INTERNATIONAL DEVELOPMENT ASSOCIATION
AND
INTERNATIONAL MONETARY FUND

CAPE VERDE

Joint World Bank–Fund Debt Sustainability Analysis

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

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The risk of debt distress in Cape Verde remains low. *Nevertheless, medium-term fiscal policy will reverse the public debt decline of recent years. The total public debt-to-GDP ratio is projected to rise until 2012 and then decline thereafter—a path opposite that projected in the 2007 DSA. The temporary rise in external debt will be only partially offset by continued decline in domestic debt. Despite the rise, debt ratios remain manageable in all scenarios. Foreign direct investment (FDI) will finance most of the external current account deficit, which will narrow as Cape Verde transforms itself into a services exporter. The main risks to the debt outlook are currency exposure and contingent liabilities. The risk of debt distress remains low under the baseline as well as alternative scenarios that take those risks into consideration.*

I. BACKGROUND[1]

1. **This DSA reviews the evolution of Cape Verde's public debt since the 2007 DSA[2] and analyzes the projected debt path for the period 2008–28.** Using the Fund-World Bank debt sustainability framework (DSF), it projects the baseline economic scenario and performs stress tests to assess whether the risk of debt distress will stay low. The thresholds for public external debt distress are those for countries like Cape Verde that have sound policies and

[1] This analysis includes only central government debt and guarantees; it excludes municipalities and state-owned enterprises.

[2] IMF Country Report 08/37 and World Bank Report 44350-CV.

institutions (Table 1).[3] The baseline scenario was updated based on discussions with the authorities during the fifth review of the Policy Support Instrument (PSI) (September–October 2008). The discussions centered on the 2009 budget and the medium-term fiscal framework the authorities submitted to Parliament in October 2008 along with the 2009 budget.

2. **Since the last DSA Cape Verde has continued to reduce public debt as a percentage of GDP and to change its composition** (Table 2). Total public debt (domestic plus external) was reduced by 10 percentage points of GDP in 2007. Net domestic debt was pushed down to the original PSI benchmark of 20 percent of GDP two years ahead of schedule; it is likely to reach 14 percent of GDP by year-end, thanks to expenditure restraint as well as buoyant revenues. The proportion of domestic debt in total debt was also reduced, reflecting efforts to reach out to development partners for concessional financing, making it possible to replace domestic with mostly concessional external borrowing. All external funds borrowed in 2007 were concessional. Cape Verde's main external creditors are IDA and the African Development Fund (Table 2). While the credit crunch in Europe is making it hard to roll over the nonbank private external debt, this totaled only 8 percent of GDP as of the end of 2007 and is mainly long-term.

Table 1. Cape Verde: Central Government External Debt Ratios

		Baseline Scenario		
	Thresholds [1]	2008	2018	2028
NPV of debt as a percentage of:				
GDP	50	25	26	21
Exports	200	56	42	30
Revenues [2]	300	99	104	83
Debt service as percentage of:				
Exports	25	5	5	4
Revenues [2]	35	8	11	11

Source: Ministry of Finance; and staff estimates.

[1] Based on Cape Verde's 2005-07 classification as a strong performer.

[2] Excluding grants.

3. **The depreciation of the dollar in 2007 and 2008 was favorable to Cape Verde, but it revealed open currency positions (Tables 2 and 5).** The nominal external debt-to-GDP ratio declined by 5 percentage points despite the fact that the dollar value of the country's nominal external debt grew by US$ 58 million in 2007 (4 percent of GDP). This is because the nominal GDP measured in dollars grew by 20 percent boosted by the

[3] Cape Verde's score on the World Bank's Country Policy and Institutional Assessment (CPIA) was upgraded in 2007 from 4.1 to 4.2. Its average score for 2005–07 was 4.13, above the 3.75 floor for strong performers.

appreciation of the escudo relative to the dollar. The open currency exposure to the dollar results from the fact that the external liabilities of the Treasury are denominated mainly in US$ and SDR (which contains dollars), and the net foreign assets of the central bank are mostly in euros. This raises questions about whether the authorities should swap part of their foreign reserves in euros for dollars to cover the outstanding open positions or should prefer that future loans be denominated in euros. The authorities have made commitments in the PSI and PRSC series to improve debt management, and the Fund and the Bank together will provide technical assistance (TA) on debt management in addition to the TA Cape Verde receives from Portugal.

Table 2. Cape Verde: Central Government Debt, 2004–08

	2004	2005	2006	2007	2008
	Actual				Proj.
	(Percent of nominal debt)				
Total	100	100	100	100	100
Nominal external debt	66	64	65	68	74
Multilaterals	51	50	51	57	64
Official bilaterals	13	12	12	10	8
Commercial	2	2	1	1	1
Domestic debt[1]	34	36	35	32	26
	(Units indicated)				
Total					
US$ million	842	802	919	959	936
Percent of GDP	89	81	75	65	52
Nominal external debt					
US$ million	553	513	598	656	694
Percent of GDP	60	51	50	45	38
Domestic debt[1]					
US$ million	288	289	322	303	243
Percent of GDP	29	30	25	20	14
Memorandum item:					
GDP (US$ million)	918	1,006	1,203	1,443	1,826

Source: Cape Verdean authorities, staff estimates and projections.
[1] Net of deposits and obligations with the Trust Fund.

II. MEDIUM-TERM BASELINE SCENARIO

4. **The long-term macroeconomic scenario is projected to revolve over the next 20 years around two axes:** economic transformation toward a service-based economy, and accumulation of international reserves and government deposits at the BCV.

5. **The growth forecast is designed to test the robustness of the conclusions of this DSA**. Because of the financial and commodity price shocks in 2008, short-term growth was

revised downward and inflation upward compared to the previous DSA (Table 3). For the outer years, the previous assumptions are maintained: real GDP is expected to grow by 5 percent in the long term (5 to 20 years), which is a prudent 2 percentage points below the historical average (1 standard deviation). Growth will be driven by the transformation into a service-exporting economy, financed mostly by FDI. Moreover, the projections do not consider the growth-promoting effect of public investment in infrastructure.

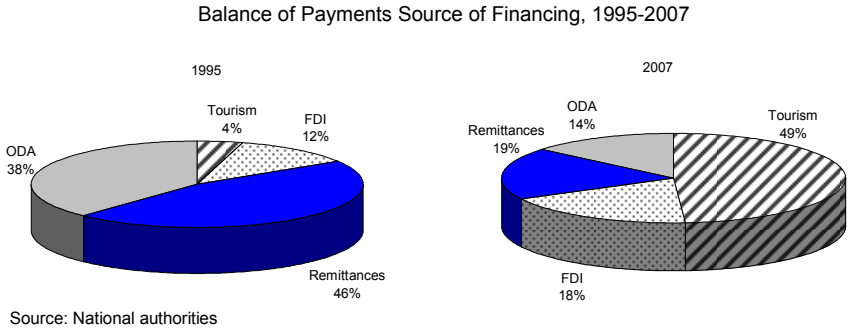
Table 3. Cape Verde: Macroeconomic Baseline Assumptions, 2008–28

	Average	5 Years Ahead		6-20 Years Ahead	
	(1998-2007)	2007 DSA	Current DSA	2007 DSA	Current DSA
Real GDP growth rate (percent)	7.2	7.3	6.6	5.2	5.1
Inflation rate (percent)	3.1	2.3	3.4	2.0	2.0
Exports of goods and services (percent of GDP)	32	47	48	58	65
Imports of goods and services (percent of GDP)	65	78	71	82	78
Financing needs (percent of GDP)[1]	…	-1.0	-2.5	-2.7	-0.4
Grant element of new external borrowing	…	28	16	10	9
Public revenue and grants (percent of GDP)	30	29	28	28	27
Primary public deficit (percent of GDP)	4.9	1.6	2.7	1.3	0.8

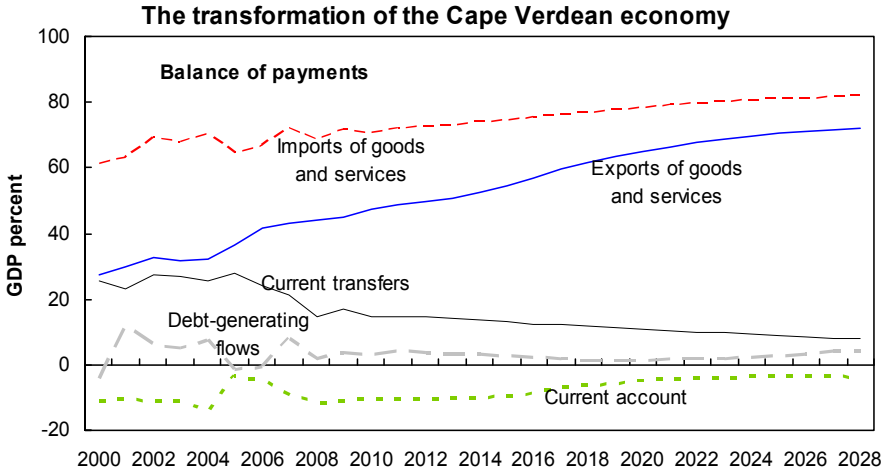
Source: National authorities, staff estimates and projections.

[1] Current account plus foreign direct investment.

6. **The economic transformation is marked by an increase in imports and service exports and by a decrease in reliance on remittances and other current transfers.** Cape Verde is expected to break its past dependence on aid and remittances as it continues to transform itself into a self-propelled economy. While the fuel and food shock increased the import bill in 2008, the restraint in recurrent expenditures created fiscal space that has enabled the government to expand social transfers to protect the vulnerable without putting pressure on the balance of payments. As a result, foreign reserves will stay above 3 months of imports and continue to grow through the forecast horizon. FDI will drive and finance the current account deficit and keep debt-generating flows close to balance. The debt-



Source: National authorities



generating inflows needed to finance the current account deficit are likely to be largely unaffected if FDI is below baseline projections owing to the self stabilizing dynamics of the current account relative to FDI (imports would decline in tandem with FDI thanks to its high import content). Despite a possible deceleration caused by global financial turmoil, the prospects for FDI inflows in the medium term continue to be bright. New commitments approved by the Investment Promoting Agency support the expectation that the private investments will materialize.

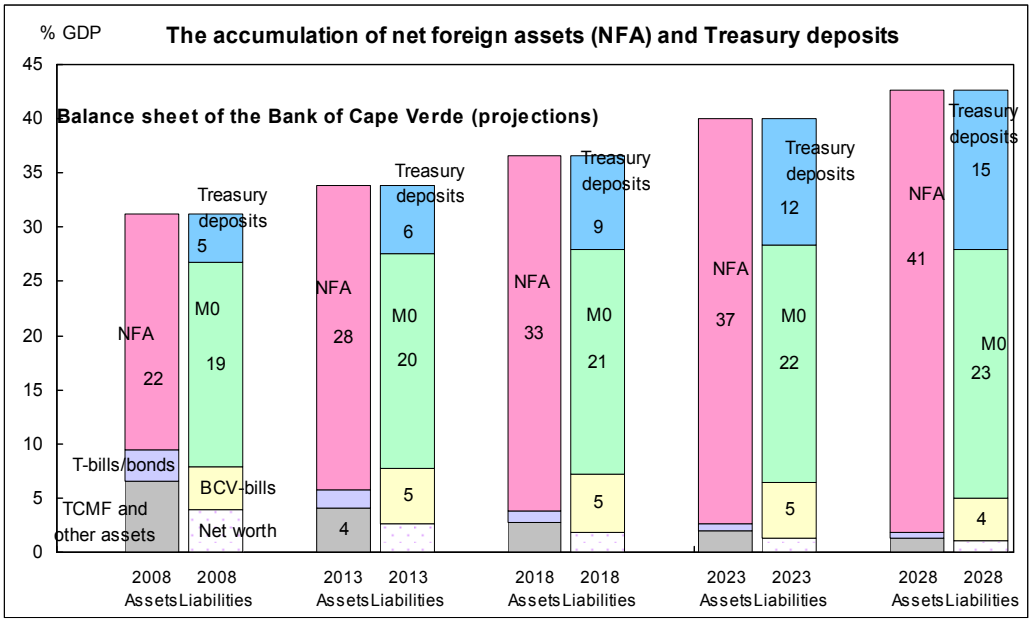
7. **The baseline scenario projects that international reserves will continue to accumulate, as will government deposits at the BCV.** The prudent fiscal policy implemented in the PSI is assumed to continue through the forecast horizon, with foreign reserves building up. This assumption is based on two facts:

a. In October 2008 the authorities submitted to Parliament a medium-term fiscal framework for 2009–2011 that indicates a prudent fiscal policy. Although the policy reverses the recent decline in public debt, it preserves a stable debt path that allows for public investments in infrastructure and social transfers.

b. The authorities announced in the Letter of Intent for the 5th PSI review that they intend to continue with a PSI for at least four more years, until 2013 (a 1-year extension of the current PSI followed by a request for a new 3-year PSI).

Based on these facts, net domestic borrowing is projected to be contained in the next 20 years, allowing net domestic debt[4] to land softly at about 11 percent of GDP. This fiscal restraint is needed to accomplish the authorities' goal of increasing reserve coverage by 0.1 month of prospective imports each year, reaching 5.7 months by 2028 (equivalent to 41 percent of GDP). Financing the reserve accumulation requires that the Treasury make annual deposits of about 1.2 percent of GDP at the BCV. Using the balance sheet approach, this result assumes that the authorities' efforts to develop the domestic securities market will allow the domestic private sector to absorb about 19 percent of GDP in Treasury securities by 2028 (Table 4).

[4] Net of government deposits.



8. **The baseline scenario assumes a faster rise than the previous DSA in the share of nonconcessional external borrowing.** While Cape Verde will continue to have access to concessional loans from IDA and others,[5] this DSA assumes that Cape Verde will increasingly take out nonconcessional loans to finance growth-enhancing public investments. It is assumed that the average grant element of all external borrowing will decline to less than 10 percent by 2028. This assumption is justified by the recent graduation of Cape Verde from the U.N.'s least-developed country category and nonconcessional loans envisaged with the European Investment Bank (EIB), the IBRD, and the OPEC Fund. This assumption is useful for probing the resilience of the debt path to less favorable borrowing terms.[6] To further test resilience in stress scenarios, the grant element of marginal debt[7] is negative because it is assumed that under stress conditions the country would be charged a risk premium of 100 basis points above the market rate.[8]

[5] Cape Verde is a "blend country" as it is eligible to IBRD and IDA funds (under the "small island exception").

[6] The Fund and the Bank will provide TA to Cape Verde on debt management to enable the authorities to ensure that future nonconcessional borrowing is consistent with debt sustainability, especially because the nonconcessional borrowing will double the external interest bill through 2028.

[7] "Marginal debt" is debt taken to cover the gap created by the shock simulated in the stress scenarios.

[8] CIRR (Commercial Interest Reference Rate).

Table 4. Balance Sheet Approach: Intersectoral Positions with the Treasury, Selected Items
(in percentage of GDP)

Treasury	2008	2028	Bank of Cape Verde	2008	2028
Assets	7	15	Assets	31	43
Deposits at the BCV	5	15	Net Foreign Assets	22	41
Deposits in banks	2	0	Claims on the Treasury	3	0
			Other items (net) and TCMF	7	1
Liabilities[1/]	-20	-26	Liabilities	-31	-43
With the BCV	-3	0	Money base	-19	-23
With banks	-11	-6	BCV bills (sterilization)	-4	-4
With non-banks	-7	-19	Deposits of the Treasury	-5	-15
			Equity capital	-4	-1
Net domestic debt	-14	-11			

Domestic Banking Sector	2008	2028	Domestic non-banking sector	2008	2028
Assets	71	85	Assets	…	…
Net Foreign Assets	2	0	Treasury	7	19
Reserve money and cash	12	15	Bank deposits	69	84
Treasury securities	11	6	Cash	7	8
BCV bills (sterilization)	4	4			
Private credit	46	60			
Other items (net) and TCMF	-4	-1			
Liabilities	-71	-85	Liabilities	…	…
Deposits	-69	-84	Bank loans	-46	-60
Deposits of the Treasury	-2	0			

Source: IMF and IDA staffs' projections.

1/ Excludes TCMF.

III. External Debt Sustainability

A. Baseline Scenario

9. **Although the recent decline in external debt will be temporarily reversed because borrowing to finance public investments will accelerate, it will remain below the threshold.** In the previous DSA, external debt was expected to decline continuously. The reason for the difference is the new funds Cape Verde recently secured for public investments, especially from the EIB and the IBRD. The finding that this temporary rise in external borrowing will not jeopardize debt sustainability repeats the finding of the 2007 DSA that a 5-year scaling-up of nonconcessional borrowing is consistent with debt sustainability. The average grant element of the new borrowing will be especially low during 2009–2011 when the EIB loan will be disbursed. The debt service ratios will rise gently but stay below the stress thresholds. This rise in debt service indicators results from the decline in concessional financing and the assumed shortening of amortization periods. Because in this DSA the grant element of new borrowing is projected to decline faster than in the previous one, the rise in debt service ratios will be frontloaded rather than backloaded, as it was in the previous DSA.

B. Alternative and Stress Scenarios

10. **The risk of external debt distress is low even with depreciation and an abrupt worsening of borrowing terms.** The debt ratios remain far below their thresholds in all alternative and stress scenarios, including the scenario where all new borrowing is 200 basis points above the baseline rates (Figure 1 and Table 6 alternative scenario A2). This finding reinforces the conclusion that nonconcessional borrowing is unlikely to jeopardize debt sustainability. The extreme scenario is a currency depreciation, which highlights the need to hedge open currency positions to support the peg. This result is a corollary to the cautionary note about the country's currency exposure (¶ 3).[9] In the historical scenario, the external debt ratio rises for a longer period of time because FDI is less than in the baseline, but it also declines faster in the outer years because the historical scenario implies faster growth and a smaller external deficit. The historical scenario should be interpreted with caution because it does not take into account that in a highly open economy like Cape Verde the current account self-stabilizes to some extent to fluctuations of FDI and growth.

IV. TOTAL DEBT SUSTAINABILITY

A. Baseline Scenario

11. **The trajectory of total public debt contrasts with the previous DSA because it reverses the decline observed in recent years**. In the baseline scenario, the NPV of total public debt as a percentage of GDP is expected to rise until 2013 and decline thereafter. In the previous DSA it was expected to decline in the short term and stabilize in the outer years. The rising trajectory is expected in spite of the faster decline in domestic debt because external borrowing is expected to be larger than in the previous DSA in order to finance public investment in infrastructure. Yet, public debt is sustainable because the baseline scenario maintains the assumption of the previous DSA that the fiscal policy pursued in the PSI and PRSC series to preserve sustainability will continue through 2028. In particular, the government is expected to hold domestic debt at about 11 percent of GDP, which will require it to decelerate public investment over time to make space to pay the interest on current nonconcessional borrowing. The expectation is supported by the medium-term fiscal framework the authorities submitted to Parliament in October 2008 and by the depth of their commitment to sound policies. Sales of coastal land to tourism developers will also enhance fiscal performance. Therefore, we find that debt is sustainable in the baseline scenario.

[9] The hump-shaped path for the historical scenario (Figure 1, red dotted line) was preserved for completeness of this DSA. However, it is not informative because the baseline assumptions on the current account and GDP growth are more pessimistic than the historical scenario.

B. Alternative Scenarios and Stress Tests

12. **Although the macroframework is robust to alternative assumptions and shocks, the DSA highlights the importance of fiscal discipline.** The alternative scenarios tested are[10] (i) real GDP and primary balance at historical averages; (ii) primary balance unchanged from 2008; and (iii) permanently lower GDP growth.[11] All debt ratios remain within sustainable levels under all the alternative scenarios. In the extreme stress test for the debt-to-GDP ratio, the annual fiscal deficit is 10 percent of GDP for 2009–10, which is 7 percent of GDP larger than the baseline primary balance. This simulates a situation where, for example, hypothetical contingent liabilities equivalent to 7 percent of GDP materialize in two consecutive years. For the debt service ratio, the extreme stress is a 30 percent depreciation of the escudo. All debt ratios remain manageable during the forecast horizon under all stress tests.

13. **While conclusive information is not yet available, contingent liabilities arising from state-owned enterprises may be a risk for the debt outlook.** This risk was taken in consideration in the risk assessment of this DSA under the extreme stress test for the debt-to-GDP ratio. This test shows that all debt ratios remain manageable even if contingent liabilities amounting to 7 percent of GDP materialize in two consecutive years. There are explicit and implicit risks: the explicit guarantees[12] provided to state-owned enterprises represent a fiscal risk of 4.5 percent of GDP at the end of 2008. The implicit fiscal risks are currently being assessed by the government, especially the amounts needed to recapitalize some state-owned enterprises. For example, the electricity and water supplier, Electra, had losses equivalent to 1.3 percent of GDP in 2007, which erased about half of its net worth, and it may suffer further losses in 2008 and the following years until the more efficient generators now under construction start operating. The government is taking action supported by the PSI to assess these fiscal risks by compiling an aggregate balance sheet and the net gains or losses of the largest state-owned corporations; it will report the fiscal risks to the Council of Ministers early in 2009. This should encourage prompt action to address the risks, such as allowing the private sector to participate in infusing capital into state-controlled enterprises.

[10] Table 8, alternative scenarios A1–3.

[11] Assumes that real GDP growth is at the baseline minus one standard deviation divided by the length of the projection period.

[12] Domestic debt issued by state-owned enterprises.

V. CONCLUSIONS

14. **The DSA concludes that the risk of debt distress is low and highlights Cape Verde's strengths as well as vulnerabilities.** Even with extreme shocks, public debt is on a sustainable path, given continued fiscal discipline and the economic transformation caused by expansion of service exports and FDI. While the decline in public debt observed in recent years is being reversed, the DSA shows that using nonconcessional funds to expand public investment will not jeopardize debt sustainability as long as the expansion is temporary and recurrent expenditures remain controlled. This conclusion holds even if the expansion of public investments in infrastructure does not generate the expected growth returns, because no growth-enhancing effect of infrastructure is assumed. It is, however, critical that Cape Verde strengthen its debt management. In particular, it needs to conduct DSAs regularly to set a borrowing envelope for the next year's budget and an MTFF consistent with debt sustainability. Two important vulnerabilities identified in the DSA also need to be addressed: the public sector's unhedged currency exposures and the contingent liabilities for state-owned enterprises. The authorities are preparing to address these vulnerabilities as they firm up their debt management.

Table 5. Cape Verde: External Debt Sustainability Framework, Baseline Scenario, 2005-2028 1/
(In percent of GDP, unless otherwise indicated)

	Actual			Historical 0 Average 0	Standard Deviation	Projections									
	2005	2006	2007			2008	2009	2010	2011	2012	2013	2008-2013 Average	2018	2028	2014-2028 Average
External debt (nominal) 1/	**68.9**	**60.8**	**60.5**			**49.7**	**48.9**	**46.9**	**46.6**	**44.8**	**42.7**	**46.6**	**35.2**	**33.7**	**33.7**
o/w public and publicly guaranteed (PPG)	51.0	49.7	45.5			38.0	39.7	39.3	39.3	38.4	37.0		30.7	22.5	
Change in external debt	-10.7	-8.1	-0.3			-10.8	-0.8	-2.0	-0.3	-1.8	-2.1		-1.9	1.4	
Identified net debt-creating flows	-11.1	-15.5	-9.9			-9.5	-1.0	-2.2	-2.4	-3.5	-3.6		-3.9	0.0	
Non-interest current account deficit	**-0.6**	**2.2**	**7.3**	**7.3**	**4.1**	**9.7**	**9.4**	**8.9**	**8.9**	**8.7**	**8.5**	**9.0**	**4.6**	**2.3**	**3.9**
Deficit in balance of goods and services	27.8	25.4	28.7			24.7	26.4	23.4	23.2	23.0	22.3		15.4	9.9	
Exports	36.5	41.6	43.2	31.9		44.0	45.2	47.2	48.8	49.5	50.7	47.5	61.5	71.8	64.6
Imports	64.3	67.0	71.9	65.3		68.6	71.6	70.6	72.0	72.5	73.0	71.4	76.9	81.8	78.4
Net current transfers (negative = inflow)	-27.8	-24.2	-21.4	-25.4	2.0	-14.7	-17.0	-14.6	-14.7	-14.8	-14.3	-15.0	-11.6	-7.8	-10.5
o/w official	-4.6	-4.1	-4.4			-4.4	-5.4	-3.1	-3.2	-3.3	-2.9		-1.7	-0.5	
Other current account flows (negative = net inflow)	-0.7	1.0	-0.1			-0.3	0.0	0.1	0.4	0.4	0.5		0.8	0.2	
Net FDI (negative = inflow)	**-7.5**	**-9.2**	**-8.9**	**-6.6**	**2.9**	**-8.5**	**-8.0**	**-8.0**	**-8.5**	**-8.9**	**-9.1**	**-8.5**	**-6.8**	**-1.2**	**-5.1**
Endogenous debt dynamics 2/	**-3.0**	**-8.5**	**-8.2**			**-10.7**	**-2.4**	**-3.1**	**-2.8**	**-3.3**	**-3.0** #		**-1.7**	**-1.0**	
Contribution from nominal interest rate	4.0	2.8	1.9			2.0	1.7	1.8	1.8	1.8	1.8 #		1.6	1.4	
Contribution from real GDP growth	-4.7	-6.2	-3.5			-2.8	-2.8	-3.1	-3.0	-2.8	-2.7 #		-1.7	-1.5	
Contribution from price and exchange rate changes	-2.3	-5.0	-6.6			-9.8	-1.3	-1.8	-1.5	-2.2	-2.1 #		-1.7	-0.9	
Residual (3-4) 3/	**0.4**	**7.4**	**9.6**			**-1.3**	**0.2**	**0.3**	**2.0**	**1.7**	**1.5** #		**1.6**	**2.0**	
o/w exceptional financing	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0 #		0.0	0.0	
PV of external debt 4/	...	...	42.9			36.2	36.2	35.1	35.5	34.8	33.9		30.3	32.4	
In percent of exports	...	...	99.4			82.3	80.3	74.5	72.9	70.3	66.8		49.3	45.2	
PV of PPG external debt	**...**	**...**	**27.9**			**24.5**	**27.0**	**27.5**	**28.2**	**28.4**	**28.1**		**25.8**	**21.3**	
In percent of exports	**...**	**...**	**65**			**56**	**60**	**58**	**58**	**57**	**55**		**42**	**30**	
In percent of government revenues	**...**	**...**	**110**			**99**	**109**	**112**	**117**	**117**	**115**		**104**	**83**	
Debt service-to-exports ratio (in percent)	**17.9**	**11.2**	**8.0**			**8.1**	**7.0**	**6.1**	**5.7**	**5.8**	**6.0**		**5.8**	**4.7**	
PPG debt service-to-exports ratio (in percent)	**8.5**	**5.6**	**4.7**			**4.7**	**4.3**	**3.9**	**3.7**	**4.0**	**4.3**		**4.7**	**4.0**	
PPG debt service-to-revenue ratio (in percent)	**13.2**	**9.8**	**7.9**			**8.3**	**7.9**	**7.5**	**7.5**	**8.1**	**8.9**		**11.5**	**11.3**	
Total gross financing need (billions of U.S. dollars)	0.0	0.0	0.0			0.1	0.1	0.1	0.1	0.1	0.1		0.1	0.5	
Non-interest current account deficit that stabilizes debt ratio	10.1	10.3	7.6			20.5	10.2	10.8	9.2	10.4	10.6		6.4	0.9	
Key macroeconomic assumptions															
Real GDP growth (in percent)	6.5	10.8	6.9	7.2	2.5	6.0	6.1	7.0	7.1	6.8	6.7	6.6	5.0	5.0	5.0
GDP deflator in US dollar terms (change in percent)	2.9	7.9	12.2	4.4	10.6	19.4	2.8	3.8	3.4	5.0	5.0	6.6	3.5	2.7	3.4
Effective interest rate (percent) 5/	5.5	4.8	3.8	17.4	26.9	4.2	3.8	4.0	4.2	4.3	4.5	4.2	4.8	4.5	4.9
Growth of exports of G&S (US dollar terms, in percent)	24.1	36.3	24.5	17.3	13.2	28.8	12.1	16.0	14.4	13.9	14.6	16.6	12.2	8.5	11.2
Growth of imports of G&S (US dollar terms, in percent)	0.6	24.6	28.7	14.3	12.3	20.8	13.8	9.4	12.9	13.0	12.7	13.8	9.8	8.3	9.4
Grant element of new public sector borrowing (in percent)	**...**	**...**	**...**	**...**	**...**	**10.2**	**14.4**	**19.0**	**17.7**	**16.4**	**14.4**	**15.4**	**9.2**	**5.7**	**8.2**
Government revenues (excluding grants, in percent of GDP)	23.7	23.9	25.5			24.7	24.8	24.5	24.2	24.3	24.4		24.9	25.6	25.1
Aid flows (in billions of US dollars) 7/	0.1	0.1	0.1			0.1	0.2	0.2	0.2	0.3	0.4		0.6	1.0	
o/w Grants	0.1	0.1	0.1			0.1	0.1	0.1	0.1	0.1	0.1		0.1	0.1	
o/w Concessional loans	0.0	0.0	0.0			0.0	0.1	0.1	0.2	0.3	0.3		0.5	0.9	
Grant-equivalent financing (in percent of GDP) 8/9/	...	...	...			5.1	5.9	4.6	3.2	3.5	3.2		2.3	1.1	2.0
Grant-equivalent financing (in percent of external financing) 8/9/	...	...	...			61.0	52.5	54.8	45.1	47.1	46.9		42.9	26.3	37.9
Memorandum items:															
Nominal GDP (billions of US dollars)	1.01	1.20	1.44			1.83	1.99	2.21	2.45	2.74	3.07		4.76	10.59	
(PVt-PVt-1)/GDPt-1 (in percent)						3.1	5.0	3.5	3.7	3.6	3.1	3.7	1.6	1.4	1.6

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 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).

9/ Numbers not comparable with the 2007 DSA, which mistakenly excluded grants.

Table 6. Cape Verde: Sensitivity Analysis for Key Indicators of Public and Publicly Guaranteed External Debt, 2008-2028
(In percent)

	Projections							
	2008	2009	2010	2011	2012	2013	**2018**	2028
PV of debt-to GDP ratio								
Baseline	25	27	28	28	28	28	**26**	21
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2008-2028 1/	25	26	26	28	29	30	**32**	23
A2. New public sector loans on less favorable terms in 2008-2028 2	25	29	31	32	33	33	**34**	34
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2009-2010	25	27	28	29	29	29	**27**	22
B2. Export value growth at historical average minus one standard deviation in 2009-2010 3/	25	30	38	38	36	34	**27**	21
B3. US dollar GDP deflator at historical average minus one standard deviation in 2009-2010	25	30	33	34	34	34	**31**	26
B4. Net non-debt creating flows at historical average minus one standard deviation in 2009-2010 4/	25	25	21	23	24	24	**25**	21
B5. Combination of B1-B4 using one-half standard deviation shocks	25	25	26	27	28	28	**28**	23
B6. One-time 30 percent nominal depreciation relative to the baseline in 2009 5/	25	38	39	40	40	40	**36**	30
PV of debt-to-exports ratio								
Baseline	56	60	58	58	57	55	**42**	30
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2008-2028 1/	56	58	56	57	59	60	**53**	32
A2. New public sector loans on less favorable terms in 2008-2028 2	56	65	65	66	67	66	**55**	47
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2009-2010	56	60	58	58	57	55	**42**	30
B2. Export value growth at historical average minus one standard deviation in 2009-2010 3/	56	72	98	92	87	81	**53**	36
B3. US dollar GDP deflator at historical average minus one standard deviation in 2009-2010	56	60	58	58	57	55	**42**	30
B4. Net non-debt creating flows at historical average minus one standard deviation in 2009-2010 4/	56	55	45	47	48	48	**41**	30
B5. Combination of B1-B4 using one-half standard deviation shocks	56	54	52	54	54	54	**44**	31
B6. One-time 30 percent nominal depreciation relative to the baseline in 2009 5/	56	60	58	58	57	55	**42**	30
PV of debt-to-revenue ratio (excluding grants)								
Baseline	99	109	112	117	117	115	**104**	83
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2008-2028 1/	99	105	108	114	120	124	**130**	89
A2. New public sector loans on less favorable terms in 2008-2028 2	99	118	126	133	136	137	**136**	132
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2009-2010	99	111	116	121	121	119	**107**	86
B2. Export value growth at historical average minus one standard deviation in 2009-2010 3/	99	122	157	155	149	141	**109**	83
B3. US dollar GDP deflator at historical average minus one standard deviation in 2009-2010	99	119	136	142	142	140	**126**	101
B4. Net non-debt creating flows at historical average minus one standard deviation in 2009-2010 4/	99	100	86	94	98	100	**100**	83
B5. Combination of B1-B4 using one-half standard deviation shocks	99	101	104	112	115	116	**112**	91
B6. One-time 30 percent nominal depreciation relative to the baseline in 2009 5/	99	154	158	165	165	162	**146**	117

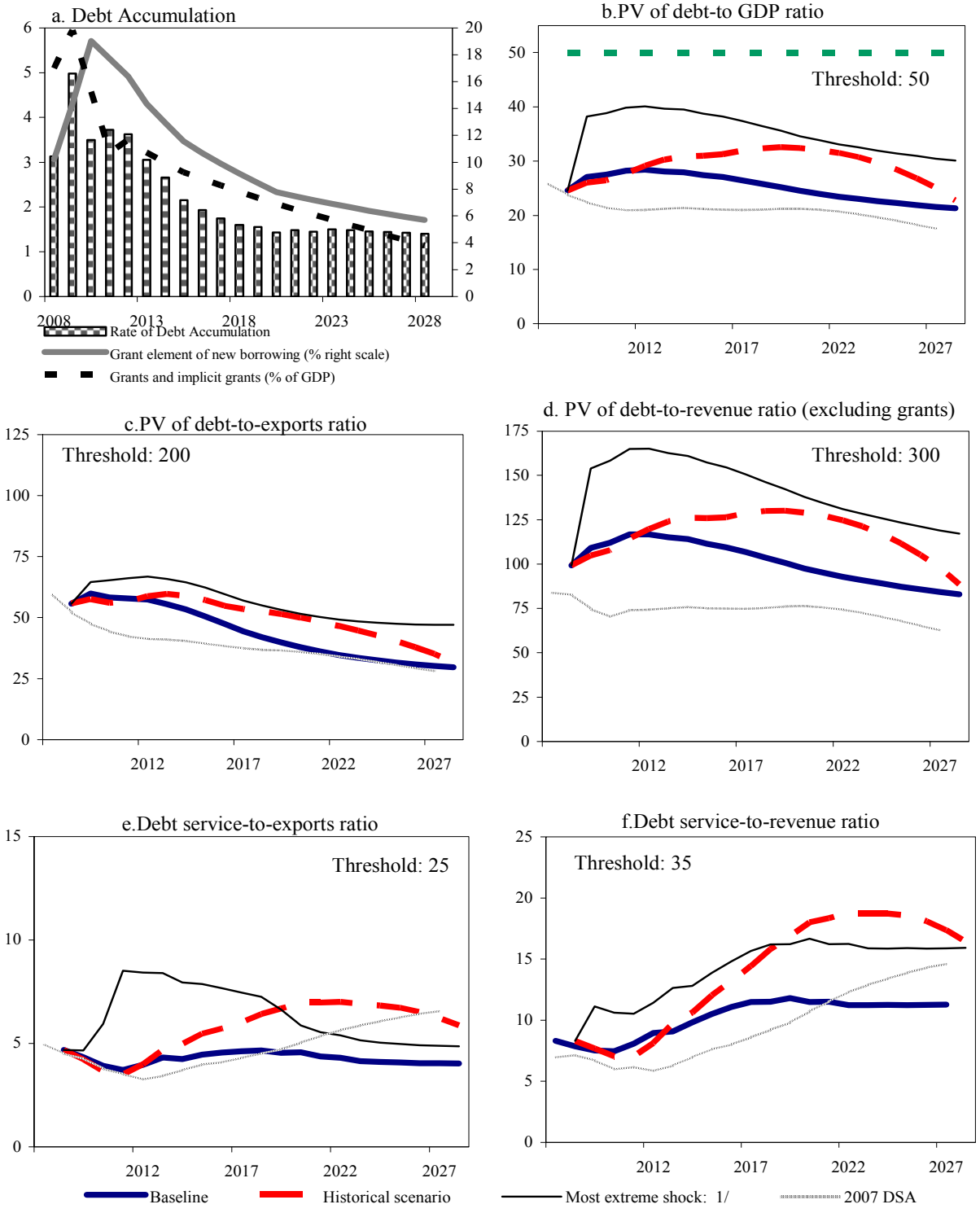
Table 6. Cape Verde: Sensitivity Analysis for Key Indicators of Public and Publicly Guaranteed External Debt, 2008-2028 (continued)
(In percent)

	Projections							
	2008	2009	2010	2011	2012	2013	2018	2028
Debt service-to-exports ratio								
Baseline	5	4	4	4	4	4	**5**	4
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2008-2028 1/	5	4	4	3	4	5	**6**	6
A2. New public sector loans on less favorable terms in 2008-2028 2	5	4	4	4	4	4	**3**	3
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2009-2010	5	4	4	4	4	4	**5**	4
B2. Export value growth at historical average minus one standard deviation in 2009-2010 3/	5	5	6	9	8	8	**7**	5
B3. US dollar GDP deflator at historical average minus one standard deviation in 2009-2010	5	4	4	4	4	4	**5**	4
B4. Net non-debt creating flows at historical average minus one standard deviation in 2009-2010 4/	5	4	3	2	2	3	**4**	4
B5. Combination of B1-B4 using one-half standard deviation shocks	5	4	3	2	3	3	**4**	4
B6. One-time 30 percent nominal depreciation relative to the baseline in 2009 5/	5	4	4	4	4	4	**5**	4
Debt service-to-revenue ratio								
Baseline	8	8	8	7	8	9	**11**	11
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2008-2028 1/	8	8	7	7	8	10	**16**	16
A2. New public sector loans on less favorable terms in 2008-2028 2	8	8	8	8	8	8	**7**	7
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2009-2010	8	8	8	8	8	9	**12**	12
B2. Export value growth at historical average minus one standard deviation in 2009-2010 3/	8	8	10	14	14	15	**15**	11
B3. US dollar GDP deflator at historical average minus one standard deviation in 2009-2010	8	9	9	9	10	11	**14**	14
B4. Net non-debt creating flows at historical average minus one standard deviation in 2009-2010 4/	8	8	6	3	4	6	**9**	11
B5. Combination of B1-B4 using one-half standard deviation shocks	8	8	6	5	6	7	**11**	12
B6. One-time 30 percent nominal depreciation relative to the baseline in 2009 5/	8	11	11	11	11	13	**16**	16
Memorandum item:								
Grant element assumed on residual financing (i.e., financing required above baseline) 6/	-4	-4	-4	-4	-4	-4	**-4**	-4

Source: Staff projections and simulations.

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
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
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/ Negative numbers indicate interest rates higher the market rates. 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.

Figure 1. Cape Verde: Indicators of Public and Publicly Guaranteed External Debt under Alternatives Scenarios, 2007-2028 1/



Source: Staff projections and simulations.

1/ The most extreme stress test is the test that yields the highest ratio in 2018. In figure b. it corresponds to a depreciation shock; in c. to a borrowing cost shock; in d. to a depreciation shock; in e. to a export shock; and in picture f. to a depreciation shock.

Table 7. Cape Verde: Public Sector Debt Sustainability Framework, Baseline Scenario, 2005-2028
(In percent of GDP, unless otherwise indicated)

	Actual					Estimate			Projections						
	2005	2006	2007	Average	Standard deviation	2008	2009	2010	2011	2012	2013	2008-13 Average	2018	2028	2014-28 Average
Public sector debt 1/	84.0	65.4	62.5 6/			52.2	51.5	51.3	51.4	50.4	48.8	**50.9**	41.9	33.1	**39.0**
o/w foreign-currency denominated	53.7	47.2	42.7 6/			38.7	39.6	39.2	39.2	38.4	37.0		30.7	22.5	
Change in public sector debt	**0.4**	**-18.6**	**-2.9**			**-10.3**	**-0.7**	**-0.2**	**0.2**	**-1.0**	**-1.6**		**-1.5**	**0.0**	
Identified debt-creating flows	**6.6**	**-13.4**	**-10.8**			**-8.9**	**-0.6**	**-1.0**	**-0.6**	**-0.8**	**-1.3**		**-1.2**	**0.2**	
Primary deficit	**4.2**	**3.1**	**-0.9**	**4.9**	**5.6**	**-0.4**	**4.1**	**3.2**	**2.8**	**3.6**	**2.8**	**2.7**	**0.8**	**0.9**	**0.8**
Revenue and grants	30.0	29.4	30.3	29.7	2.2	29.5	29.9	28.2	26.5	27.0	27.0	28.0	26.9	26.6	26.8
of which: grants	6.3	5.5	4.8			4.7	5.0	3.7	2.4	2.7	2.6		2.0	0.9	
Primary (noninterest) expenditure	34.2	32.5	29.4			29.0	33.9	31.4	29.3	30.7	29.9		27.7	27.5	
Automatic debt dynamics	**2.7**	**-16.1**	**-8.7**			**-7.0**	**-3.6**	**-3.5**	**-3.4**	**-3.9**	**-3.8**		**-1.9**	**-0.7**	
Contribution from interest rate/growth differential	-5.4	-9.6	-4.6			-3.9	-2.6	-2.9	-3.0	-3.0	-2.8		-1.4	-0.6	
of which: contribution from average real interest rate	-0.2	-1.4	-0.3			-0.4	0.4	0.4	0.3	0.3	0.4		0.6	1.0	
of which: contribution from real GDP growth	-5.1	-8.2	-4.2			-3.5	-3.0	-3.4	-3.4	-3.3	-3.1		-2.0	-1.6	
Contribution from real exchange rate depreciation	8.1	-6.5	-4.1			-3.0	-1.0	-0.6	-0.4	-0.9	-1.0		...	...	
Other identified debt-creating flows	**-0.3**	**-0.4**	**-1.3**			**-1.5**	**-1.1**	**-0.6**	**0.1**	**-0.4**	**-0.3**		**-0.1**	**0.0**	
Privatization and land sales (negative)	-0.3	-0.4	-1.3			-1.5	-1.1	-0.6	0.1	-0.4	-0.3		-0.1	0.0	
Recognition of implicit or contingent liabilities	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Debt relief (HIPC and other)	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Other (specify, e.g. bank recapitalization)	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Residual, including asset changes	**-6.2**	**-5.2**	**7.9**			**-1.4**	**-0.1**	**0.7**	**0.7**	**-0.3**	**-0.3**		**-0.3**	**-0.2**	
Other Sustainability Indicators															
PV of public sector debt	**30.3**	**45.4**	**46.0**			**38.5**	**38.8**	**39.5**	**40.4**	**40.4**	**40.0**	**39.6**	**37.0**	**31.9**	**35.1**
o/w foreign-currency denominated	0.0	27.2	26.2			25.0	27.0	27.5	28.2	28.4	28.1		25.8	21.3	
o/w external	...	27.2	26.2			25.0	27.0	27.5	28.2	28.4	28.1		25.8	21.3	
PV of contingent liabilities (not included in public sector debt)	1.6	5.6	5.1			4.5	4.1	3.7	3.3	3.0	2.7		1.7	0.8	
Gross financing need 2/	9.7	10.5	9.4			4.5	4.2	8.3	7.0	6.4	7.4		5.6	5.6	
PV of public sector debt-to-revenue and grants ratio (in percent)	101	155	152			131	130	140	152	150	148		137	120	
PV of public sector debt-to-revenue ratio (in percent)	128	190	181			156	157	161	167	166	164		148	124	
o/w external 3/	…	114	103			101	109	112	117	117	115		104	83	
Debt service-to-revenue and grants ratio (in percent) 4/	7.3	6.2	5.4			5.6	5.5	5.6	5.5	5.7	5.9		6.0	6.3	
Debt service-to-revenue ratio (in percent) 4/	9.2	7.6	6.5			6.7	6.6	6.4	6.1	6.3	6.5		6.5	6.6	
Primary deficit that stabilizes the debt-to-GDP ratio	3.8	21.7	2.0			9.9	4.7	3.4	2.6	4.7	4.4		2.3	0.9	
Key macroeconomic and fiscal assumptions															
Nominal GDP (local currency)	89.2	105.6	116.1			132.1	146.2	161.6	178.1	198.9	221.7		343.6	764.2	
Real GDP growth (in percent)	6.5	10.8	6.9	7.2	2.5	6.0	6.1	7.0	7.1	6.8	6.7	6.6	5.0	5.0	5.0
Average nominal interest rate on forex debt (in percent)	1.1	1.1	1.1	1.3	0.3	1.4	1.5	2.0	2.3	2.5	2.8	2.1	3.2	4.0	3.4
Average real interest rate on forex debt (in percent)	2.9	-2.5	-6.3	3.1	10.5	-10.8	5.8	3.8	2.4	0.7	0.8	0.5	2.6	5.9	3.7
Real exchange rate depreciation (in percent, + indicates depreciation)	0.2	-5.2	-16.1	-3.4	21.2	-23.1	...	...	...	...	...	...	...	...	...
Inflation rate (GDP deflator, in percent)	2.9	7.9	12.2	4.4	10.6	19.4	2.8	3.8	3.4	5.0	5.0	6.6	3.5	2.7	3.4
Growth of real primary spending (deflated by GDP deflator, in percent)	0.1	0.1	0.0	0.0	0.2	0.0	0.2	0.0	0.0	0.1	0.0	0.1	0.0	0.1	0.0
Grant element of new external borrowing (in percent)	...	...	...	…	…	10.2	14.4	19.0	17.7	16.4	14.4	15.4	9.2	5.7	...

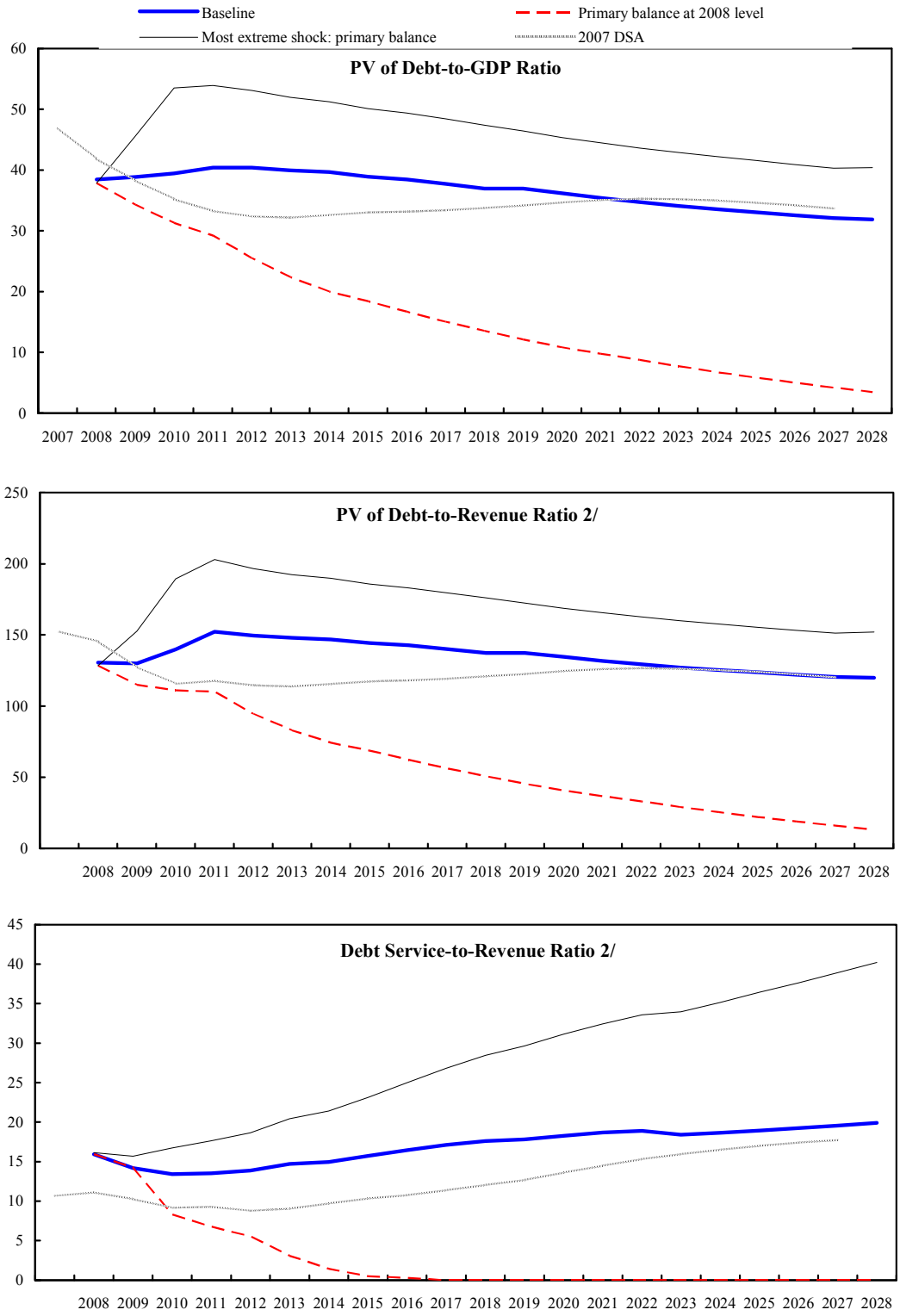
Sources: Country authorities; and staff estimates and projections.
1/ Central government. Debt figures are net of deposits at central bank.
2/ Gross financing need is defined as the primary deficit plus debt service plus the stock of short-term debt at the end of the last period.
3/ Revenues excluding 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.
6/ The difference with Tables 2 and 5 is caused by different exchange rates (average or end-of-period).

Table 8. Cape Verde: Sensitivity Analysis for Key Indicators of Public Debt 2008-2028

	Projections							
	2008	2009	2010	2011	2012	2013	2018	2028
PV of Debt-to-GDP Ratio								
Baseline	38	39	39	40	40	40	37	32
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	38	39	42	45	46	47	57	77
A2. Primary balance is unchanged from 2008	38	34	31	29	26	22	14	4
A3. Permanently lower GDP growth 1/	38	39	40	42	43	43	46	63
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2009-2010	38	40	42	44	45	45	46	48
B2. Primary balance is at historical average minus one standard deviations in 2009-2010	38	46	53	54	53	52	47	40
B3. Combination of B1-B2 using one half standard deviation shocks	38	43	48	49	49	49	47	45
B4. One-time 30 percent real depreciation in 2009	38	49	49	49	49	48	46	45
B5. 10 percent of GDP increase in other debt-creating flows in 2009	38	39	50	50	49	47	42	34
PV of Debt-to-Revenue Ratio 2/								
Baseline	131	130	140	152	150	148	137	120
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	128	132	148	168	169	173	212	293
A2. Primary balance is unchanged from 2008	128	115	111	110	95	83	51	13
A3. Permanently lower GDP growth 1/	128	132	143	158	157	159	170	236
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2009-2010	128	133	149	165	165	166	170	179
B2. Primary balance is at historical average minus one standard deviations in 2009-2010	128	153	190	203	196	192	176	152
B3. Combination of B1-B2 using one half standard deviation shocks	128	143	171	186	182	180	175	173
B4. One-time 30 percent real depreciation in 2009	129	164	173	185	180	177	170	169
B5. 10 percent of GDP increase in other debt-creating flows in 2009	128	130	176	187	180	175	155	128
Debt Service-to-Revenue Ratio 2/								
Baseline	16	14	13	14	14	15	18	20
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	16	14	14	16	18	19	32	59
A2. Primary balance is unchanged from 2008	16	14	8	7	6	3	0	0
A3. Permanently lower GDP growth 1/	16	14	14	14	15	16	23	44
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2009-2010	16	14	14	15	16	17	24	33
B2. Primary balance is at historical average minus one standard deviations in 2009-2010	16	14	21	26	21	23	28	28
B3. Combination of B1-B2 using one half standard deviation shocks	16	14	18	21	19	21	26	32
B4. One-time 30 percent real depreciation in 2009	16	16	17	18	19	20	28	40
B5. 10 percent of GDP increase in other debt-creating flows in 2009	16	14	13	14	14	15	18	20

Sources: Country authorities; and staff estimates and projections.
1/ Assumes that real GDP growth is at baseline minus one standard deviation divided by the length of the projection period.
2/ Revenues are defined inclusive of grants.

Figure 2. Cape Verde: Indicators of Public Debt Under Alternative Scenarios, 2007-2028 1/



Sources: Country authorities; and staff estimates and projections.
1/ The most extreme stress test is the test that yields the highest ratio in 2018.
2/ Revenues are defined inclusive of grants.