September 2006

Cape Verde: Joint Bank-Fund Debt Sustainability Analysis [1] [2]

Cape Verde's debt level has increased in recent years. Despite the rising cost of servicing this debt, the country's external sustainability ratios indicate a low probability of debt distress under the baseline scenario and in the face of plausible shocks. High domestic debt and its implication for fiscal space, however, warrants focusing on total public debt in the analysis.

Background

1. The sustainability of Cape Verde's external and total public debt is assessed using the Fund-World Bank debt sustainability framework for low income countries. The previous DSA was carried out during the sixth review of the PRGF and Article IV consultation,[3] based on the outstanding stock of debt at end-2004. The analysis concluded that, under long-term economic scenarios that were in line with or more cautious than recent historical averages, Cape Verde's public debt appeared sustainable although vulnerable to a variety of possible economic shocks.

2. **Total public debt in Cape Verde has been above 80 percent of GDP for most of the last decade.**[4] At end-2005, debt stood at almost 90 percent of GDP, with interest payments accounting for nearly 10 percent of domestic revenues (2.2 percent of GDP).

3. **External public debt increased significantly in the 1990s, but has declined over recent years.** After peaking at 64 percent of GDP in 2001, external debt decreased to 54 percent of GDP at end-2005. Of this, 79 percent was owed to multilateral creditors, 18 percent to bilateral creditors and less than 1 percent to commercial creditors. The World Bank (IDA) was the largest multilateral creditor, followed by the African Development Fund and BADEA. Portugal, Russia and Germany accounted for over 65 percent of bilateral debt.

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[1] This DSA has been prepared jointly by staff of the IMF and the World Bank. The analysis is undertaken based on aggregate external debt data from the authorities, which have been revised since the last DSA.

[2] This analysis focuses on central government and government guaranteed public debt only, as comprehensive and reliable data on private external debt are not available. Private external debt contracted is believed to be around $25 million. The outstanding amount and the terms of repayment of this debt are not known.

[3] Appendix I of IMF Country Report No. 05/320, 09/2005.

[4] Due to its relatively high income per capita, Cape Verde is not eligible for HIPC assistance nor does it qualify for debt forgiveness under the MDRI. Cape Verde's eligibility for concessional financing through the PRGF and IDA is based on the small island exception.

Table 1. Cape Verde: Net Present Value of Disbursed Debt Outstanding, 2006–11
(Millions of U.S. dollars)

	2005	2006	2007	2008	2009	2010	2011
	Actual	Projected					
Multilaterals	395.6	218.0	217.1	214.7	210.0	205.2	199.9
IDA	213.9	106.4	108.6	110.3	111.3	112.0	112.7
IMF	12.7	10.1	10.4	10.1	9.1	7.5	5.2
Others	169.0	101.5	98.1	94.3	89.6	85.8	81.9
Official bilaterals	93.9	63.7	55.9	46.7	37.8	32.3	26.9
Paris Club	65.3	42.8	35.8	28.6	21.7	18.3	15.0
Non-Paris Club	28.6	17.4	16.9	15.4	13.9	12.3	10.7
Export credit agencies	4.8	3.5	3.3	2.7	2.2	1.7	1.2
Commercial	14.4	12.2	9.9	7.5	5.0	2.4	0.0

Sources: Cape Verdean authorities; and staff estimates and projections.

4. **Domestic debt has increased sharply since the debt restructuring operation in the late 1990s.** This increase has reflected the government's assuming the debt of some large public enterprises as part of their privatization, fiscal slippages, and, more recently, increased recognition of domestic arrears. Central government net domestic debt including arrears amounted to 33 percent of GDP at end-2005. Of this, 30 percent was short term. Commercial banks were the major creditors, holding 55 percent of total government debt. The social security fund INPS held the largest share of the debt to non-banks (26 percent).

5. **The assumptions underlying this DSA are based on the medium-term macroeconomic framework agreed with the authorities during discussions for the PSI and long-term projections agreed between the Fund and the Bank staff.** Over the longer term, real GDP growth is expected to average 5 percent while inflation gradually decreases to around 2 percent annually in line with rates in the euro area. Exports are projected to grow by around 9 percent a year on average, below their historical average growth rate. A cautious approach has been taken toward these assumptions; for example, growth could be higher than projected if foreign direct investment continues to grow at a strong pace.

6. **Grants are assumed to decrease to 5 percent of GDP by 2026, and new borrowing terms may also worsen as a result of Cape Verde's graduation from low income country status in 2008.** Hence, while the baseline scenario assumes no commercial borrowing in 2006-09, commercial loans are assumed to gradually replace loans from multilateral creditors and the Paris Club in the long run. Thus, at the end of the projection period (2026), loans from multilaterals account for 30 percent of total borrowing, whereas commercial borrowing accounts for 40 percent. As a result, the concessionality of new borrowing decreases from 27 percent in 2006 to 8 percent by 2026.

Table 2. Cape Verde: Macroeconomic Baseline Assumptions, 2006–11
(Percent, unless otherwise indicated)

	Historical Average (1996–2005)	2006	2007	2008	2009	2010	2011
Real GDP growth	6.8	5.5	6.0	6.3	6.6	6.6	6.3
Inflation	2.6	6.2	0.2	0.3	2.1	2.1	2.1
Exports of G&S (U.S. dollars terms)	14.8	3.8	5.0	6.5	6.4	12.6	10.5
Imports of G&S (U.S. dollars terms)	8.9	9.2	9.4	9.3	8.6	8.3	6.7
Current Account Balance (percent of GDP)	-9.3	-6.8	-9.9	-10.9	-11.0	-9.9	-7.3
Foreign direct investment (percent of GDP)	3.5	2.1	3.4	4.0	4.4	2.0	2.1
Grant element of new external borrowing	...	27.3	27.5	29.2	31.1	26.6	25.8
Exchange rate (national currency per U.S. dollar, p.a.)	101.3	93.1	92.9	92.6	92.4	92.3	92.1
Public sector revenue and grants (percent of GDP)	30.3	34.1	33.6	34.3	35.0	33.6	30.5

7. **In the event that highly concessional loans fall short of the baseline assumptions, an alternative scenario assesses the impact of covering the resulting gap by a limited amount of less concessional borrowing, as provided for under the PSI program.** To assess the maximum impact of such borrowing, the alternative scenario assumes that the full amount allowed under the program (US$20 million per year) is provided on commercial rather than highly concessional terms over 2006–09. The alternative scenario assumes, moreover, that in the long run, commercial loans will replace concessional loans at a faster pace than in the baseline, thus accounting for 60 percent of total borrowing in 2026.

8. **The DSA incorporates new information that has become available since the previous exercise in 2005.** The main additions are as follows:

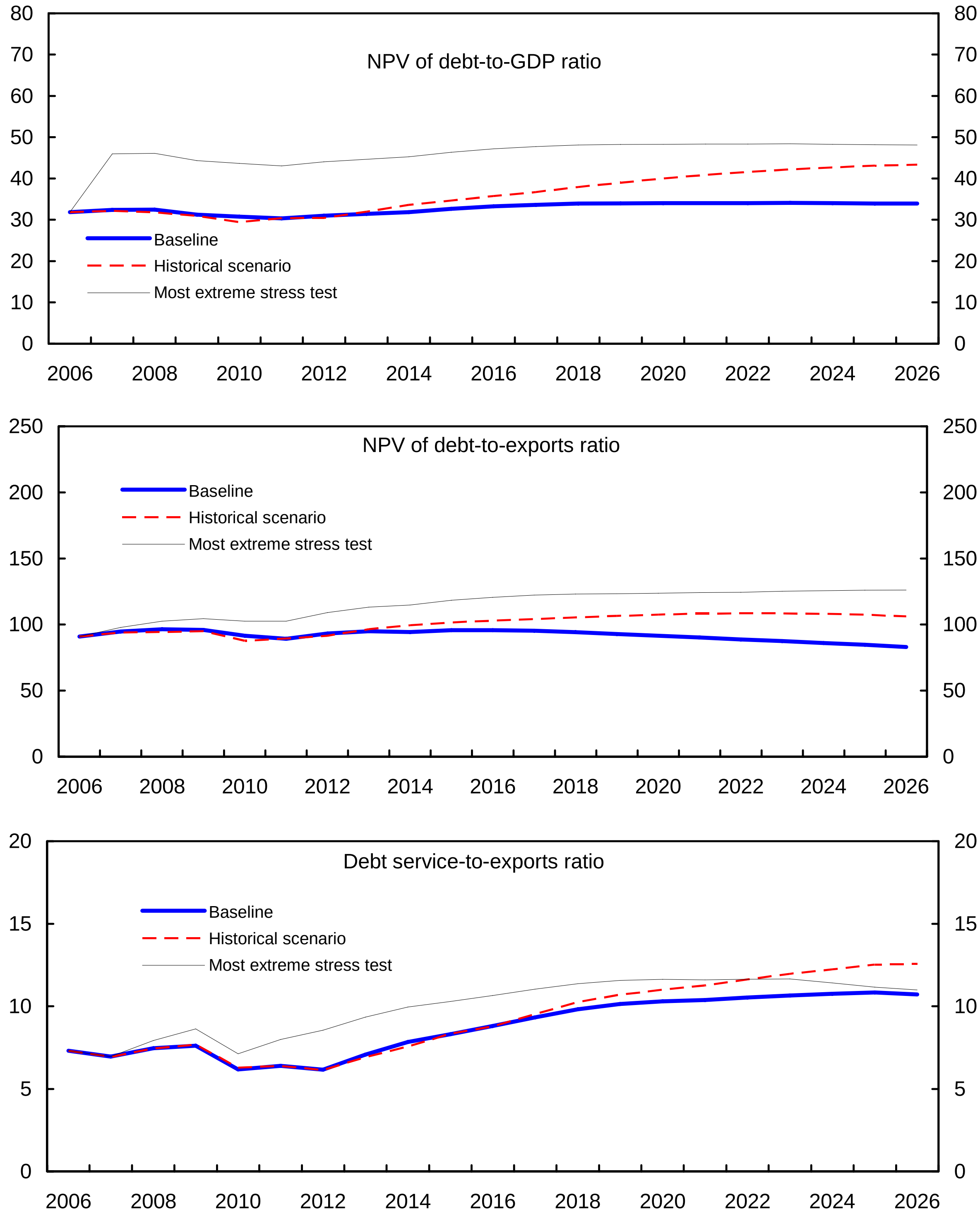
- government guaranteed domestic debt is included in the total debt stock at end-2005;
- newly recognized domestic arrears and cross-debt with the public administration and institutes (amounting to CV Esc 5.3 billion) are included in the domestic debt stock;
- revised projections on contributions to the social security fund stemming from the pension reform of January 1, 2006 are incorporated in the fiscal framework;
- oil subsidies are eliminated from the projections, following the government's 2006 budget decision to this effect;
- WEO oil price projections are updated as of the winter 2006 baseline.

External Debt Sustainability

9. **Despite the gradual reduction in concessionality of new loans, Cape Verde's debt stock and flow indicators under the baseline scenario remain below their policy-dependent thresholds throughout the projection period.** The NPV of debt is projected to increase minimally from 32 to 34 percent of GDP, and to decrease in terms of exports (from 91 to 83 percent). Reflecting worsening borrowing terms, however, debt service payments increase from 7 to 11 percent of exports. In the alternative scenario, the debt service-to-export ratio would increase to 15 percent over the projection horizon.

10. **Standard bound tests suggest that even in the presence of external shocks, Cape Verde does not appear vulnerable to debt distress.** However, a one-time 30 percent exchange rate depreciation relative to the baseline would bring the NPV of debt-to-GDP very close to the threshold of 50 percent and keep it permanently at this level. The debt outlook also appears sensitive to further worsening of borrowing terms and a decline in nondebt creating flows (implying higher debt flows). While the former would increase the NPV of debt-to-exports to 126 percent, a decrease in transfers by one standard deviation compared to the historical average would push the debt service-to-export ratio from 7.6 percent in 2006 to nearly 12 percent in 2023.

Figure II 1. Cape Verde: Indicators of Public and Publicly Guaranteed External Debt Under Alternative Scenarios, 2006-2026
(Percent)



Source: Staff projections and simulations.

Table 3. External Debt Burden Indicators				
		Cape Verde's ratios		
	Thresholds [1]	2006	2016	2026
NPV of debt in percent of:				
GDP	50	32	33	34
Exports	200	91	96	83
Revenues [2]	300	95	119	120
Debt service in percent of:				
Exports	25	7	9	11
Revenues [2]	35	7	11	15

Sources: MOF; and staff extimates.

[1] Based on Cape Verde's 2005 classification as a strong performer.
[2] Including grants.

Fiscal Sustainability

11. **The fiscal DSA is based on the assumption of ongoing fiscal consolidation in the context of lower grant inflows.** The DSA also builds in and extends the PSI program goal of a sizeable reduction in domestic debt as a share of GDP. Specifically, domestic debt would decrease to 16 percent of GDP by 2026. Domestic public revenues are projected to be constant at 24 percent of GDP over the long term: this is lower than the recent historical average and medium-term projections, reflecting prudent assumptions on the scope for ongoing gains in revenue collection. The resulting overall fiscal deficit in the projection period averages 3.1 percent of GDP.

12. **The baseline scenario depicts a decline in the NPV of debt-to GDP ratio, in line with efforts to decrease the debt burden and create fiscal space for emerging pressures.** This ratio decreases to 50 percent in 2026 from 60 percent in 2006. While the NPV of debt-to-revenues shows a small improvement, debt service increases sharply from 10 to 20 percent of revenues by 2026—reflecting the worsening of borrowing terms in the baseline scenario. In the alternative scenario, with a more rapid deterioration in borrowing terms, debt service would rise to 22 percent of revenues by 2026.

13. **Standardized alternative shocks increase the NPV of Cape Verde’s public debt and drive debt service to much higher levels**. The most extreme test, which assumes that the primary balance stays at its historical average minus 1 standard deviation in 2007–08, increases the NPV of debt-to-GDP to 73 percent in 2008 and keeps it above the baseline throughout the projection period. The same shock stabilizes the NPV of debt to-revenues at around 200 percent in the long run, while increasing debt service-to-revenues to 23 percent by 2026.

14. **Recent simulations by the World Bank indicate that the INPS pension system will move into a cash flow deficit by 2037.** While beyond the projection period in the current DSA, this outlook clearly has negative implications for contingent fiscal liabilities

and public debt in Cape Verde over the long run. As in other pension systems around the world, early efforts to address these imbalances would lower the eventual burden of adjustment.

Conclusion

15. **In summary, the debt sustainability analysis suggests that Cape Verde is not likely to face debt distress despite the rising debt service burden, given that sustainability indicators are kept below the thresholds over the forecast horizon.** The analysis incorporates cautious assumptions on macroeconomic variables and builds in a considerable worsening of borrowing terms in the long run. These results are contingent upon the reduction of currently high debt ratios, highlighting the need for prudent fiscal and debt management in the period ahead, including to ensure that debt service costs do not crowd out high priority, poverty reducing spending.

Figure II 2. Cape Verde: Indicators of Public Debt Under Alternative Scenarios, 2006-2026[1]

(Percent)

Chart 1. NPV of debt-to-GDP ratio

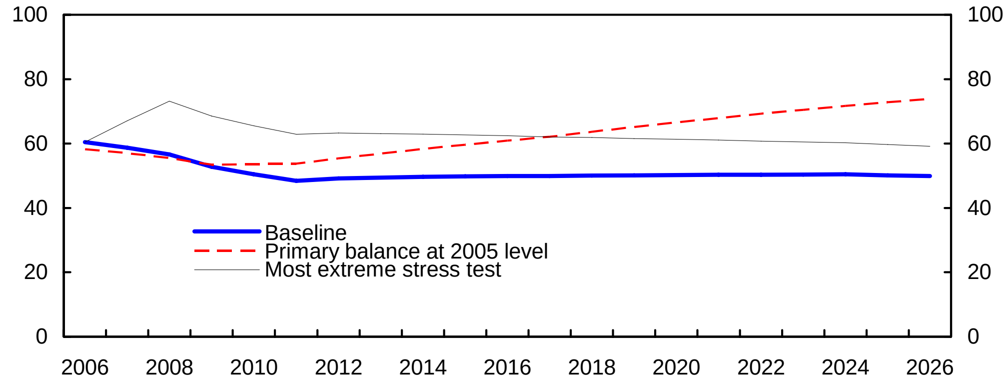


Chart 2. NPV of Debt-to-Revenue Ratio[2]

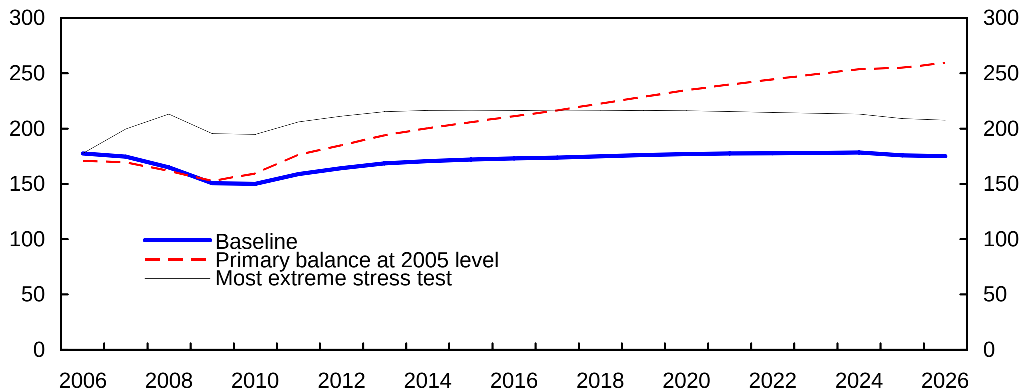
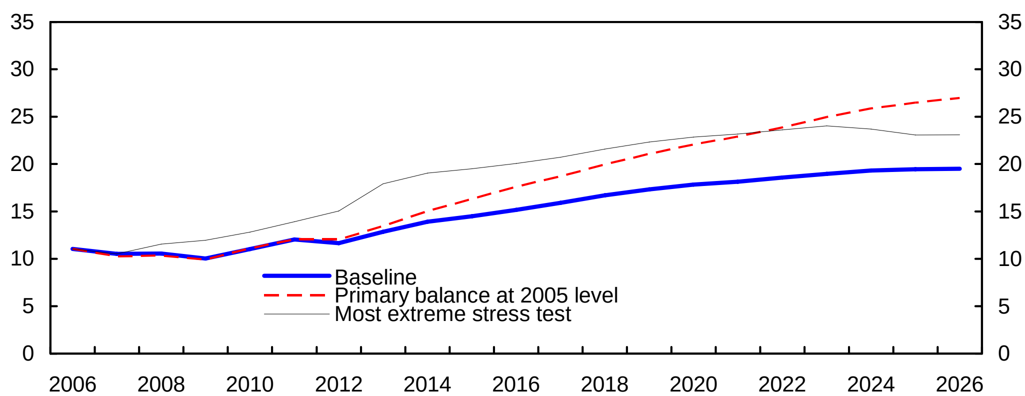


Chart 3. Debt Service-to-Revenue Ratio[2]



Source: Staff projections and simulations.

[1] Most extreme stress test is test that yields highest ratio in 2016.

[2] Revenue including grants.

Table II.4a. Country: External Debt Sustainability Framework, Baseline Scenario, 2003–2026 [1]

(Percent of GDP, unless otherwise indicated)

	Actual			Historical Average [6]	Standard Deviation [6]	Estimate	Projections								
	2003	2004	2005			2006	2007	2008	2009	2010	2011	2006–11 Average	2016	2026	2012–2026 Average
External debt (nominal) [1]	**64.3**	**59.3**	**51.3**			**51.4**	**51.0**	**50.2**	**47.7**	**46.0**	**44.5**		**43.3**	**38.1**	
Of which: public and publicly guaranteed (PPG)	64.3	59.3	51.3			51.4	51.0	50.2	47.7	46.0	44.5		43.3	38.1	
Change in external debt	1.4	-5.1	-8.0			0.1	-0.4	-0.8	-2.5	-1.7	-1.5		0.0	-0.4	
Identified net debt-creating flows	-5.8	4.5	-0.9			2.0	3.6	4.0	3.6	5.0	2.6		3.9	3.7	
Noninterest current account deficit	**10.4**	**13.7**	**3.9**	**9.3**	**3.1**	**6.1**	**9.3**	**10.3**	**10.4**	**9.4**	**6.7**		**7.2**	**5.6**	6.6
Deficit in balance of goods and services	36.1	37.6	29.6			32.0	34.0	35.2	35.4	33.8	31.9		23.3	14.9	
Exports	31.3	31.9	36.2			35.0	34.2	33.7	32.6	33.6	34.0		34.7	40.8	
Imports	67.4	69.5	65.8			67.0	68.1	68.9	68.0	67.4	65.9		58.0	55.7	
Net current transfers (negative = inflow)	-26.6	-25.2	-28.4	-26.2	2.0	-28.1	-26.7	-26.7	-26.7	-26.0	-26.6		-17.0	-9.0	-14.8
Other current account flows (negative = net inflow)	0.9	1.2	2.8			2.2	2.1	1.8	1.7	1.6	1.4		0.9	-0.3	
Net FDI (negative = inflow)	**-1.9**	**-2.2**	**-2.0**	**-3.5**	**2.4**	**-2.1**	**-3.4**	**-4.0**	**-4.4**	**-2.0**	**-2.1**		**-2.0**	**-1.3**	-2.0
Endogenous debt dynamics [2]	**-14.3**	**-7.0**	**-2.9**			**-2.0**	**-2.3**	**-2.4**	**-2.4**	**-2.3**	**-2.0**		**-1.2**	**-0.6**	
Contribution from nominal interest rate	0.6	0.7	0.6			0.6	0.6	0.6	0.6	0.6	0.6		0.8	1.2	
Contribution from real GDP growth	-2.2	-2.5	-3.2			-2.6	-2.9	-3.0	-3.0	-2.9	-2.7		-2.0	-1.8	
Contribution from price and exchange rate changes	-12.7	-5.2	-0.3			...	...	...	...	...	...		...	...	
Residual (3–4) [3]	**7.2**	**-9.5**	**-7.1**			**-1.9**	**-4.0**	**-4.7**	**-6.1**	**-6.7**	**-4.1**		**-4.0**	**-4.0**	
Of which: exceptional financing	-53.1	-1.2	3.7			0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Of which: capital grant	-3.1	-2.5	-2.1			-1.4	-2.4	-2.9	-3.1	-3.5	-1.1		-1.1	-1.1	
NPV of external debt [4]	...	...	31.0			31.9	32.4	32.5	31.2	30.8	30.3		33.3	33.9	
Percent of exports	...	...	85.5			90.9	94.7	96.4	95.9	91.6	89.1		95.8	83.0	
NPV of PPG external debt	**...**	**...**	**31.0**			**31.9**	**32.4**	**32.5**	**31.2**	**30.8**	**30.3**		**33.3**	**33.9**	
Percent of exports	...	...	85.5			90.9	94.7	96.4	95.9	91.6	89.1		95.8	83.0	
Debt service-to-exports ratio (percent)	10.5	11.3	8.8			7.3	7.0	7.5	7.6	6.2	6.4		8.8	10.7	
PPG debt service-to-exports ratio (percent)	10.5	11.3	8.8			7.3	7.0	7.5	7.6	6.2	6.4		8.8	10.7	
Total gross financing need (billions of U.S. dollars)	0.1	0.1	0.1			0.1	0.1	0.1	0.1	0.1	0.1		0.2	0.4	
Noninterest current account deficit that stabilizes debt ratio	9.0	18.8	11.9			6.0	9.7	11.1	12.9	11.1	8.2		7.2	6.0	
Key macroeconomic assumptions															
Real GDP growth (percent)	4.7	4.4	5.8	6.8	2.2	5.5	6.0	6.3	6.6	6.6	6.3	6.2	5.0	5.0	5.0
GDP deflator in U.S. dollar terms (change in percent)	25.2	8.8	0.5	0.9	11.0	1.7	1.5	1.7	3.2	2.6	2.7	2.2	2.0	2.0	2.0
Effective interest rate (percent) [5]	1.3	1.2	1.1	1.5	0.3	1.4	1.2	1.2	1.3	1.3	1.4	1.3	2.1	3.2	2.4
Growth of exports of G&S (U.S. dollar terms, percent)	27.2	15.8	20.7	14.8	11.7	3.8	5.0	6.5	6.4	12.6	10.5	7.5	9.0	9.0	8.4
Growth of imports of G&S (U.S. dollar terms, percent)	28.9	17.2	0.6	8.9	11.8	9.2	9.4	9.3	8.6	8.3	6.7	8.6	6.5	6.7	5.9
Grant element of new public sector borrowing (percent)	...	...	...	...	...	27.3	27.5	29.2	31.1	26.6	25.8	27.9	8.7	7.6	8.2
Memorandum item:															
Nominal GDP (billions of U.S. dollars)	0.8	0.9	1.0			1.1	1.1	1.2	1.3	1.5	1.6		2.3	4.5	

Source: Staff simulations.

[1] Includes both public and private sector external debt.

[2] Derived as [r - g - r(1+g)]/(1+g+r+gr) times previous period debt ratio, with r = nominal interest rate; g = real GDP growth rate, and r = 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 NPV of private sector debt is equivalent to its face value.

[5] Current-year interest payments devided by previous period debt stock.

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

Table II. 4b. Cape Verde : Sensitivity Analyses for Key Indicators of Public and Publicly Guaranteed External Debt, 2006–2026 (concluded)

(Percent)

	Estimate	Projections						
	2006	2007	2008	2009	2010	2011	**2016**	2026
				NPV of debt-to-GDP ratio				
Baseline	32	32	32	31	31	30	**33**	34
A. Alternative scenarios								
A1. Key variables at their historical averages in 2007–2026 [1]	32	32	32	31	29	30	**36**	43
A2. New public sector loans on less favorable terms in 2007–2026 [2]	32	33	35	34	34	35	**42**	52
B. Bound tests								
B1. Real GDP growth at historical average minus one standard deviation in 2007–08	32	33	33	32	32	31	**34**	35
B2. Export value growth at historical average minus one standard deviation in 2007–08 [3]	32	33	35	33	33	32	**34**	34
B3. US dollar GDP deflator at historical average minus one standard deviation in 2007–08	32	37	41	40	39	39	**42**	43
B4. Net non-debt creating flows at historical average minus one standard deviation in 2007–08 [4]	32	36	41	39	39	38	**37**	34
B5. Combination of B1-B4 using one-half standard deviation shocks	32	36	41	40	39	38	**40**	39
B6. One-time 30 percent nominal depreciation relative to the baseline in 2007 [5]	32	46	46	44	44	43	**47**	48
				NPV of debt-to-exports ratio				
Baseline	91	95	96	96	92	89	**96**	83
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2007–2026 [1]	91	94	94	95	88	89	**103**	106
A2. New public sector loans on less favorable terms in 2007–2026 [2]	91	98	103	105	103	102	**121**	126
B. Bound tests								
B1. Real GDP growth at historical average minus one standard deviation in 2007–2008	91	95	96	96	92	89	**96**	83
B2. Export value growth at historical average minus one standard deviation in 2007–08 [3]	91	98	108	107	102	99	**104**	88
B3. US dollar GDP deflator at historical average minus one standard deviation in 2007–08	91	95	96	96	92	89	**96**	83
B4. Net non-debt creating flows at historical average minus one standard deviation in 2007–08 [4]	91	107	122	121	115	111	**108**	84
B5. Combination of B1–B4 using one-half standard deviation shocks	91	95	101	100	96	93	**95**	79
B6. One-time 30 percent nominal depreciation relative to the baseline in 2007 [5]	91	95	96	96	92	89	**96**	83
				Debt service ratio				
Baseline	7.3	7.0	7.5	7.6	6	6	**9**	11
A. Alternative scenarios								
A1. Key variables at their historical averages in 2007–2026 [1]	7	7	7	8	6	6	**9**	13
A2. New public sector loans on less favorable terms in 2007–2026 [2]	7	7	7	8	7	6	**8**	15
B. Bound tests								
B1. Real GDP growth at historical average minus one standard deviation in 2007–08	7	7	7	8	6	6	**9**	11
B2. Export value growth at historical average minus one standard deviation in 2007–08 [3]	7	7	8	8	7	7	**10**	11
B3. US dollar GDP deflator at historical average minus one standard deviation in 2007–08	7	7	7	8	6	6	**9**	11
B4. Net non-debt creating flows at historical average minus one standard deviation in 2007–08 [4]	7	7	8	9	7	8	**11**	11
B5. Combination of B1-B4 using one-half standard deviation shocks	7	7	7	8	6	7	**9**	10
B6. One-time 30 percent nominal depreciation relative to the baseline in 2007 [5]	7	7	7	8	6	6	**9**	11
Memorandum item:								
Grant element assumed on residual financing (i.e., financing required above baseline) [6]	8	8	8	8	8	8	**8**	8

Source: Staff simulations.

[1] Variables include real GDP growth, growth of GDP deflator (in U.S. dollar terms), noninterest current account in percent of GDP, and nondebt creating flows.
[2] Assumes that the interest rate on new borrowing is 2 percentage points higher than in the baseline, while grace and maturity periods are the same.
[3] Export 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 II. 5. Cape Verde: Public Sector Debt Sustainability Framework, Baseline Scenario, 2003–2026

(Percent of GDP, unless otherwise indicated)

	Actual					Estimate					Projections				
	2003	2004	2005	Historical Average 5/	Standard Deviation 5/	2006	2007	2008	2009	2010	2011	2006-11 Average	2016	2026	2012-26 Average
Public sector debt [1]	86.5	90.7	88.3			79.9	77.3	74.3	69.2	65.7	62.6		60.0	50.7	
Of which: foreign-currency denominated	57.5	54.0	54.0			51.3	50.9	50.1	47.7	46.0	44.5		43.3	34.6	
Change in public sector debt	-0.7	4.2	-2.4			-8.4	-2.6	-3.0	-5.1	-3.5	-3.1		-0.6	-4.0	
Identified debt-creating flows	-12.8	-8.5	7.8			-3.0	-1.5	-1.7	-4.1	-3.5	-3.0		-0.5	-0.5	
Primary deficit	1.0	-4.2	2.9	5.0	6.6	5.3	2.5	2.3	1.0	0.2	0.3	1.9	1.3	0.7	1.1
Revenue and grants	27.6	34.1	31.2			34.1	33.6	34.3	35.0	33.6	30.5		28.8	28.5	
Of which: grants	5.5	10.9	7.1			9.0	8.9	9.2	9.3	8.9	6.3		5.1	5.0	
Primary (noninterest) expenditure	28.6	29.9	34.1			39.3	36.1	36.6	36.0	33.8	30.8		30.1	29.2	
Automatic debt dynamics	-13.8	-4.3	4.9			-8.3	-3.9	-4.0	-5.0	-3.6	-3.4		-1.9	-1.3	
Contribution from interest rate/growth differential	-3.6	-2.0	-2.9			-4.7	-3.2	-3.2	-3.6	-2.5	-2.2		-1.0	-0.5	
Of which: contribution from average real interest rate	0.3	1.7	2.1			-0.1	1.4	1.4	1.0	1.8	1.7		1.9	2.1	
Of which: contribution from real GDP growth	-3.9	-3.6	-4.9			-4.6	-4.6	-4.6	-4.6	-4.3	-3.9		-2.9	-2.6	
Contribution from real exchange rate depreciation	-10.2	-2.3	7.8			-3.5	-0.8	-0.8	-1.5	-1.1	-1.1		...	...	
Denominator = 1 + g	1.0	1.0	1.1			1.1	1.1	1.1	1.1	1.1	1.1		1.1	1.1	
Other identified debt-creating flows	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Privatization receipts (negative)	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Recognition of implicit or contingent liabilities	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Debt relief (HIPC and other)	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Other (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	12.1	12.7	-10.1			-5.4	-1.2	-1.3	-1.0	0.0	-0.1		0.0	-3.5	
Other Sustainability Indicators															
NPV of public sector debt	...	...	...			60.4	58.7	56.6	52.8	50.5	48.4		49.9	49.9	
Of which: foreign-currency denominated	...	...	...			31.8	32.3	32.4	31.2	30.7	30.3		33.3	33.9	
Of which: external	...	...	...			31.8	32.3	32.4	31.2	30.7	30.3		33.3	33.9	
NPV of contingent liabilities (not included in public sector debt)	...	...	...			...	...	...	...	...	...		...	...	
Gross financing need [2]	35.6	25.4	35.9			37.5	33.3	32.0	28.9	26.7	25.0		23.8	22.5	
in billions of U.S. dollars	0.3	0.2	0.4			0.4	0.4	0.4	0.4	0.4	0.4		0.5	1.0	
NPV of public sector debt-to-revenue ratio (percent) [3]	...	...	...			177.4	174.8	164.9	150.6	150.1	158.8		173.1	175.2	
Of which: external	...	...	...			93.4	96.2	94.4	89.1	91.4	99.3		115.3	119.0	
Debt service-to-revenue ratio (percent) [3, 4]	23.4	7.3	14.9			11.0	10.5	10.5	10.0	11.0	12.0		15.2	19.5	
Primary deficit that stabilizes the debt-to-GDP ratio	1.7	-8.4	5.2			13.6	5.1	5.2	6.0	3.7	3.4		1.9	4.8	
Key macroeconomic and fiscal assumptions															
Nominal GDP (local currency)	80	82	87			98	105	114	125	136	148		209	415	
Real GDP growth (percent)	4.7	4.4	5.8	6.8	2.2	5.5	6.0	6.3	6.6	6.6	6.3	6.2	5.0	5.0	5.0
Average nominal interest rate on public debt (percent)	3.1	3.0	2.6	3.5		2.4	2.3	2.4	2.4	3.5	3.5	2.7	3.8	4.6	4.0
Average nominal interest rate on forex debt (percent)	1.3	1.2	1.2	1.5	0.3	1.4	1.2	1.2	1.3	1.3	1.4	1.3	2.1	3.2	2.4
Average nominal interest rate on domestic debt (percent)	6.6	6.5	4.6	6.5	2.2	4.0	4.4	4.5	4.7	8.3	8.3	5.7	8.2	7.8	8.1
Average real interest rate (percent)	0.4	2.0	2.4	1.8	1.8	-0.2	1.8	1.9	1.4	2.7	2.7	1.7	3.2	4.0	3.4
Real discount rate on foreign-currency debt (percent)	3.1	2.8	5.0	3.3	0.7	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Average real interest rate on domestic currency debt (percent)	2.1	7.7	4.2	4.6	3.9	-2.6	3.0	3.2	1.7	5.7	5.6	2.8	6.0	5.7	6.0
Exchange rate (LC per U.S. dollar)	87	81	93	99.6	14.6	93	93	92	92	92	92	92.5	92	92	92.1
Nominal depreciation of local currency (percentage change in LC per U.S. dollar)	-17.0	-7.3	15.5	2.6	12.5	-0.5	-0.3	-0.3	-0.2	-0.1	-0.1	-0.3	0.0	0.0	0.0
Exchange rate (U.S. dollar per LC)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Nominal appreciation (increase in US dollar value of local currency, percent)	20.4	7.8	-13.4	-1.1	12.9	0.5	0.3	0.3	0.2	0.1	0.1	0.3	0.0	0.0	0.0
Real exchange rate depreciation (in percent, + indicates depreciation)	-19.0	-4.3	15.0	2.4	12.1	-6.8	...	...	...	...	...	...	...	...	...
Inflation rate (GDP deflator, percent)	4.4	-1.1	0.4	1.9	2.9	6.7	1.3	1.3	3.0	2.4	2.5	2.9	2.0	2.0	2.0
US Inflation rate (GDP deflator, percent)	1.8	2.1	0.0	1.6	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Growth of real primary spending (deflated by GDP deflator, percent)	-5.0	9.3	20.5	4.5	17.6	21.8	-2.7	7.8	4.9	0.2	-3.1	4.8	4.4	4.9	4.6
Grant element of new external borrowing (percent)	...	...	...	...	...	27.3	27.5	29.2	31.1	26.6	25.8	27.9	8.7	7.6	...

Sources: Cape Verdean authorities, and Fund 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 including 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 II. 5b. Cape Verde: Sensitivity Analysis for Key Indicators of Public Debt 2006–2026

	Estimate	Projections						
	2006	2007	2008	2009	2010	2011	2016	2026
NPV of Debt-to-GDP Ratio								
Baseline	60	59	57	53	50	48	50	50
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	60	61	61	60	62	63	73	87
A2. Primary balance is unchanged from 2005	58	57	55	53	54	54	61	74
A3. Permanently lower GDP growth [1]	60	59	57	54	52	51	58	74
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2007–08	60	60	59	56	54	53	57	61
B2. Primary balance is at historical average minus one standard deviations in 2007–08	60	67	73	69	66	63	62	59
B3. Combination of B1-B2 using one half standard deviation shocks	60	64	68	63	60	58	58	56
B4. One-time 30 percent real depreciation in 2007	60	72	68	64	61	58	58	60
B5. 10 percent of GDP increase in other debt-creating flows in 2007	60	68	65	61	59	56	57	55
NPV of Debt-to-Revenue Ratio 2/								
Baseline	177	175	165	151	150	159	173	175
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	177	181	177	172	185	208	258	320
A2. Primary balance is unchanged from 2005	171	170	162	153	159	176	211	259
A3. Permanently lower GDP growth [1]	177	176	167	154	155	167	198	255
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2007–08	177	177	171	159	160	172	197	215
B2. Primary balance is at historical average minus one standard deviations in 2007–08	177	200	213	196	195	206	217	208
B3. Combination of B1-B2 using one half standard deviation shocks	177	191	197	180	179	190	201	195
B4. One-time 30 percent real depreciation in 2007	177	213	199	182	180	190	202	211
B5. 10 percent of GDP increase in other debt-creating flows in 2007	177	202	191	175	174	184	196	193
Debt Service-to-Revenue Ratio [2]								
Baseline	11	11	11	10	11	12	15	20
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	11	10	11	10	12	13	21	31
A2. Primary balance is unchanged from 2005	11	10	10	10	11	12	18	27
A3. Permanently lower GDP growth [1]	11	11	11	10	11	12	17	26
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2007–08	11	11	11	10	11	13	17	23
B2. Primary balance is at historical average minus one standard deviations in 2007–08	11	11	12	12	13	14	20	23
B3. Combination of B1-B2 using one half standard deviation shocks	11	11	11	11	12	13	18	22
B4. One-time 30 percent real depreciation in 2007	11	11	11	11	12	13	17	23
B5. 10 percent of GDP increase in other debt-creating flows in 2007	11	11	12	11	12	13	18	21

Sources: Country authorities; and Fund staff estimates and projections.

[1] Assumes that real GDP growth is at baseline minus one standard deviation divided by the square root of 20 (i.e., the length of the projection period).

[2] Revenues are defined inclusive of grants.