INTERNATIONAL MONETARY FUND AND INTERNATIONAL DEVELOPMENT ASSOCIATION

UNION OF THE COMOROS

Joint World Bank/IMF Debt Sustainability Analysis

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

The analysis based on the joint IMF-World Bank debt sustainability framework for low-income countries shows that Comoros is in debt distress. Under the baseline scenario, external debt indicators remain above their relevant indicative thresholds over the next couple of years. Faster economic growth, continued prudent fiscal policy, and further gains in macroeconomic stability are anticipated in the long-run, but the external debt dynamics remain vulnerable to shocks. As illustrated in the 2010 DSA for the Highly Indebted Poor Country (HIPC) Initiative Decision Point, comprehensive debt relief under the HIPC and Multilateral Debt Relief Initiative (MDRI) frameworks remains crucial for securing a long lasting upturn in the external debt outlook.[1]

A. Introduction

1. **This debt sustainability analysis (LIC-DSA) assesses the country's external and public debt using the forward-looking debt sustainability framework (DSF) for low-income countries.**[2] In line with the previous DSA exercise, the present analysis concludes that Comoros is in debt distress and debt dynamics for the country remain vulnerable to a number of shocks over the projection period.

2. **The last joint DSA prepared in June 2010 for the HIPC Initiative decision point concluded that Comoros was in debt distress.** It nevertheless showed more favorable dynamics of debt indicators in the medium term than those from earlier assessments, reflecting arrears clearance operations, bilateral and multilateral debt relief, as well as

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[1] HIPC Initiative Decision Point document for Comoros (IMF Country Report No. 10/242, July 2010).

[2] This DSA has been prepared by Fund and World Bank staff using the Debt Sustainability Framework (DSF) for Low Income Countries (see "Applying the Debt Sustainability Framework for Low-Income Countries Post Debt Relief", (http://siteresources.worldbank.org/INTDEBTDEPT/PolicyPapers/21154573/DMSDR1S3149398v1DSFPaperforweb.pdf). Comoros' quality of policies and institutions, as measured by the average World Bank's Country Policy and Institutional Assessment (CPIA) for the period 2007–12 places it as a "weak performer". The corresponding indicative thresholds for the external debt indicators are 30 percent for the NPV of debt-to-GDP ratio, 100 percent of the debt-to-export ratio, 200 percent for NPV of debt-to-revenue ratio, 15 percent for the debt service-to-exports ratio, and 18 percent for the debt service-to-revenue ratio.

projected improvements in macroeconomic performance. The somewhat improved medium-term debt dynamics are confirmed by the 2012 DSA results.

3. **Comoros reached the decision point of the HIPC Initiative in July 2010 and was granted debt relief by a number of multilateral and bilateral creditors.** After reaching the decision point, the authorities continued making good faith efforts toward completing agreements with Paris Club and non-Paris Club bilateral creditors, as well as other official and commercial creditors on the provision of debt relief on terms compatible with the relief accorded under the November 2009 Paris Club Agreement and in the context of the HIPC Initiative. An agreement signed with the Arab Bank for Economic Development in Africa (BADEA) in December 2010 rescheduled $28.7 million in arrears to this institution.

B. Baseline Assumptions

4. **The baseline macroeconomic assumptions for the current DSA are consistent with the macroeconomic framework underlying the current ECF arrangement, including the following key features:**

a. Real GDP growth is projected to accelerate over the medium term to 4 percent per year, driven by continued macroeconomic stability, improvements in infrastructure, and stronger performance of the agricultural sector based on favorable international prices and additional investment. Economic activity would also benefit from continued easing of political tensions and the gradual return of political stability.

b. CPI inflation over the long-term is projected to remain stable at around 3 percent per year, compatible with the fixed exchange rate regime under the Franc Zone arrangement, which constitutes an important anchor for price stability.

c. The current account deficit (including official grants) is expected to gradually decline, converging to about 5 percent of GDP over the projection period (compared to around 9.5 percent estimated for 2011) as food and consumer goods imports slacken. As a share of GDP, imports of goods are projected to revert to long-run historical averages reflecting the impact of terms of trade improvements and import substitution in agriculture and manufacturing from ongoing and envisaged investments in these sectors. By contrast, exports of goods are projected to grow in line with real GDP.

d. Remittances are projected to remain robust, although increasing at more moderate rates (on average 5 percent in nominal terms over the projection period). Structural reforms, macroeconomic stability and improvements in overall governance are also expected to enhance the outlook for FDI compared to the recent past.

e. Fiscal consolidation is expected to continue over the medium term. The primary fiscal balance is projected to be in surplus from 2016 onwards, providing a strong anchor for long-term fiscal sustainability.

f. External financing is initially assumed mostly on grant terms, with less concessional loan financing gradually picking up (as shown in Figure 1).

g. The baseline scenario for the DSA takes into account interim IDA HIPC assistance starting in mid-2010 up to end-2012 as well as debt relief granted by Paris Club creditors (topped up to standard Cologne terms) and BADEA.

C. External Debt Sustainability Analysis

Baseline

5. **Under the baseline scenario, some external debt indicators for Comoros remain above their relevant indicative thresholds over the medium term** (Table 1a, Figure 1). The present value (PV) of public and publicly guaranteed (PPG) external debt to exports ratio is projected to be about 200 percent in 2012 and remains above the 100 percent threshold for most of the projection period. Furthermore, both the PV of external debt-to-GDP ratio and the PV of external debt relative to revenue are projected to stay above their respective indicative threshold through 2014. Nevertheless, under the baseline scenario, these two indicators decrease significantly over the projection period, including after moving below relevant thresholds in 2015. Indicators related to debt service remain below the respective thresholds throughout the period of analysis.

Sensitivity Analysis

6. **The external debt outlook remains vulnerable to shocks, especially shocks to non-debt creating flows (e.g. FDI) and a combination of several other shocks** (Table 1b, Figure 1). The policy thresholds for three key ratios are breached under the most extreme stress tests for a prolonged period of time. Both the PV of external debt-to-GDP and the PV external debt-to-revenue indicators deteriorate significantly under the scenario assuming a shock to non-debt creating flows. In addition, the PV of debt-to-exports ratio is vulnerable to a combined-shock scenario entailing weaker GDP growth, lower exports, and subdued non-debt creating flows.

7. **In light of Comoros' debt service difficulties and the results from the baseline scenario and stress tests performed, staff concludes that Comoros is in debt distress.**

D. Public Sector Debt Sustainability

Baseline

8. **The inclusion of Comoros' domestic public debt in the analysis does not significantly alter the dynamics of debt burden indicators** (Table 2a, Figure 2). Under the baseline scenario, the PV of total public debt-to-GDP and total public debt-to-revenue (including grants) ratios are projected to decline steadily over time, but remain at rather high levels over the medium term. Total public debt is mostly driven by the dynamics of external debt.

Sensitivity Analysis

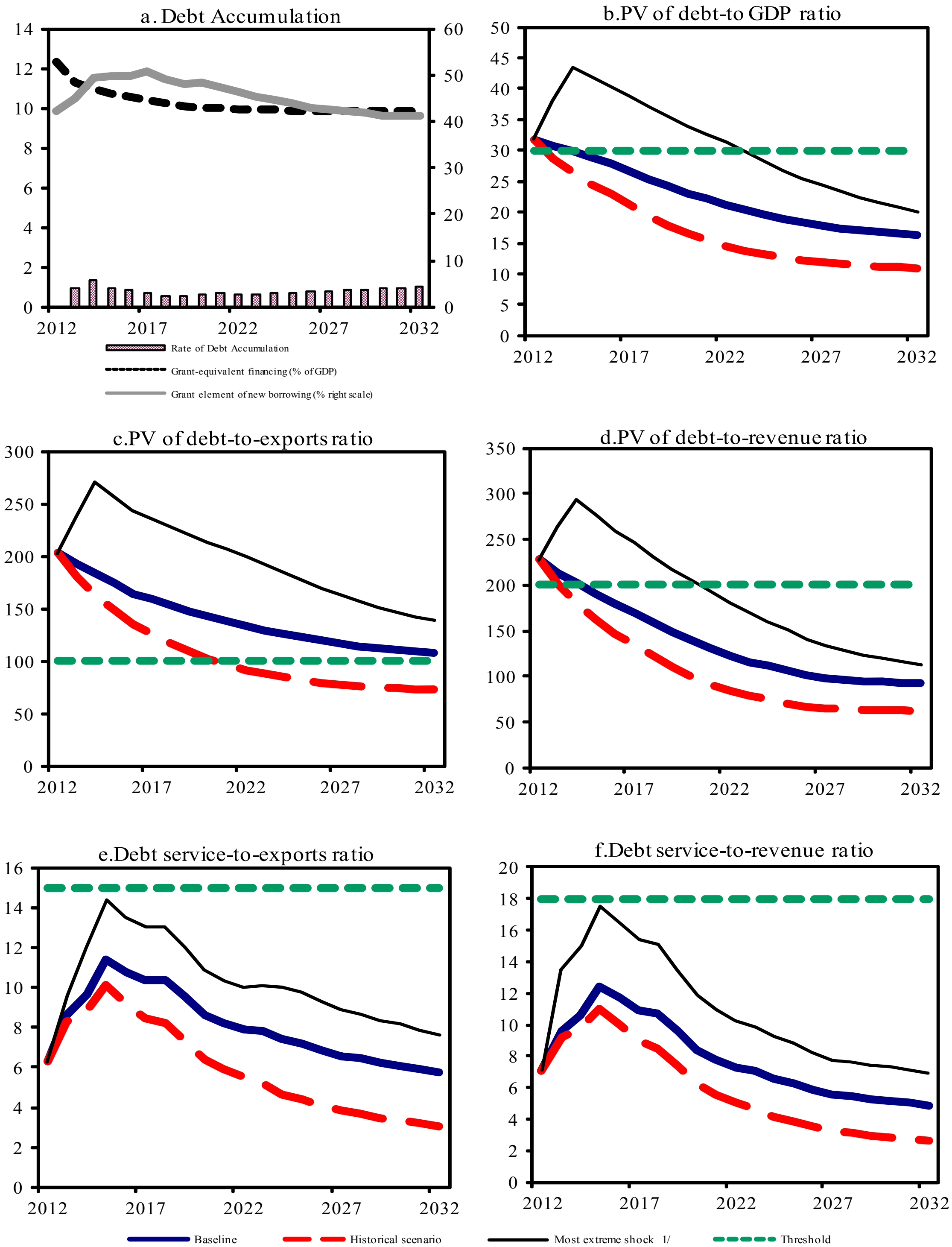
9. **The evolution of public debt indicators is sensitive to a wide range of shocks.** In particular, a shock to GDP growth and a one-time real depreciation (30 percent) would cause the PV of the debt-to-GDP ratio to remain above 30 percent until 2022 (Table 2b, Figure 2). The dynamics of debt appears unsustainable when key variables are kept at historical levels. This highlights the paramount importance of continued efforts in fiscal consolidation to ensure debt sustainability, and in structural reforms to improve the business environment, support foreign investment, and achieve rapid growth.

E. Conclusion

10. **The DSA indicates that Comoros is in debt distress.** Under the baseline scenario and realistic stress tests, the debt ratios remain above relevant thresholds over an extended period of time. These results point to the need for continued fiscal consolidation and prudent borrowing policies to secure long-term debt sustainability. The assumptions and conclusions of the DSA were discussed with the authorities, who broadly concurred with staff's assessment.

11. **Improving the external debt outlook will depend on achieving the HIPC Initiative completion point and maintaining sound macroeconomic policies in the long run.** The inclusion of Comoros' domestic debt in the analysis reinforces the conclusions of the external DSA and stresses the risks to debt prospects. In this context, it is essential that the authorities continue current efforts to strengthen public finance management, reform state-owned enterprises, and improve the investment climate so as to lay the foundation for rapid sustainable economic growth.

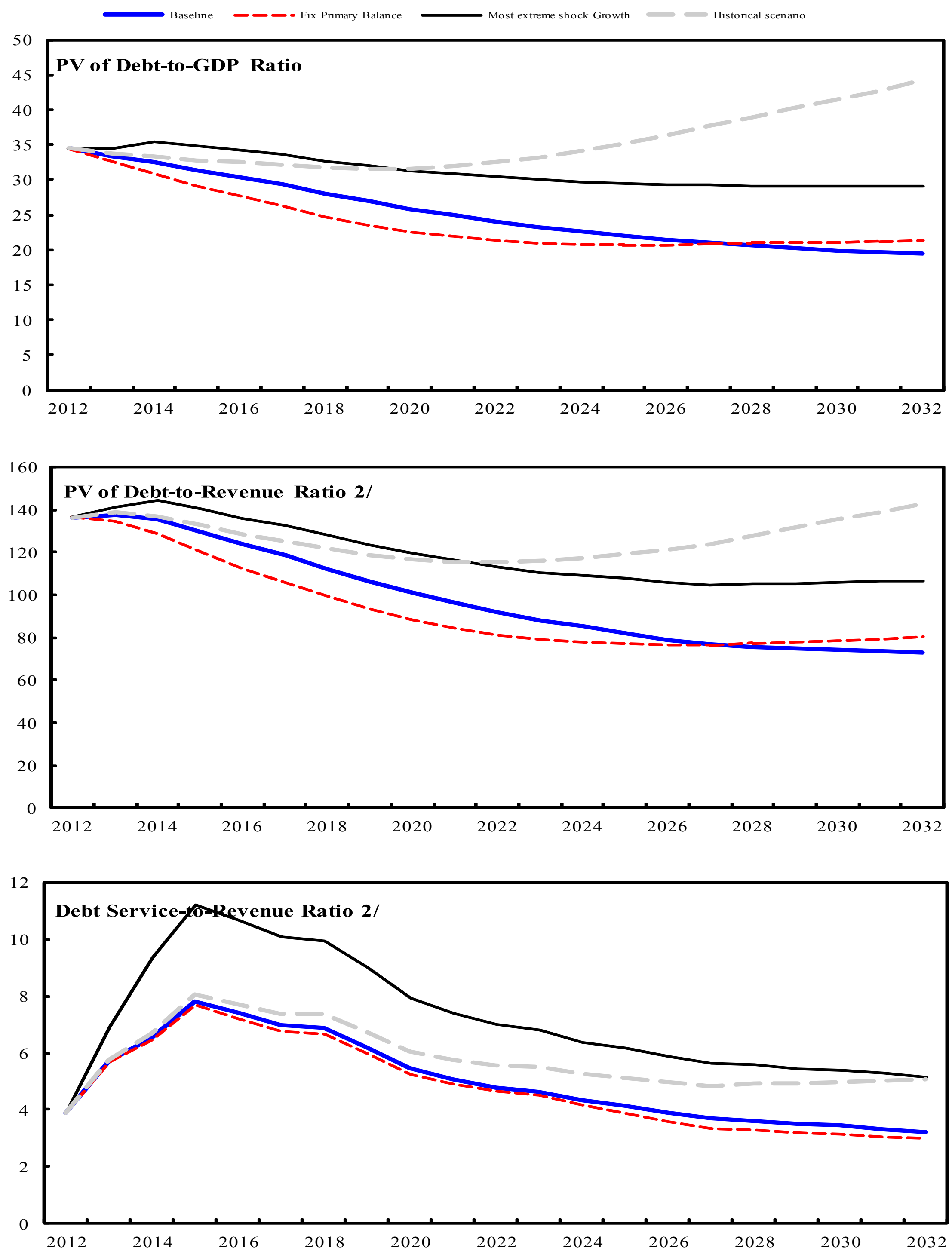
Figure 1. Comoros: Indicators of Public and Publicly Guaranteed External Debt under Alternatives Scenarios, 2012-2032 1/



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 Non-debt flows shock; in c. to a Combination shock; in d. to a Non-debt flows shock; in e. to a Exports shock and in figure f. to a One-time depreciation shock

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

	Actual			Historical Average 6/	Standard Deviation 6/	Projections									
	2009	2010	2011			2012	2013	2014	2015	2016	2017	2012-2017 Average	2022	2032	2018-2032 Average
External debt (nominal) 1/	**54.4**	**49.3**	**42.4**			**43.6**	**42.4**	**41.9**	**41.0**	**40.0**	**38.8**		**31.7**	**24.3**	
o/w public and publicly guaranteed (PPG)	54.4	49.3	42.4			43.6	42.4	41.9	41.0	40.0	38.8		31.7	24.3	
Change in external debt	-9.6	-5.1	-7.0			1.3	-1.2	-0.6	-0.8	-1.0	-1.2		-1.3	-0.4	
Identified net debt-creating flows	4.7	5.5	1.9			6.4	5.4	4.9	4.1	4.0	4.0		4.1	4.3	
Non-interest current account deficit	**7.4**	**6.6**	**9.2**	**6.1**	**2.8**	**10.2**	**9.2**	**8.6**	**7.7**	**7.5**	**7.2**		**6.1**	**5.3**	5.6
Deficit in balance of goods and services	33.2	34.8	36.7			35.9	33.3	30.9	28.6	27.7	26.5		23.5	21.6	
Exports	14.5	15.6	15.4			15.7	16.0	16.3	16.6	16.9	16.7		15.9	15.1	
Imports	47.7	50.4	52.1			51.6	49.3	47.2	45.2	44.7	43.3		39.3	36.7	
Net current transfers (negative = inflow)	-25.5	-28.2	-27.2	-19.5	6.2	-25.8	-24.0	-22.1	-20.7	-20.0	-19.1		-17.2	-16.4	-17.2
o/w official	-2.2	-9.2	0.0			-2.3	-1.0	-0.2	0.0	0.0	0.1		0.1	0.1	
Other current account flows (negative = net inflow)	-0.2	0.0	-0.3			0.0	-0.1	-0.1	-0.2	-0.3	-0.2		-0.1	0.1	
Net FDI (negative = inflow)	**-2.6**	**-0.7**	**-2.3**	**-0.9**	**0.9**	**-2.9**	**-2.7**	**-2.5**	**-2.4**	**-2.2**	**-2.1**		**-1.0**	**-0.3**	-0.7
Endogenous debt dynamics 2/	**-0.1**	**-0.4**	**-5.0**			**-0.8**	**-1.1**	**-1.3**	**-1.2**	**-1.2**	**-1.2**		**-1.0**	**-0.7**	
Contribution from nominal interest rate	0.3	0.4	0.3			0.2	0.3	0.3	0.3	0.3	0.3		0.2	0.2	
Contribution from real GDP growth	-1.1	-1.1	-1.0			-1.1	-1.4	-1.6	-1.6	-1.5	-1.5		-1.2	-0.9	
Contribution from price and exchange rate changes	0.7	0.3	-4.4			...	...	...	...	...	...		...	...	
Residual (3-4) 3/	**-14.3**	**-10.6**	**-8.9**			**-5.2**	**-6.6**	**-5.4**	**-4.9**	**-5.0**	**-5.2**		**-5.4**	**-4.7**	
o/w exceptional financing	-3.1	-7.7	-2.7			-0.1	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
PV of external debt 4/	...	...	30.9			31.8	30.7	29.9	28.9	27.9	26.7		21.2	16.3	
In percent of exports	...	...	201.0			202.7	192.1	184.0	174.4	164.6	159.6		133.8	107.8	
PV of PPG external debt	**...**	**...**	**30.9**			**31.8**	**30.7**	**29.9**	**28.9**	**27.9**	**26.7**		**21.2**	**16.3**	
In percent of exports	**...**	**...**	**201.0**			**202.7**	**192.1**	**184.0**	**174.4**	**164.6**	**159.6**		**133.8**	**107.8**	
In percent of government revenues	**...**	**...**	**191.1**			**228.0**	**213.2**	**202.5**	**190.6**	**178.9**	**169.1**		**122.8**	**92.0**	
Debt service-to-exports ratio (in percent)	**10.5**	**11.4**	**10.6**			**6.3**	**8.6**	**9.6**	**11.4**	**10.8**	**10.3**		**7.9**	**5.7**	
PPG debt service-to-exports ratio (in percent)	**10.5**	**11.4**	**10.6**			**6.3**	**8.6**	**9.6**	**11.4**	**10.8**	**10.3**		**7.9**	**5.7**	
PPG debt service-to-revenue ratio (in percent)	**11.0**	**12.5**	**10.1**			**7.1**	**9.6**	**10.6**	**12.5**	**11.7**	**10.9**		**7.3**	**4.9**	
Total gross financing need (Billions of U.S. dollars)	0.0	0.0	0.1			0.0	0.1	0.1	0.1	0.1	0.1		0.1	0.1	
Non-interest current account deficit that stabilizes debt ratio	17.0	11.7	16.2			8.9	10.4	9.2	8.5	8.5	8.5		7.3	5.6	
Key macroeconomic assumptions															
Real GDP growth (in percent)	1.8	2.1	2.2	1.9	1.4	2.5	3.5	4.0	4.0	4.0	4.0	3.6	4.0	4.0	4.0
GDP deflator in US dollar terms (change in percent)	-1.0	-0.6	9.7	8.9	8.3	-4.8	3.3	2.9	2.8	2.7	2.8	1.6	3.3	3.3	3.3
Effective interest rate (percent) 5/	0.5	0.8	0.8	0.5	0.2	0.5	0.8	0.8	0.8	0.8	0.8	0.7	0.8	0.9	0.8
Growth of exports of G&S (US dollar terms, in percent)	0.4	9.4	10.5	11.3	13.3	-0.6	8.8	9.0	8.9	9.0	5.7	6.8	6.3	7.1	6.6
Growth of imports of G&S (US dollar terms, in percent)	-0.8	7.4	15.8	17.1	10.3	-3.3	2.1	2.4	2.3	5.7	3.6	2.1	6.1	7.1	6.2
Grant element of new public sector borrowing (in percent)	...	...	...	...	...	42.1	45.1	49.5	49.7	49.6	50.9	47.8	46.3	41.1	44.4
Government revenues (excluding grants, in percent of GDP)	13.9	14.3	16.2			14.0	14.4	14.8	15.2	15.6	15.8		17.3	17.7	17.5
Aid flows (in Billions of US dollars) 7/	0.1	0.1	0.0			0.1	0.1	0.1	0.1	0.1	0.1		0.1	0.2	
o/w Grants	0.1	0.1	0.0			0.1	0.1	0.1	0.1	0.1	0.1		0.1	0.2	
o/w Concessional loans	...	...	...			0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Grant-equivalent financing (in percent of GDP) 8/	...	...	...			12.4	11.3	10.9	10.7	10.6	10.4		10.0	9.8	9.9
Grant-equivalent financing (in percent of external financing) 8/	...	...	...			90.0	86.4	86.3	86.1	86.9	88.3		90.2	89.5	89.8
Memorandum items:															
Nominal GDP (Billions of US dollars)	0.5	0.5	0.6			0.6	0.6	0.7	0.7	0.8	0.8		1.2	2.4	
Nominal dollar GDP growth	0.7	1.5	12.2			-2.5	6.9	7.0	6.9	6.8	6.9	5.3	7.4	7.4	7.4
PV of PPG external debt (in Billions of US dollars)			0.2			0.2	0.2	0.2	0.2	0.2	0.2		0.3	0.4	
(PVt-PVt-1)/GDPt-1 (in percent)						0.0	1.0	1.3	1.0	0.8	0.7	0.8	0.7	1.0	0.8
Gross workers' remittances (Billions of US dollars)	0.1	0.1	0.1			0.1	0.1	0.1	0.1	0.1	0.1		0.2	0.3	
PV of PPG external debt (in percent of GDP + remittances)	...	...	26.1			26.6	25.8	25.3	24.7	23.9	23.0		18.6	14.3	
PV of PPG external debt (in percent of exports + remittances)	...	...	90.5			90.3	87.4	87.1	85.8	83.0	81.2		70.3	56.8	
Debt service of PPG external debt (in percent of exports + remittances)	...	...	4.8			2.8	3.9	4.6	5.6	5.4	5.3		4.2	3.0	

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.Comoros: Sensitivity Analysis for Key Indicators of Public and Publicly Guaranteed External Debt, 2012-2032
(In percent)

	Projections							
	2012	2013	2014	2015	2016	2017	**2022**	2032
PV of debt-to GDP ratio								
Baseline	32	31	30	29	28	27	**21**	16
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2012-2032 1/	32	29	27	25	23	21	**15**	11
A2. New public sector loans on less favorable terms in 2012-2032 2	32	32	32	32	32	31	**28**	25
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2013-2014	32	32	32	31	30	28	**23**	17
B2. Export value growth at historical average minus one standard deviation in 2013-2014 3/	32	32	32	31	30	29	**23**	17
B3. US dollar GDP deflator at historical average minus one standard deviation in 2013-2014	32	31	31	30	29	28	**22**	17
B4. Net non-debt creating flows at historical average minus one standard deviation in 2013-2014 4/	32	38	43	42	40	39	**31**	20
B5. Combination of B1-B4 using one-half standard deviation shocks	32	37	41	40	39	37	**30**	20
B6. One-time 30 percent nominal depreciation relative to the baseline in 2013 5/	32	43	42	41	39	38	**30**	23
PV of debt-to-exports ratio								
Baseline	203	192	184	174	165	160	**134**	108
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2012-2032 1/	203	180	163	149	135	127	**92**	72
A2. New public sector loans on less favorable terms in 2012-2032 2	203	198	196	192	187	187	**178**	169
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2013-2014	203	192	184	174	164	159	**133**	108
B2. Export value growth at historical average minus one standard deviation in 2013-2014 3/	203	219	246	234	221	214	**180**	139
B3. US dollar GDP deflator at historical average minus one standard deviation in 2013-2014	203	192	184	174	164	159	**133**	108
B4. Net non-debt creating flows at historical average minus one standard deviation in 2013-2014 4/	203	238	267	253	239	232	**197**	133
B5. Combination of B1-B4 using one-half standard deviation shocks	203	238	271	257	243	236	**200**	139
B6. One-time 30 percent nominal depreciation relative to the baseline in 2013 5/	203	192	184	174	164	159	**133**	108
PV of debt-to-revenue ratio								
Baseline	228	213	203	191	179	169	**123**	92
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2012-2032 1/	228	200	180	162	147	134	**84**	62
A2. New public sector loans on less favorable terms in 2012-2032 2	228	219	216	210	204	198	**163**	144
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2013-2014	228	219	215	203	190	180	**131**	98
B2. Export value growth at historical average minus one standard deviation in 2013-2014 3/	228	219	220	207	194	183	**134**	96
B3. US dollar GDP deflator at historical average minus one standard deviation in 2013-2014	228	218	212	200	187	177	**129**	96
B4. Net non-debt creating flows at historical average minus one standard deviation in 2013-2014 4/	228	265	293	276	260	246	**181**	114
B5. Combination of B1-B4 using one-half standard deviation shocks	228	256	280	264	248	235	**173**	111
B6. One-time 30 percent nominal depreciation relative to the baseline in 2013 5/	228	300	285	268	252	238	**173**	129

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

Debt service-to-exports ratio

Baseline	6	9	10	11	11	10	**8**	6
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2012-2032 1/	6	8	9	10	9	8	**6**	3
A2. New public sector loans on less favorable terms in 2012-2032 2	6	9	10	12	12	12	**9**	9
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2013-2014	6	9	10	11	11	10	**8**	6
B2. Export value growth at historical average minus one standard deviation in 2013-2014 3/	6	10	12	14	14	13	**10**	8
B3. US dollar GDP deflator at historical average minus one standard deviation in 2013-2014	6	9	10	11	11	10	**8**	6
B4. Net non-debt creating flows at historical average minus one standard deviation in 2013-2014 4/	6	9	10	12	12	11	**9**	8
B5. Combination of B1-B4 using one-half standard deviation shocks	6	9	11	13	13	12	**9**	8
B6. One-time 30 percent nominal depreciation relative to the baseline in 2013 5/	6	9	10	11	11	10	**8**	6

Debt service-to-revenue ratio

Baseline	7	10	11	12	12	11	**7**	5
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2012-2032 1/	7	9	10	11	10	9	**5**	3
A2. New public sector loans on less favorable terms in 2012-2032 2	7	10	11	13	13	12	**9**	8
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2013-2014	7	10	11	13	12	12	**8**	5
B2. Export value growth at historical average minus one standard deviation in 2013-2014 3/	7	10	11	13	12	11	**7**	5
B3. US dollar GDP deflator at historical average minus one standard deviation in 2013-2014	7	10	11	13	12	11	**8**	5
B4. Net non-debt creating flows at historical average minus one standard deviation in 2013-2014 4/	7	10	11	14	13	12	**8**	7
B5. Combination of B1-B4 using one-half standard deviation shocks	7	10	11	14	13	12	**8**	7
B6. One-time 30 percent nominal depreciation relative to the baseline in 2013 5/	7	13	15	18	16	15	**10**	7
Memorandum item:								
Grant element assumed on residual financing (i.e., financing required above baseline) 6/	44	44	44	44	44	44	**44**	44

Sources: Country authorities; and staff estimates and projections.

1/ Variables include real GDP growth, growth of GDP deflator (in U.S. dollar terms), non-interest current account in percent of GDP, and non-debt creating flows.
2/ Assumes that the interest rate on new borrowing is by 2 percentage points higher than in the baseline., while grace and maturity periods are the same as in the baseline.
3/ Exports values are assumed to remain permanently at the lower level, but the current account as a share of GDP is assumed to return to its baseline level after the shock (implicitly assuming an offsetting adjustment in import levels).
4/ Includes official and private transfers and FDI.
5/ Depreciation is defined as percentage decline in dollar/local currency rate, such that it never exceeds 100 percent.
6/ Applies to all stress scenarios except for A2 (less favorable financing) in which the terms on all new financing are as specified in footnote 2.

Table 2a.Comoros: Public Sector Debt Sustainability Framework, Baseline Scenario, 2009-2032
(In 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	2018-32 Average
Public sector debt 1/	57.2	51.6	44.9			46.3	45.0	44.4	43.6	42.6	41.5		34.6	27.4	
o/w foreign-currency denominated	54.4	49.3	42.4			43.6	42.4	41.9	41.0	40.0	38.8		31.7	24.3	
Change in public sector debt	-9.9	-5.7	-6.7			1.4	-1.2	-0.6	-0.9	-0.9	-1.2		-1.2	-0.4	
Identified debt-creating flows	-4.7	-15.3	-9.9			0.3	-2.2	-1.8	-2.0	-2.3	-2.5		-3.5	-3.4	
Primary deficit	-0.9	-7.4	-1.8	0.3	3.2	-0.9	0.4	0.8	0.5	0.2	-0.1	0.2	-1.3	-1.7	-1.3
Revenue and grants	23.6	29.2	23.7			25.3	24.2	24.0	24.2	24.6	24.8		26.3	26.7	
of which: grants	9.7	14.9	7.5			11.4	9.8	9.2	9.0	9.0	9.0		9.0	9.0	
Primary (noninterest) expenditure	22.7	21.7	21.9			24.4	24.6	24.8	24.7	24.8	24.7		25.0	25.0	
Automatic debt dynamics	-0.6	-0.2	-5.4			1.2	-2.6	-2.6	-2.5	-2.5	-2.5		-2.2	-1.7	
Contribution from interest rate/growth differential	-3.7	-3.1	-3.0			-2.2	-2.7	-2.8	-2.8	-2.7	-2.6		-2.2	-1.7	
of which: contribution from average real interest rate	-2.6	-1.9	-1.9			-1.2	-1.1	-1.1	-1.1	-1.0	-1.0		-0.8	-0.6	
of which: contribution from real GDP growth	-1.2	-1.2	-1.1			-1.1	-1.6	-1.7	-1.7	-1.7	-1.6		-1.4	-1.1	
Contribution from real exchange rate depreciation	3.1	2.9	-2.4			3.5	0.1	0.2	0.2	0.2	0.2		...	...	
Other identified debt-creating flows	-3.1	-7.7	-2.7			-0.1	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)	-3.1	-7.7	-2.7			-0.1	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	-5.2	9.6	3.2			1.1	1.0	1.2	1.1	1.4	1.4		2.3	3.0	
Other Sustainability Indicators															
PV of public sector debt	...	...	33.5			34.4	33.3	32.5	31.4	30.4	29.3		24.1	19.4	
o/w foreign-currency denominated	...	...	30.9			31.8	30.7	29.9	28.9	27.9	26.7		21.2	16.3	
o/w external	...	...	30.9			31.8	30.7	29.9	28.9	27.9	26.7		21.2	16.3	
PV of contingent liabilities (not included in public sector debt)	...	...	...			...	...	...	...	...	...		...	...	
Gross financing need 2/	3.0	-3.4	1.9			2.5	4.2	4.8	4.8	4.3	4.1		2.6	2.1	
PV of public sector debt-to-revenue and grants ratio (in percent)	…	…	141.2			136.1	137.4	135.4	129.9	123.7	118.3		91.7	72.6	
PV of public sector debt-to-revenue ratio (in percent)	…	…	206.6			246.9	231.3	220.0	207.1	195.4	185.8		139.5	109.6	
o/w external 3/	…	…	191.1			228.0	213.2	202.5	190.6	178.9	169.1		122.8	92.0	
Debt service-to-revenue and grants ratio (in percent) 4/	6.5	6.1	6.9			3.9	5.7	6.5	7.8	7.4	7.0		4.8	3.2	
Debt service-to-revenue ratio (in percent) 4/	11.0	12.5	10.1			7.1	9.6	10.6	12.5	11.7	10.9		7.3	4.9	
Primary deficit that stabilizes the debt-to-GDP ratio	8.9	-1.8	4.9			-2.3	1.6	1.4	1.4	1.1	1.1		-0.1	-1.3	
Key macroeconomic and fiscal assumptions															
Real GDP growth (in percent)	1.8	2.1	2.2	1.9	1.4	2.5	3.5	4.0	4.0	4.0	4.0	3.6	4.0	4.0	4.0
Average nominal interest rate on forex debt (in percent)	0.5	0.8	0.8	0.5	0.2	0.5	0.8	0.8	0.8	0.8	0.8	0.7	0.8	0.9	0.8
Average real interest rate on domestic debt (in percent)	...	...	...	…	…	...	...	...	...	...	...	…	...	...	…
Real exchange rate depreciation (in percent, + indicates depreciation)	5.2	5.6	-5.2	-4.1	6.8	8.6	...	...	...	...	...	...	...	...	...
Inflation rate (GDP deflator, in percent)	4.6	4.3	4.1	3.9	1.4	3.7	3.3	3.3	3.3	3.3	3.3	3.4	3.3	3.3	3.3
Growth of real primary spending (deflated by GDP deflator, in percent)	-0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Grant element of new external borrowing (in percent)	...	...	...	…	…	42.1	45.1	49.5	49.7	49.6	50.9	47.8	46.3	41.1	...

Sources: Country authorities; and staff estimates and projections.
1/ Covers general government gross debt.
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.Comoros: Sensitivity Analysis for Key Indicators of Public Debt 2012-2032

	Projections							
	2012	2013	2014	2015	2016	2017	2022	2032
PV of Debt-to-GDP Ratio								
Baseline	34	33	33	31	30	29	24	19
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	34	34	33	33	32	32	32	44
A2. Primary balance is unchanged from 2012	34	33	31	29	28	26	21	21
A3. Permanently lower GDP growth 1/	34	33	33	32	31	30	26	26
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2013-2014	34	35	35	35	34	34	30	29
B2. Primary balance is at historical average minus one standard deviations in 2013-2014	34	35	36	34	33	32	26	21
B3. Combination of B1-B2 using one half standard deviation shocks	34	35	36	35	34	33	30	27
B4. One-time 30 percent real depreciation in 2013	34	46	44	41	39	37	28	20
B5. 10 percent of GDP increase in other debt-creating flows in 2013	34	39	38	37	35	34	28	22
PV of Debt-to-Revenue Ratio 2/								
Baseline	136	137	135	130	124	118	92	73
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	136	139	137	133	128	125	115	143
A2. Primary balance is unchanged from 2012	136	135	129	120	112	106	81	80
A3. Permanently lower GDP growth 1/	136	138	136	131	126	121	99	94
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2013-2014	136	141	144	140	136	132	113	107
B2. Primary balance is at historical average minus one standard deviations in 2013-2014	136	145	149	143	136	130	101	78
B3. Combination of B1-B2 using one half standard deviation shocks	136	143	145	141	136	132	111	100
B4. One-time 30 percent real depreciation in 2013	136	189	182	171	159	149	107	75
B5. 10 percent of GDP increase in other debt-creating flows in 2013	136	160	157	151	144	137	107	81
Debt Service-to-Revenue Ratio 2/								
Baseline	4	6	7	8	7	7	5	3
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	4	6	7	8	8	7	6	5
A2. Primary balance is unchanged from 2012	4	6	6	8	7	7	5	3
A3. Permanently lower GDP growth 1/	4	6	7	8	7	7	5	4
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2013-2014	4	6	7	8	8	7	5	4
B2. Primary balance is at historical average minus one standard deviations in 2013-2014	4	6	7	8	8	7	5	4
B3. Combination of B1-B2 using one half standard deviation shocks	4	6	7	8	8	7	5	4
B4. One-time 30 percent real depreciation in 2013	4	7	9	11	11	10	7	5
B5. 10 percent of GDP increase in other debt-creating flows in 2013	4	6	7	8	8	7	5	4

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.