rate compared to the previous DSA rate of 4 percent.

<sup>1</sup>The drop in GDP deflator in 2012 results from a depreciation of the exchange rate in that year.

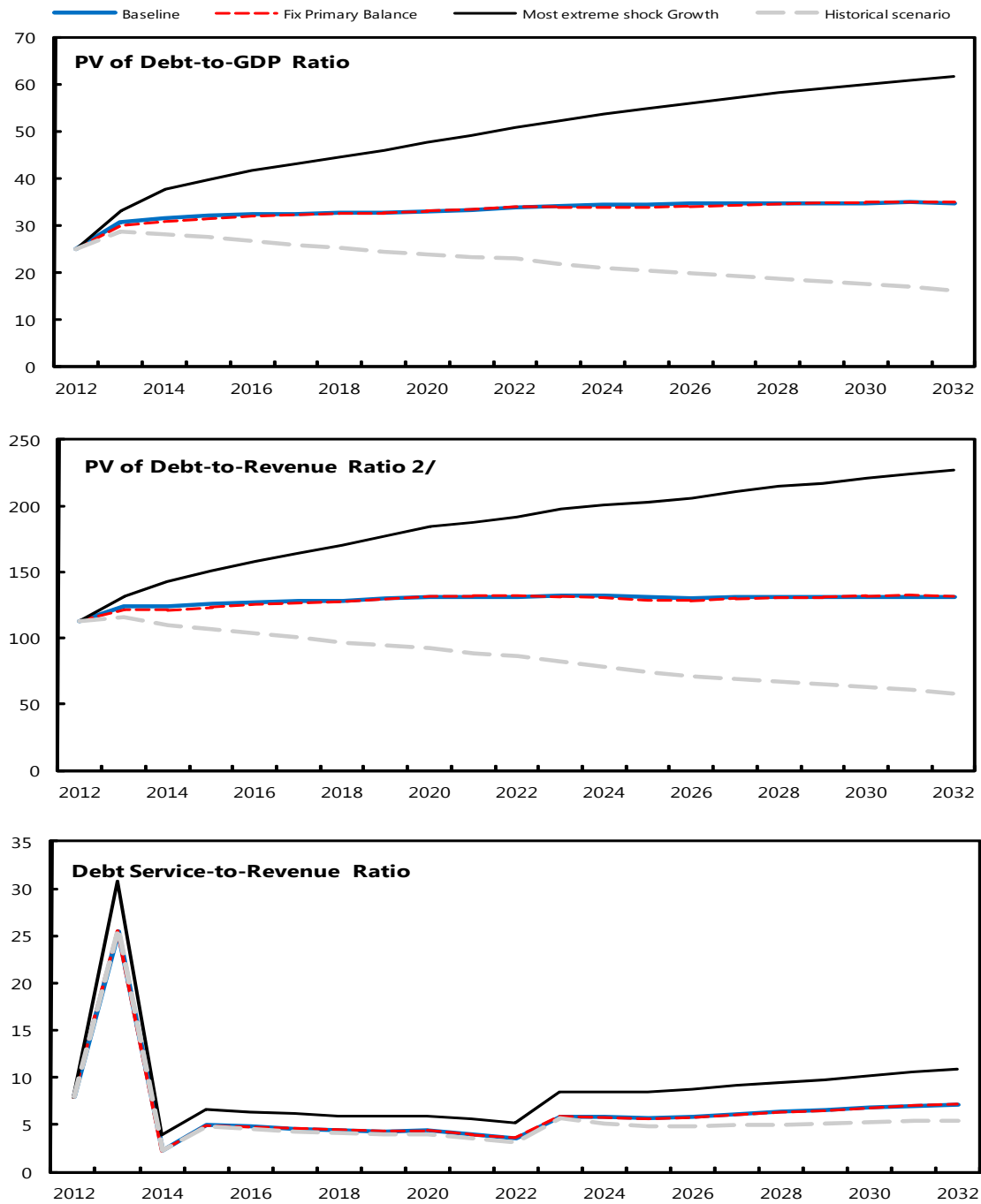
**Figure 1. Niger: Indicators of Public and Publicly Guaranteed External Debt under Alternatives Scenarios, 2012-2032 1/**



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 One-time depreciation shock; in c. to a Terms shock; in d. to a One-time depreciation shock; in e. to a Terms shock and in figure f. to a Terms shock

**Figure 2. Niger: 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. Niger: External Debt Sustainability Framework, Baseline Scenario, 2009-2032 1/**  
(In percent of GDP, unless otherwise indicated)

	Actual			Historical <sup>6/</sup> Standard <sup>6/</sup>		Projections									
	2009	2010	2011	Average	Deviation	2012	2013	2014	2015	2016	2017	2012-2017 Average	2022	2032	2018-2032 Average
<b>External debt (nominal) 1/</b>	<b>39.5</b>	<b>50.0</b>	<b>50.4</b>			<b>54.0</b>	<b>56.0</b>	<b>58.5</b>	<b>61.2</b>	<b>62.6</b>	<b>59.2</b>		<b>48.0</b>	<b>40.9</b>	
<i>of which: public and publicly guaranteed (PPG)</i>	18.9	17.0	22.4			24.0	33.5	34.8	36.4	37.8	38.6		41.7	42.1	
Change in external debt	15.6	10.5	0.4			3.6	2.0	2.5	2.7	1.4	-3.5		-1.6	-0.5	
Identified net debt-creating flows	11.2	-0.3	3.1			3.8	20.2	7.3	7.8	6.9	6.0		6.1	5.5	
<b>Non-interest current account deficit</b>	<b>24.4</b>	<b>19.7</b>	<b>24.6</b>	<b>12.2</b>	<b>7.8</b>	<b>17.2</b>	<b>18.5</b>	<b>19.4</b>	<b>18.9</b>	<b>15.9</b>	<b>10.0</b>		<b>9.9</b>	<b>9.5</b>	10.3
Deficit in balance of goods and services	26.9	26.9	28.5			20.4	20.1	20.3	19.2	16.7	10.8		9.4	11.1	
Exports	20.6	22.2	22.2			25.4	25.7	26.4	25.8	25.8	27.2		34.1	34.7	
Imports	47.5	49.2	50.7			45.9	45.8	46.7	44.9	42.4	37.9		43.5	45.9	
Net current transfers (negative = inflow)	-2.8	-7.9	-4.6	-4.4	1.5	-4.6	-4.5	-4.6	-4.5	-4.4	-4.1		-2.8	-1.8	-2.5
<i>of which: official</i>	-0.7	-5.5	-3.3			-3.3	-3.3	-3.4	-3.2	-3.1	-2.9		-1.5	-0.6	
Other current account flows (negative = net inflow)	0.3	0.6	0.7			1.4	2.9	3.7	4.3	3.6	3.4		3.3	0.2	
<b>Net FDI (negative = inflow)</b>	<b>-13.8</b>	<b>-17.5</b>	<b>-16.7</b>	<b>-6.5</b>	<b>7.3</b>	<b>-8.4</b>	<b>4.3</b>	<b>-9.3</b>	<b>-8.4</b>	<b>-6.2</b>	<b>-0.6</b>		<b>-1.4</b>	<b>-2.3</b>	-1.8
<b>Endogenous debt dynamics 2/</b>	<b>0.6</b>	<b>-2.5</b>	<b>-4.8</b>			<b>-5.0</b>	<b>-2.5</b>	<b>-2.8</b>	<b>-2.7</b>	<b>-2.8</b>	<b>-3.4</b>		<b>-2.4</b>	<b>-1.7</b>	
Contribution from nominal interest rate	0.4	0.2	0.1			0.4	0.5	0.5	0.5	0.5	0.5		0.5	0.6	
Contribution from real GDP growth	0.2	-3.9	-1.0			-5.5	-3.0	-3.3	-3.3	-3.4	-3.9		-2.9	-2.3	
Contribution from price and exchange rate changes	0.0	1.3	-4.0			...	...	...	...	...	...		...	...	
<b>Residual (3-4) 3/</b>	<b>4.4</b>	<b>10.8</b>	<b>-2.6</b>			<b>-0.3</b>	<b>-18.2</b>	<b>-4.8</b>	<b>-5.1</b>	<b>-5.5</b>	<b>-9.5</b>		<b>-7.7</b>	<b>-5.9</b>	
<i>of which: exceptional financing</i>	-0.1	-0.1	-0.1			-0.1	-0.1	-0.1	-0.1	-0.1	-0.1		0.0	0.0	
PV of external debt 4/	...	...	46.6			49.3	48.3	50.4	52.7	53.7	50.0		38.7	33.2	
In percent of exports	...	...	209.5			194.0	188.1	191.2	204.3	208.3	184.0		113.5	95.7	
<b>PV of PPG external debt</b>	<b>...</b>	<b>...</b>	<b>18.6</b>			<b>19.4</b>	<b>25.7</b>	<b>26.7</b>	<b>27.9</b>	<b>28.9</b>	<b>29.4</b>		<b>32.4</b>	<b>34.5</b>	
In percent of exports	...	...	83.5			76.2	100.2	101.3	108.1	112.0	108.1		95.1	99.3	
In percent of government revenues	...	...	129.6			121.4	150.8	151.4	156.0	158.5	158.0		164.4	160.8	
<b>Debt service-to-exports ratio (in percent)</b>	<b>3.3</b>	<b>2.5</b>	<b>3.2</b>			<b>5.1</b>	<b>70.7</b>	<b>4.1</b>	<b>3.9</b>	<b>7.3</b>	<b>11.8</b>		<b>7.1</b>	<b>6.1</b>	
<b>PPG debt service-to-exports ratio (in percent)</b>	<b>3.3</b>	<b>2.5</b>	<b>3.2</b>			<b>4.3</b>	<b>23.2</b>	<b>3.4</b>	<b>3.3</b>	<b>3.3</b>	<b>3.0</b>		<b>2.4</b>	<b>5.4</b>	
<b>PPG debt service-to-revenue ratio (in percent)</b>	<b>4.6</b>	<b>4.1</b>	<b>5.0</b>			<b>6.9</b>	<b>34.9</b>	<b>5.1</b>	<b>4.7</b>	<b>4.7</b>	<b>4.4</b>		<b>4.2</b>	<b>8.7</b>	
Total gross financing need (Billions of U.S. dollars)	0.6	0.2	0.5			0.7	3.0	0.9	1.0	1.0	1.2		1.6	3.0	
Non-interest current account deficit that stabilizes debt ratio	8.7	9.2	24.1			13.7	16.4	16.9	16.2	14.5	13.5		11.5	10.0	
<b>Key macroeconomic assumptions</b>															
Real GDP growth (in percent)	-1.0	10.7	2.2	4.8	4.3	11.2	6.2	6.4	6.0	5.9	6.8	7.1	6.4	6.0	6.2
GDP deflator in US dollar terms (change in percent)	0.0	-3.1	8.6	8.5	7.2	-6.8	4.7	1.1	0.6	0.8	1.7	0.3	2.0	2.0	2.0
Effective interest rate (percent) 5/	1.7	0.4	0.3	2.2	2.1	0.9	1.0	1.1	1.0	0.9	0.9	1.0	1.2	1.6	1.3
Growth of exports of G&S (US dollar terms, in percent)	4.9	15.7	11.0	16.2	11.8	18.5	12.4	10.3	4.3	6.7	14.6	11.1	18.1	6.5	10.1
Growth of imports of G&S (US dollar terms, in percent)	29.4	10.9	14.5	21.6	13.2	-6.4	11.0	9.7	2.7	0.8	-2.9	2.5	18.3	5.0	9.7
Grant element of new public sector borrowing (in percent)	...	...	...	...	...	31.6	21.5	30.3	31.1	31.8	31.5	29.7	26.1	16.7	23.4
Government revenues (excluding grants, in percent of GDP)	14.5	13.6	14.3			16.0	17.1	17.6	17.9	18.2	18.6		19.7	21.5	20.4
Aid flows (in Billions of US dollars) 7/	0.3	0.3	0.4			0.6	0.7	0.8	0.8	0.8	0.9		1.1	1.9	
<i>of which: Grants</i>	0.2	0.3	0.2			0.4	0.6	0.6	0.6	0.7	0.7		0.9	1.6	
<i>of which: Concessional loans</i>	0.1	0.1	0.2			0.2	0.1	0.1	0.2	0.2	0.2		0.2	0.3	
Grant-equivalent financing (in percent of GDP) 8/	...	...	...			7.8	11.3	9.1	9.0	8.7	8.1		7.1	5.7	6.6
Grant-equivalent financing (in percent of external financing) 8/	...	...	...			69.3	46.1	75.7	75.6	75.5	74.1		69.7	62.4	66.7
<b>Memorandum items:</b>															
Nominal GDP (Billions of US dollars)	5.3	5.7	6.3			6.6	7.3	7.9	8.4	9.0	9.7		14.6	32.2	
Nominal dollar GDP growth	-1.0	7.2	11.0			3.6	11.2	7.6	6.6	6.7	8.6	7.4	8.5	8.1	8.3
PV of PPG external debt (in Billions of US dollars)	...	...	1.1			1.3	1.9	2.1	2.3	2.6	2.8		4.7	11.1	
(Pvt-Pvt-1)/GDPT-1 (in percent)	...	...	...			3.0	8.7	2.9	3.0	2.9	3.1	3.9	3.4	2.7	3.1
Gross workers' remittances (Billions of US dollars)	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
PV of PPG external debt (in percent of GDP + remittances)	...	...	18.6			19.4	25.7	26.7	27.9	28.9	29.4		32.4	34.5	
PV of PPG external debt (in percent of exports + remittances)	...	...	83.5			76.2	100.2	101.3	108.1	112.0	108.1		95.1	99.3	
Debt service of PPG external debt (in percent of exports + remittances)	...	...	3.2			4.3	23.2	3.4	3.3	3.3	3.0		2.4	5.4	

Sources: Country authorities; and staff estimates and projections.

1/ Includes both public and private sector external debt.

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

3/ Includes exceptional financing (i.e., changes in arrears and debt relief); changes in gross foreign assets; and valuation adjustments. For projections also includes contribution from price and exchange rate changes.

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

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

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

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

8/ Grant-equivalent financing includes grants provided directly to the government and through new borrowing (difference between the face value and the PV of new debt).

**Table 1b. Niger: Public Sector Debt Sustainability Framework, Baseline Scenario, 2009-2032**  
(Percent of GDP, unless otherwise indicated)

	Actual			Average	5/ Standard Deviation	5/ Estimate	Projections								
	2009	2010	2011				2012	2013	2014	2015	2016	2017	2012-17 Average	2022	2032
<b>Public sector debt 1/</b>	27.2	24.0	28.9				29.7	38.3	39.7	40.7	41.5	41.6		43.0	42.5
<i>of which: foreign-currency denominated</i>	18.9	17.0	22.4				24.0	33.5	34.8	36.4	37.8	38.6		41.7	42.1
Change in public sector debt	4.8	-3.2	4.8				0.9	8.6	1.4	0.9	0.8	0.2		0.4	-0.3
Identified debt-creating flows	3.4	1.1	0.2				0.4	2.0	1.3	1.0	0.8	0.1		0.3	0.7
Primary deficit	5.0	2.2	1.3	0.9	2.2		3.2	3.9	3.5	3.0	3.0	2.9	3.2	3.2	3.3
Revenue and grants	18.9	18.2	18.1				22.2	24.8	25.5	25.5	25.6	25.4		25.8	26.5
<i>of which: grants</i>	4.4	4.6	3.8				6.2	7.7	7.8	7.7	7.3	6.8		6.0	5.0
Primary (noninterest) expenditure	23.8	20.4	19.4				25.3	28.6	29.0	28.6	28.5	28.4		28.9	29.8
Automatic debt dynamics	-1.5	-1.0	-1.0				-2.8	-1.8	-2.2	-2.0	-2.1	-2.8		-2.9	-2.6
Contribution from interest rate/growth differential	0.2	-2.7	-0.9				-3.0	-1.7	-2.4	-2.4	-2.5	-3.0		-2.9	-2.6
<i>of which: contribution from average real interest rate</i>	-0.1	-0.1	-0.3				-0.1	0.0	-0.1	-0.2	-0.2	-0.3		-0.3	-0.2
<i>of which: contribution from real GDP growth</i>	0.2	-2.6	-0.5				-2.9	-1.7	-2.3	-2.2	-2.3	-2.7		-2.6	-2.4
Contribution from real exchange rate depreciation	-1.7	1.7	-0.2				0.2	-0.1	0.2	0.4	0.4	0.1		...	...
Other identified debt-creating flows	0.0	0.0	0.0				0.0	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)	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	1.4	-4.3	4.6				0.5	6.6	0.2	-0.1	0.0	0.1		0.1	-1.1
<b>Other Sustainability Indicators</b>															
<b>PV of public sector debt</b>			25.0				25.1	30.6	31.6	32.1	32.5	32.5		33.8	34.8
<i>of which: foreign-currency denominated</i>			18.6				19.4	25.7	26.7	27.9	28.9	29.4		32.4	34.5
<i>of which: external</i>			18.6				19.4	25.7	26.7	27.9	28.9	29.4		32.4	34.5
PV of contingent liabilities (not included in public sector debt)			...				...	...	...	...	...	...		...	...
Gross financing need 2/	4.7	3.5	2.0				4.9	10.2	4.1	4.3	4.2	4.1		4.1	5.2
PV of public sector debt-to-revenue and grants ratio (in percent)			138.1				113.1	123.6	124.1	125.7	127.2	127.6		131.1	131.5
PV of public sector debt-to-revenue ratio (in percent)			174.6				157.0	179.2	179.2	179.7	178.5	174.5		171.2	162.3
<i>of which: external 3/</i>			129.6				121.4	150.8	151.4	156.0	158.5	158.0		164.4	160.8
Debt service-to-revenue and grants ratio (in percent) 4/	-1.2	7.2	4.0				8.0	25.5	2.3	5.0	4.8	4.6		3.6	7.1
Debt service-to-revenue ratio (in percent) 4/	-1.5	9.6	5.1				11.0	37.0	3.3	7.2	6.7	6.3		4.7	8.8
Primary deficit that stabilizes the debt-to-GDP ratio	0.2	5.4	-3.6				2.3	-4.7	2.1	2.1	2.2	2.8		2.8	3.7
<b>Key macroeconomic and fiscal assumptions</b>															
Real GDP growth (in percent)	-1.0	10.7	2.2	4.8	4.3		11.2	6.2	6.4	6.0	5.9	6.8	7.1	6.4	6.0
Average nominal interest rate on forex debt (in percent)	2.7	0.9	0.8	2.4	2.0		1.0	1.4	1.2	1.2	1.1	1.1	1.2	1.2	1.5
Average real interest rate on domestic debt (in percent)	-4.7	-0.6	-1.9	-2.7	2.5		1.5	-0.1	0.0	0.2	0.1	0.2	0.3	0.2	2.0
Real exchange rate depreciation (in percent, + indicates depreciation)	-10.9	10.0	-1.1	-4.7	9.2		0.8	...	...	...	...	...	...	...	...
Inflation rate (GDP deflator, in percent)	5.7	1.7	3.6	3.6	2.9		0.8	1.6	1.7	1.3	1.6	1.7	1.5	2.0	2.0
Growth of real primary spending (deflated by GDP deflator, in percent)	0.1	-0.1	0.0	0.1	0.1		0.5	0.2	0.1	0.0	0.1	0.1	0.1	0.1	0.1
Grant element of new external borrowing (in percent)	...	...	...	...	...		31.6	21.5	30.3	31.1	31.8	31.5	29.7	26.1	16.7

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 2a. Niger: Sensitivity Analysis for Key Indicators of Public- and Publicly-Guaranteed External Debt, 2012-2032 (Percent)									
	Projections							2022	2032
	2012	2013	2014	2015	2016	2017	2022		
<b>PV of debt-to GDP ratio</b>									
<b>Baseline</b>	19	26	27	28	29	29	<b>32</b>	34	
<b>A. Alternative Scenarios</b>									
A1. Key variables at their historical averages in 2012-2032 1/	19	12	10	8	6	4	<b>-1</b>	2	
A2. New public sector loans on less favorable terms in 2012-2032 2	19	29	31	34	36	37	<b>44</b>	52	
<b>B. Bound Tests</b>									
B1. Real GDP growth at historical average minus one standard deviation in 2013-2014	19	27	30	31	32	33	<b>36</b>	38	
B2. Export value growth at historical average minus one standard deviation in 2013-2014 3/	19	27	30	31	32	33	<b>35</b>	35	
B3. US dollar GDP deflator at historical average minus one standard deviation in 2013-2014	19	27	27	29	30	30	<b>33</b>	35	
B4. Net non-debt creating flows at historical average minus one standard deviation in 2013-2014 4/	19	24	34	35	36	36	<b>37</b>	36	
B5. Combination of B1-B4 using one-half standard deviation shocks	19	22	30	31	32	32	<b>35</b>	36	
B6. One-time 30 percent nominal depreciation relative to the baseline in 2013 5/	19	36	37	39	40	41	<b>45</b>	48	
<b>PV of debt-to-exports ratio</b>									
<b>Baseline</b>	76	100	101	108	112	108	<b>95</b>	99	
<b>A. Alternative Scenarios</b>									
A1. Key variables at their historical averages in 2012-2032 1/	76	47	37	29	23	16	<b>-2</b>	6	
A2. New public sector loans on less favorable terms in 2012-2032 2	76	113	119	130	138	136	<b>129</b>	149	
<b>B. Bound Tests</b>									
B1. Real GDP growth at historical average minus one standard deviation in 2013-2014	76	100	101	108	112	108	<b>95</b>	99	
B2. Export value growth at historical average minus one standard deviation in 2013-2014 3/	76	114	131	139	143	137	<b>116</b>	115	
B3. US dollar GDP deflator at historical average minus one standard deviation in 2013-2014	76	100	101	108	112	108	<b>95</b>	99	
B4. Net non-debt creating flows at historical average minus one standard deviation in 2013-2014 4/	76	94	130	136	139	132	<b>110</b>	103	
B5. Combination of B1-B4 using one-half standard deviation shocks	76	85	111	118	122	117	<b>101</b>	102	
B6. One-time 30 percent nominal depreciation relative to the baseline in 2013 5/	76	100	101	108	112	108	<b>95</b>	99	
<b>PV of debt-to-revenue ratio</b>									
<b>Baseline</b>	121	151	151	156	158	158	<b>164</b>	161	
<b>A. Alternative Scenarios</b>									
A1. Key variables at their historical averages in 2012-2032 1/	121	71	56	42	33	24	<b>-4</b>	10	
A2. New public sector loans on less favorable terms in 2012-2032 2	121	170	177	188	196	199	<b>222</b>	241	
<b>B. Bound Tests</b>									
B1. Real GDP growth at historical average minus one standard deviation in 2013-2014	121	159	169	174	177	176	<b>183</b>	179	
B2. Export value growth at historical average minus one standard deviation in 2013-2014 3/	121	159	173	176	177	175	<b>177</b>	163	
B3. US dollar GDP deflator at historical average minus one standard deviation in 2013-2014	121	156	156	161	163	163	<b>169</b>	165	
B4. Net non-debt creating flows at historical average minus one standard deviation in 2013-2014 4/	121	142	195	197	197	194	<b>190</b>	167	
B5. Combination of B1-B4 using one-half standard deviation shocks	121	129	168	172	174	173	<b>177</b>	168	
B6. One-time 30 percent nominal depreciation relative to the baseline in 2013 5/	121	211	212	218	221	221	<b>230</b>	224	

**Table 2a. Niger: Sensitivity Analysis for Key Indicators of Public- and Publicly-Guaranteed External Debt, 2012-2032 (concluded)**  
(Percent)

	Projections							
	2012	2013	2014	2015	2016	2017	2022	2032
<b>Debt service-to-exports ratio</b>								
<b>Baseline</b>	4	23	3	3	3	3	<b>2</b>	5
<b>A. Alternative Scenarios</b>								
A1. Key variables at their historical averages in 2012-2032 1/	4	23	2	2	2	1	<b>1</b>	0
A2. New public sector loans on less favorable terms in 2012-2032 2	4	23	4	4	5	4	<b>5</b>	8
<b>B. Bound Tests</b>								
B1. Real GDP growth at historical average minus one standard deviation in 2013-2014	4	23	3	3	3	3	<b>2</b>	5
B2. Export value growth at historical average minus one standard deviation in 2013-2014 3/	4	25	4	4	4	4	<b>3</b>	6
B3. US dollar GDP deflator at historical average minus one standard deviation in 2013-2014	4	23	3	3	3	3	<b>2</b>	5
B4. Net non-debt creating flows at historical average minus one standard deviation in 2013-2014 4/	4	23	3	4	4	3	<b>3</b>	6
B5. Combination of B1-B4 using one-half standard deviation shocks	4	24	3	3	4	3	<b>3</b>	6
B6. One-time 30 percent nominal depreciation relative to the baseline in 2013 5/	4	23	3	3	3	3	<b>2</b>	5
<b>Debt service-to-revenue ratio</b>								
<b>Baseline</b>	7	35	5	5	5	4	<b>4</b>	9
<b>A. Alternative Scenarios</b>								
A1. Key variables at their historical averages in 2012-2032 1/	7	34	4	3	2	2	<b>1</b>	1
A2. New public sector loans on less favorable terms in 2012-2032 2	7	35	6	6	7	7	<b>9</b>	12
<b>B. Bound Tests</b>								
B1. Real GDP growth at historical average minus one standard deviation in 2013-2014	7	37	6	5	5	5	<b>5</b>	10
B2. Export value growth at historical average minus one standard deviation in 2013-2014 3/	7	35	5	5	5	5	<b>4</b>	9
B3. US dollar GDP deflator at historical average minus one standard deviation in 2013-2014	7	36	5	5	5	5	<b>4</b>	9
B4. Net non-debt creating flows at historical average minus one standard deviation in 2013-2014 4/	7	35	5	5	5	5	<b>5</b>	10
B5. Combination of B1-B4 using one-half standard deviation shocks	7	36	5	5	5	5	<b>4</b>	9
B6. One-time 30 percent nominal depreciation relative to the baseline in 2013 5/	7	49	7	7	7	6	<b>6</b>	12
<i>Memorandum item:</i>								
Grant element assumed on residual financing (i.e., financing required above baseline) 6/	23	23	23	23	23	23	<b>23</b>	23

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 2b. Niger: Sensitivity Analysis for Key Indicators of Public Debt 2012-2032

	Projections							
	2012	2013	2014	2015	2016	2017	2022	2032
<b>PV of Debt-to-GDP Ratio</b>								
<b>Baseline</b>	25	31	32	32	32	32	34	35
<b>A. Alternative scenarios</b>								
A1. Real GDP growth and primary balance are at historical averages	25	29	28	28	27	26	23	16
A2. Primary balance is unchanged from 2012	25	30	31	31	32	32	34	35
A3. Permanently lower GDP growth 1/	25	31	33	34	35	36	43	66
<b>B. Bound tests</b>								
B1. Real GDP growth is at historical average minus one standard deviations in 2013-2014	25	33	38	40	42	43	51	61
B2. Primary balance is at historical average minus one standard deviations in 2013-2014	25	30	31	31	32	32	33	35
B3. Combination of B1-B2 using one half standard deviation shocks	25	30	31	33	34	35	41	50
B4. One-time 30 percent real depreciation in 2013	25	37	37	37	37	36	36	35
B5. 10 percent of GDP increase in other debt-creating flows in 2013	25	38	39	39	39	39	39	37
<b>PV of Debt-to-Revenue Ratio 2/</b>								
<b>Baseline</b>	113	124	124	126	127	128	131	132
<b>A. Alternative scenarios</b>								
A1. Real GDP growth and primary balance are at historical averages	113	115	110	107	103	100	86	58
A2. Primary balance is unchanged from 2012	113	121	121	123	125	126	132	132
A3. Permanently lower GDP growth 1/	113	125	127	131	135	139	165	240
<b>B. Bound tests</b>								
B1. Real GDP growth is at historical average minus one standard deviations in 2013-2014	113	131	143	151	158	164	192	227
B2. Primary balance is at historical average minus one standard deviations in 2013-2014	113	121	121	122	124	125	129	130
B3. Combination of B1-B2 using one half standard deviation shocks	113	120	119	125	131	136	158	185
B4. One-time 30 percent real depreciation in 2013	113	148	145	144	144	142	138	133
B5. 10 percent of GDP increase in other debt-creating flows in 2013	113	154	153	153	153	153	150	141
<b>Debt Service-to-Revenue Ratio 2/</b>								
<b>Baseline</b>	8	26	2	5	5	5	4	7
<b>A. Alternative scenarios</b>								
A1. Real GDP growth and primary balance are at historical averages	8	26	2	5	5	4	3	5
A2. Primary balance is unchanged from 2012	8	26	2	5	5	5	4	7
A3. Permanently lower GDP growth 1/	8	26	2	5	5	5	4	10
<b>B. Bound tests</b>								
B1. Real GDP growth is at historical average minus one standard deviations in 2013-2014	8	26	3	6	6	5	5	10
B2. Primary balance is at historical average minus one standard deviations in 2013-2014	8	26	2	5	5	5	4	7
B3. Combination of B1-B2 using one half standard deviation shocks	8	26	2	5	5	5	4	9
B4. One-time 30 percent real depreciation in 2013	8	31	4	7	6	6	5	11
B5. 10 percent of GDP increase in other debt-creating flows in 2013	8	26	3	6	5	5	4	8
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.								