INTERNATIONAL MONETARY FUND AND
INTERNATIONAL DEVELOPMENT ASSOCIATION

ISLAMIC REPUBLIC OF MAURITANIA

Debt Sustainability Analysis

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February 26, 2010

The updated joint IMF-World Bank low-income country debt sustainability analysis (LIC DSA) shows that, despite the several shocks that affected the country, including the global economic slowdown, Mauritania remains at a moderate risk of debt distress.[1] *Under the baseline scenario, all debt burden indicators remain below their policy-dependent indicative thresholds, except for a minor and non protracted breach of threshold for the present value (PV) of debt-to-GDP ratio. Public debt indicators remain on declining paths. Stress tests suggest that Mauritania is particularly vulnerable to export shocks, thus highlighting the need to pursue a prudent macroeconomic policy and a cautious borrowing strategy, improve debt management, and diversify the economy.*

I. BACKGROUND

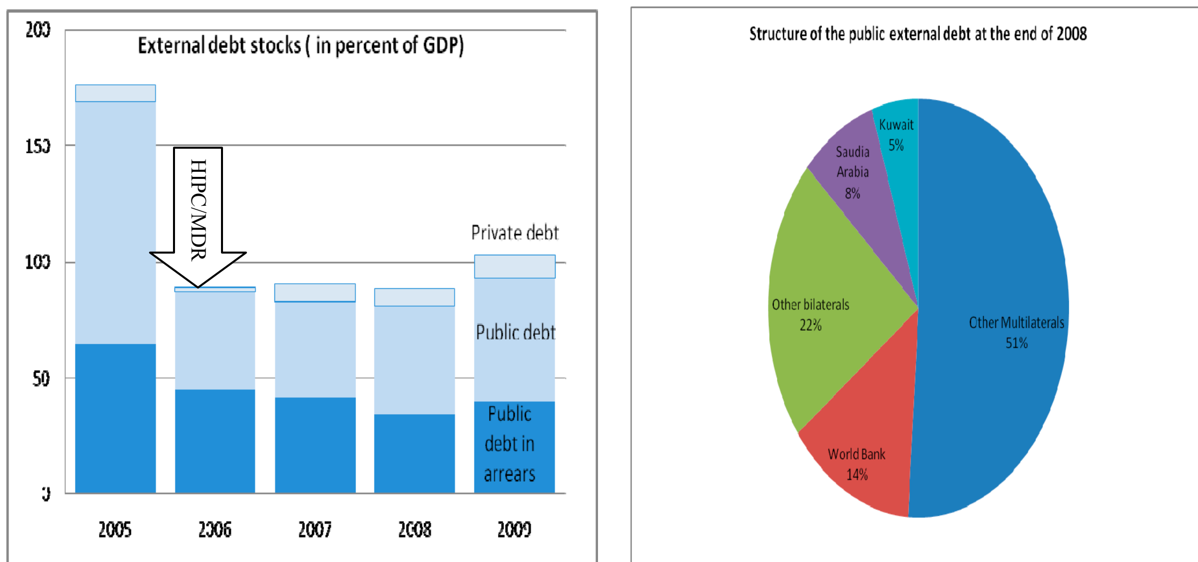
1. **This report updates the DSA prepared in 2008.** This analysis is based on the long-term macroeconomic framework presented in the 2009 Article IV discussions report. The assessment remains broadly similar to the 2008 DSA, despite the fact that public and external balances are weaker than previously projected and that medium-term prospects are not as

[1] The external and the public sector LIC DSAs presented in this document are based on the common standard LIC DSA framework. See "Debt Sustainability in Low-Income Countries: Proposal for an Operational Framework and 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 "Applying the Debt Sustainability Framework for Low-Income Countries Post Debt Relief," http://www.imf.org/external/np/pp/eng/2006/110606.pdf and IDA/SecM2006-0564, 8/11/06).

favorable. In the long run, the forecast remains broadly the same and as a result Mauritania remains at a moderate risk of debt distress.

2. **HIPC debt relief and MDRI assistance contributed to firm up the country's debt sustainability.** Mauritania reached its completion point under the HIPC Initiative in 2002 and received MDRI assistance in 2006. Debt relief agreements with most creditors have been finalized, but agreements have yet to be reached on arrears owed to two non-Paris club creditors (Libya and Kuwait). These arrears amounted to about US$1.2 billion at end-2009 (nearly half of Mauritania's outstanding stock of external nominal debt), of which about US$1 billion (83 percent) is owed to Kuwait.

Figure 1. Evolution and Composition of External Debt

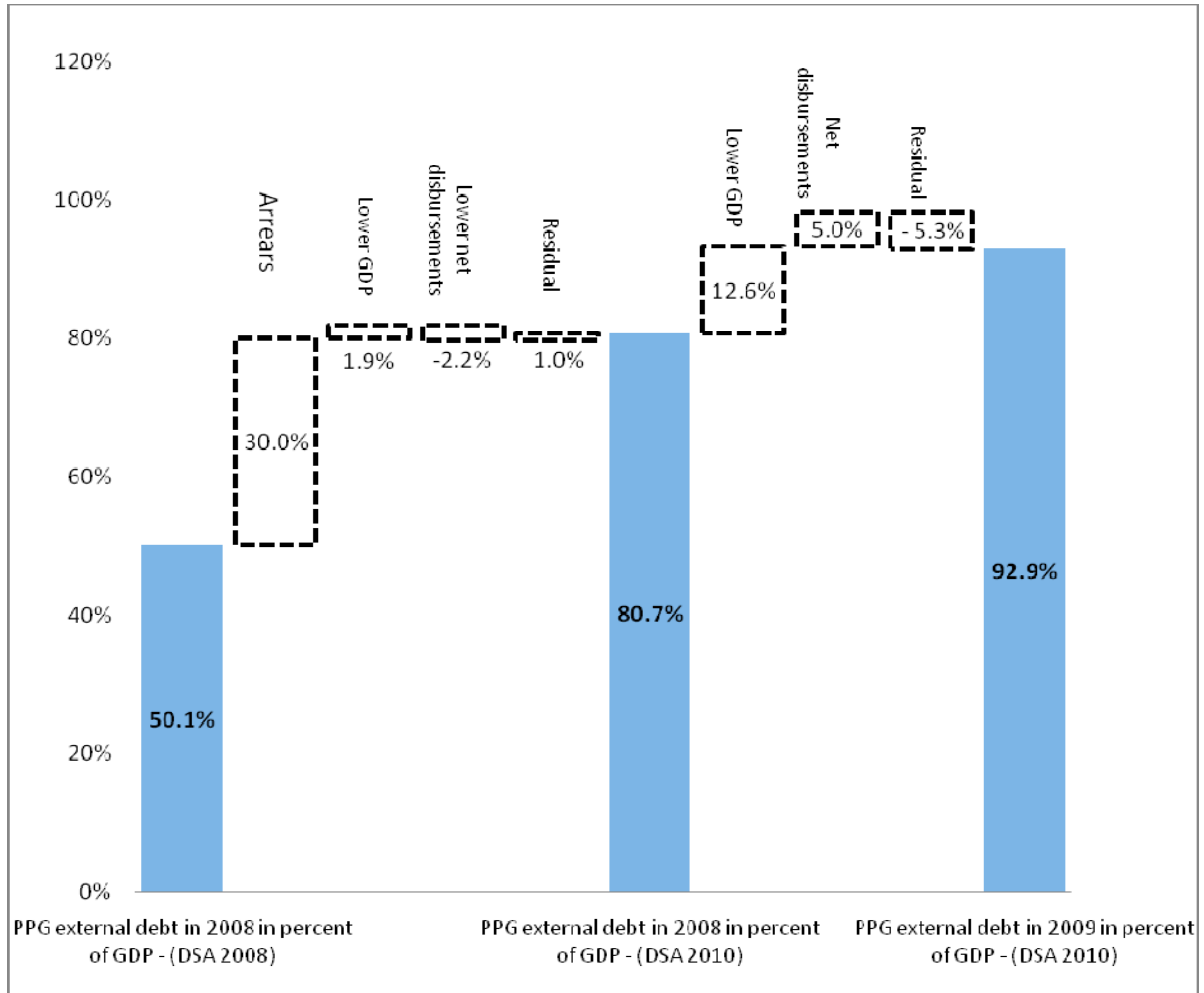


3. **As of end-2008, total external debt amounted to US$2.8 billion**, or 88.5 percent of GDP. Gross public and publicly-guaranteed (PPG) external debt[2] was about 81 percent of GDP, compared with a projection of about 50 percent in the previous DSA. The difference is mainly explained by the non-clearance of arrears accumulated vis-à-vis the aforementioned two non-Paris Club creditors. Excluding those arrears, the public external debt ratio remained broadly unchanged (Figure 2). Key creditors are the World Bank Group's IDA, Saudi Arabia, and Kuwait. Preliminary data indicate that public external debt to GDP ratio increased to about 93 percent at end-2009 due mainly to the decline in GDP. At end-2008, net total public debt (gross external and domestic debt net of oil fund reserves) amounted to roughly 89 percent of GDP.

[2] This includes central government and state-owned enterprises (excluding SNIM).

Figure 2. Factors Explaining:

(i) the differences in the estimates of the PPG external debt as percentage of GDP in 2008 between the DSA 2008 and DSA 2010 and (ii) the change in PPG external debt between 2009 and 2008



II. Underlying DSA Assumptions

4. **Since the last DSA, oil output and exports were significantly revised downward,** in line with output trends in 2008 and 2009**.** Oil production[3] is expected to reach annually 10.2 million barrels over the period 2009**-**29 (compared with 13.9 million barrels in the 2008 DSA). The current projections are conservative considering the intense exploration program underway that could boost prospects for additional oil and gas reserves.

[3] The exhaustion of reserves is beyond the projected horizon.

5. **The medium-term outlook is affected by recent external shocks.** Mauritania was hard hit by the fuel and food crisis nearly two years ago and the subsequent global recession in 2008-09, mainly through the decline in the prices of and the demand for Mauritania's main export commodities (iron, copper, and fish). The consequences of these external shocks have been exacerbated by a domestic political crisis triggered by the military coup in August 2008 and the unexpected significant drop in oil production. These multiple shocks have taken a toll on the economy and its growth prospects. Therefore, in the medium term, economic activity, exports, and the fiscal and external positions are weaker than previously projected.

6. **Long-run macroeconomic indicators remain, however, broadly unchanged.** The economy is expected to return to high and sustained non-oil GDP growth, supported by ongoing large investments projects, including a major project to expand capacity of the national iron ore company (estimated at US$1.1 billion).[4] Thus, the external position is expected to strengthen gradually. On the fiscal side, the non-oil deficit will increase, reflecting social and infrastructure needs, but it will be fully financed by increasing oil revenue. Average annual inflation would stay at around 5 percent during the projection period.

7. **Outstanding arrears to Kuwait and Libya are assumed to be rescheduled in 2010 and 2011.** The authorities indicated that the technical groundwork was completed but final negotiations were interrupted by the August 2008 military coup. The July 2009 presidential election enabled Mauritania's return to constitutional order, and the new authorities are stepping up their efforts to reengage rapidly with the two creditors. They expect to finalize bilateral agreements in the coming months. Therefore, consistently with LIC DSA guidelines for post-completion point countries, we assume debt relief by Kuwait and Libya in line with the debt reduction required under HIPC.[5]

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[4] The project includes 4 components: (a) expanding capacity; (b) building a new mineral seaport; (c) modernizing the railway connection from the mine to the seaport; and (d) building a maintenance base. The financing is provided by several financial institutions, including the African Development Bank, the European Investment Bank, the French Development Agency (AFD), and the Islamic Development Bank. This project will help expand iron ore production. Lack of detailed information does not allow to fully incorporate the impact on growth of other major ongoing and upcoming identified projects.

[5] See "Staff Guidance Note on the Application of the Joint Bank-Fund Debt Sustainability Framework for Low-Income Countries" available at www.imf.org and www.worldbank.org.

Box 1. Baseline Macroeconomic Assumptions

Real GDP growth: Real GDP growth is projected to be sustained at 5.3 percent per year on average over 2010-14, supported by strong activity in the non-oil sector, which is expected to be driven by a significant investment program covering water production and distribution, a large port, and a major project (estimated at US$1.1 billion) to expand capacity of the national iron ore company. Upon completion of these projects, we expect growth to stabilize at about 4.5 percent per year over 2015-29. Near-term risks include volatility in the commodity market, notably a large drop in iron ore and copper prices and a prolonged shortfall in power supply. On the upside, accelerated structural reforms to improve the business environment and higher return on ongoing investment could spur growth.

Inflation: Continued prudent monetary and fiscal policies will keep inflation in the low single digits, at around 5 percent.

Current account balance: The current account deficit is expected to peak at about 16.5 percent of GDP in 2011, mainly driven by the increase in imports associated with the implementation of three major projects in the mining, transportation, and water sectors. The external position would strengthen gradually after 2012, with exports remaining at about 45 percent of GDP through 2022 (and then declining to about 40 percent in 2029) and imports falling steadily to 41 percent by 2029. Net foreign direct investment is expected to decline gradually from about 8 percent of GDP in 2008 to 2.3 percent in 2029.

Mauritania: Major Projects 2009–12
in millions of US dollars

	Total cost of projects	Planned Disbursements 2009	2010	2011	2012
I) Development and Modernization Program of SNIM	1072	25.9	268.9	392.9	347.8
as percentage of GDP		0.9%	8.4%	11.5%	9.5%
of which Expansion of Iron ore capacities production	776				
Construction of a new mineral port	170				
II) Extension of the Nouakchott Sea port	300	0	102	102	96
III) Aftout Essahli Water Project	450	236	100	15	0
Total		261.9	470.9	509.9	443.8
as percentage of GDP		8.8	14.7	14.9	12.1

Source: Mauritanian authorities.

Government balances: The framework assumes the following: (a) non-oil revenue remains stable at about 24 percent of non-oil GDP throughout the period; (b) grants are expected to stabilize at 1 percent in the long-run; and (c) oil revenue will peak at 4 percent of GDP in 2022 before declining steadily to 3.1 percent of GDP in 2029. The government's non-oil deficit including grants is projected to improve gradually from 9 percent to about 3.6 percent of non-oil GDP between 2008 and 2029. The projected primary balance improves from a deficit of 3.2 percent of GDP in 2009 to a surplus of 0.9 percent of GDP in 2029.

External financing: The framework assumes that the authorities will be successful in eliciting additional aid resources equivalent to the levels pledged at the December 2007 consultative group meeting. For this purpose, the government intends to organize in 2010 a follow-up meeting on these pledges. The baseline scenario assumes that Mauritania will borrow essentially on concessional terms. It is expected that new borrowing will gradually shift away from concessional financing. Average grant element on new borrowing will decline to about 18 percent in 2029.

Domestic debt, mainly treasury bills held by the banking sector, stood at 8 percent of GDP at end- 2008. It is projected to stay around 9 percent until 2029.

Real interest rates. The real interest rate of the short-term domestic debt approaches 5 percent.

III. External Debt Sustainability

8. **The analysis shows that Mauritania's external debt is at a moderate risk of debt distress.**[6] The analysis was conducted under the debt sustainability framework for low-income countries (LICs). Mauritania ranks as a "medium performer," according to the World Bank CPIA rating.[7] Therefore, the indicative, policy-related debt burden thresholds used for the analysis are those applying to medium performers. The debt-burden thresholds for countries in this category are: (a) the PV of the debt-to-exports of goods and services of 150 percent; (b) PV of the debt-to-GDP of 40 percent; and (c) PV of the debt-to-fiscal revenues of 250 percent. The relevant debt service ratios are: (a) 20 percent of exports of goods and services; and (b) 30 percent of fiscal revenues.

Baseline

9. **All debt burden indicators remain below their policy-dependent indicative thresholds, except for a marginal and non protracted breach of threshold for the present value (PV) of debt-to-GDP ratio.** PV of debt-to-exports and PV of debt-to-revenue ratios remain well below their indicative, policy-dependent thresholds throughout the period (Figure 1). Furthermore, the ratios decline continuously, and are estimated to be about 40 percent below their thresholds during the last ten years of the projections. However, the PV of debt-to-GDP ratio would only decline below its threshold from 2016. The deterioration of the country's debt indicators in the medium term relative to the previous DSA is attributable mainly to the (i) new loan contracted by the national mining company to expand its production and export capacity; (ii) lower projected oil output; and (iii) the decline in the discount rate from 5 to 4 percent. Debt service ratios reflecting liquidity risks would stay below the indicative thresholds.

Alternative scenario and stress tests

10. **Under the two alternative scenarios, all external debt burden indicators—but the PV of debt-to-GDP—remain below their thresholds**. In the historical scenario (key macroeconomic indicators evolve in line with the record of the past ten years), as well as in a scenario of less favorable lending conditions (new borrowing at 2 percentage points higher interest rates than in the baseline), PV of debt-to-exports and PV of debt-to-revenue ratios

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[6] According to the LIC DSA guidelines, the existence of arrears could suggest that a country is in debt distress, unless there are other reasons than debt-service burden for not servicing its debt. Despite having substantial arrears to external creditors, Mauritania is not assessed as being in debt distress because its arrears are related to debts that were previously categorized as "passive".

[7] In the LIC DSA framework, the quality of a country's policies and institutions is measured by the World Bank's Country Policy and Institutional Assessment (CPIA) index, and classified into three categories: strong, medium and poor. The average CPIA rating for Mauritania over 2006-08 is 3.33, above the 3.25 threshold (see http://siteresources.worldbank.org/IDA/Resources/tablesCPR.pdf).

remain below their thresholds. The historical scenario, based on a continued relatively high level of FDI (12 percent of GDP), shows a more optimistic debt ratio trajectory in comparison with the baseline. However, maintaining FDI at 12 percent of GDP in the long term is unlikely to occur.

11. **The bound tests highlight the country's vulnerability to external shocks, in particular, to lower export value growth.** The most extreme test reflects the one standard deviation shock to export of goods and services in 2010-11. As a result of this shock, all debt stock indicators would breach the thresholds before declining to sustainable levels around 2017 for the PV of debt-to-revenue ratio and 2022-23 for the PV of debt to-exports and GDP ratios.[8] The PV of debt-to-exports ratio does not breach its threshold under any other tests, while the PV of debt-to-revenue ratio breaches the currency depreciation test—a one-time 30 percent depreciation of the exchange rate in 2010—during four years. Also, the debt-to-GDP ratio is breached under several other stress tests.

IV. PUBLIC DEBT SUSTAINABILITY

Baseline

12. **Under the baseline assumptions, the PV of net government debt-to-GDP ratio is projected to decline continuously over the projection period**. Total public debt consists mainly of external PPG debt (90 percent), following then closely the dynamics of its external component. Net public debt would decline to 27 percent of GDP in 2029, down from 89 percent of GDP in 2008. This decline reflects the authorities' policy to move to a primary fiscal surplus starting in 2018 coupled with relatively high and sustained economic growth.

Alternative scenario and stress tests

13. **Stress tests highlight some vulnerability, particularly to exchange rate, to fiscal slippages, and to long-term growth.** The public debt path is susceptible to shocks to the primary fiscal balance. If the primary deficit remains at about 3½ percent of GDP (as in 2009) the debt ratio would stay at around 60 percent of GDP through 2029. This, of course, suggests that the 2009 fiscal stance is not sustainable and the need for fiscal consolidation to put public finances back on a sustainable path. The debt path is also vulnerable to the shock "permanently lower GDP growth." Under the latter assumption, the PV of public debt would reach 52 percent of GDP in 2029, compared with a baseline projection of 24 percent. Public debt indicators also increase in case of a large depreciation of the exchange rate as shown by the test one-time 30 percent real depreciation in 2010.

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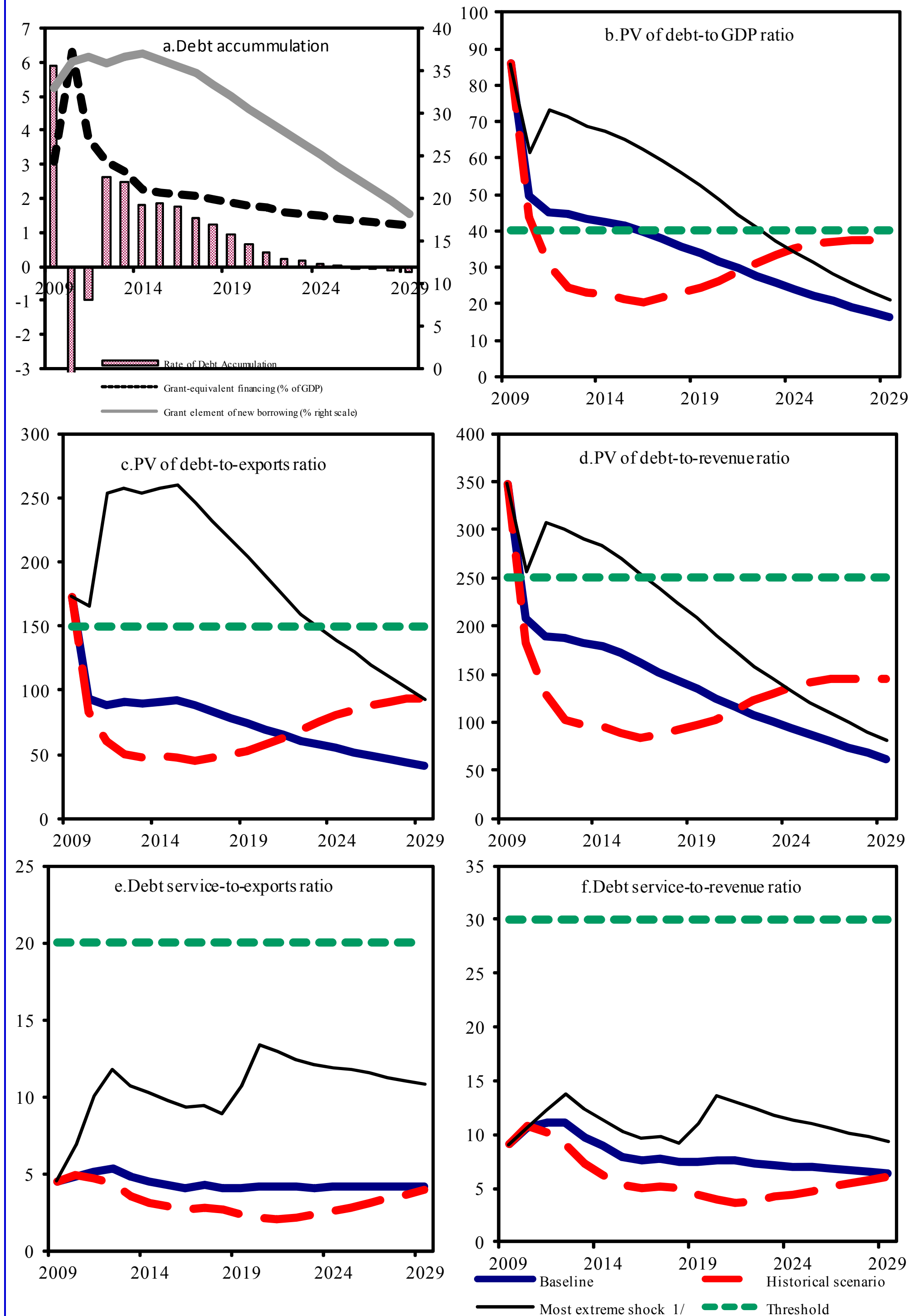
[8] The standard test models a decline in export performance by 16 percent in 2010-11. Should the growth of exports be set at 0 percent during 2010-11, the debt ratios would breach their thresholds only marginally and for three years.

V. Conclusion

14. **This LIC DSA, in line with the 2008 DSA, suggests that Mauritania's risk of debt distress remains moderate**. The PV of debt-to-revenue and PV of debt-to-exports ratios would remain well below the policy-dependent thresholds throughout the period, while the PV of debt-to-GDP ratio exhibits a minor breach in the indicative threshold until 2016. The latter debt trajectory is on a gross basis and does not take into account accumulated reserves in the oil fund (1.1 percent of GDP in 2016).

15. **The debt dynamics are subject to risks.** The country's vulnerability to exports shocks highlights the need to pursue a cautious borrowing strategy, improve debt management, pursue a prudent macroeconomic policy, and diversify the economy. The authorities need to adopt sustainable macroeconomic policies and proceed cautiously with new borrowing over the medium to long term. On the upside, hydrocarbon projections are very conservative despite some indications of additional oil and gas reserves. Moreover, the ongoing large investments projects are expected to result in an acceleration of growth, which has not been fully incorporated in the macroeconomic framework.

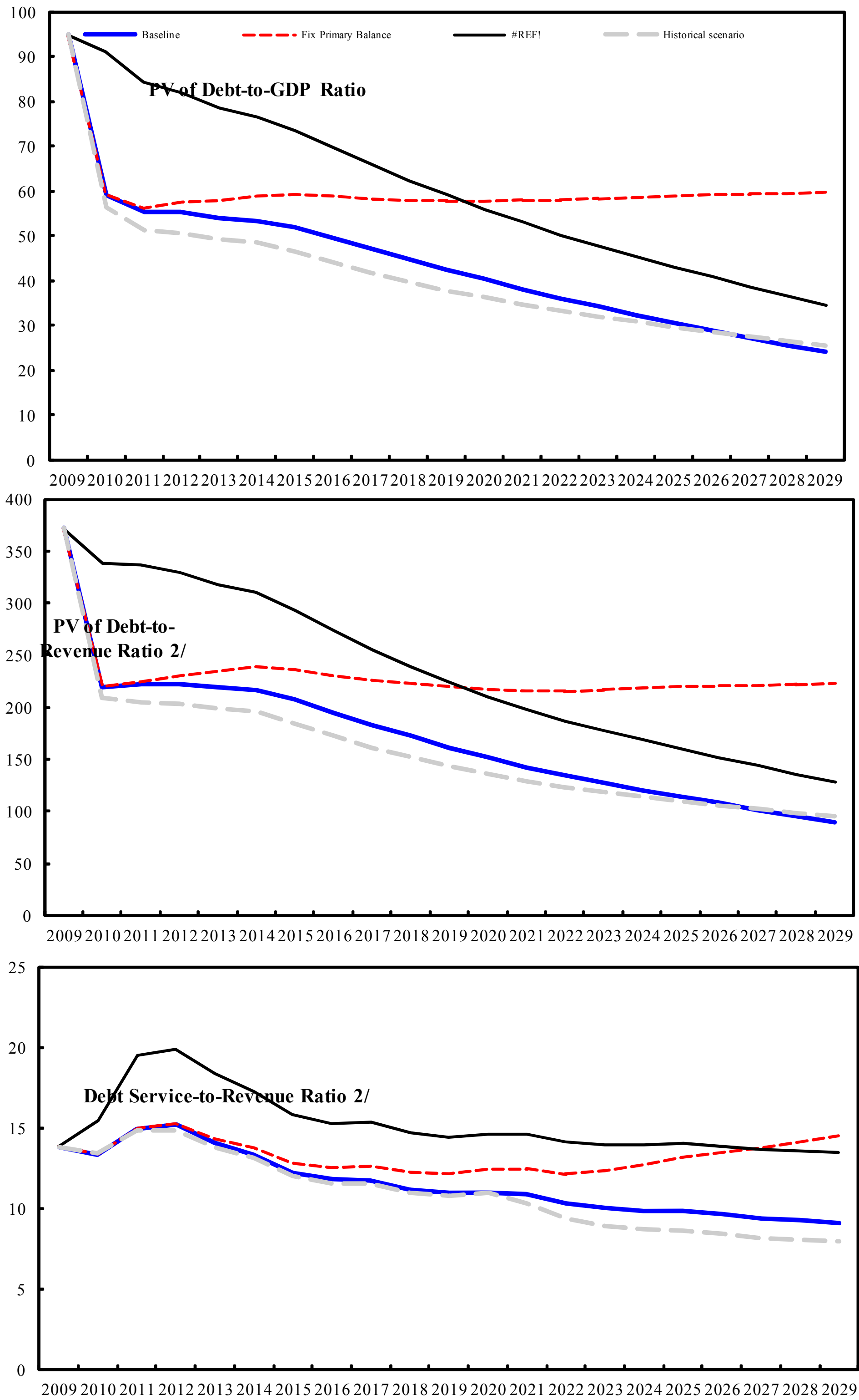
Figure I.1. Mauritania: Indicators of Public and Publicly Guaranteed External Debt under Alternatives Scenarios, 2009-29 1/



Sources: Mauritania authorities and IMF staff projections

a Exports shock; in c. to a Exports shock; in d. to a Exports shock; in e. to a Exports shock and in figure f. to a Exports shock

Figure I.2. Mauritania: Indicators of Public Debt Under Alternative Scenarios, 2009-29 1/



Sources: Mauritanian 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.

Table 1a.Mauritania:: External Debt Sustainability Framework, Baseline Scenario, 2006-29 1/
(In percent of GDP, unless otherwise indicated)

	Actual		Historical Average	Standard Deviation	Projections									
	2007	2008			2009	2010	2011	2012	2013	2014	2009-2014 Average	2019	2029	2015-2029 Average
External debt (nominal) 1/	**90.4**	**88.5**			**103.1**	**71.5**	**74.8**	**79.7**	**76.4**	**72.4**		**48.8**	**20.0**	
o/w public and publicly guaranteed (PPG)	82.9	80.7			92.9	58.8	55.3	55.1	53.9	53.0		41.6	18.6	
Change in external debt	1.1	-1.9			14.6	-31.6	3.3	4.9	-3.3	-4.1		-4.5	-1.9	
Identified net debt-creating flows	0.5	-8.3			21.8	0.0	8.2	5.7	-1.8	-2.3		-3.8	-3.1	
Non-interest current account deficit	**16.5**	**14.6**	**15.4**	**15.8**	**11.0**	**10.3**	**14.6**	**12.8**	**7.6**	**6.3**	10.4	**1.8**	**-0.4**	0.6
Deficit in balance of goods and services	22.4	22.2			17.8	17.1	19.0	16.8	11.0	9.8		4.0	1.0	
Exports	51.1	54.4			49.7	52.8	51.2	49.1	48.1	46.4		45.7	39.7	
Imports	73.4	76.6			67.6	69.9	70.2	65.9	59.1	56.2		49.6	40.7	
Net current transfers (negative = inflow)	-5.0	-5.6	-7.8	2.0	-7.7	-6.1	-4.9	-4.4	-3.7	-3.9		-3.6	-2.7	-3.3
o/w official	-2.5	-3.5			-2.0	-3.8	-2.5	-2.1	-1.6	-1.8		-1.8	-1.4	
Other current account flows (negative = net inflow)	-0.9	-2.0			0.9	-0.7	0.5	0.4	0.4	0.4		1.4	1.4	
Net FDI (negative = inflow)	**-10.8**	**-7.9**	**-12.0**	**13.1**	**-6.1**	**-0.2**	**-3.0**	**-4.2**	**-5.4**	**-6.4**		**-4.5**	**-2.3**	-3.6
Endogenous debt dynamics 2/	**-5.2**	**-14.9**			**16.9**	**-10.2**	**-3.4**	**-2.9**	**-3.9**	**-2.2**		**-1.1**	**-0.5**	
Contribution from nominal interest rate	1.2	1.2			2.0	1.7	1.9	2.2	2.4	2.3		1.2	0.5	
Contribution from real GDP growth	-0.8	-2.7			1.1	-4.2	-3.4	-3.8	-4.4	-3.9		-2.3	-0.9	
Contribution from price and exchange rate changes	-5.6	-13.4			13.8	-7.7	-1.9	-1.4	-1.9	-0.5		-0.8	...	
Residual (3-4) 3/	**0.6**	**6.4**			**-7.2**	**-31.6**	**-4.9**	**-0.8**	**-1.6**	**-1.8**		**-0.7**	**1.3**	
o/w exceptional financing	1.2	1.2			0.7	-30.8	-3.1	0.7	0.7	0.6		0.2	0.1	
PV of external debt 4/	...	81.0			96.1	62.4	64.6	69.1	65.7	61.8		41.0	17.6	
In percent of exports	...	148.9			193.2	118.0	126.2	140.6	136.6	133.3		89.8	44.3	
PV of PPG external debt	**...**	**73.2**			**85.9**	**49.6**	**45.1**	**44.4**	**43.2**	**42.4**		**33.8**	**16.2**	
In percent of exports	**...**	**134.6**			**172.7**	**93.9**	**88.1**	**90.5**	**89.9**	**91.5**		**74.1**	**40.7**	
In percent of government revenues	**...**	**313.0**			**347.7**	**207.6**	**189.6**	**187.6**	**183.1**	**179.3**		**134.5**	**62.6**	
Debt service-to-exports ratio (in percent)	**1.5**	**6.1**			**7.0**	**7.0**	**7.5**	**8.5**	**9.7**	**11.3**		**7.7**	**4.5**	
PPG debt service-to-exports ratio (in percent)	**0.8**	**4.4**			**4.5**	**4.8**	**5.2**	**5.3**	**4.8**	**4.5**		**4.1**	**4.2**	
PPG debt service-to-revenue ratio (in percent)	**1.6**	**10.3**			**9.1**	**10.7**	**11.1**	**11.1**	**9.8**	**8.9**		**7.4**	**6.4**	
Total gross financing need (Billions of U.S. dollars)	0.3	0.5			0.4	0.7	0.7	0.7	0.5	0.4		0.2	0.0	
Non-interest current account deficit that stabilizes debt ratio	15.4	16.5			-3.6	41.9	11.3	7.9	10.9	10.3		6.3	1.5	
Key macroeconomic assumptions														
Real GDP growth (in percent)	1.0	3.7	4.5	3.2	-1.1	4.6	5.2	5.4	6.0	5.4	4.3	4.8	4.5	4.6
GDP deflator in US dollar terms (change in percent)	6.7	17.4	7.1	12.6	-13.5	8.0	2.7	1.9	2.5	0.7	0.4	3.8	3.2	3.4
Effective interest rate (percent) 5/	1.5	1.6	0.8	0.6	1.9	1.8	2.9	3.2	3.3	3.1	2.7	2.5	2.3	2.4
Growth of exports of G&S (US dollar terms, in percent)	2.3	29.6	20.0	35.8	-21.8	20.0	4.6	3.1	6.3	2.3	2.4	9.0	5.9	7.1
Growth of imports of G&S (US dollar terms, in percent)	35.8	26.8	19.4	25.5	-24.5	16.9	8.4	0.9	-2.7	0.9	0.0	6.3	6.4	5.8
Grant element of new public sector borrowing (in percent)	...	...	...	...	33.0	36.0	36.6	35.8	36.6	37.1	35.9	32.0	18.3	28.3
Government revenues (excluding grants, in percent of GDP)	25.0	23.4			24.7	23.9	23.8	23.7	23.6	23.7		25.2	25.8	25.3
Aid flows (in Billions of US dollars) 7/	0.1	0.1			0.2	0.2	0.1	0.1	0.1	0.1		0.1	0.1	
o/w Grants	0.1	0.0			0.0	0.1	0.0	0.0	0.0	0.0		0.1	0.1	
o/w Concessional loans	0.0	0.1			0.1	0.1	0.1	0.1	0.1	0.1		0.0	0.0	
Grant-equivalent financing (in percent of GDP) 8/	...	...			3.1	6.3	3.7	3.1	2.8	2.3		1.9	1.2	1.7
Grant-equivalent financing (in percent of external financing) 8/	...	...			39.5	51.7	46.5	47.3	48.2	51.1		56.6	57.9	57.7
Memorandum items:														
Nominal GDP (Billions of US dollars)	2.9	3.5			3.0	3.4	3.7	4.0	4.3	4.6		6.9	14.9	
Nominal dollar GDP growth	7.8	21.7			-14.4	13.0	8.0	7.4	8.6	6.1	4.8	8.8	7.9	8.2
PV of PPG external debt (in Billions of US dollars)		2.4			2.6	1.7	1.7	1.8	1.9	1.9		2.3	2.4	
(PVt-PVt-1)/GDPt-1 (in percent)					5.9	-29.8	-1.0	2.7	2.5	1.8	-3.0	1.0	-0.2	0.2

Sources: Mauritanian 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 1.b. Mauritania: Sensitivity Analysis for Key Indicators of Public and Publicly Guaranteed External Debt, 2009-29
(In percent)

	Projections							
	2009	2010	2011	2012	2013	2014	**2019**	2029
PV of debt-to GDP ratio								
Baseline	86	50	45	44	43	42	**34**	16
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2009-2029 1/	86	44	31	24	23	23	**24**	37
A2. New public sector loans on less favorable terms in 2009-2029 2	86	52	50	50	50	50	**43**	26
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2010-2011	86	51	48	47	46	45	**36**	17
B2. Export value growth at historical average minus one standard deviation in 2010-2011 3/	86	61	73	71	69	67	**53**	21
B3. US dollar GDP deflator at historical average minus one standard deviation in 2010-2011	86	57	56	55	53	52	**41**	19
B4. Net non-debt creating flows at historical average minus one standard deviation in 2010-2011 4/	86	51	48	47	46	45	**36**	16
B5. Combination of B1-B4 using one-half standard deviation shocks	86	56	58	57	55	54	**43**	19
B6. One-time 30 percent nominal depreciation relative to the baseline in 2010 5/	86	69	62	61	59	58	**46**	22
PV of debt-to-exports ratio								
Baseline	173	94	88	90	90	92	**74**	41
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2009-2029 1/	173	83	60	50	48	49	**53**	94
A2. New public sector loans on less favorable terms in 2009-2029 2	173	99	97	102	104	108	**95**	65
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2010-2011	173	94	88	90	89	91	**73**	40
B2. Export value growth at historical average minus one standard deviation in 2010-2011 3/	173	166	253	257	253	257	**204**	94
B3. US dollar GDP deflator at historical average minus one standard deviation in 2010-2011	173	94	88	90	89	91	**73**	40
B4. Net non-debt creating flows at historical average minus one standard deviation in 2010-2011 4/	173	96	94	97	96	97	**78**	41
B5. Combination of B1-B4 using one-half standard deviation shocks	173	115	121	123	122	124	**99**	51
B6. One-time 30 percent nominal depreciation relative to the baseline in 2010 5/	173	94	88	90	89	91	**73**	40
PV of debt-to-revenue ratio								
Baseline	348	208	190	188	183	179	**135**	63
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2009-2029 1/	348	183	129	103	98	96	**97**	145
A2. New public sector loans on less favorable terms in 2009-2029 2	348	219	208	212	211	211	**172**	99
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2010-2011	348	214	202	200	195	190	**142**	65
B2. Export value growth at historical average minus one standard deviation in 2010-2011 3/	348	257	307	301	291	284	**209**	81
B3. US dollar GDP deflator at historical average minus one standard deviation in 2010-2011	348	237	234	231	225	220	**164**	75
B4. Net non-debt creating flows at historical average minus one standard deviation in 2010-2011 4/	348	212	203	200	195	190	**141**	63
B5. Combination of B1-B4 using one-half standard deviation shocks	348	235	244	241	234	228	**169**	74
B6. One-time 30 percent nominal depreciation relative to the baseline in 2010 5/	348	287	262	258	252	246	**183**	84
Debt service-to-exports ratio								
Baseline	5	5	5	5	5	5	**4**	4
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2009-2029 1/	5	5	5	4	4	3	**2**	4
A2. New public sector loans on less favorable terms in 2009-2029 2	5	5	5	5	5	5	**5**	5
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2010-2011	5	5	5	5	5	5	**4**	4
B2. Export value growth at historical average minus one standard deviation in 2010-2011 3/	5	7	10	12	11	10	**11**	11
B3. US dollar GDP deflator at historical average minus one standard deviation in 2010-2011	5	5	5	5	5	5	**4**	4
B4. Net non-debt creating flows at historical average minus one standard deviation in 2010-2011 4/	5	5	5	5	5	5	**4**	4
B5. Combination of B1-B4 using one-half standard deviation shocks	5	6	6	7	6	6	**5**	5
B6. One-time 30 percent nominal depreciation relative to the baseline in 2010 5/	5	5	5	5	5	5	**4**	4
Debt service-to-revenue ratio								
Baseline	9	11	11	11	10	9	**7**	6
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2009-2029 1/	9	11	10	9	7	6	**4**	6
A2. New public sector loans on less favorable terms in 2009-2029 2	9	11	10	11	10	10	**9**	8
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2010-2011	9	11	12	12	10	10	**8**	7
B2. Export value growth at historical average minus one standard deviation in 2010-2011 3/	9	11	12	14	12	11	**11**	9
B3. US dollar GDP deflator at historical average minus one standard deviation in 2010-2011	9	12	14	14	12	11	**9**	8
B4. Net non-debt creating flows at historical average minus one standard deviation in 2010-2011 4/	9	11	11	11	10	9	**8**	7
B5. Combination of B1-B4 using one-half standard deviation shocks	9	12	13	13	12	11	**9**	8
B6. One-time 30 percent nominal depreciation relative to the baseline in 2010 5/	9	15	15	15	14	12	**10**	9
Memorandum item:								
Grant element assumed on residual financing (i.e., financing required above baseline) 6/	25	25	25	25	25	25	**25**	25

Sources: Mauritanian 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 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. Mauritania: Public Sector Debt Sustainability Framework, Baseline Scenario, 2006-29
(In percent of GDP, unless otherwise indicated)

	Actual		Average	Standard Deviation	Estimate	Projections								
	2007	2008			2009	2010	2011	2012	2013	2014	2009-14 Average	2019	2029	2015-29 Average
Public sector debt 1/	92.1	88.8			101.9	68.2	65.7	65.9	64.8	64.0		50.3	26.5	
o/w foreign-currency denominated	81.0	79.3			91.8	58.1	54.9	55.0	53.9	52.9		39.9	17.3	
o/w: foreign currency denominated oil reserve	-2.0	-1.4			-1.1	-0.7	-0.4	-0.1	-0.1	-0.1		-1.7	-1.3	
Change in public sector debt	3.6	-3.3			13.1	-33.7	-2.5	0.3	-1.2	-0.8		-3.0	-1.9	
Identified debt-creating flows	-7.0	-0.2			12.7	-37.7	-4.0	-0.6	-1.9	-0.7		-2.9	-1.9	
Primary deficit	-0.5	4.6	-0.2	13.8	3.2	3.2	2.5	1.4	0.9	0.7	2.0	-0.2	-0.9	-0.4
Revenue and grants	27.1	24.1			25.5	26.9	25.0	24.8	24.7	24.7		26.4	26.8	
Grants	2.2	0.8			0.8	3.0	1.3	1.2	1.1	1.0		1.2	1.0	
Oil revenue	2.6	2.0			1.7	1.1	1.1	1.0	1.2	1.2		3.3	3.1	
Primary (noninterest) expenditure	26.7	28.7			28.7	30.1	27.5	26.3	25.6	25.4		26.2	25.9	
Automatic debt dynamics	-7.6	-6.1			8.8	-10.1	-3.4	-2.8	-3.5	-2.0		-2.9	-1.1	
Contribution from interest rate/growth differential	-2.1	-3.9			2.2	-4.6	-2.8	-2.8	-3.2	-2.7		-2.4	-1.0	
of which: contribution from average real interest rate	-1.2	-0.6			1.2	-0.1	0.6	0.6	0.5	0.7		0.0	0.2	
of which: contribution from real GDP growth	-0.9	-3.3			1.0	-4.5	-3.4	-3.4	-3.7	-3.3		-2.4	-1.2	
Contribution from real exchange rate depreciation	-5.5	-2.2			6.6	-5.5	-0.6	0.0	-0.3	0.7		...	...	
Other identified debt-creating flows	1.1	1.3			0.7	-30.8	-3.1	0.7	0.7	0.6		0.2	0.1	
Privatization receipts (negative)	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	
Debt relief (HIPC and other)	1.1	1.3			0.7	-30.8	-3.1	0.7	0.7	0.6		0.2	0.1	
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	
Residual, including asset changes	10.5	-3.1			0.4	4.0	1.5	0.9	0.8	-0.2		-0.1	0.0	
Other Sustainability Indicators														
NPV of public sector debt	9.1	81.2			94.8	59.0	55.5	55.3	54.1	53.4		42.6	24.1	
o/w foreign-currency denominated	0.0	73.2			85.9	49.6	45.1	44.4	43.2	42.4		33.8	16.2	
o/w external	...	73.2			85.9	49.6	45.1	44.4	43.2	42.4		33.8	16.2	
PV of contingent liabilities (not included in public sector debt)	...	...			...	...	...	...	...	...		...	...	
Gross financing need 2/	11.8	18.4			16.9	15.7	15.5	15.2	14.5	14.3		12.4	10.3	
PV of public sector debt-to-revenue and grants ratio (in percent)	33.7	336.5			372.2	219.4	221.6	222.6	219.1	216.5		161.6	89.7	
PV of public sector debt-to-revenue ratio (in percent)	36.6	347.4			383.7	246.8	233.3	233.5	229.0	225.6		169.4	93.1	
o/w external 3/	…	313.0			347.7	207.6	189.6	187.6	183.1	179.3		134.5	62.6	
Debt service-to-revenue and grants ratio (in percent) 4/	25.6	16.5			13.8	13.4	15.0	15.2	14.1	13.3		10.9	9.1	
Debt service-to-revenue ratio (in percent) 4/	27.8	17.1			14.3	15.0	15.7	15.9	14.7	13.8		11.5	9.4	
Primary deficit that stabilizes the debt-to-GDP ratio	-4.0	7.9			-9.9	36.9	5.0	1.1	2.1	1.5		2.8	1.0	
Key macroeconomic and fiscal assumptions														
Real GDP growth (in percent)	1.0	3.7	4.5	3.2	-1.1	4.6	5.2	5.4	6.0	5.4	4.3	4.8	4.5	4.6
Average nominal interest rate on forex debt (in percent)	1.0	0.9	0.6	0.4	1.1	1.1	1.7	1.7	1.6	1.6	1.5	1.5	1.7	1.6
Average real interest rate on domestic debt (in percent)	18.9	3.9	10.0	12.2	16.2	0.5	5.9	6.8	6.4	8.3	7.3	5.0	4.7	4.9
Real exchange rate depreciation (in percent, + indicates depreciation)	-6.5	-2.8	-6.4	7.3	8.1	...	...	...	...	...	...	...	...	...
Inflation rate (GDP deflator, in percent)	3.3	9.0	8.6	10.2	-6.2	8.0	2.7	1.9	2.5	0.7	1.6	3.8	3.2	3.4
Growth of real primary spending (deflated by GDP deflator, in percent)	2.6	11.7	6.9	17.2	-1.2	9.8	-3.9	0.7	3.2	4.6	2.2	5.0	4.4	4.8
Grant element of new external borrowing (in percent)	...	...	…	…	33.0	36.0	36.6	35.8	36.6	37.1	35.9	32.0	18.3	...

Sources: Mauritanian authorities; and staff estimates and projections.

1/ Central government's debt, net of oil fund reserves

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 2b. Mauritania: Sensitivity Analysis for Key Indicators of Public Debt, 2009-29

	Projections							
	2009	2010	2011	2012	2013	2014	2019	2029
PV of Debt-to-GDP Ratio								
Baseline	95	59	55	55	54	53	43	24
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	95	56	51	50	49	48	38	26
A2. Primary balance is unchanged from 2009	95	59	56	57	58	59	58	60
A3. Permanently lower GDP growth 1/	95	60	57	57	57	57	52	52
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2010-2011	95	62	61	63	62	63	57	45
B2. Primary balance is at historical average minus one standard deviations in 2010-2011	95	67	72	71	69	68	54	31
B3. Combination of B1-B2 using one half standard deviation shocks	95	63	63	64	63	63	54	38
B4. One-time 30 percent real depreciation in 2010	95	91	84	82	78	76	59	34
B5. 10 percent of GDP increase in other debt-creating flows in 2010	95	67	63	63	61	60	48	28
PV of Debt-to-Revenue Ratio 2/								
Baseline	372	219	222	223	219	216	162	90
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	372	210	205	203	199	196	143	95
A2. Primary balance is unchanged from 2009	372	220	224	231	234	239	219	222
A3. Permanently lower GDP growth 1/	372	221	226	230	230	231	198	191
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2010-2011	372	228	245	251	252	254	214	168
B2. Primary balance is at historical average minus one standard deviations in 2010-2011	372	249	287	286	280	276	207	117
B3. Combination of B1-B2 using one half standard deviation shocks	372	232	253	256	255	254	203	140
B4. One-time 30 percent real depreciation in 2010	372	338	337	330	318	310	224	129
B5. 10 percent of GDP increase in other debt-creating flows in 2010	372	249	252	252	247	244	183	104
Debt Service-to-Revenue Ratio 2/								
Baseline	14	13	15	15	14	13	11	9
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	14	13	15	15	14	13	11	8
A2. Primary balance is unchanged from 2009	14	13	15	15	14	14	12	14
A3. Permanently lower GDP growth 1/	14	13	15	16	15	14	12	13
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2010-2011	14	14	16	16	15	15	13	13
B2. Primary balance is at historical average minus one standard deviations in 2010-2011	14	13	16	17	16	15	12	12
B3. Combination of B1-B2 using one half standard deviation shocks	14	14	16	16	15	14	12	12
B4. One-time 30 percent real depreciation in 2010	14	15	20	20	18	17	14	13
B5. 10 percent of GDP increase in other debt-creating flows in 2010	14	13	16	16	15	14	11	10

Sources: Mauritanian 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.