INTERNATIONAL MONETARY FUND

DJIBOUTI

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

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Approved By
Daniela Gressani and Vitaliy Kramarenko (IMF) and Paloma Anós Casero (IDA)

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

This Debt Sustainability Analysis (DSA) confirms that Djibouti continues to face a high risk of debt distress, and that this risk has increased significantly since the public sector engaged in large, externally-financed infrastructure projects which have driven the external public debt-to-GDP ratio from 50 percent in 2014 to 85 percent in 2016. Baseline projections over the next twenty years suggest significant and prolonged breaches of the present value (PV) of debt-to-GDP and debt-to-exports thresholds. Liquidity ratios are also projected to exceed the relevant thresholds already in 2018, as amortization on recent large loans starts falling due, suggesting potential liquidity strains in the near term.[1]

In the DSA, external debt ratios are most sensitive to the exchange rate, non-debt flows, and exports shocks. Since Djibouti operates one of the oldest currency board arrangements in the world, an exchange rate depreciation should be considered a tail risk. Nevertheless, a sharp depreciation of the U.S. dollar vis-à-vis other currencies in which Djibouti is indebted, namely the euro and the Kuwaiti dinar, could contribute to sizeable valuation effects. Moreover, an increase in global interest rates could pose important risks, given the significant share of debt with variable interest rates.

The DSA suggests that the public sector's borrowing space is very limited and, hence, the pace of external borrowing should be reduced and borrowing on non-concessional terms avoided. In particular, any new borrowing resulting in significant additional short-term debt service should be avoided. Going forward, the authorities should develop a national strategy to manage the external debt burden aimed at restoring debt sustainability and strengthen coordination among the different government entities in charge of contracting external loans.

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[1] Under the joint Fund-Bank Low-Income Country (LIC) Debt Sustainability Framework, Djibouti is rated as having weak policy performance, given its Country Policy and Institutional Assessment (CPIA) average rating of 3.04 in 2013–15. The 2015 DSA can be found in IMF Country Report No. 16/248.

BACKGROUND

1. **Total public and publicly guaranteed (PPG) debt increased from 50 percent of GDP at end-2014 to 69 percent of GDP at end-2015, and is projected to increase further to 85 percent of GDP at end-2016.**[2] This increase was mainly due to loan disbursements related to three large-scale projects (see below). Government-guaranteed public enterprise debt accounted for 58 percent of external debt at end-2015, and the share is expected to rise further to 68 percent of external debt by end-2016.[3] The share of domestic debt in total public debt is small and has been declining.

Table 1. Djibouti: Composition of External Public and Publicly-Guaranteed Debt, 2015–16

	2015			2016 (Proj.) 1/		
	Millions of US$	Percent of GDP	Percent of external debt	Millions of US$	Percent of GDP	Percent of external debt
Total (External + Domestic)	1,211	64	...	1,621	86	...
External Debt 1/	1,197	63	100	1,610	85	100
Public debt	495	26	41	508	27	32
Multilateral	323	17	27	322	17	20
IMF	28	1	2	26	1	2
IDA	131	7	11	131	7	8
Other Multilateral	164	9	14	165	9	10
Official Bilateral	172	9	14	186	10	12
Paris Club	47	2	4	47	2	3
Non-Paris Club	125	7	10	139	7	9
Publicly-guaranteed debt	696	37	58	1,096	58	68
Stock of external arrears 2/ 3/	6	0.3	0.5	...	...	...
Domestic Debt 4/	14	1	...	10	1	...

Sources: Djibouti authorities; IMF staff calculations.

1/ Based on information available as of end-November 2016

2/ Excluding arrears under negotiation to Iran and India.

3/ In the DSA projections all external arrears are assumed to be cleared by 2018.

4/ Excluding budgetary arrears equivalent to approximately 0.5 percent of GDP. In the DSA projection these arrears are included and assumed to be paid off by 2019.

[2] Figures for 2016 are based on data available through mid-November 2016.

[3] The government's contingent liabilities or guarantees on public enterprise external debt stem from loans contracted by the government that have been on-lent (under loan agreements, *accords de rétrocession*) to public enterprises. Under the lending agreement, the public enterprise assumes responsibility to pay the debt service falling due on the loan, but is treated in this DSA as being guaranteed by the government because the latter remains the borrower of record and would be the payer of last resort to the creditor in the event of a default by the public enterprise. Two large loans that were contracted by the government for projects being implemented by public enterprises for which on-lending agreements have yet to be signed are however classified under government-guaranteed debt to be consistent with the government's debt recording and given the intention to sign on-lending agreements with respect to these two loans.

2. The pace of debt accumulation accelerated sharply during 2014–16 along with loan disbursements to finance three large projects, but is now expected to moderate. In 2013, the government contracted two large loans to finance the building of the Addis Ababa–Djibouti railway and a water pipeline from Ethiopia for the amount of US$860 million. In addition, in 2016 another government-guaranteed loan to finance the construction of a multipurpose port was signed for an amount of US$340 million. These three loans were extended by China EximBank, and during 2014-16 alone, disbursements reached a cumulative US$1.1 billion (over 90 percent of the loans contracted). The average grant element on new external borrowing (disbursements) is expected to reach 36 percent in 2016, reflecting low international interest rates and generous terms, in particular on the large water pipeline project, but is expected to gradually decline to 12 percent by 2023 in line with the assumption of tightening financing terms for Djibouti in the longer term.

3. The rapid accumulation of external PPG debt since 2014 will contribute to an elevated debt service burden in the coming years. Based on the existing stock of debt and pipeline of disbursements and new project borrowing, the external PPG debt-to-GDP ratio is projected to peak at 87.3 percent in 2018, almost double its 2013 level. At the same time, external debt service will also increase rapidly, in large part reflecting borrowing for the three large projects. The grace period for the railway, water pipeline, and multipurpose port projects will end in 2019, 2021, and 2023 respectively, and total external PPG debt service will increase to about US$350–400 million per year by 2024 and thereafter (peaking in terms of GDP at 9.1 percent in 2024).

4. Disbursements under the three large loans also increased the share of U.S. dollar-denominated debt in total external debt. In 2014, Djibouti's external debt was mainly denominated in Kuwaiti dinar (22 percent), U.S. dollar (20 percent), and euro (10 percent). However, the disbursements related to the three large projects will increase the dollar-denominated debt share to 60 percent in 2021. Under Djibouti's currency board,[4] a larger share of U.S. dollar-denominated debt would lower valuation risks associated with movements in the U.S. dollar exchange rate.

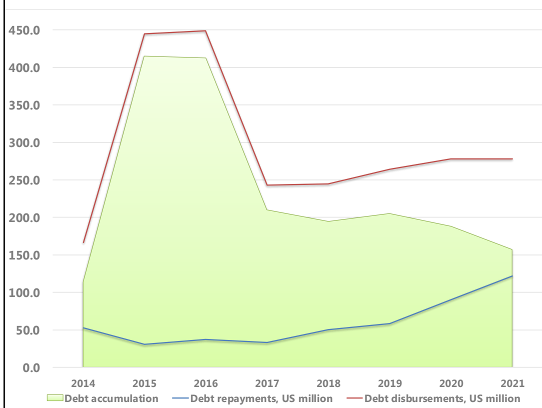
5. Mixed progress was made in clearing external debt arrears in 2016. In May, outstanding arrears to India ($10.9 million or 0.6 percent of GDP at end-2015) were cleared under a restructuring agreement (and are no longer considered arrears). However, as of end-November 2016, external debt arrears on PPG external debt still amounted to 0.7 percent of GDP. These were owed mainly to Iran (0.3 percent of GDP); discussions to reschedule these arrears are ongoing. Also, arrears have accumulated since late 2011 with Belgium, Italy, and Spain ($4.6 million or 0.2 percent of GDP) due to the suspension of payments pending the conclusion of negotiations to convert the related debts into development projects. During 2016, short-term arrears have been periodically incurred and subsequently cleared vis-a-vis several other creditors. As a result, at end-November such short-term arrears amounted to 0.2 percent of GDP, and were owed to Arab Development Funds and India. The authorities explained that the recurrence of short-term arrears in 2016 owed to treasury cash-flow pressures, and did not consider them to be indicative of a

[4] Under the currency board arrangement, the Djibouti franc is pegged to the U.S. dollar.

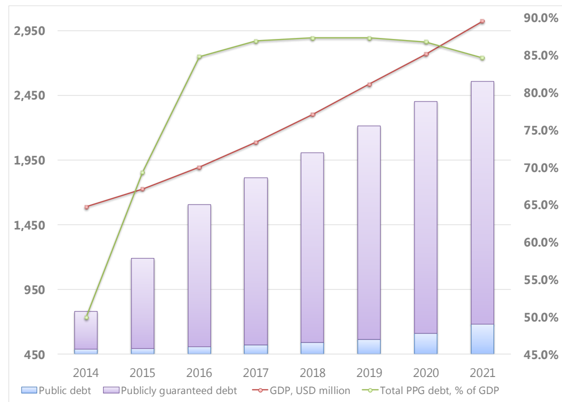
fundamental payments incapacity. They were also optimistic that generous terms would be granted for the arrears under negotiation.

Figure 1. Djibouti: External PPG debt ratios

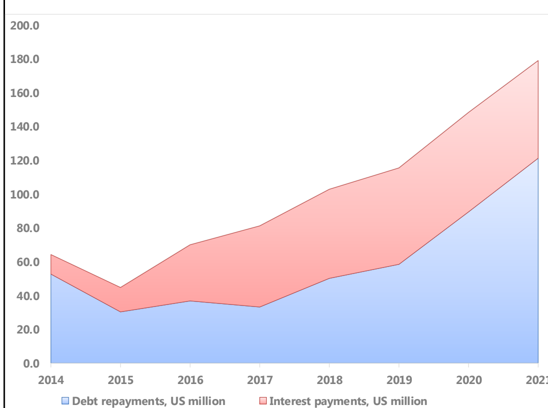
The investment boom led to rapid debt accumulation in recent years …



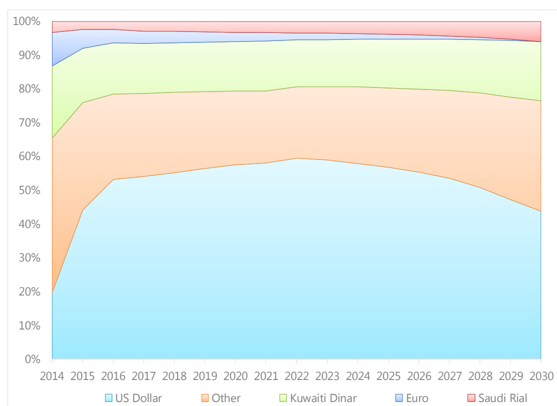
The debt-to-GDP ratio increased by 35 percentage points since 2014, reaching 85 percent of GDP in 2016 …



Consequently, debt service is increasing and will reach 6 percent of GDP in 2021.



The share of debt denominated in U.S. dollar has increased sharply over the past few years.



Source: Staff and authorities' Calculation

MACROECONOMIC ASSUMPTIONS

6. Since the start of the investment boom, economic activity has been strong, but was accompanied by a sizeable widening of the fiscal and current account deficits through 2016. Looking ahead:

- GDP growth is projected to reach 6.5 percent in 2016 and to accelerate to 7 percent in the medium term on the back of the major investments in port facilities, railways and energy.

Growth is assumed to stabilize at 6 percent in the long term once the major investment projects start to bear fruit.

- The current account deficit peaked at 32 percent of GDP in 2015 due to large investment goods imports. Thereafter the deficit is expected to decline in 2016 (28 percent of GDP) and 2017 (21 percent of GDP) as the investment boom begins to unwind, and subsequently to stabilize at around 13 percent of GDP in the long run. The non-interest current account deficit is projected at 11 percent in the long run.

- Net FDI inflows, mainly driven by the development of port-related activities, are projected to fluctuate around 11 percent of GDP per annum, covering the non-interest current account deficit beyond 2022, based on the authorities' investment agenda which relies on FDI inflows, including through PPPs, to finance future investments and avoid further increases in public debt.

- Inflation is projected to stabilize at 3 percent in the medium and long run.

- While the fiscal deficit reached about 16 percent of GDP on average during 2014–16 on account of spending on large public investment projects, the deficit is projected to drop to about 1 percent of GDP from 2018 once the water pipeline project is completed.

- The average effective interest rate on external debt is projected at 2.4 percent in 2016. However, in line with the assumption of gradual tightening of financing terms, the cost of external financing is expected to pick up in the long run with the effective interest rate exceeding 4 percent in the medium term.

- The average grant element of new external PPG borrowing would drop to 28 percent in 2017 (from 36 percent in 2016) after the completion of the highly concessional water project, and would decline gradually to 20 percent in the medium term, before falling to 12 percent thereafter.

Table 2. Djibouti: Evolution of Selected Macroeconomic Indicators

	2016	2017	2018	2019	2020	Average 2020–2036
Real GDP growth						
Current DSA	6.5	7	7	7	6	6
Previous DSA, September 2015	6.5	7	7	7	6	6
Overall fiscal balance (cash basis, percent of GDP)						
Current DSA	-16.3	-2.6	-1.1	-1.1	-1.3	-1.4
Previous DSA, September 2015	-11.9	-1.6	-3.4	-1.1	-0.1	-0.1
Current account deficit (percent of GDP)						
Current DSA	-28.4	-20.8	-18.2	-19	-17.9	-12.2
Previous DSA, September 2015	-25.8	-14.8	-14.5	-12.6	-13.1	-14
External PPG debt (nominal, percent of GDP)						
Current DSA	84.9	86.9	87.3	87.2	86.6	63.1
Previous DSA, September 2015	78.7	79.6	78.3	73.5	68.6	54.1

Source: IMF Staff.

EXTERNAL DSA

7. **The results of the external DSA confirm that Djibouti remains at a high risk of debt distress (as in the previous 2015 DSA).** Furthermore, the risk of debt distress has increased significantly with the debt burden indicators breaching their respective policy-dependent thresholds by larger amounts, and in the case of the liquidity thresholds for longer periods.

8. **Under the baseline, total nominal public and publicly guaranteed (PPG) debt is projected to reach 85 percent of GDP in 2016 and 87 percent of GDP in 2017–19 before steadily declining over the long run. The PV of debt-to-GDP ratio is projected to reach 82-83 percent in 2016–18.**[5] This DSA confirms that, as in the 2015 DSA, all debt solvency indicators breach their corresponding thresholds, but by a larger margin (Figure 2). The PV of external debt-to-GDP and debt–to-exports ratios remain above their policy-dependent thresholds for the entire projection period and the PV of debt-to-revenues ratio remains above its threshold until 2026. This indicates the presence of significant solvency risks during the projection period. In addition, compared to the 2015 DSA, the liquidity indicators reveal greater stress on Djibouti's debt servicing capacity. The debt service-to-exports and debt service-to-revenue ratios now rapidly approach and exceed their respective thresholds in 2019, somewhat sooner than in the 2015 DSA, and remain above the threshold for almost the whole projection horizon. During 2020-30, the debt service will

[5] Sufficient data on stocks and flows of private external debt are not available to make it possible to incorporate the evolution of the private external debt in the DSA.

on average reach about one-quarter of total export revenues and one-third of fiscal revenues, implying high liquidity risks in the long term.

9. Under this DSA, shocks to exchange rates, non-debt creating flows, and exports are likely to have the most significant impact on debt ratios. The bound tests indicate that a one-time 30 percent nominal depreciation in 2017 would raise the PV of the external debt-to-GDP ratio above 117 percent and cause sizeable and prolonged breaches of the respective thresholds by all the debt burden indicators. However, given the Djibouti franc's exceptional stability vis-à-vis the dollar under the currency board, the DSA exchange rate stress scenario should be considered a tail risk event. While a bilateral movement of the U.S. dollar exchange rate vis-à-vis other major currencies could contribute to a sizeable valuation effect, with the recently increasing share of U.S. dollar-denominated debt, this effect should be limited (Figure 1). However, given that the debt related to the railway project is linked to LIBOR, an increase in global interest rates could pose important risks. In addition, a slowdown in economic growth in Ethiopia or China and a slowdown in international trade would have a major impact on export revenues and could potentially worsen debt indicators.

PUBLIC DSA

10. The dynamics of total public debt reflect the large share of external debt in total public debt, as the share of domestic debt is small and declining (Table 2). Under the baseline, reflecting the sharp rise in external debt, overall public debt is projected to increase from 54 percent of GDP in 2014 to 88 percent in 2017 and the PV of debt-to-GDP remains above the 38 percent benchmark until 2029. Simulations shows that under the fixed primary balance and historical scenarios, public debt dynamics worsen. This owes to the fact that under the baseline, projected economic growth is higher and the primary fiscal deficit lower than their historical values. According to stress tests, public debt indicators are most vulnerable to an exchange rate depreciation: a one-time 30 percent depreciation in 2017 would lead to major increases in all key ratios and would impact significantly the debt service-to-revenue ratio over the medium term.

CONCLUSION

11. Djibouti remains at a high risk of debt distress. This is unchanged from the 2015 DSA, but risks have increased. Under the baseline scenario, solvency and liquidity risks are significant over the projection horizon, and all the debt burden indicators breach their respective policy-dependent thresholds by sizeable margins that are larger than in the 2015 DSA. All the solvency debt burden indicators exhibit protracted breaches of their respective thresholds. In addition, liquidity risks have increased significantly compared with the 2015 DSA, particularly in the near term, and the liquidity thresholds are breached for longer periods. The DSA also shows that Djibouti's debt dynamics and risk of debt distress are particularly vulnerable to adverse exchange rate and export shocks, as well as to costlier borrowing costs and shocks to non-debt creating inflows (FDI).

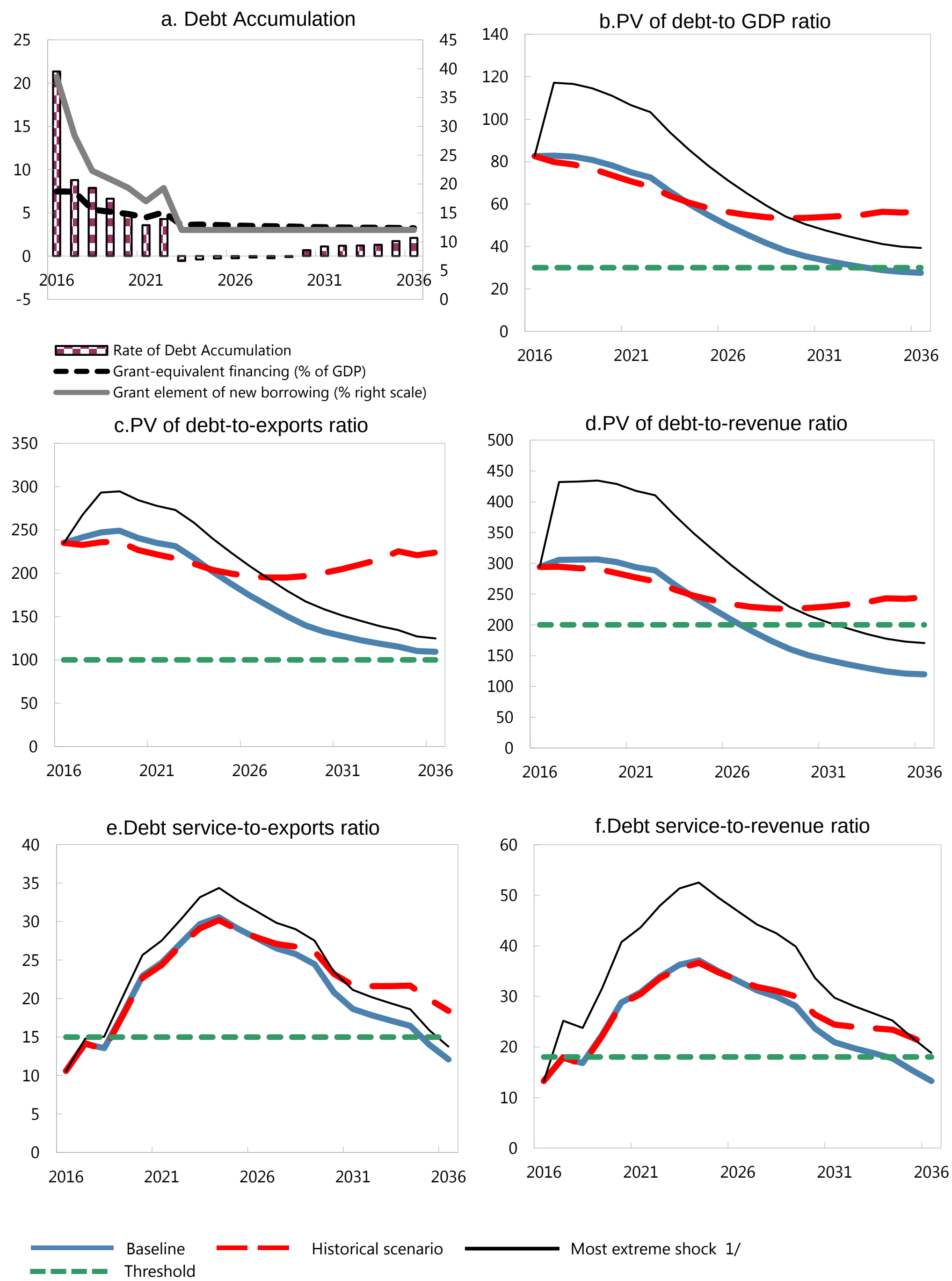
12. Under the existing institutional framework, debt management suffers from weak coordination. Coordination of new borrowing consistent with an overall policy remains a problem as most debt agreements are signed by line ministries and other government agencies while the Ministry of Economy and Finance (and the Public Debt Department) are often involved only at a late stage. The authorities' capacity to monitor and evaluate debt flows and stocks, and the associated budget risks, including through periodic DSAs, would benefit from being strengthened. Given the large role of public enterprises in ensuring the sustainability of PPG debt, it would be important to increase transparency on the risks and costs of the contingent budget liabilities from public enterprise debt liabilities. In this respect, it would be useful for the authorities to establish a database to monitor public enterprise debt, government guarantees, and related collateral.

13. In light of the sharp run-up in external debt and worsening of an already high risk of debt distress, the pace of PPG external borrowing should be reduced and borrowing on non-concessional terms should be avoided. The DSA suggests that any further non-concessional borrowing will exacerbate the already high risk of debt distress, while both the external and fiscal primary balances are below debt service requirements, and for the most part are negative, over the long run. In this situation, it is important to slow the pace of new loans contracted or guaranteed by the government. In addition, all new borrowing, in particular to finance projects managed by public enterprises, should be limited to the projects that generate sufficient revenues to meet debt service requirements. Complementary reforms to strengthen the governance and efficiency of public enterprises would help in this respect. To the extent that the authorities, as planned, turn to public-private partnerships (PPP) to finance and manage future projects, they should also strengthen their capacity to evaluate and monitor PPP-related contingent liabilities for the budget. They should also minimize their financial participation in PPPs and avoid providing explicit guarantees or taking on implicit contingent budget liabilities related to the financial performance of PPP projects.

14. To strengthen debt management, the authorities should press ahead with the finalization and adoption of their debt strategy. The government is currently preparing a national debt policy and plans to establish a national public debt committee. It will be important that the committee, as expected, serve as a clearing house for the approval of all new public sector loans, thereby ensuring a centralized and coordinated control over new borrowing, and an ex ante evaluation of borrowing costs and risks. With respect to a national debt policy, the introduction of an explicit debt anchor, for example, through a target for the medium-term debt-to-GDP ratio, would benchmark and guide a sustainable debt policy. The sizeable increase in debt service over the medium term underscores the importance of consolidating and strengthening debt management expeditiously. Finally, the authorities should give priority to staying current on all debt service obligations.

15. The authorities acknowledge the high risk to debt sustainability attached to the current financing strategy as demonstrated by the DSA. However, they believe that the debt-financed investment projects are critical for Djibouti's development and that their strategy will be viable if it generates the sustained strong economic growth and crowds-in sufficient FDI, which would serve as an alternative financing source for future development. In this regard, the authorities underscored the high priority given to strengthening the governance and efficiency of public enterprises as well to improving the business climate. The authorities also aim at relying more on financing projects through PPPs involving only a small financial participation, if any, by the government. PPPs would be selected only if they were considered to be profitable, and in this respect the authorities did not expect to provide government guarantees. However, in the absence of alternative financing options, they felt that it would be necessary to use external borrowing to finance the projects that they consider important for the country's development and cost effective. The authorities also acknowledged the need to press ahead with establishing a national debt policy and strengthening public debt management; they underscored the importance of technical assistance in this regard.

Figure 2. Djibouti: Indicators of Public and Publicly Guaranteed External Debt under Alternatives Scenarios, 2016-2036 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 Non-debt flows shock; in d. to a One-time depreciation shock; in e. to a Exports shock and in figure f. to a One-time depreciation shock

Figure 3. Djibouti: Indicators of Public Debt Under Alternative Scenarios, 2016-2036 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.
2/ Revenues are defined inclusive of grants.

Table 3. Djibouti: External Debt Sustainability Framework, Baseline Scenario, 2013-2036 1/

(In percent of GDP, unless otherwise indicated)

	Actual			Historical 6/	Standard 6/	Projections									
				Average	Deviation							2016-2021			2022-2036
	2013	2014	2015			2016	2017	2018	2019	2020	2021	Average	2026	2036	Average
External debt (nominal) 1/	**46.2**	**49.9**	**69.3**			**84.8**	**87.1**	**87.1**	**87.1**	**85.8**	**83.0**		**58.9**	**30.6**	
of which: public and publicly guaranteed (PPG)	46.2	49.9	69.3			84.8	87.1	87.1	87.1	85.8	83.0		58.9	30.6	
Change in external debt	-3.0	3.7	19.4			15.4	2.3	0.1	-0.1	-1.3	-2.7		-4.9	-1.2	
Identified net debt-creating flows	-1.6	11.6	20.6			15.0	4.5	1.0	1.9	1.8	0.7		-1.8	-1.9	
Non-interest current account deficit	**20.9**	**24.4**	**30.9**	**15.7**	**9.9**	**26.6**	**17.6**	**15.9**	**15.4**	**14.4**	**14.3**		**10.3**	**10.9**	10.5
Deficit in balance of goods and services	29.4	32.2	43.7			37.8	30.1	25.7	25.2	23.9	23.6		20.1	15.1	
Exports	33.4	32.2	34.1			35.1	34.3	33.3	32.4	32.5	31.9		28.6	25.2	
Imports	62.7	64.3	77.7			72.9	64.3	59.0	57.6	56.4	55.5		48.7	40.4	
Net current transfers (negative = inflow)	-0.6	-1.2	-4.2	-0.8	1.3	-3.2	-3.8	-1.0	-0.9	-0.9	-0.8		-0.6	-0.7	-0.5
of which: official	-1.5	-2.0	-3.3			-2.5	-3.0	-0.3	-0.3	-0.3	-0.2		-0.2	-0.9	
Other current account flows (negative = net inflow)	-7.9	-6.6	-8.5			-7.9	-8.7	-8.8	-8.8	-8.6	-8.5		-9.2	-3.6	
Net FDI (negative = inflow)	**-19.7**	**-9.6**	**-7.2**	**-13.2**	**7.8**	**-9.1**	**-10.8**	**-11.5**	**-11.4**	**-11.2**	**-12.0**		**-11.1**	**-11.3**	-11.2
Endogenous debt dynamics 2/	**-2.8**	**-3.1**	**-3.2**			**-2.6**	**-2.3**	**-3.3**	**-2.1**	**-1.4**	**-1.6**		**-1.1**	**-1.4**	
Contribution from nominal interest rate	0.6	0.7	0.9			1.5	3.0	2.2	3.4	3.4	3.1		2.4	0.3	
Contribution from real GDP growth	-2.3	-2.5	-3.0			-4.1	-5.4	-5.5	-5.5	-4.8	-4.7		-3.5	-1.7	
Contribution from price and exchange rate changes	-1.2	-1.3	-1.0			...	...	...	...	...	...		...	...	
Residual (3-4) 3/	**-1.4**	**-8.0**	**-1.2**			**0.5**	**-2.1**	**-0.9**	**-1.9**	**-3.1**	**-3.5**		**-3.1**	**0.7**	
of which: exceptional financing	-0.2	-0.3	0.2			-0.1	0.4	0.0	0.0	0.0	0.0		0.0	0.0	
PV of external debt 4/	...	...	69.2			82.5	82.8	82.3	80.7	78.2	74.9		49.9	27.6	
In percent of exports	...	...	202.9			235.0	241.6	247.2	249.3	240.8	235.1		174.5	109.3	
PV of PPG external debt	**...**	**...**	**69.2**			**82.5**	**82.8**	**82.3**	**80.7**	**78.2**	**74.9**		**49.9**	**27.6**	
In percent of exports	**...**	**...**	**202.9**			**235.0**	**241.6**	**247.2**	**249.3**	**240.8**	**235.1**		**174.5**	**109.3**	
In percent of government revenues	**...**	**...**	**228.0**			**294.2**	**305.6**	**305.9**	**306.5**	**302.1**	**293.8**		**207.6**	**119.6**	
Debt service-to-exports ratio (in percent)	**8.3**	**12.9**	**7.4**			**10.6**	**14.1**	**13.6**	**18.1**	**22.9**	**24.7**		**27.8**	**12.1**	
PPG debt service-to-exports ratio (in percent)	**8.3**	**12.9**	**7.4**			**10.6**	**14.1**	**13.6**	**18.1**	**22.9**	**24.7**		**27.8**	**12.1**	
PPG debt service-to-revenue ratio (in percent)	**10.1**	**15.9**	**8.3**			**13.3**	**17.8**	**16.8**	**22.3**	**28.8**	**30.8**		**33.1**	**13.2**	
Total gross financing need (Billions of U.S. dollars)	0.1	0.3	0.5			0.4	0.2	0.2	0.3	0.3	0.3		0.3	0.3	
Non-interest current account deficit that stabilizes debt ratio	23.9	20.7	11.5			11.2	15.3	15.8	15.5	15.7	17.1		15.2	12.1	
Key macroeconomic assumptions															
Real GDP growth (in percent)	5.0	6.0	6.5	5.1	1.5	6.5	7.0	7.0	7.0	6.0	6.0	6.6	6.0	6.0	6.0
GDP deflator in US dollar terms (change in percent)	2.4	2.9	2.1	4.0	2.3	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Effective interest rate (percent) 5/	1.4	1.8	1.9	1.5	0.2	2.4	4.0	2.8	4.3	4.3	4.0	3.6	4.2	1.1	3.0
Growth of exports of G&S (US dollar terms, in percent)	6.1	5.2	15.2	7.5	4.9	13.0	7.6	7.0	7.2	9.5	7.1	8.6	7.2	8.6	7.5
Growth of imports of G&S (US dollar terms, in percent)	9.2	11.9	31.4	14.6	18.2	2.9	-2.8	1.0	7.6	6.9	7.5	3.9	7.3	8.5	6.9
Grant element of new public sector borrowing (in percent)	...	...	...	...	...	38.6	28.4	22.3	20.9	19.3	17.0	24.4	12.0	12.0	12.5
Government revenues (excluding grants, in percent of GDP)	27.4	26.3	30.3			28.0	27.1	26.9	26.3	25.9	25.5		24.0	23.1	23.8
Aid flows (in Billions of US dollars) 7/	0.1	0.1	0.1			0.1	0.1	0.1	0.1	0.1	0.1		0.1	0.3	
of which: Grants	0.1	0.1	0.1			0.1	0.1	0.1	0.1	0.1	0.1		0.1	0.3	
of which: Concessional loans	...	...	...			0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Grant-equivalent financing (in percent of GDP) 8/	...	...	...			7.5	7.5	5.4	5.1	4.9	4.5		3.5	3.2	3.5
Grant-equivalent financing (in percent of external financing) 8/	...	...	...			60.9	52.6	39.4	38.6	37.8	37.2		40.4	46.5	42.3
Memorandum items:															
Nominal GDP (Billions of US dollars)	1.5	1.6	1.7			1.9	2.1	2.3	2.5	2.8	3.0		4.7	11.3	
Nominal dollar GDP growth	7.5	9.1	8.7			9.7	10.2	10.2	10.2	9.2	9.2	9.8	9.2	9.2	9.2
PV of PPG external debt (in Billions of US dollars)			1.2			1.6	1.7	1.9	2.0	2.2	2.3		2.3	3.1	
(PVt-PVt-1)/GDPt-1 (in percent)						21.4	8.8	7.9	6.6	4.7	3.6	8.8	-0.2	2.1	0.8
Gross workers' remittances (Billions of US dollars)	...	...	...			...	...	...	...	...	...		...	...	
PV of PPG external debt (in percent of GDP + remittances)	...	...	69.2			82.5	82.8	82.3	80.7	78.2	74.9		49.9	27.6	
PV of PPG external debt (in percent of exports + remittances)	...	...	202.9			235.0	241.6	247.2	249.3	240.8	235.1		174.5	109.3	
Debt service of PPG external debt (in percent of exports + remitt	...	...	7.4			10.6	14.1	13.6	18.1	22.9	24.7		27.8	12.1	

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 ra

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 4a. Djibouti: Sensitivity Analysis for Key Indicators of Public and Publicly Guaranteed External Debt, 2016–2036

(In Percent)

	Projections							
	2016	2017	2018	2019	2020	2021	**2026**	2036
PV of debt-to GDP ratio								
Baseline	83	83	82	81	78	75	**50**	28
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2016-2036 1/	83	80	79	77	74	71	**56**	57
A2. New public sector loans on less favorable terms in 2016-2036 2	83	84	85	86	85	83	**64**	47
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2017-2018	83	86	88	87	84	81	**54**	30
B2. Export value growth at historical average minus one standard deviation in 2017-2018 3/	83	84	86	85	82	79	**53**	29
B3. US dollar GDP deflator at historical average minus one standard deviation in 2017-2018	83	84	85	83	81	77	**52**	29
B4. Net non-debt creating flows at historical average minus one standard deviation in 2017-2018 4/	83	92	98	95	92	89	**60**	31
B5. Combination of B1-B4 using one-half standard deviation shocks	83	91	97	95	92	88	**59**	32
B6. One-time 30 percent nominal depreciation relative to the baseline in 2017 5/	83	117	117	114	111	106	**71**	39
PV of debt-to-exports ratio								
Baseline	235	242	247	249	241	235	**175**	109
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2016-2036 1/	235	233	236	236	227	222	**196**	224
A2. New public sector loans on less favorable terms in 2016-2036 2	235	244	256	265	262	262	**224**	185
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2017-2018	235	242	248	251	242	237	**176**	110
B2. Export value growth at historical average minus one standard deviation in 2017-2018 3/	235	258	284	286	277	270	**202**	125
B3. US dollar GDP deflator at historical average minus one standard deviation in 2017-2018	235	242	248	251	242	237	**176**	110
B4. Net non-debt creating flows at historical average minus one standard deviation in 2017-2018 4/	235	267	293	295	284	278	**208**	125
B5. Combination of B1-B4 using one-half standard deviation shocks	235	264	289	291	281	275	**205**	125
B6. One-time 30 percent nominal depreciation relative to the baseline in 2017 5/	235	242	248	251	242	237	**176**	110
PV of debt-to-revenue ratio								
Baseline	294	306	306	307	302	294	**208**	120
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2016-2036 1/	294	295	292	291	284	277	**234**	245
A2. New public sector loans on less favorable terms in 2016-2036 2	294	309	317	326	329	327	**266**	202
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2017-2018	294	316	328	329	325	316	**224**	129
B2. Export value growth at historical average minus one standard deviation in 2017-2018 3/	294	311	321	322	318	309	**220**	125
B3. US dollar GDP deflator at historical average minus one standard deviation in 2017-2018	294	310	315	316	312	303	**215**	124
B4. Net non-debt creating flows at historical average minus one standard deviation in 2017-2018 4/	294	338	363	362	357	347	**248**	136
B5. Combination of B1-B4 using one-half standard deviation shocks	294	335	361	361	356	347	**247**	138
B6. One-time 30 percent nominal depreciation relative to the baseline in 2017 5/	294	432	433	435	429	418	**296**	170

Table 4b. Djibouti: Sensitivity Analysis for Key Indicators of Public and Publicly Guaranteed External Debt, 2016–2036

(In Percent)

Debt service-to-exports ratio								
Baseline	11	14	14	18	23	25	**28**	12
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2016-2036 1/	11	14	13	18	23	24	**28**	18
A2. New public sector loans on less favorable terms in 2016-2036 2	11	14	12	17	20	23	**27**	15
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2017-2018	11	14	14	18	23	25	**28**	12
B2. Export value growth at historical average minus one standard deviation in 2017-2018 3/	11	15	15	20	26	28	**31**	14
B3. US dollar GDP deflator at historical average minus one standard deviation in 2017-2018	11	14	14	18	23	25	**28**	12
B4. Net non-debt creating flows at historical average minus one standard deviation in 2017-2018 4/	11	14	15	20	25	26	**31**	14
B5. Combination of B1-B4 using one-half standard deviation shocks	11	14	15	20	25	27	**31**	14
B6. One-time 30 percent nominal depreciation relative to the baseline in 2017 5/	11	14	14	18	23	25	**28**	12
Debt service-to-revenue ratio								
Baseline	13	18	17	22	29	31	**33**	13
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2016-2036 1/	13	18	17	22	28	30	**33**	20
A2. New public sector loans on less favorable terms in 2016-2036 2	13	18	15	21	26	29	**32**	16
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2017-2018	13	18	18	24	31	33	**35**	14
B2. Export value growth at historical average minus one standard deviation in 2017-2018 3/	13	18	17	23	29	31	**34**	14
B3. US dollar GDP deflator at historical average minus one standard deviation in 2017-2018	13	18	17	23	30	32	**34**	14
B4. Net non-debt creating flows at historical average minus one standard deviation in 2017-2018 4/	13	18	18	25	31	33	**36**	15
B5. Combination of B1-B4 using one-half standard deviation shocks	13	18	19	25	32	34	**37**	15
B6. One-time 30 percent nominal depreciation relative to the baseline in 2017 5/	13	25	24	32	41	44	**47**	19
Memorandum item:								
Grant element assumed on residual financing (i.e., financing required above baseline) 6/	11	11	11	11	11	11	**11**	11

Sources: Country authorities; and staff estimates and projections.

1/ Variables include real GDP growth, growth of GDP deflator (in U.S. dollar terms), non-interest current account in percent of GDP, and non-debt creating flows.

2/ Assumes that the interest rate on new borrowing is by 2 percentage points higher than in the baseline., while grace and maturity periods are the same as in the baseline.

3/ Exports values are assumed to remain permanently at the lower level, but the current account as a share of GDP is assumed to return to its baseline level after the shock (implicitly assuming an offsetting adjustment in import levels).

4/ Includes official and private transfers and FDI.

5/ Depreciation is defined as percentage decline in dollar/local currency rate, such that it never exceeds 100 percent.

6/ Applies to all stress scenarios except for A2 (less favorable financing) in which the terms on all new financing are as specified in footnote 2.

Table 5. Djibouti: Public Sector Debt Sustainability Framework, Baseline Scenario, 2013-2036

(In 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/	51.3	53.7	72.1			86.6	88.1	87.5	87.2	85.8	83.1		58.9	30.6	
of which: foreign-currency denominated	46.2	49.9	69.3			84.8	87.1	87.1	87.1	85.8	83.0		58.9	30.6	
Change in public sector debt	-3.6	2.5	18.4			14.5	1.5	-0.6	-0.4	-1.3	-2.8		-4.9	-1.2	
Identified debt-creating flows	2.8	5.7	17.4			9.5	-5.9	-7.5	-7.4	-6.0	-5.4		-4.5	-0.6	
Primary deficit	5.2	8.8	20.8	4.0	6.7	14.1	-1.1	-1.6	-2.9	-2.3	-1.4	0.8	-1.6	1.8	-0.4
Revenue and grants	31.8	30.9	37.2			32.5	31.9	29.9	29.3	28.8	28.4		26.9	25.8	
of which: grants	4.4	4.7	6.9			4.5	4.8	3.0	3.0	2.9	2.9		2.8	2.7	
Primary (noninterest) expenditure	37.0	39.8	58.1			46.6	30.8	28.3	26.4	26.6	27.0		25.3	27.6	
Automatic debt dynamics	-3.2	-3.5	-3.5			-4.6	-4.8	-5.8	-4.5	-3.8	-4.0		-2.9	-2.4	
Contribution from interest rate/growth differential	-2.7	-3.0	-3.3			-3.9	-4.0	-5.2	-3.7	-3.0	-3.2		-2.3	-2.1	
of which: contribution from average real interest rate	-0.1	-0.1	0.0			0.5	1.7	0.6	2.0	2.0	1.7		1.3	-0.3	
of which: contribution from real GDP growth	-2.6	-2.9	-3.3			-4.4	-5.7	-5.8	-5.7	-4.9	-4.9		-3.6	-1.8	
Contribution from real exchange rate depreciation	-0.5	-0.6	-0.2			-0.7	-0.8	-0.6	-0.8	-0.8	-0.8		...	...	
Other identified debt-creating flows	0.8	0.4	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Privatization receipts (negative)	0.8	0.4	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	-6.4	-3.2	1.0			5.0	7.4	6.8	7.1	4.7	2.6		-0.4	-0.6	
Other Sustainability Indicators															
PV of public sector debt	...	...	71.9			84.4	83.9	82.7	80.8	78.3	74.9		49.9	27.6	
of which: foreign-currency denominated	...	...	69.2			82.5	82.8	82.3	80.7	78.2	74.9		49.9	27.6	
of which: external	...	...	69.2			82.5	82.8	82.3	80.7	78.2	74.9		49.9	27.6	
PV of contingent liabilities (not included in public sector debt)	...	...	...			...	...	...	...	...	...		...	...	
Gross financing need 2/	8.3	13.1	23.4			17.8	3.8	2.9	3.0	5.2	6.5		6.4	4.8	
PV of public sector debt-to-revenue and grants ratio (in percent)	...	...	193.3			259.6	263.1	276.4	275.7	271.4	263.7		185.8	107.0	
PV of public sector debt-to-revenue ratio (in percent)	...	...	237.2			300.8	309.5	307.3	306.9	302.3	293.9		207.6	119.6	
of which: external 3/	...	...	228.0			294.2	305.6	305.9	306.5	302.1	293.8		207.6	119.6	
Debt service-to-revenue and grants ratio (in percent) 4/	9.5	13.7	6.9			11.6	15.3	15.2	20.1	25.9	27.7		29.6	11.8	
Debt service-to-revenue ratio (in percent) 4/	11.0	16.1	8.5			13.4	18.0	16.9	22.4	28.9	30.9		33.1	13.2	
Primary deficit that stabilizes the debt-to-GDP ratio	8.8	6.4	2.4			-0.4	-2.6	-1.0	-2.5	-0.9	1.4		3.3	2.9	
Key macroeconomic and fiscal assumptions															
Real GDP growth (in percent)	5.0	6.0	6.5	5.1	1.5	6.5	7.0	7.0	7.0	6.0	6.0	6.6	6.0	6.0	6.0
Average nominal interest rate on forex debt (in percent)	1.4	1.8	1.9	1.5	0.2	2.8	4.2	2.9	4.5	4.4	4.1	3.8	4.2	1.1	3.1
Average real interest rate on domestic debt (in percent)	-2.3	...	...	-3.4	0.9	...	...	...	...	...	...		...	...	
Real exchange rate depreciation (in percent, + indicates depreciation)	-1.0	-1.3	-0.3	-2.0	1.9	-1.1	...	...	...	...	...	...	...	...	...
Inflation rate (GDP deflator, in percent)	2.4	2.9	2.1	4.0	2.3	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Growth of real primary spending (deflated by GDP deflator, in percent)	6.6	13.8	55.4	7.6	17.4	-14.6	-29.2	-1.7	-0.1	6.6	7.7	-5.2	6.6	6.3	6.2
Grant element of new external borrowing (in percent)	...	...	...	...	...	38.6	28.4	22.3	20.9	19.3	17.0	24.4	12.0	12.0	...

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 6. Djibouti: Sensitivity Analysis for Key Indicators of Public Debt 2016–2036

	Projections							
	2016	2017	2018	2019	2020	2021	2026	2036
PV of Debt-to-GDP Ratio								
Baseline	84	84	83	81	78	75	50	28
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	84	90	95	101	104	105	102	92
A2. Primary balance is unchanged from 2016	84	97	109	121	132	140	167	202
A3. Permanently lower GDP growth 1/	84	84	83	82	80	77	55	41
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2017-20	84	87	91	90	89	87	65	49
B2. Primary balance is at historical average minus one standard deviations in 2017-201	84	94	104	101	97	93	65	37
B3. Combination of B1-B2 using one half standard deviation shocks	84	94	102	101	99	96	71	50
B4. One-time 30 percent real depreciation in 2017	84	117	113	109	105	100	71	46
B5. 10 percent of GDP increase in other debt-creating flows in 2017	84	93	91	89	86	82	56	31
PV of Debt-to-Revenue Ratio 2/								
Baseline	260	263	276	276	271	264	186	107
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	260	281	317	342	358	368	373	348
A2. Primary balance is unchanged from 2016	260	305	366	414	457	492	621	782
A3. Permanently lower GDP growth 1/	260	264	279	280	277	271	204	156
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2017-20	260	273	301	305	306	302	241	187
B2. Primary balance is at historical average minus one standard deviations in 2017-201	260	296	347	344	338	328	240	142
B3. Combination of B1-B2 using one half standard deviation shocks	260	292	341	343	341	335	264	192
B4. One-time 30 percent real depreciation in 2017	260	368	379	373	364	352	264	177
B5. 10 percent of GDP increase in other debt-creating flows in 2017	260	291	305	303	298	290	208	121
Debt Service-to-Revenue Ratio 2/								
Baseline	12	15	15	20	26	28	30	12
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	12	15	16	23	30	34	43	31
A2. Primary balance is unchanged from 2016	12	15	17	25	34	39	55	59
A3. Permanently lower GDP growth 1/	12	15	15	20	26	28	31	15
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2017-20	12	16	16	22	28	30	34	18
B2. Primary balance is at historical average minus one standard deviations in 2017-201	12	15	17	24	30	32	34	15
B3. Combination of B1-B2 using one half standard deviation shocks	12	16	17	24	31	33	36	18
B4. One-time 30 percent real depreciation in 2017	12	19	22	29	38	41	47	25
B5. 10 percent of GDP increase in other debt-creating flows in 2017	12	15	17	22	28	29	31	13

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.