INTERNATIONAL DEVELOPMENT ASSOCIATION AND
INTERNATIONAL MONETARY FUND

NIGER

Joint Fund-Bank Debt Sustainability Analysis

Prepared by the staffs of the International Development Association and
the International Monetary Fund

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January 22, 2010

Niger has moved from moderate to low risk of debt distress. Results from the analysis based on end-2008 data confirm the improvement in the debt outlook which was already apparent in the 2008 DSA. Furthermore, the impact of the ongoing global crisis on its economy has not been as severe as feared, removing a key source of uncertainty for the debt outlook. In particular, there are no major delays in the implementation of the large uranium and oil projects, which are expected to boost exports and government revenues significantly. While recent political events pose some risk of a slowdown in aid flows and foreign investment, the main external debt ratios remain below their thresholds under the baseline and all plausible stress scenarios. Enhanced public financial management and a prudent debt policy are key to preserving debt sustainability and ensuring the efficient use of available fiscal space.

I. BACKGROUND

1. This joint IMF-World Bank debt sustainability analysis evaluates both the external and the total public debt of Niger based on end-2008 data, using standard debt dynamics templates for low-income countries.

2. **The economy has largely been resilient to the global economic and financial crisis.** Available high frequency indicators, such as brisk credit growth and robust tax collection, indicate continued dynamism of non-agricultural sectors, such as mining, telecommunication, construction, and transport. Furthermore, the large projects in the oil and mining sectors are proceeding without major delays. Recent political events are likely to have some short-term impact on official aid flows but for the time being there is no reason to believe that they will affect long-term growth.

3. **Debt ratios have been significantly reduced by debt relief, most recently under the MDRI.** Niger reached the HIPC Initiative completion point in April 2004 and in 2006 benefited from MDRI assistance from the African Development Fund, IDA, and IMF.

Nominal external debt has thus fallen from over 90 percent of GDP at end-2000 to about 15 percent of GDP at end-2007. By end-2008, debt to the ADF, IDA and the IMF accounted for 9.2 percent, 41 percent and 7 percent of external debt, respectively, while the remainder was constituted by borrowing from other multilateral lenders.

II. UNDERLYING DSA ASSUMPTIONS

4. **The results of the current exercise do not differ substantially from those of the 2008 exercise**, which already incorporated the expected rise of FDI and imports starting from 2008 onward following the launch of an oil production project as well as significant developments in the uranium sector. Box 1 describes the two largest oil and uranium projects in Niger, along with some smaller investments, while Box 2 presents in detail the main macroeconomic assumptions used for the baseline debt burden ratio calculations. The projected export growth in real terms (9 percent per year in 2008-2016) is similar to the projection made last year but represents a break from the past (3.4 percent per year in 1998-2007) when mining exports were stagnant.

Box 1: Large Investment Projects

The two very large investments and several smaller ones planned over the next five years will play an important role in improving the sustainability of Niger's debt. Beyond boosting exports, they are expected to increase government revenues by about 2 percent of GDP from 2012, derived from royalties, corporate tax, dividends and tax on dividends. Hence the government's capacity to repay debt will increase.

Agadem Oil Field: A production-sharing contract with a private Chinese partner was approved in June 2008. The project has three components: the development of the Agadem oil field to extract an estimated 320 million barrels, the construction of a mini-refinery with a capacity of 20,000 barrels per day, and a 470 km pipeline linking the Agadem field to the refinery. As the capacity of the refinery largely exceeds local consumption needs, much of the production will be exported. Total estimated investment cost is about US$1.3 billion. Investment is proceeding ahead of schedule and the refinery is likely to begin operating in 2011, one year ahead of plans.

Imouraren Uranium Mine: The development of this mine will require a US$1.6 billion investment in the next five years. The production will start gradually by 2013 and reach 5,000 tons (about 160 percent of current national output) by 2018; total reserves are estimated at about 150,000 tons. According to the convention that regulates this project, the government will hold a 33.35 percent stake in the mine. Annual revenue from Imouraren is expected to contribute the equivalent of 0.5 percent of GDP to the budget. The investment scheduled for 2009 has been delayed, but its pace is expected to pick up in 2010.

Other uranium projects: The largest existing uranium mine is expected to expand its output by roughly 35 percent in the next couple of years. The other main uranium mine is investing in improved processing technology to raise its yield. Other exploration activity is ongoing. Taken together, these projects are expected to result in some short term improvement in uranium output and a 40 percent increase in current national output by 2012.

In total, the above investments are projected to increase uranium production to 9,600 tons by 2018, more than triple the current level. While the spot price of uranium has fallen with the recent global economic slowdown, it remains well above the average of the last 20 years and similar to the price set in current contracts in Niger. The long-term prospects for uranium remain strong given the renewed interest in nuclear energy.

III. EXTERNAL DSA

5. **In the baseline scenario, all external debt ratios remain below their policy-dependent indicative thresholds throughout the projection period (2009-29)**. The net present value (NPV) of debt-to-GDP ratio rises gradually and stabilizes below 25 percent by 2029, and the NPV of debt-to-exports ratio levels off at about 102 percent (Table 1a and Figure 1)[2]. The gradual rise in these indicators results from Niger's high financing requirements, critical for promoting growth and achieving the Millennium Development Goals. It is assumed that one third of total project financing is in the form of concessional loans and the rest in grants.

Policy-Based Thresholds and External Debt Burden Indicators

	Thresholds 1/	Niger: Baseline Scenario Ratios		
		2008	2009-29 2/	Peak
NPV of external debt in percent of:				
GDP	40	11.5	17.9	23.0
Exports	150	60.4	73.7	103.8
Revenue	250	62.2	123.2	170.0
External debt service in percent of:				
Exports	20	3.6	2.9	4.1
Revenue	30	3.7	4.8	6.7

1/ Policy-dependent thresholds as used in the joint IMF-WB LIC DSA framework for a medium policy performance. Niger received an average rating of 3.30 in 2006-2008 in the World Bank's Country Policy and Institutional Assessment (CPIA), which qualifies it as a medium policy performer.

2/ Simple Average.

6. **Given the uncertainties in the international environment, there are some risks that the oil and uranium projects could be delayed.** The risk is compounded by the current political uncertainty, which could affect private investment decisions and external donor flows (notably budget support) if no resolution is found in the coming months. The fiscal projections in the baseline scenario make conservative assumptions about the level of budget support expected to be disbursed until mid-2010. Updated information on the pace of execution of the largest projects—such as the slight delay in the entry of the Imourarem

[2] Debt-to-exports and debt-to-revenue do not fully stabilize by 2029. This reflects the projected profile of uranium production, which is projected to plateau after reaching its peak in 2018. The slowdown in export growth not only reduces the denominators of both debt ratios, but also increases the current account deficit and debt-creating flows (as evidenced by the growth of residuals in Table 1a). However, by the mid-2030s, both debt ratios stabilize at levels well below their thresholds.

project into production phase—has already been incorporated in the analysis, without significant impact on its conclusions.

7. **Sensitivity tests show that although Niger's external debt burden would worsen in the event of plausible adverse macroeconomic shocks, the ratios would remain below their threshold levels in all realistic scenarios**. If key variables remain at the historical average of the previous 10 years (scenario A1), the NPV of debt-to-GDP and debt-to-exports ratios would rise to 14 percent and 63 percent respectively by 2029, remaining below the baseline (see Table 2a). This lower debt profile in the historical scenario reflects lower borrowing needs and smaller current account deficits than are assumed going forward. The B1 scenario of lower growth can be used to illustrate the potential downside risks emanating from current political uncertainty, but, even in this scenario, debt indicators remain well below all thresholds. Two other scenarios in the DSA template—a temporary but substantial reduction in export growth (scenario B2), and a sizeable deterioration of the terms for new borrowing (scenario A2)[3] would significantly worsen Niger's NPV of debt to exports ratio, but still not lead to a violation of the thresholds.

8. **Thresholds are breached under two stress tests (scenarios B4 and B5) that consider two unrealistic scenarios.** Scenarios B4 and B5 assume that in 2010 and 2011 all non-debt creating flows (including foreign direct investment) are significantly below their historical levels, while other current account components (including imports) are kept as in the baseline scenario. Under these assumptions, the overall balance of payments turns into a large deficit because high imports related to oil and uranium investments are no longer financed by FDI flows. However, these scenarios are not credible since oil and uranium related imports are a direct function of the corresponding FDI. In scenario A3 in Table 2a and Table 3, which assumes that oil and uranium projects are not implemented (i.e. the reduction in imports is commensurate to the reduction in FDI), no debt threshold violation is observed[4].

IV. PUBLIC DSA

9. **As was the case in the 2008 DSA, consideration of total public debt, including domestic debt, does not significantly alter the assessment.** Domestic debt stood at 5.7 percent of GDP at end-2008, but is projected to fall under the baseline scenario (Table 1b**)**. This pattern is explained by relatively small primary fiscal deficits, averaging 2.9 percent of GDP in the projection period. The nominal interest rate on domestic debt is

[3] Under scenario A2, interest costs are 2 percentage points above the baseline.

[4] Assuming that oil and uranium projects are not implemented implies lower FDI and FDI-related imports than under the baseline scenario. This assumption also translates into a reduction of total exports and exports-related fiscal revenues, as well as a reduction in GDP. Lower GDP has second-round effects on imports, government revenues, and several monetary aggregates.

low (0.7 percent) because the bulk of the debt comprises non-interest bearing arrears, which are projected to be fully repaid by 2015.

10. **A significant proportion of domestic debt as of end-2008 is accounted for by domestic arrears.** The baseline analysis therefore takes into account the ongoing implementation of a domestic arrears reduction plan, which eliminates them by 2015, bring domestic debt down to around 1 percent of GDP. Total public sector debt (PV terms) would decline from 17.2 percent of GDP in 2008 to 15.7 by 2010, would remain at between 15 percent and 16 percent of GDP until 2018, and then gradually increase, driven by new external debt.

11. **Public debt ratios remain relatively low under most sensitivity tests (Table 2b)**. Public debt accelerates significantly only if we assume that the primary balance is unchanged from its 2009 level (scenario A2). Under this scenario, the PV of public debt reaches 50 percent of GDP and 278 percent of revenue by the end of the projection period (Figure 2). However, this scenario is unrealistic, as the primary deficit in 2009 is unusually high due to a sharp increase in capital expenditures financed by exceptional non-fiscal revenues in 2008. The primary deficit is projected to decline from 2010 onward.

V. CONCLUSION

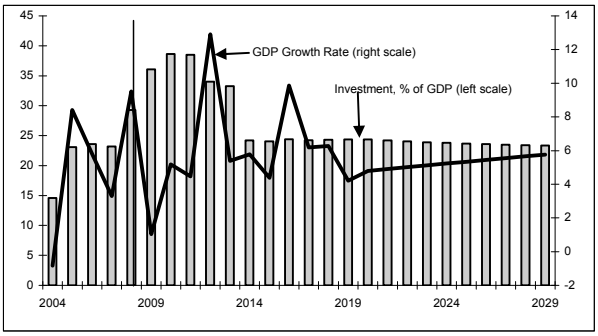
12. **Niger has moved from moderate to low risk of debt distress, reflecting the projected improvement of the fiscal and external positions and continued prudent public debt policies.** Furthermore, the impact of the ongoing global crisis has not been as severe as feared, removing a key source of uncertainty for the outlook. Except in the case of highly implausible scenarios, the debt situation appears robust to macroeconomic shocks. To preserve debt sustainability, the authorities should further strengthen the debt management process and bolster the analytical underpinnings of their indebtedness decisions. Accelerating public financial management reform would also help ensure the efficient use of available fiscal space to increase investment, thereby boosting growth and reducing poverty.

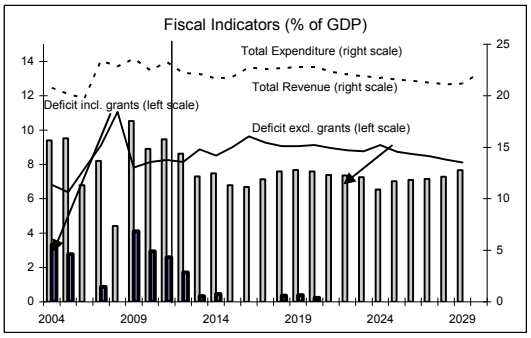
Box 2. Baseline scenario assumptions

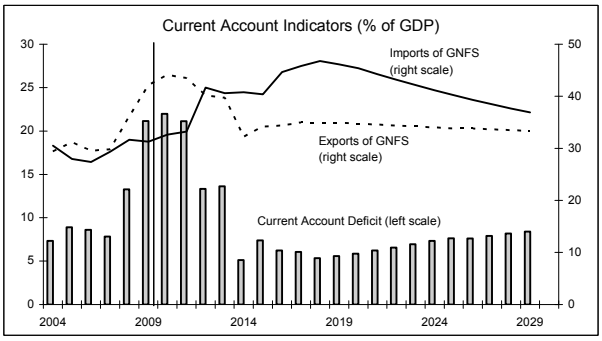
The baseline macroeconomic scenario for 2009–29 hinges on the following assumptions:

- Real GDP growth is expected to rise from its historical average (1998-2008) of 4.5 percent to an average of 6 percent in 2009–18, as a result of increased investment in and production of oil and uranium. In 2018-29, with oil and uranium production stabilizing, annual GDP growth is expected to moderate to about 5.6 percent. This level is similar to the historical average, although Niger's growth potential could rise significantly as a result of ongoing investments in irrigation and infrastructure, as well as reforms to improve the investment climate.
- The investment rate is projected to be high in 2008-13, around 35.1 percent of GDP, largely as a result of planned oil and uranium-related investments. Investment would hold steady between 23 and 24 percent of GDP in 2014-29, as mining-related investment declines.
- After the 2008 peak, the GDP deflator is expected to decrease gradually to about 2 percent by 2011.
- The revenue-to-GDP ratio is projected to rise from 13.5 percent of GDP in 2009-12 to 14.8 percent of GDP between 2013-29 due to higher tax revenues from oil and uranium exports and improved efficiency of the revenue collecting agencies. Public expenditure would remain between 21 and 24 percent of GDP.
- The evolution of total exports in the medium term will be largely determined by developments in oil and uranium exports resulting from investments to expand production. Indeed, exports in constant prices are projected to rise from 16.7 percent of GDP in 2009 to about 25 percent of GDP between 2016-2020, before decreasing gradually to 20 percent of GDP by 2029.
- Oil and uranium-related activity will also boost other items of the current account because of increased imports of equipment and capital goods, higher repatriation of profits, and larger compensation to foreign employees. Hence, total imports in constant prices would grow by 7 percent on average during 2009-15, with the current account deficit-to-GDP ratio peaking in 2011. Afterwards, imports are projected to grow broadly in line with GDP.
- The average interest rate on new external borrowing is projected at 1.2 percent, assuming half of new external debt is contracted on IDA terms and half at an interest rate of about 2 percent. Project financing in the form of external grants and loans is projected to rise in line with nominal GDP, with grants being two thirds of the total. These assumptions imply a grant element slightly above 40 percent in 2009 that increases slightly until 2013, as borrowing from the IMF (which carries a lower grant element) is gradually repaid, before decreasing again as the share of new loans available on IDA terms is expected to be reduced. External budgetary financing is expected to reach 3 percent of GDP by 2011 up to 2029, after remaining around 2 percent in 2009-10.
- The domestic debt profile assumes a reduction of domestic arrears in 2009-15 and no domestic financing of the deficit after 2015. The average interest rate on the stock of debt is very low (2.2 percent) because arrears do not incur interest charges. The interest rate of new short term domestic financing up to 2029 is assumed at 5 percent.
- Following the regional central bank's decision to on-lend the CFAF counterpart of Niger's general SDR allocation (SDR 48.8 million) to the Treasury, use of the SDR allocations is recorded in both the external and the public debt templates. The external template reflects projected interest payments on the difference between Niger's SDR allocation and holdings, which differs from the on-lent amount, as the central bank loan does not automatically trigger a drawdown of Niger's SDR holdings. The domestic template records the projected debt service associated with the central bank loan, which has a grace period of 3 years, an interest rate of 3 percent and a 10-year repayment period.

Box 2 (continued). Baseline scenario assumptions







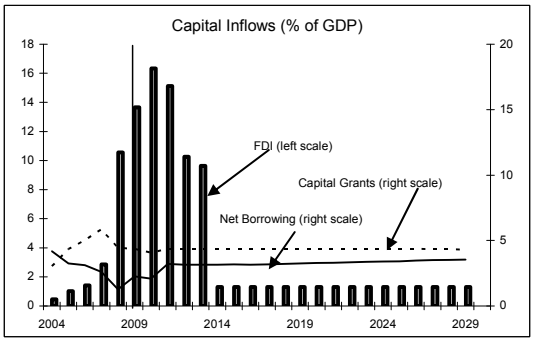


Table 1a.: External Debt Sustainability Framework, Baseline Scenario, 2006-2029 1/
(In percent of GDP, unless otherwise indicated)

	Actual			Historical Average	Standard Deviation	Projections									
	2006	2007	2008			2009	2010	2011	2012	2013	2014	2009-2014 Average	2019	2029	2015-2029 Average
External debt (nominal) 1/	**15.0**	**15.1**	**15.1**			**15.5**	**16.9**	**18.7**	**19.2**	**20.7**	**21.9**		**26.6**	**33.6**	
o/w public and publicly guaranteed (PPG)	15.0	15.1	15.1			15.5	16.9	18.7	19.2	20.7	21.9		26.6	33.6	
Change in external debt	-39.3	0.1	0.0			0.4	1.4	1.9	0.4	1.5	1.2		1.3	0.0	
Identified net debt-creating flows	3.1	2.8	-0.5			7.4	4.9	5.3	1.0	3.0	2.7		3.3	5.3	
Non-interest current account deficit	**8.2**	**7.4**	**12.9**	**6.7**	**3.4**	**20.9**	**21.8**	**20.9**	**13.1**	**13.4**	**4.8**		**5.3**	**8.0**	6.5
Deficit in balance of goods and services	13.1	12.2	17.1			23.3	24.5	23.6	15.2	15.4	7.7		7.2	11.2	
Exports	16.4	17.6	19.0			18.8	19.6	19.9	25.0	24.4	24.5		27.7	22.1	
Imports	29.5	29.8	36.1			42.1	44.1	43.5	40.2	39.7	32.2		34.9	33.4	
Net current transfers (negative = inflow)	-4.5	-4.4	-4.1	-3.8	1.1	-4.1	-4.6	-4.4	-4.1	-4.1	-3.9		-3.5	-2.9	-3.3
o/w official	-2.3	-2.2	-2.1			-2.0	-2.5	-2.4	-2.0	-2.0	-1.9		-1.4	-0.9	
Other current account flows (negative = net inflow)	-0.4	-0.5	-0.1			1.7	1.8	1.7	2.0	2.1	1.1		1.5	-0.3	
Net FDI (negative = inflow)	**-1.4**	**-2.8**	**-10.6**	**-1.9**	**3.2**	**-13.7**	**-16.3**	**-15.1**	**-10.3**	**-9.6**	**-1.3**		**-1.3**	**-1.3**	-1.3
Endogenous debt dynamics 2/	**-3.7**	**-1.7**	**-2.9**			**0.1**	**-0.5**	**-0.5**	**-1.9**	**-0.7**	**-0.9**		**-0.7**	**-1.4**	
Contribution from nominal interest rate	0.4	0.5	0.3			0.3	0.2	0.2	0.2	0.3	0.3		0.3	0.4	
Contribution from real GDP growth	-2.9	-0.4	-1.1			-0.2	-0.7	-0.7	-2.1	-1.0	-1.1		-1.0	-1.8	
Contribution from price and exchange rate changes	-1.2	-1.7	-2.0			…	…	…	…	…	…		…	…	
Residual (3-4) 3/	**-42.4**	**-2.7**	**0.5**			**-6.9**	**-3.6**	**-3.4**	**-0.5**	**-1.5**	**-1.5**		**-2.0**	**-5.3**	
o/w exceptional financing	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
PV of external debt 4/	...	...	11.5			11.6	12.3	13.4	13.4	14.2	14.9		17.8	23.0	
In percent of exports	...	...	60.4			61.6	62.9	67.0	53.6	58.4	60.8		64.3	103.8	
PV of PPG external debt	**...**	**...**	**11.5**			**11.6**	**12.3**	**13.4**	**13.4**	**14.2**	**14.9**		**17.8**	**23.0**	
In percent of exports	**...**	**...**	**60.4**			**61.6**	**62.9**	**67.0**	**53.6**	**58.4**	**60.8**		**64.3**	**103.8**	
In percent of government revenues	**...**	**...**	**62.2**			**88.7**	**90.8**	**96.9**	**98.7**	**96.1**	**104.8**		**117.8**	**170.0**	
Debt service-to-exports ratio (in percent)	**234.4**	**4.4**	**3.6**			**3.2**	**2.7**	**3.3**	**2.7**	**3.0**	**2.8**		**2.1**	**4.1**	
PPG debt service-to-exports ratio (in percent)	**234.4**	**4.4**	**3.6**			**3.2**	**2.7**	**3.3**	**2.7**	**3.0**	**2.8**		**2.1**	**4.1**	
PPG debt service-to-revenue ratio (in percent)	**296.7**	**5.1**	**3.7**			**4.6**	**3.8**	**4.8**	**5.0**	**5.0**	**4.9**		**3.9**	**6.7**	
Total gross financing need (Billions of U.S. dollars)	1.7	0.2	0.2			0.4	0.3	0.4	0.2	0.3	0.3		0.5	1.9	
Non-interest current account deficit that stabilizes debt ratio	47.5	7.3	12.9			20.5	20.4	19.0	12.7	11.9	3.7		4.0	8.0	
Key macroeconomic assumptions															
Real GDP growth (in percent)	5.8	3.3	9.5	4.5	4.1	1.0	5.2	4.5	12.9	5.4	5.8	5.8	4.2	5.8	5.6
GDP deflator in US dollar terms (change in percent)	2.2	12.8	15.6	6.2	9.2	-2.1	5.0	1.5	0.9	1.1	0.9	1.2	2.0	2.0	2.0
Effective interest rate (percent) 5/	0.8	3.5	2.5	2.3	1.9	1.9	1.5	1.5	1.5	1.4	1.4	1.5	1.3	1.3	1.3
Growth of exports of G&S (US dollar terms, in percent)	5.8	25.0	36.6	11.6	15.1	-2.3	15.1	8.0	42.9	3.9	7.2	12.5	4.9	5.7	7.1
Growth of imports of G&S (US dollar terms, in percent)	2.5	17.6	53.5	14.9	18.6	15.2	15.6	4.6	5.3	5.3	-13.5	5.4	6.4	7.4	8.0
Grant element of new public sector borrowing (in percent)	...	...	...	...	...	39.6	40.0	40.1	40.2	40.9	40.8	40.3	40.2	39.1	39.9
Government revenues (excluding grants, in percent of GDP)	13.0	15.2	18.4			13.0	13.6	13.8	13.6	14.8	14.2		15.1	13.5	14.8
Aid flows (in Billions of US dollars) 7/	0.3	0.4	0.3			0.3	0.3	0.4	0.4	0.4	0.5		0.7	1.4	
o/w Grants	0.2	0.2	0.2			0.2	0.2	0.3	0.3	0.3	0.4		0.5	1.1	
o/w Concessional loans	0.1	0.1	0.1			0.1	0.1	0.1	0.1	0.1	0.1		0.2	0.3	
Grant-equivalent financing (in percent of GDP) 8/	...	...	...			5.2	5.1	5.7	5.6	5.7	5.7		5.6	5.5	5.6
Grant-equivalent financing (in percent of external financing) 8/	...	...	...			80.0	76.1	74.7	75.0	75.2	75.1		75.3	75.6	74.9
Memorandum items:															
Nominal GDP (Billions of US dollars)	3.6	4.3	5.4			5.3	5.9	6.2	7.1	7.6	8.1		12.0	24.5	
Nominal dollar GDP growth	8.1	16.5	26.6			-1.1	10.4	6.1	13.9	6.6	6.7	**7.1**	6.3	7.9	7.7
PV of PPG external debt (in Billions of US dollars)			0.6			0.6	0.7	0.8	0.9	1.1	1.2		2.1	5.6	
(PVt-PVt-1)/GDPt-1 (in percent)						1.1	1.7	1.8	1.9	1.7	1.8	1.7	2.0	1.9	2.0

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 1b.Niger: Public Sector Debt Sustainability Framework, Baseline Scenario, 2006-2029
(In percent of GDP, unless otherwise indicated)

	Actual					Estimate	Projections								
	2006	2007	2008	Average	Standard Deviation	2009	2010	2011	2012	2013	2014	2009-14 Average	2019	2029	2015-29 Average
Public sector debt 1/	26.4	25.1	20.8			19.9	20.3	21.4	21.1	22.2	23.0		27.3	33.9	
o/w foreign-currency denominated	15.0	15.1	15.1			15.5	16.9	18.7	19.2	20.7	21.9		26.6	33.6	
Change in public sector debt	-42.6	-1.2	-4.3			-0.9	0.3	1.1	-0.3	1.1	0.8		1.3	-0.1	
Identified debt-creating flows	-49.0	-0.6	-2.9			4.5	3.5	3.9	1.6	1.6	1.5		1.8	0.8	
Primary deficit	1.3	1.7	-0.5	2.9	2.4	5.8	4.5	4.7	3.9	2.5	2.6	4.0	2.8	2.9	2.4
Revenue and grants	18.0	21.0	22.9			17.4	17.6	18.2	17.9	19.2	18.6		19.5	17.9	
of which: grants	5.0	5.8	4.4			4.4	4.1	4.4	4.4	4.4	4.4		4.4	4.4	
Primary (noninterest) expenditure	19.3	22.8	22.4			23.2	22.1	22.9	21.8	21.7	21.2		22.3	20.8	
Automatic debt dynamics	-9.4	-2.4	-2.4			-1.4	-1.0	-0.8	-2.2	-0.9	-1.2		-1.0	-2.1	
Contribution from interest rate/growth differential	-5.1	-1.0	-2.6			-0.4	-1.0	-0.8	-2.4	-1.0	-1.2		-1.0	-2.1	
of which: contribution from average real interest rate	-1.3	-0.1	-0.4			-0.2	0.0	0.1	0.1	0.1	0.1		0.0	-0.2	
of which: contribution from real GDP growth	-3.8	-0.8	-2.2			-0.2	-1.0	-0.9	-2.4	-1.1	-1.2		-1.1	-1.9	
Contribution from real exchange rate depreciation	-4.3	-1.4	0.2			-1.0	0.0	0.0	0.2	0.2	0.0		...	...	
Other identified debt-creating flows	-40.9	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)	-40.9	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	6.4	-0.6	-1.4			-5.4	-3.2	-2.8	-1.9	-0.6	-0.7		-0.5	-0.9	
Other Sustainability Indicators															
PV of public sector debt	11.4	10.1	17.2			16.0	15.7	16.0	15.4	15.8	16.0		18.5	23.3	
o/w foreign-currency denominated	0.0	0.0	11.5			11.6	12.3	13.4	13.4	14.2	14.9		17.8	23.0	
o/w external	...	...	11.5			11.6	12.3	13.4	13.4	14.2	14.9		17.8	23.0	
PV of contingent liabilities (not included in public sector debt)	...	...	...			...	...	...	...	...	...		...	...	
Gross financing need 2/	42.3	4.1	3.6			8.1	6.4	6.6	5.5	4.1	4.2		3.8	3.9	
PV of public sector debt-to-revenue and grants ratio (in percent)	63.3	47.8	75.3			91.9	89.2	88.3	85.6	82.1	86.3		95.1	130.4	
PV of public sector debt-to-revenue ratio (in percent)	87.8	66.3	93.4			122.6	115.9	116.2	113.2	106.4	112.9		122.6	172.6	
o/w external 3/	…	…	62.2			88.7	90.8	96.9	98.7	96.1	104.8		117.8	170.0	
Debt service-to-revenue and grants ratio (in percent) 4/	227.7	11.1	15.0			9.7	7.7	7.4	6.7	6.4	6.3		4.0	5.0	
Debt service-to-revenue ratio (in percent) 4/	315.9	15.4	18.6			12.9	10.0	9.7	8.9	8.3	8.2		5.2	6.7	
Primary deficit that stabilizes the debt-to-GDP ratio	43.9	3.0	3.8			6.7	4.2	3.6	4.1	1.4	1.8		1.5	2.9	
Key macroeconomic and fiscal assumptions															
Real GDP growth (in percent)	5.8	3.3	9.5	4.5	4.1	1.0	5.2	4.5	12.9	5.4	5.8	5.8	4.2	5.8	5.6
Average nominal interest rate on forex debt (in percent)	0.8	3.5	2.5	2.3	1.9	1.9	1.5	1.5	1.5	1.4	1.4	1.5	1.3	1.3	1.3
Average real interest rate on domestic debt (in percent)	-0.9	-2.0	-5.4	-2.2	2.3	-3.5	0.6	2.7	5.4	8.0	11.9	4.2	25.3	-1.2	8.7
Real exchange rate depreciation (in percent, + indicates depreciation)	-8.6	-9.8	1.5	-5.4	8.2	-6.6	...	...	...	...	...	...	...	...	...
Inflation rate (GDP deflator, in percent)	1.4	3.3	7.6	2.9	2.8	4.9	2.3	2.0	1.7	2.0	2.0	2.5	2.0	2.0	2.0
Growth of real primary spending (deflated by GDP deflator, in percent)	0.1	0.2	0.1	0.2	0.2	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1
Grant element of new external borrowing (in percent)	...	...	...	…	…	39.6	40.0	40.1	40.2	40.9	40.8	40.3	40.2	39.1	...

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, 2009-2029
(In percent)

	Projections							
	2009	2010	2011	2012	2013	2014	**2019**	2029
				PV of debt-to GDP ratio				
Baseline	12	12	13	13	14	15	**18**	23
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2009-2029 1/	12	12	12	14	15	16	**18**	14
A2. New public sector loans on less favorable terms in 2009-2029 2	12	13	15	16	18	19	**26**	36
A3. No implementation of oil and uranium projects	12	12	13	14	15	16	**21**	27
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2010-2011	12	13	15	15	15	16	**19**	25
B2. Export value growth at historical average minus one standard deviation in 2010-2011 3/	12	14	18	18	19	19	**21**	24
B3. US dollar GDP deflator at historical average minus one standard deviation in 2010-2011	12	13	15	15	16	17	**20**	26
B4. Net non-debt creating flows at historical average minus one standard deviation in 2010-2011 4/	12	24	36	34	34	35	**33**	29
B5. Combination of B1-B4 using one-half standard deviation shocks	12	26	40	37	37	38	**36**	32
B6. One-time 30 percent nominal depreciation relative to the baseline in 2010 5/	12	17	19	19	20	21	**25**	32
				PV of debt-to-exports ratio				
Baseline	62	63	67	54	58	61	**64**	104
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2009-2029 1/	62	61	59	54	60	64	**64**	64
A2. New public sector loans on less favorable terms in 2009-2029 2	62	67	75	63	72	79	**92**	164
A3. No implementation of oil and uranium projects	62	65	70	74	80	83	**102**	123
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2010-2011	62	63	67	53	58	61	**64**	104
B2. Export value growth at historical average minus one standard deviation in 2010-2011 3/	62	87	122	95	101	105	**102**	146
B3. US dollar GDP deflator at historical average minus one standard deviation in 2010-2011	62	63	67	53	58	61	**64**	104
B4. Net non-debt creating flows at historical average minus one standard deviation in 2010-2011 4/	62	125	182	137	141	141	**120**	132
B5. Combination of B1-B4 using one-half standard deviation shocks	62	138	211	159	163	163	**139**	152
B6. One-time 30 percent nominal depreciation relative to the baseline in 2010 5/	62	63	67	53	58	61	**64**	104
				Debt service-to-exports ratio				
Baseline	3	3	3	4	4	4	**3**	5
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2009-2029 1/	3	3	3	3	3	3	**2**	3
A2. New public sector loans on less favorable terms in 2009-2029 2	3	3	3	3	4	4	**4**	8
A3. No implementation of oil and uranium projects	3	3	4	4	5	5	**3**	2
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2010-2011	3	3	3	3	3	3	**2**	4
B2. Export value growth at historical average minus one standard deviation in 2010-2011 3/	3	3	5	4	4	4	**3**	6
B3. US dollar GDP deflator at historical average minus one standard deviation in 2010-2011	3	3	3	3	3	3	**2**	4
B4. Net non-debt creating flows at historical average minus one standard deviation in 2010-2011 4/	3	3	5	4	5	4	**3**	6
B5. Combination of B1-B4 using one-half standard deviation shocks	3	3	5	5	5	5	**4**	7
B6. One-time 30 percent nominal depreciation relative to the baseline in 2010 5/	3	3	3	3	3	3	**2**	4
Memorandum item:								
Grant element assumed on residual financing (i.e., financing required above baseline) 6/	38	38	38	38	38	38	**38**	38

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 assumingan 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 2009-2029

	Projections							
	2009	2010	2011	2012	2013	2014	2019	2029
	PV of Debt-to-GDP Ratio							
Baseline	16	16	16	15	16	16	19	23
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	16	15	14	14	14	15	20	28
A2. Primary balance is unchanged from 2009	16	17	18	18	20	23	34	50
A3. Permanently lower GDP growth 1/	16	16	17	16	17	18	24	42
A4. No implementation of new oil and uranium projects	16	16	16	17	17	17	21	28
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2010-2011	16	17	19	19	20	21	27	36
B2. Primary balance is at historical average minus one standard deviations in 2010-2011	16	16	17	16	17	17	19	24
B3. Combination of B1-B2 using one half standard deviation shocks	16	16	16	16	17	17	22	30
B4. One-time 30 percent real depreciation in 2010	16	20	20	18	18	18	18	21
B5. 10 percent of GDP increase in other debt-creating flows in 2010	16	22	22	21	21	21	23	26
	PV of Debt-to-Revenue Ratio 2/							
Baseline	92	89	88	86	82	86	95	130
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	92	83	76	75	74	79	99	145
A2. Primary balance is unchanged from 2009	92	94	97	101	107	121	173	281
A3. Permanently lower GDP growth 1/	92	90	91	90	88	95	122	223
A4. No implementation of new oil and uranium projects	92	89	89	94	92	94	116	143
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2010-2011	92	95	101	102	101	110	135	199
B2. Primary balance is at historical average minus one standard deviations in 2010-2011	92	92	93	90	86	90	98	132
B3. Combination of B1-B2 using one half standard deviation shocks	92	89	87	87	86	92	111	163
B4. One-time 30 percent real depreciation in 2010	92	114	109	101	94	95	93	118
B5. 10 percent of GDP increase in other debt-creating flows in 2010	92	127	122	116	110	114	116	143
	Debt Service-to-Revenue Ratio 2/							
Baseline	10	8	7	7	6	6	4	5
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	10	8	7	7	7	6	4	6
A2. Primary balance is unchanged from 2009	10	8	8	7	7	7	5	10
A3. Permanently lower GDP growth 1/	10	8	7	7	7	7	5	8
A4. No implementation of new oil and uranium projects	10	8	7	7	7	7	5	5
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2010-2011	10	8	8	7	7	7	5	7
B2. Primary balance is at historical average minus one standard deviations in 2010-2011	10	8	7	7	6	6	4	5
B3. Combination of B1-B2 using one half standard deviation shocks	10	8	8	7	7	7	4	6
B4. One-time 30 percent real depreciation in 2010	10	8	9	8	8	8	5	8
B5. 10 percent of GDP increase in other debt-creating flows in 2010	10	8	8	7	7	7	4	6

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.

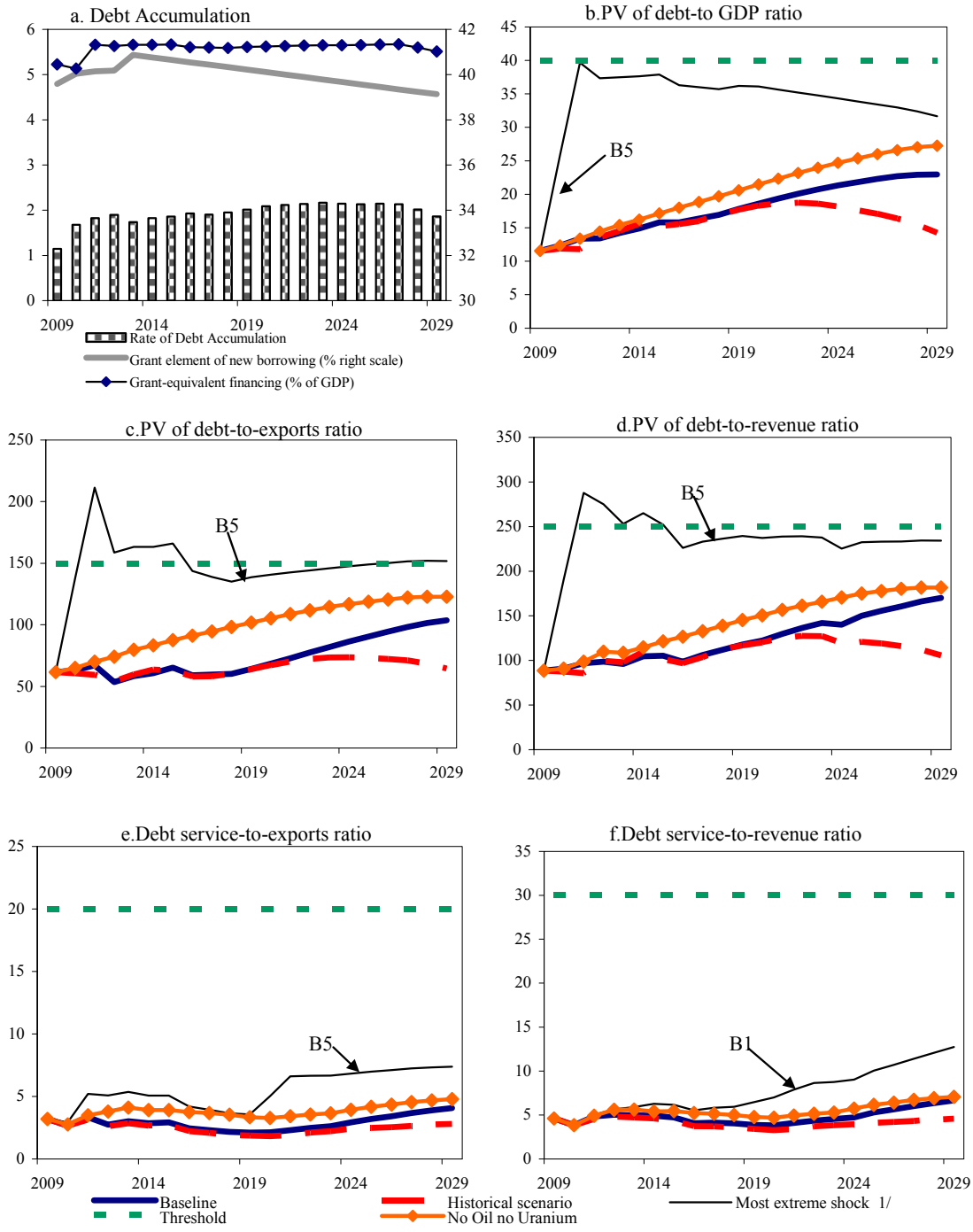
Table 3.Niger: Sensitivity Analysis for Key Indicators of Public and Publicly Guaranteed External Debt, 2009-2029
(Not Including New Oil and Uranium Projects)
(In percent)

	Projections							
	2009	2010	2011	2012	2013	2014	**2019**	2029
				PV of debt-to GDP ratio				
Alternative Baseline	12	12	13	14	15	16	**21**	27
Alternative B4. Net non-debt creating flows at historical average minus one standard deviation in 2010-2011 1/	12	16	20	21	22	23	**26**	30
Alternative B5. Combination of B1-B4 using one-half standard deviation shocks	12	16	21	22	23	24	**28**	32
				PV of debt-to-exports ratio				
Alternative Baseline	62	65	70	74	80	83	**102**	123
Alternative B4. Net non-debt creating flows at historical average minus one standard deviation in 2010-2011 1/	62	84	107	110	114	118	**129**	133
Alternative B5. Combination of B1-B4 using one-half standard deviation shocks	62	88	115	117	122	126	**139**	145
				PV of debt-to-revenue ratio				
Alternative Baseline	89	91	99	110	109	115	**145**	182
Alternative B4. Net non-debt creating flows at historical average minus one standard deviation in 2010-2011 1/	89	118	151	162	156	162	**185**	197
Alternative B5. Combination of B1-B4 using one-half standard deviation shocks	89	121	159	171	165	171	**196**	212
				Debt service-to-exports ratio				
Alternative Baseline	3.2	2.8	3.5	3.8	4.1	3.9	**3.3**	4.8
Alternative B4. Net non-debt creating flows at historical average minus one standard deviation in 2010-2011 1/	3.2	2.8	3.9	4.5	4.8	4.5	**3.8**	5.6
Alternative B5. Combination of B1-B4 using one-half standard deviation shocks	3.2	2.9	4.2	4.8	5.2	4.9	**4.1**	6.1
				Debt service-to-revenue ratio				
Alternative Baseline	4.6	3.8	4.9	5.6	5.6	5.4	**4.8**	7.1
Alternative B4. Net non-debt creating flows at historical average minus one standard deviation in 2010-2011 1/	4.6	3.8	5.4	6.6	6.5	6.3	**5.4**	8.4
Alternative B5. Combination of B1-B4 using one-half standard deviation shocks	4.6	4.1	5.8	7.1	7.0	6.7	**5.8**	8.9

Source: Staff projections and simulations.

1/ Includes official and private transfers and FDI.

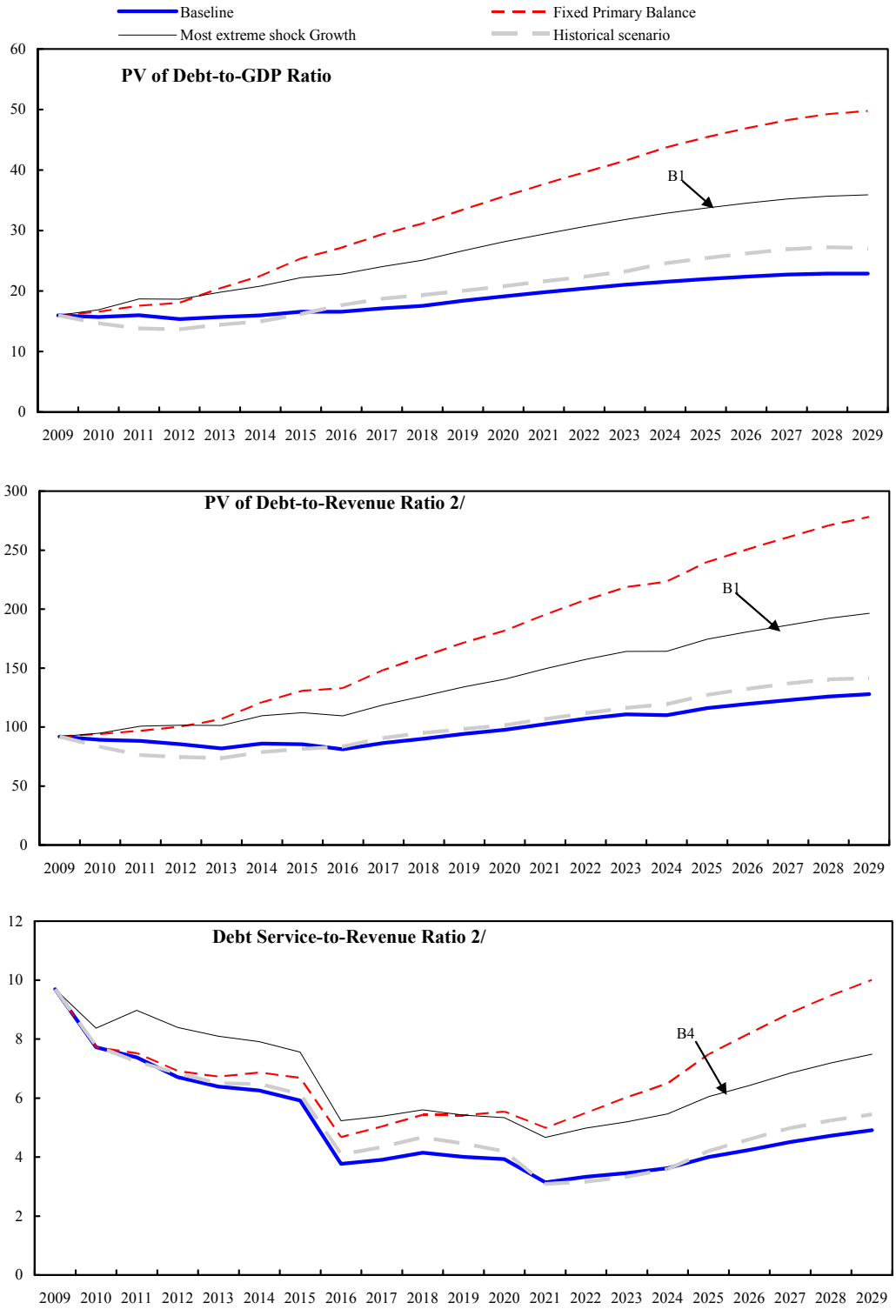
Figure 1. Niger: Indicators of Public and Publicly Guaranteed External Debt under Alternatives Scenarios, 2009-2029 1/



Sources: Country authorities; and staff estimates and projections.

1/ The most extreme stress test is the test that yields the highest ratio in 2019. 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 Combination shock and in figure f. to a Terms shock

Figure 2.Niger: Indicators of Public Debt Under Alternative Scenarios, 2009-2029 1/



Sources: Country authorities; and staff estimates and projections.

1/ The most extreme stress test is the test that yields the highest ratio in 2019.

2/ Revenues are defined inclusive of grants.