INTERNATIONAL MONETARY FUND

CABO VERDE

STAFF REPORT FOR THE 2016 ARTICLE IV CONSULTATION—DEBT SUSTAINABILITY ANALYSIS

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Based on the Staff baseline scenario, Cabo Verde's risk of external debt distress rating is assessed as high, up from the moderate rating in the previous DSA. [1] *Total public debt is expected to reach considerably higher levels over the medium term than projected in the previous Debt Sustainability Analysis (DSA). While public debt is high, it is overwhelmingly on highly concessional terms. The assessment of high risk is reinforced by risks stemming from a slower-than-expected growth in the Euro area, rising domestic debt, and contingent financial liabilities related to state-owned enterprises. The authorities have taken important steps to contain the risk of debt distress, including faster fiscal consolidation than envisaged in the Medium-Term Fiscal Framework underlying the 2014 Article IV report, with a particular focus on shifting the execution of some public investment projects to beyond 2018. The debt situation bears careful monitoring in light of growth and exchange rate vulnerabilities.*

BACKGROUND

1. **This DSA reflects official debt stock data for end-2015, and additional information available as of October 2016.** The staff's fiscal projections for 2016–19 (Table 3a in the Staff Report) are used to project debt-creating flows. The debt data include central government external and domestic debt, and external debt contracted by the central government on behalf of state-owned enterprises (also referred to as "onlending"). The data do not include the domestic debt contracted directly by state-owned enterprises and local governments that carry a central-government guarantee; at end-2015, this debt was estimated at about 6.1 percent of GDP (preliminary data). Projections for such publicly-guaranteed debt for 2016 and beyond were not available at the time of this assessment.

2. **Private external debt is relatively low.** Private external debt is estimated using non-bank private sector debt data, and balance of payments data on bank liabilities to non-residents. On this basis, private external debt was estimated at around 13 percent of GDP at end-2015. The authorities compile non-bank private sector debt, but there is need for a more systematic monitoring of the repayment flows.

3. **Total public debt in Cabo Verde continued to increase in 2015 as a result of the Public Investment Program (PIP).** The stock of public debt increased markedly from about 114.5 percent of GDP in 2014 to an estimated 125.8 percent of GDP at end-2015, driven primarily by external debt accumulation to finance the scaling-up of infrastructure. However, low growth, declining prices and the appreciation of the U.S. dollar have also contributed significantly to the increase in the debt ratio.

Text Table 1. Cabo Verde: Stock of Total Public Debt at End-Year, 2005–15

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
					(Percent of GDP)						
External debt	49.6	46.2	39.9	38.4	43.9	50.7	57.2	68.1	78.3	87.9	96.9
Domestic debt	35.7	31.7	24.7	19.1	21.3	21.7	21.6	23.0	24.2	26.6	28.9
Total public deb	85.3	77.9	64.6	57.4	65.2	72.4	78.8	91.1	102.5	114.5	125.8

Sources: Cabo Verdean authorities and IMF staff calculations.

[1] Cabo Verde's three-year average CPIA score is 3.9, making the country a strong policy performer.

4. While external public debt is high, it is overwhelmingly concessional. Multilateral institutions, in particular the World Bank Group and the African Development Bank, are the main external creditors. Cabo Verde's external public debt—including commercial debt, which is subsidized by Portugal—has a long maturity profile and low average interest rates (Text Table 2).

Text Table 2. Cabo Verde: External Debt Profile by Type of Creditor, 2015

	Percent of Total External Debt	Average Grace Period	Average Amortization Period	Average Interest Rate
Multilateral	47	9	32	0.9%
Bilateral	23	8	19	1.1%
Commercial	30	9	20	1.6%

Sources: Cabo Verdean authorities and IMF staff estimates.

5. Cabo Verde's domestic public debt has risen lately, but its structure and maturity remain favorable. The government's ability to finance the PIP through concessional external loans has helped keep domestic debt at about 29 percent of GDP at end-2015. Moreover, the authorities strive to limit domestic financing of the deficit to 3 percent of GDP per year. At end-2015 the National Pension Fund held about 43 percent of domestic debt, and the rest was held by the banking system. Treasury bonds make up about 96 percent of domestic debt. The average maturity of domestic debt at end-2014 was about 7 years and the average interest rate was 5.7 percent. Domestic debt is projected to increase gradually, peaking at about 38 percent in 2029 before declining to 35 percent in 2036, while external debt is repaid and net foreign borrowing remains low.

6. Cabo Verde is a strong policy performer for the purpose of determining the debt burden thresholds under the Debt Sustainability Framework (DSF). Cabo Verde's rating on the World Bank's Country Policy and Institutional Assessment (CPIA) averaged 3.9 (on a scale of 1 to 6) during 2013–15. Based on its 2015 CPIA score, Cabo Verde ranks second among IDA-recipient countries in the sub-Saharan African (SSA) region. The corresponding external public debt burden thresholds for high risk are shown in Text Table 3.

Text Table 3. External Public Debt Thresholds for High Risk for Strong Policy Performers under the Debt Sustainability Framework

Present value of external debt, percent of:	
GDP	50
Exports	200
Revenue	300
External debt service in percent of:	
Exports	25
Revenue	22

Sources: Cabo Verdean authorities and IMF staff estimates.

BASELINE SCENARIO UNDERLYING THE DEBT SUSTAINABILITY ANALYSIS

7. **The assumptions underlying the current DSA differ in a number of ways from those used in the 2014 Article IV Consultation** (Text Table 4 and Box 1). While the current baseline scenario still assumes a rebound of economic activity in the medium term, the growth forecast for 2016–20 is overall lower than in the previous DSA owing to the shifting of some public investment projects into later years. The GDP deflator is projected slightly lower, reflecting the low inflation in the country and in the Euro area. The baseline scenario also assumes a different profile of fiscal consolidation, reflecting the most recent MTFF. The current account deficit is also projected slightly higher, reflecting the large pipeline of FDI for the next few years. Most importantly, the exchange rate depreciation versus the dollar of about 30 percent at end-2015 is carried forward in the projections, contributing significantly to the increase in the PV of debt.

Text Table 4. Cabo Verde: Assumptions for Key Economic Indicators, 2015–20

(Percent of GDP)

	2015	2016	2017	2018	2019	2020
Real GDP growth						
Current DSA	1.5	3.2	3.7	4.1	4.1	4.1
2014 Article IV DSA	3.5	4.0	4.0	4.0	4.0	4.0
GDP Deflator						
Current DSA	0.5	0.1	1.2	1.8	2.0	2.0
2014 Article IV DSA	2.5	2.5	2.5	2.5	2.5	2.5
Fiscal balance (including grants)						
Current DSA	-4.1	-3.3	-3.0	-1.9	-2.0	0.0
2014 Article IV DSA	-6.5	-5.7	-4.6	-0.5	-1.3	-2.5
Overall financing needs (including onlending)						
Current DSA	8.3	7.8	7.0	5.6	3.9	1.0
2014 Article IV DSA	10.4	8.9	6.9	1.5	1.3	2.5
Current account deficit (including grants)						
Current DSA	-4.3	-7.2	-8.8	-8.4	-7.9	-7.1
2014 Article IV DSA	-10.8	-10.9	-9.2	-7.2	-5.2	-5.2
Cv$/USD exchange rate (e-o-y)						
Current DSA	101.4	100.7	100.5	100.3	99.7	99.6
2014 Article IV DSA	78.2	76.8	75.5	74.5	73.8	73.8

Sources: Cabo Verdean authorities and IMF staff estimates.

Box 1. Cabo Verde: Macroeconomic Assumptions of the Baseline Scenario, 2016–36

Real GDP growth is expected to pick up after the slowdown in 2012–15, and settle at about 4 percent per year in the long term. Growth assumptions are based on continued good performance in the tourism sector, better conditions in the euro area, resumption of private credit growth, some product diversification into areas like agriculture and fisheries, and an increase in productivity owing to payoffs from the PIP and from structural reforms. In addition, medium-term growth projections take into account the impact of PIP containment on the economy over 2015–17, as well as the postponement of several projects to 2018–20 and beyond.

Fiscal policy. In the medium term (2015–20), the fiscal deficit and overall financing needs are expected to decline by 4.1 and 5.9 percent of GDP, respectively, in line with the latest MTFF. Fiscal consolidation is expected to continue in the long run, with the government continuing to reduce its financing needs as the concessional borrowing window closes. In the long run (2019–36), with fiscal consolidation complete and onlending coming to an end, net financing needs are projected to stay below 2 percent of GDP per year.

The non-interest current account deficit is projected to widen in 2016–19 owing to the expected increase in economic activity, public investment and FDI (which will drive up imports) and decline gradually afterwards, as the Public Investment Program winds down.

Consumer price inflation and the GDP deflator are projected not to exceed 2 percent.

Financing. The concessionality of new external loans will decline significantly starting from 2019, and the baseline assumes a slightly more accelerated move towards non-concessional financing than the previous DSA. In addition, the baseline assumes that domestic financing will remain below 3 percent of GDP.

DEBT SUSTAINABILITY ANALYSIS

E. External Public Debt

8. **Under the staff baseline scenario, the PV of external debt to GDP breaches the 50 percent threshold significantly.** The PV of public and publicly guaranteed (PPG) external debt is expected to peak at 64.4 percent of GDP in 2017, gradually decreasing to below 50 percent by 2023 (Figure 1). The debt service indicators remain safely below the threshold throughout 2036.

9. **Cabo Verde's ability to service its debt is most sensitive to a growth slowdown (embedded in the historical scenario) and a one-time depreciation shock.** The PV of the debt-to-exports and debt-to-revenue ratio, and the debt service to revenue ratio would breach the threshold under the historical growth scenario. The PV of the debt-to-revenue ratio would breach the threshold under a bound test that entails a 30 percent nominal depreciation shock in 2016, and so would the debt-service-to-revenue ratio (Table 1b, scenario B6). Debt service rises over the medium term owing to the grace period ending for several loans, but remains sustainable and considerably below the threshold in the baseline scenario throughout the projection period.

F. Total Public Debt

10. Total public debt peaks at about 130 percent, and its present value at 96.1 percent of GDP in 2017, and declines gradually over the projection period (Table 2a, Figure 2). The PV of total public debt exceeds the 74 percent benchmark and remains above it until 2028. Furthermore, the debt outlook is vulnerable to a prolonged economic slowdown; developments in the Euro zone, which would affect growth by depressing remittances and tourism income; and realization of losses on contingent liabilities associated with SOEs. With regards to remittances, which accounted for roughly 12 percent of GDP in 2015, there are also vulnerabilities related to financial stability. While these flows have remained fairly stable over many years, problems in a systemic bank could cause emigrants to re-assess their financial investment in Cabo Verde and withdraw their funds. Regarding SOEs, while the financial situation of ELECTRA has improved during 2013–15, TACV's financial circumstances and the situation at IFH have deteriorated sharply.

11. Public debt sustainability is sensitive to various alternative scenarios and stress tests (Table 2b). The expansion of public debt is most pronounced under the scenario which keeps real growth and the primary balance at historical averages. However, a primary balance as high as that over the past decade seems unlikely, given that the primary balance over 2005–14 reflects a temporarily high level of public investment.

12. Public debt sustainability is also vulnerable to contingent liabilities associated with the debt of state-owned enterprises (SOEs). At end-2015 (preliminary data), SOE-related contingent liabilities amounted to 25 percent of GDP, up from 9 percent of GDP in 2014. If the financial situation of SOEs were to deteriorate to such an extent that the central government had to take on all of this debt (and respect the 3 percent limit on domestic financing), debt sustainability would be further jeopardized, the serviceability of public debt would be put under significant strain.

G. Comparison with the Previous Debt Sustainability Analysis

13. The PV of external debt does breach the threshold under the staff baseline scenario—which was not the case in the previous DSA—and public debt peaks at a higher level. In the previous DSA, the PV of external debt to GDP in 2015 was 48.5, and in the current DSA it increases to 61.8, breaching the 50 percent threshold. While the debt profile has deteriorated owing to lower than expected nominal GDP and a strong appreciation of the U.S. Dollar, the authorities PIP containment measures were crucial in curbing the PV of external debt to GDP. In addition, while in the previous DSA public debt peaked at 108 percent of GDP (in 2016), in the current DSA it reaches 130 percent in 2017.

H. The Authorities' Views

14. The authorities broadly concurred with the results of the DSA. They noted, however, that although the external debt level is high, the public investment scaling up that contributed to it should help increase potential growth and boost revenue in the long term. In addition, the authorities remarked that while the PV of external debt is high, the debt service indicators remain comfortably below the threshold in the baseline scenario.

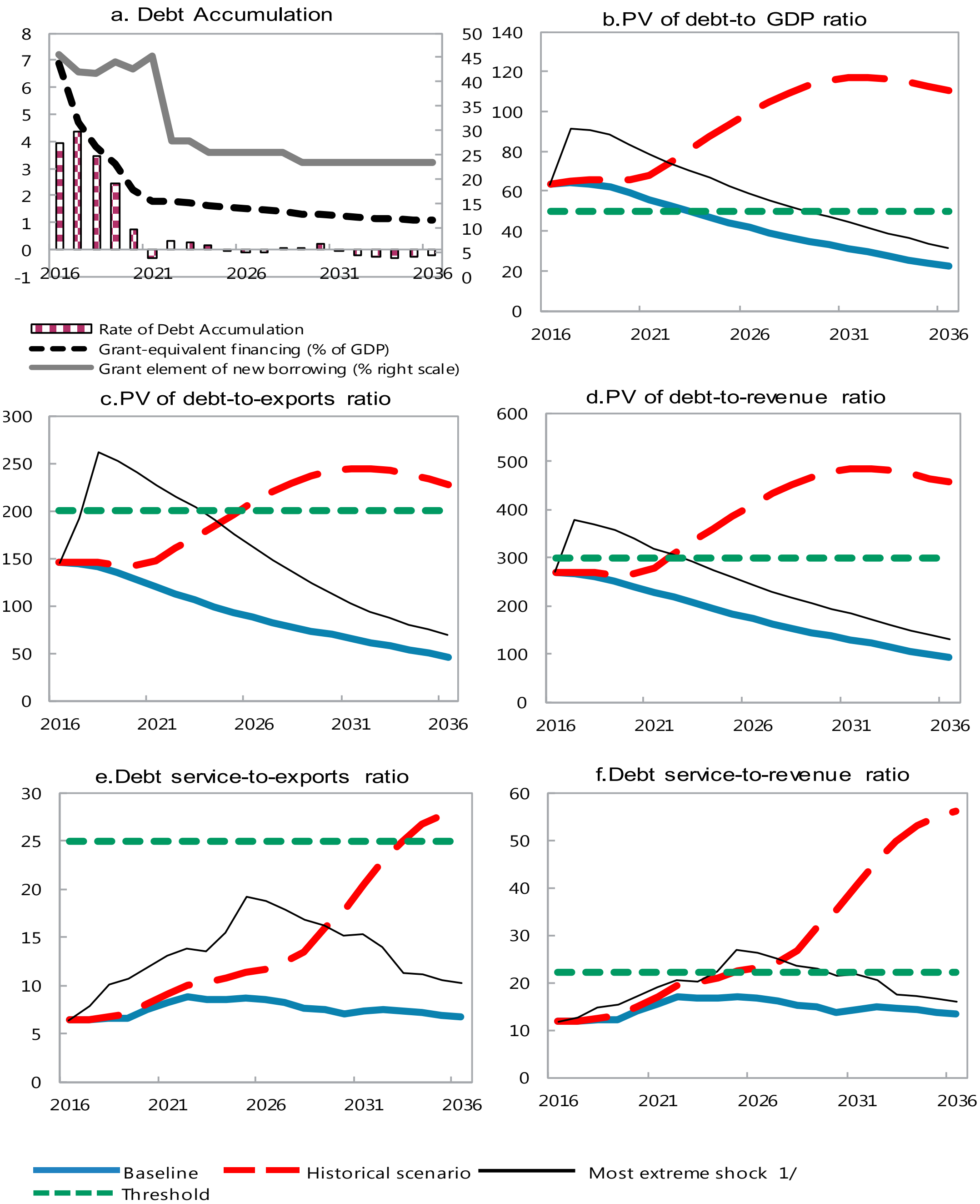
DEBT DISTRESS CLASSIFICATION

15. Based on the external debt burden indicators, the current DSA finds that the risk of debt distress is high but Cabo Verde retains its capability to service its debt. The PV of external debt to GDP threshold is breached over the 20-year projection period under the baseline scenario, and the breach is significant. [2] Furthermore, debt sustainability remains sensitive to a depreciation shock. However, the debt service indicators are comfortably below their respective thresholds.

16. The authorities should stay the course on their fiscal consolidation which should help set the country on the path to moderate risk of debt distress by 2023. Broadly in line with staff advice, the authorities have embarked on a fiscal consolidation driven in large part by a reduction in externally financed capital spending. The fiscal adjustment envisioned is realistic, and necessary to give a strong message of fiscal responsibility to development partners and investors.,

[2] Staff Guidance Note on the Application of the Joint Bank-Fund Debt Sustainability Framework for Low-Income Countries, International Monetary Fund, November 2013.

Figure 1. Cabo Verde: Indicators of Public and Publicly Guaranteed External Debt Under Alternatives Scenarios, 2016–36 1/



Sources: Country authorities; and staff estimates and projections.

1/ The most extreme stress test is the test that yields the highest ratio on or before 2026. In figure b. it corresponds to a One-time depreciation shock; in c. to a Exports shock; in d. to a One-time depreciation shock; in e. to a Exports shock and in figure f. to a Combination shock

Table 1a. Cabo Verde: External Debt Sustainability Framework, Baseline Scenario, 2013–36 1/

(Percent of GDP, unless otherwise indicated)

	Actual			Historical 6/ Average	Standard 6/ Deviation	Projections									
	2013	2014	2015			2016	2017	2018	2019	2020	2021	2016-2021 Average	2026	2036	2022-2036 Average
External debt (nominal) 1/	**99.8**	**101.3**	**109.8**			**110.2**	**109.3**	**105.9**	**101.1**	**94.6**	**87.2**		**60.7**	**28.4**	
of which: public and publicly guaranteed (PPG)	78.3	87.9	96.9			98.1	98.4	96.2	92.1	86.3	79.7		55.6	26.9	
Change in external debt	6.4	1.4	8.5			0.4	-0.9	-3.4	-4.8	-6.5	-7.4		-4.6	-3.5	
Identified net debt-creating flows	-3.7	0.4	16.4			-1.4	-0.4	-0.7	-0.3	-3.1	-6.7		-10.3	-6.8	
Non-interest current account deficit	**2.8**	**6.1**	**2.2**	**7.9**	**4.4**	**4.9**	**6.5**	**6.8**	**7.5**	**4.5**	**0.3**		**-4.2**	**-3.7**	-4.1
Deficit in balance of goods and services	15.8	18.1	16.8			20.2	21.0	21.8	22.4	18.8	14.2		7.9	5.8	
Exports	47.0	47.5	42.0			43.6	44.9	45.5	45.9	46.2	46.2		47.6	48.4	
Imports	62.8	65.6	58.8			63.8	65.9	67.2	68.3	65.0	60.4		55.5	54.1	
Net current transfers (negative = inflow)	-14.4	-14.1	-16.1	-17.8	3.0	-16.4	-15.7	-16.0	-15.8	-15.1	-14.6		-12.4	-9.0	-11.4
of which: official	-3.1	-3.0	-3.7			-2.1	-1.4	-1.3	-1.2	-1.2	-1.1		-0.8	-0.4	
Other current account flows (negative = net inflow)	1.4	2.0	1.5			1.2	1.1	1.0	0.9	0.8	0.7		0.3	-0.4	
Net FDI (negative = inflow)	**-3.5**	**-6.7**	**-5.7**	**-7.2**	**3.0**	**-5.9**	**-6.0**	**-6.1**	**-6.7**	**-6.6**	**-6.2**		**-6.2**	**-4.1**	-5.0
Endogenous debt dynamics 2/	**-2.9**	**1.0**	**19.9**			**-0.5**	**-0.9**	**-1.3**	**-1.2**	**-1.0**	**-0.8**		**0.2**	**0.9**	
Contribution from nominal interest rate	2.1	2.8	2.2			3.0	3.0	3.0	2.9	2.9	2.8		2.6	2.1	
Contribution from real GDP growth	-0.7	-1.8	-1.7			-3.5	-3.9	-4.3	-4.1	-3.9	-3.6		-2.5	-1.2	
Contribution from price and exchange rate changes	-4.3	0.0	19.4			...	...	...	...	...	...		...	...	
Residual (3-4) 3/	**10.1**	**1.1**	**-7.9**			**1.9**	**-0.5**	**-2.7**	**-4.5**	**-3.4**	**-0.6**		**5.6**	**3.3**	
of which: 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/	...	...	74.7			75.4	75.2	73.5	71.0	67.3	62.8		46.7	23.7	
In percent of exports	...	...	177.9			172.9	167.6	161.7	154.6	145.6	136.1		98.2	49.1	
PV of PPG external debt	**...**	**...**	**61.8**			**63.3**	**64.4**	**63.8**	**62.0**	**59.0**	**55.2**		**41.6**	**22.3**	
In percent of exports	**...**	**...**	**147.2**			**145.1**	**143.4**	**140.4**	**135.0**	**127.7**	**119.7**		**87.5**	**46.0**	
In percent of government revenues	**...**	**...**	**259.5**			**268.9**	**265.9**	**260.0**	**250.5**	**238.5**	**225.4**		**171.7**	**92.0**	
Debt service-to-exports ratio (in percent)	**7.0**	**8.8**	**8.7**			**10.5**	**10.6**	**10.8**	**10.8**	**11.7**	**12.5**		**12.7**	**10.3**	
PPG debt service-to-exports ratio (in percent)	**5.1**	**4.8**	**6.3**			**6.3**	**6.4**	**6.6**	**6.6**	**7.4**	**8.2**		**8.5**	**6.7**	
PPG debt service-to-revenue ratio (in percent)	**10.9**	**10.9**	**11.1**			**11.8**	**11.8**	**12.2**	**12.2**	**13.9**	**15.4**		**16.7**	**13.3**	
Total gross financing need (Billions of U.S. dollars)	0.0	0.1	0.0			0.1	0.1	0.1	0.1	0.1	0.0		-0.1	-0.1	
Non-interest current account deficit that stabilizes debt ratio	-3.7	4.7	-6.3			4.5	7.4	10.2	12.3	11.0	7.7		0.4	-0.2	
Key macroeconomic assumptions															
Real GDP growth (in percent)	0.8	1.9	1.5	3.4	3.7	3.2	3.7	4.1	4.1	4.1	4.1	3.9	4.0	4.0	4.0
GDP deflator in US dollar terms (change in percent)	4.8	0.0	-16.1	0.9	8.8	-1.6	1.8	1.9	2.4	2.6	2.0	1.5	2.0	2.0	2.0
Effective interest rate (percent) 5/	2.3	2.8	1.9	3.8	1.2	2.7	2.8	2.9	3.0	3.1	3.2	2.9	4.3	7.1	5.1
Growth of exports of G&S (US dollar terms, in percent)	10.5	2.8	-24.7	8.1	19.4	5.4	8.6	7.4	7.8	7.5	6.1	7.1	6.2	6.3	6.4
Growth of imports of G&S (US dollar terms, in percent)	-2.5	6.4	-23.7	5.4	18.2	10.1	9.1	8.2	8.3	1.6	-1.3	6.0	5.6	6.0	5.3
Grant element of new public sector borrowing (in percent)	...	...	...	...	...	45.5	41.9	41.8	44.2	42.6	45.3	43.6	25.6	23.5	24.8
Government revenues (excluding grants, in percent of GDP)	22.0	20.8	23.8			23.5	24.2	24.5	24.7	24.7	24.5		24.2	24.2	24.2
Aid flows (in Billions of US dollars) 7/	0.3	0.2	0.1			0.2	0.1	0.1	0.1	0.1	0.1		0.0	0.0	
of which: Grants	0.0	0.0	0.0			0.1	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
of which: Concessional loans	0.2	0.2	0.1			0.1	0.1	0.1	0.1	0.0	0.0		0.0	0.0	
Grant-equivalent financing (in percent of GDP) 8/	...	...	...			6.9	4.7	3.8	3.2	2.2	1.8		1.5	1.1	1.4
Grant-equivalent financing (in percent of external financing) 8/	...	...	...			65.5	54.0	54.2	57.8	63.9	71.3		45.0	36.1	42.1
Memorandum items:															
Nominal GDP (Billions of US dollars)	1.9	1.9	1.6			1.6	1.7	1.8	1.9	2.1	2.2		3.0	5.4	
Nominal dollar GDP growth	5.7	1.8	-14.9			1.5	5.6	6.1	6.7	6.8	6.2	5.5	6.1	6.1	6.1
PV of PPG external debt (in Billions of US dollars)			1.0			1.0	1.1	1.2	1.2	1.2	1.2		1.2	1.2	
(PVt-PVt-1)/GDPt-1 (in percent)						3.9	4.4	3.5	2.4	0.8	-0.3	2.4	-0.1	-0.2	0.0
Gross workers' remittances (Billions of US dollars)	13.8	15.5	18.6			19.9	21.9	24.1	26.5	29.1	30.0		34.8	46.7	
PV of PPG external debt (in percent of GDP + remittances)	...	...	4.9			4.8	4.7	4.5	4.2	3.9	3.8		3.3	2.3	
PV of PPG external debt (in percent of exports + remittances)	...	...	5.1			5.0	4.9	4.7	4.4	4.1	3.9		3.4	2.4	
Debt service of PPG external debt (in percent of exports + remittanc	...	...	0.2			0.2	0.2	0.2	0.2	0.2	0.3		0.3	0.4	

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. Cabo Verde: Sensitivity Analysis for Key Indicators of Public and Publicly Guaranteed External Debt, 2016–36

(Percent)

	Projections							
	2016	2017	2018	2019	2020	2021	**2026**	2036
PV of debt-to GDP ratio								
Baseline	63	64	64	62	59	55	**42**	22
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2016-2036 1/	63	65	66	65	66	68	**99**	110
A2. New public sector loans on less favorable terms in 2016-2036 2	63	66	67	66	63	59	**47**	31
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2017-2018	63	67	69	67	64	60	**45**	24
B2. Export value growth at historical average minus one standard deviation in 2017-2018 3/	63	70	80	78	75	71	**52**	23
B3. US dollar GDP deflator at historical average minus one standard deviation in 2017-2018	63	71	78	76	72	67	**51**	27
B4. Net non-debt creating flows at historical average minus one standard deviation in 2017-2018 4/	63	66	68	66	63	59	**44**	22
B5. Combination of B1-B4 using one-half standard deviation shocks	63	73	88	86	82	77	**57**	26
B6. One-time 30 percent nominal depreciation relative to the baseline in 2017 5/	63	91	91	88	84	78	**59**	32
PV of debt-to-exports ratio								
Baseline	145	143	140	135	128	120	**87**	46
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2016-2036 1/	145	145	145	142	142	147	**209**	228
A2. New public sector loans on less favorable terms in 2016-2036 2	145	147	147	143	136	129	**100**	63
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2017-2018	145	143	141	135	128	120	**87**	46
B2. Export value growth at historical average minus one standard deviation in 2017-2018 3/	145	192	262	253	239	227	**161**	69
B3. US dollar GDP deflator at historical average minus one standard deviation in 2017-2018	145	143	141	135	128	120	**87**	46
B4. Net non-debt creating flows at historical average minus one standard deviation in 2017-2018 4/	145	148	150	144	136	128	**93**	46
B5. Combination of B1-B4 using one-half standard deviation shocks	145	168	200	193	183	173	**124**	56
B6. One-time 30 percent nominal depreciation relative to the baseline in 2017 5/	145	143	141	135	128	120	**87**	46
PV of debt-to-revenue ratio								
Baseline	269	266	260	251	239	225	**172**	92
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2016-2036 1/	269	270	268	264	266	277	**410**	456
A2. New public sector loans on less favorable terms in 2016-2036 2	269	272	272	266	254	242	**196**	126
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2017-2018	269	276	283	273	259	244	**186**	100
B2. Export value growth at historical average minus one standard deviation in 2017-2018 3/	269	290	327	316	302	288	**213**	93
B3. US dollar GDP deflator at historical average minus one standard deviation in 2017-2018	269	294	318	307	291	275	**210**	112
B4. Net non-debt creating flows at historical average minus one standard deviation in 2017-2018 4/	269	274	277	268	254	241	**182**	92
B5. Combination of B1-B4 using one-half standard deviation shocks	269	303	359	347	330	315	**235**	108
B6. One-time 30 percent nominal depreciation relative to the baseline in 2017 5/	269	377	369	356	338	319	**243**	130

Table 1b. Cabo Verde: Sensitivity Analysis for Key Indicators of Public and Publicly Guaranteed External Debt, 2016–36 (continued)

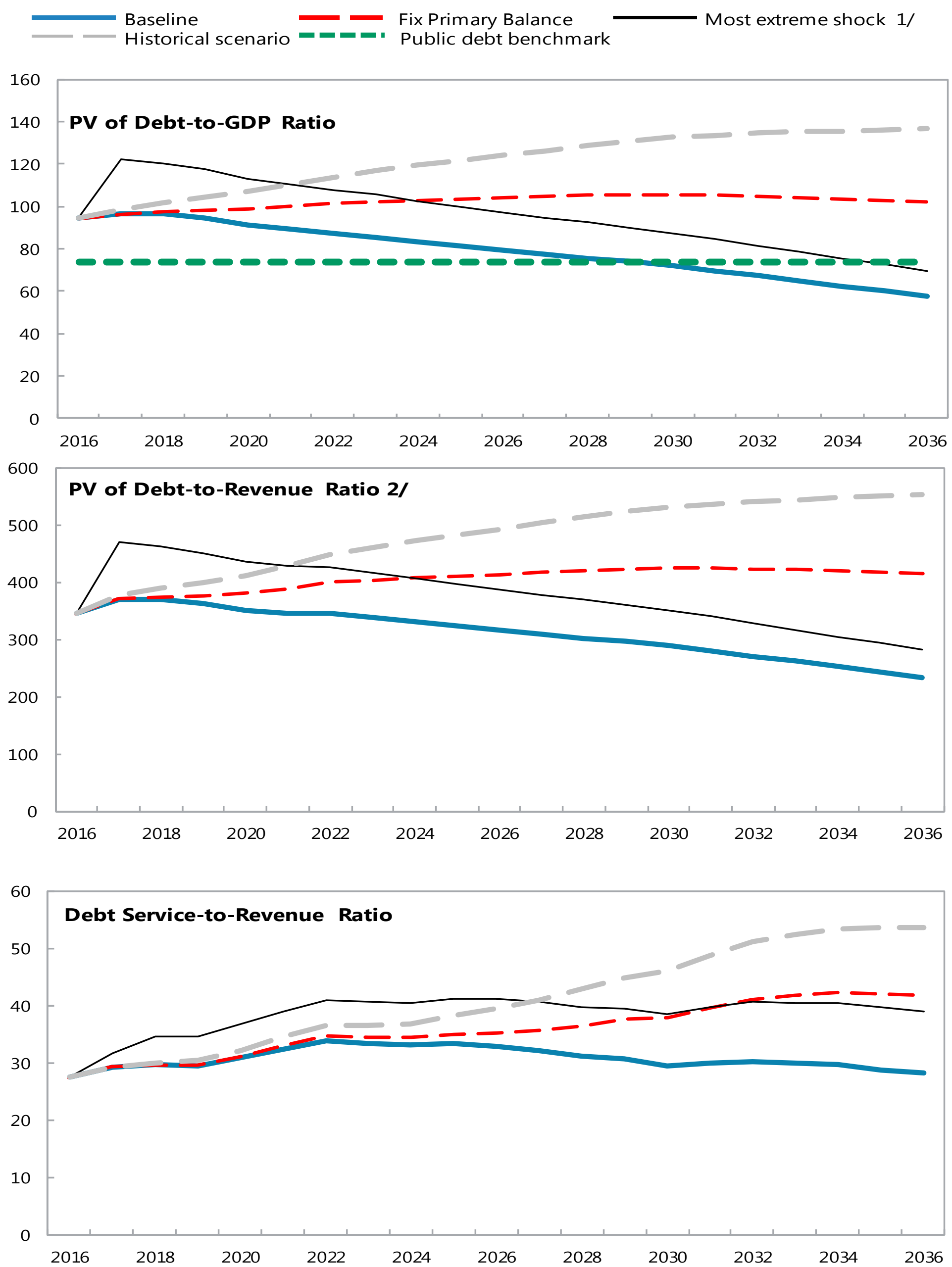
(Percent)

Debt service-to-exports ratio								
Baseline	6	6	7	7	7	8	**8**	7
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2016-2036 1/	6	6	7	7	8	9	**12**	28
A2. New public sector loans on less favorable terms in 2016-2036 2	6	6	7	7	8	9	**9**	9
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2017-2018	6	6	7	7	7	8	**8**	7
B2. Export value growth at historical average minus one standard deviation in 2017-2018 3/	6	8	10	11	12	13	**19**	10
B3. US dollar GDP deflator at historical average minus one standard deviation in 2017-2018	6	6	7	7	7	8	**8**	7
B4. Net non-debt creating flows at historical average minus one standard deviation in 2017-2018 4/	6	6	7	7	8	8	**10**	7
B5. Combination of B1-B4 using one-half standard deviation shocks	6	7	8	9	9	10	**14**	8
B6. One-time 30 percent nominal depreciation relative to the baseline in 2017 5/	6	6	7	7	7	8	**8**	7
Debt service-to-revenue ratio								
Baseline	12	12	12	12	14	15	**17**	13
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2016-2036 1/	12	12	13	13	15	17	**23**	56
A2. New public sector loans on less favorable terms in 2016-2036 2	12	12	12	13	15	17	**17**	19
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2017-2018	12	12	13	13	15	17	**18**	14
B2. Export value growth at historical average minus one standard deviation in 2017-2018 3/	12	12	13	13	15	17	**25**	14
B3. US dollar GDP deflator at historical average minus one standard deviation in 2017-2018	12	13	15	15	17	19	**20**	16
B4. Net non-debt creating flows at historical average minus one standard deviation in 2017-2018 4/	12	12	12	13	14	16	**19**	13
B5. Combination of B1-B4 using one-half standard deviation shocks	12	13	15	15	17	19	**26**	16
B6. One-time 30 percent nominal depreciation relative to the baseline in 2017 5/	12	17	17	17	20	22	**24**	19
Memorandum item:								
Grant element assumed on residual financing (i.e., financing required above baseline) 6/	29	29	29	29	29	29	**29**	29

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
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 tl
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.

Figure 2. Cabo Verde: Indicators of Public Debt Under Alternatives Scenarios, 2016–36 1/



Sources: Country authorities; and staff estimates and projections.
1/ The most extreme stress test is the test that yields the highest ratio on or before 2026. It correponds to a one-time depreciation shock.
2/ Revenues are defined inclusive of grants.

Table 2a. Cabo Verde: Public Sector Debt Sustainability Framework, Baseline Scenario, 2013–36

(Percent of GDP, unless otherwise indicated)

	Actual					Estimate				Projections					
	2013	2014	2015	Average 5/	Standard Deviation 5/	2016	2017	2018	2019	2020	2021	2016-21 Average	2026	2036	2022-36 Average
Public sector debt 1/	102.5	114.5	125.8			129.1	130.2	128.5	124.7	118.5	113.4		93.2	62.3	
of which: foreign-currency denominated	78.3	87.9	96.9			98.1	98.4	96.2	92.1	86.3	79.7		55.6	26.9	
Change in public sector debt	11.4	12.0	11.3			3.4	1.1	-1.7	-3.9	-6.1	-5.2		-3.8	-2.8	
Identified debt-creating flows	8.6	18.1	17.1			1.9	0.1	-2.6	-4.8	-7.0	-5.5		-3.7	-2.3	
Primary deficit	11.4	8.5	5.1	6.3	4.7	4.0	3.8	2.4	0.8	-2.1	-1.0	1.3	-0.4	-0.5	-0.4
Revenue and grants	24.5	22.6	26.2			27.4	26.0	26.0	26.1	26.0	25.7		25.1	24.7	
of which: grants	2.5	1.8	2.4			3.8	1.8	1.5	1.3	1.3	1.2		0.9	0.5	
Primary (noninterest) expenditure	35.9	31.1	31.4			31.4	29.8	28.5	26.8	23.9	24.7		24.8	24.2	
Automatic debt dynamics	-2.7	9.6	11.9			-2.1	-3.7	-5.0	-5.6	-4.9	-4.5		-3.4	-1.8	
Contribution from interest rate/growth differential	0.1	-0.9	-0.2			-2.7	-4.1	-5.1	-5.1	-5.0	-4.6		-3.5	-1.9	
of which: contribution from average real interest rate	0.8	0.9	1.5			1.3	0.5	0.1	0.0	0.0	0.0		0.2	0.6	
of which: contribution from real GDP growth	-0.7	-1.9	-1.6			-3.9	-4.6	-5.2	-5.1	-4.9	-4.7		-3.7	-2.5	
Contribution from real exchange rate depreciation	-2.8	10.6	12.1			0.6	0.5	0.0	-0.4	0.0	0.1		...	...	
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 (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	2.7	-6.1	-5.8			1.5	0.9	1.0	0.9	0.9	0.4		-0.1	-0.4	
Other Sustainability Indicators															
PV of public sector debt	...	...	90.7			94.3	96.1	96.1	94.5	91.2	88.9		79.2	57.6	
of which: foreign-currency denominated	...	...	61.8			63.3	64.4	63.8	62.0	59.0	55.2		41.6	22.3	
of which: external	...	...	61.8			63.3	64.4	63.8	62.0	59.0	55.2		41.6	22.3	
PV of contingent liabilities (not included in public sector debt)	...	...	...			...	...	...	...	...	...		...	...	
Gross financing need 2/	18.5	13.9	12.5			11.5	11.4	10.1	8.4	5.9	7.3		7.9	6.5	
PV of public sector debt-to-revenue and grants ratio (in percent)	...	...	345.6			344.3	369.6	369.1	362.4	350.7	346.2		315.3	233.4	
PV of public sector debt-to-revenue ratio (in percent)	...	...	380.6			400.6	397.2	391.6	382.0	368.8	362.9		326.8	238.1	
of which: external 3/	...	...	259.5			268.9	265.9	260.0	250.5	238.5	225.4		171.7	92.0	
Debt service-to-revenue and grants ratio (in percent) 4/	29.2	24.2	28.3			27.5	29.2	29.6	29.5	30.8	32.3		32.9	28.2	
Debt service-to-revenue ratio (in percent) 4/	32.4	26.3	31.1			31.9	31.4	31.4	31.0	32.4	33.9		34.1	28.8	
Primary deficit that stabilizes the debt-to-GDP ratio	0.0	-3.5	-6.2			0.6	2.8	4.1	4.6	4.1	4.2		3.5	2.3	
Key macroeconomic and fiscal assumptions															
Real GDP growth (in percent)	0.8	1.9	1.5	3.4	3.7	3.2	3.7	4.1	4.1	4.1	4.1	3.9	4.0	4.0	4.0
Average nominal interest rate on forex debt (in percent)	1.8	1.2	1.1	1.3	0.3	1.2	1.1	1.1	1.1	1.1	1.1	1.1	1.2	1.4	1.2
Average real interest rate on domestic debt (in percent)	2.8	5.3	5.2	2.9	1.7	5.2	3.9	3.2	2.9	2.9	2.9	3.5	2.3	2.4	2.3
Real exchange rate depreciation (in percent, + indicates depreciation	-4.2	13.8	14.0	1.3	9.0	0.6	...	...	...	...	...	...	...	...	...
Inflation rate (GDP deflator, in percent)	1.4	-0.1	0.5	1.7	1.3	0.1	1.2	1.8	2.0	2.0	2.0	1.5	2.0	2.0	2.0
Growth of real primary spending (deflated by GDP deflator, in percer	-1.0	-11.8	2.4	-1.0	3.9	3.3	-1.4	-0.7	-1.8	-7.1	7.3	-0.1	3.7	3.8	3.9
Grant element of new external borrowing (in percent)	...	...	...	...	...	45.5	41.9	41.8	44.2	42.6	45.3	43.6	25.6	23.5	...

Sources: Country authorities; and staff estimates and projections.

1/ [Indicate coverage of public sector, e.g., general government or nonfinancial public sector. Also whether net or gross debt is used.]

2/ Gross financing need is defined as the primary deficit plus debt service plus the stock of short-term debt at the end of the last period.

3/ Revenues excluding grants.

4/ Debt service is defined as the sum of interest and amortization of medium and long-term debt.

5/ Historical averages and standard deviations are generally derived over the past 10 years, subject to data availability.

Table 2b. Cabo Verde: Sensitivity Analysis for Key Indicators of Public Debt, 2016–36

	Projections							
	2016	2017	2018	2019	2020	2021	2026	2036
PV of Debt-to-GDP Ratio								
Baseline	94	96	96	95	91	89	79	58
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	94	98	101	104	107	110	124	137
A2. Primary balance is unchanged from 2016	94	96	97	98	99	100	104	102
A3. Permanently lower GDP growth 1/	94	97	98	98	95	94	93	93
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2017-20	94	101	106	106	104	103	99	84
B2. Primary balance is at historical average minus one standard deviations in 2017-201	94	101	107	105	102	99	88	63
B3. Combination of B1-B2 using one half standard deviation shocks	94	101	108	107	104	103	95	75
B4. One-time 30 percent real depreciation in 2017	94	122	120	117	113	110	97	70
B5. 10 percent of GDP increase in other debt-creating flows in 2017	94	103	103	101	98	95	85	61
PV of Debt-to-Revenue Ratio 2/								
Baseline	344	370	369	362	351	346	315	233
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	344	377	389	399	412	429	492	553
A2. Primary balance is unchanged from 2016	344	370	374	376	380	389	413	415
A3. Permanently lower GDP growth 1/	344	373	376	374	366	367	368	376
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2017-20	344	386	407	405	398	399	392	340
B2. Primary balance is at historical average minus one standard deviations in 2017-201	344	389	411	403	391	386	351	256
B3. Combination of B1-B2 using one half standard deviation shocks	344	389	414	410	400	398	378	305
B4. One-time 30 percent real depreciation in 2017	344	469	462	450	435	429	386	282
B5. 10 percent of GDP increase in other debt-creating flows in 2017	344	396	395	388	376	371	337	247
Debt Service-to-Revenue Ratio 2/								
Baseline	27	29	30	29	31	32	33	28
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	27	29	30	30	32	34	40	54
A2. Primary balance is unchanged from 2016	27	29	30	30	31	33	35	42
A3. Permanently lower GDP growth 1/	27	29	30	30	32	34	36	39
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2017-20	27	30	32	32	34	35	37	37
B2. Primary balance is at historical average minus one standard deviations in 2017-201	27	29	30	31	32	33	38	30
B3. Combination of B1-B2 using one half standard deviation shocks	27	30	31	31	33	34	38	34
B4. One-time 30 percent real depreciation in 2017	27	32	35	35	37	39	41	39
B5. 10 percent of GDP increase in other debt-creating flows in 2017	27	29	30	30	31	33	36	30

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.