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STAFF REPORT FOR THE 2014 ARTICLE IV CONSULTATION—DEBT SUSTAINABILITYANALYSIS

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Debt risks have increased significantly after the government of Djibouti contracted large nonconcessional loans in 2013. The current DSA confirms the high risk of external debt distress assigned earlier. There are significant and protracted breaches of the PV of debt-to-GDP and the PV of debt-to-exports thresholds. Liquidity ratios breach the relevant thresholds as well, indicating not only elevated solvency risks, but also potential liquidity tightness in the near term. In order to avoid a downgrade to 'in debt distress', the government would need to clear the existing arrears of $4.7 million in the near term and avoid accumulating new arrears.

External debt ratios are most sensitive to exchange rate depreciation; shocks to exports; and tightening of the financing terms, which is particularly relevant because a significant share of debt has variable interest rates. The debt sustainability analysis suggests that borrowing space is extremely limited, and any further nonconcessional borrowing will exacerbate the already high risk of debt distress.

BACKGROUND

1. **Total public and publicly guaranteed (PPG) debt declined slightly to 56.8 percent of GDP by the end of 2013.** A slight decline in the external debt-to-GDP ratio was driven by the GDP growth; the nominal stock was up by US$42 million and stood at 48.3 percent at the end of 2013. Domestic debt increased as advanced dividend payment by the state bank was converted into a loan. However, this trend is expected to be reversed, driven by disbursements under the new external loans. In 2013 the government contracted two large loans for the total amount of about US$900million (60 percent of GDP). These loans are provided by the Export-Import Bank of China to finance the construction of the Addis Ababa–Djibouti railway and a water pipeline from Ethiopia (see Annex II of the Staff Report and Table 1 below). Disbursements are concentrated over 2014–17. As a result, the external debt-to-GDP ratio is expected to exceed 80 percent of GDP in 2017.

Table 1. Djibouti: Public and Publicly-Guaranteed External Debt Contracted in 2013

Year	Creditor	Total amount, US$ million	Percent of GDP	Grant element, percent	Period of disbursements	Sector
2013	EXIM BANK CHINE	491.8	39.6%	10.6 1/	2014-2017	Transportation
	EXIM BANK CHINE	322.0	22.1%	29.7 1/	2014-2017	Water
	IDA	7.0	0.5%	32.6	2013-2017	Healthcare
	FSD	5.0	0.3%	41.6	2014-2017	Other
	FAD	0.4	0.0%	54.4	2014-2017	Energy

1/ The estimates does not take into account commitment fees. For the railroad project loan LIBOR is assumed to remain fixed at 0.5 percent - the level of interest rates at the time, when the loan was contracted.

2. **Domestic debt remains a small portion of the total debt stock.** Domestic debt increased in 2013 as advanced dividend payment by the state bank was converted into a loan. The government continues clearing the old stock of domestic arrears according to the schedule set at the beginning of the 2008 ECF; however, new domestic arrears were accumulated. The exact amount of the total outstanding stock of domestic arrears is unclear. It is assumed that new domestic arrears were cleared by the end of 2014.

3. **The major scaling-up of investment will exert considerable fiscal pressures in the near term.** The government interest rate bill is projected to increase to at least 1.6 percent of GDP in 2018–19, from 0.3 percent in 2013; including at least 0.7 percentage point associated with the interest rate on the disbursed amounts and commitment fees paid on undisbursed amounts under the water pipeline and the railway loan agreements.

4. As of November 2014, the stock of arrears (excluding technical arrears) on PPG external debt amounted to US$4.7 million (less than 0.3 percent of GDP and 1 percent of the total debt stock). About half of these arrears have been outstanding for less than 3 months and represent missed payments to Arab funds covered by the GCC grant agreement.[1] The remaining portion of arrears (including arrears to Paris Club members) is expected to be repaid by February 2015.

Table 2. Djibouti: Composition of External Public and Publicly-Guaranteed Debt, End-2013

	Millions of US$	Percent of GDP	Percent of external debt
External Debt	699	48	100
Public debt	510	35	73
Multilateral	340	23	49
IMF, AMF	34	2	5
IDA	148	10	21
Other Multilateral	158	11	23
Official Bilateral	170	12	24
Paris Club	61	4	9
Non-Paris Club	108	7	16
Publicly-guaranteed debt	262	18	37
Stock of external arrears	5	0	1

Sources: Djibouti authorities; IMF and World Bank staff calculations.

[1] In December 2013, the Gulf countries decided to grant Djibouti US$200 million over 2014–17. Out of this amount, US$40 million will be used to repay debt due to the Gulf countries.

MACROECONOMIC ASSUMPTIONS

5. The scaling-up of investment is expected to accelerate economic activity starting in 2014, but also to result in widening of the fiscal and current account deficits over the medium term.

- GDP growth was revised up to about 7 percent in 2016–17, compared with 6.5 percent in the previous DSA (Table 3) under the assumption that ongoing investments will create new production and export capacity. It is projected to moderate to 6 percent in the long term, slightly higher than the previous DSA (5.8 percent).

- The current account gap is projected to reach 27 percent of GDP over 2014–15, because large capital imports will exceed the expected increase in exports, mainly port services. Most of the projects have already secured financing in the form of debt (mainly PPG), FDI, and capital grants.

- Net FDI inflow (mainly the development of port-related activities) is projected to fluctuate around 8–11 percent of GDP per annum.

- Inflation forecasts were revised upward to 3–3.5 percent over the next five years, from 2.5 percent assumed under the previous DSA.

- Given data on the loan agreements signed since the last review and data on loans under negotiation, in the current DSA update the grant element of new public borrowings remains at about 25 percent.

- It is projected that the central government will reduce usage of external financing after 2019 and increase borrowing from the domestic market to cover its remaining budget financing needs. The real interest rate of new domestic debt is set at 2 percent.

- Effective interest rates on external debt are projected to remain elevated in 2014–15 because of a large share of relatively expensive loans, and to decline gradually to 2.7–3 percent in the long term, assuming a constant LIBOR rate. However, the effective interest rate on the railway project loan, which is linked to six months LIBOR, could increase.

6. The current DSA uses a discount rate of 5 percent, up from 3 percent used in the previous DSA.

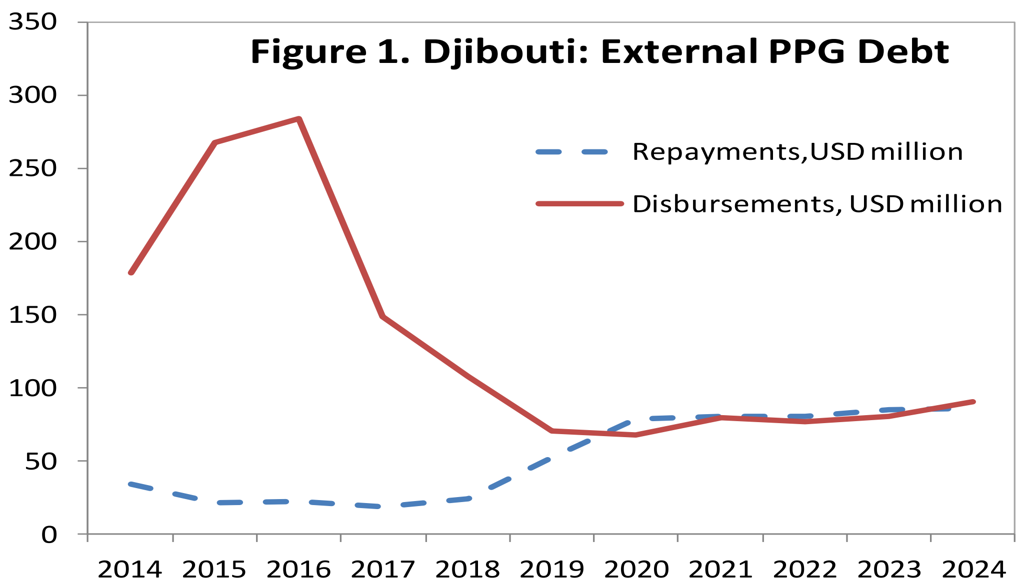
Table 3. Djibouti: Evolution of Selected Macroeconomic Indicators

	2014	2015	2016	2017	2018	Average 2019–33
Real GDP growth						
Current DSA	6.0	6.5	7.0	7.1	7.1	6.0
Previous DSA, June 2013	6.0	6.5	6.5	6.5	6.0	5.8
Overall fiscal balance (cash basis, percent of GDP)						
Current DSA	-12.6	-14.4	-12.7	-3.9	-6.0	-0.3
Previous DSA, June 2013	-6.0	0.0	0.0	0.0	0.0	0.0
Current account deficit (percent of GDP)						
Current DSA	-27.5	-27.7	-21.8	-13.6	-13.4	-11.3
Previous DSA, June 2013	-15.2	-13.0	-12.8	-12.6	-12.3	-10.3
External PPG debt (nominal, percent of GDP)						
Current DSA	55.5	69.8	79.4	81.5	79.8	53.4
Previous DSA, June 2013	47.7	48.1	45.6	44.0	42.7	33.9

Source: IMF staff.

EXTERNAL DSA

7. **Under the baseline, total nominal public and publicly guaranteed (PPG) external debt is projected to exceed 80 percent of GDP with the present value (PV) of debt-to-GDP ratio almost reaching 75 percent over the medium term**[2] (Table 4). Disbursements are projected to significantly outpace the repayments over the next five years, leading to rapid buildup of the debt stock (Figure 1). Under the baseline scenario, the present value (PV) of the external debt-to-GDP ratio and the PV debt–to-exports ratio remain above their respective thresholds beyond 2025 (Figure 2). PV of debt-to-revenues ratio is breached temporarily over the medium term. Debt service ratios remain below indicative thresholds under the baseline, but are breached under most of the stress tests.



8. **The updated DSA shows that exchange rate depreciation and combined shock are likely to have the most significant effect on debt ratios (Table 5).** The bound tests indicate that a one-time 30 percent nominal depreciation in 2014 leads to an increase in the PV of the external debt-to-GDP ratio above 100 percent and to prolonged breaches of the relative threshold. The combined shock may push the PV of the external debt-to-revenue threshold beyond 200 percent, at least in the medium term. The shock to new public sector financing on less favorable terms (200 basis points on all new financing in 2012-34) could be used as a proxy for the potential effect of high floating rates on the railway project loan in the medium term. Under this shock, the PV of the debt-to GDP ratio rises to 85 percent in 2017, and debt service-to-revenue ratio breaches its threshold in 2019.

[2] Because information on the stock and flows of the private external debt is limited, the current DSA uses simplified assumptions about the evolution of the private external debt. These projected flows, together with capital grants, are behind large negative residuals in the summary of the drivers of net changes in external debt (Table 4).

PUBLIC DSA

9. The dynamic of the total public debt mainly reflects that of external debt as the share of PPG domestic debt remains small (Table 6). Overall public debt is projected to increase from 57 percent in 2013 to about 85 percent in 2017 and remain well above the 38 percent benchmark for the next 10 years. Simulations under the baseline scenario show a significantly stronger debt position as compared to fixed primary balance and historical scenarios, which could be explained by i) projected acceleration of economic growth in the medium term; and ii) expected improvement in the fiscal position (taking into account privatization proceeds received in 2013), which is not captured by these alternative scenarios. According to stress tests, public debt indicators are most vulnerable to exchange rate shock: a one-time 30 percent depreciation in 2014 leads to a major increase in all key ratios and has the most significant impact on the debt-service-to-revenue ratio.

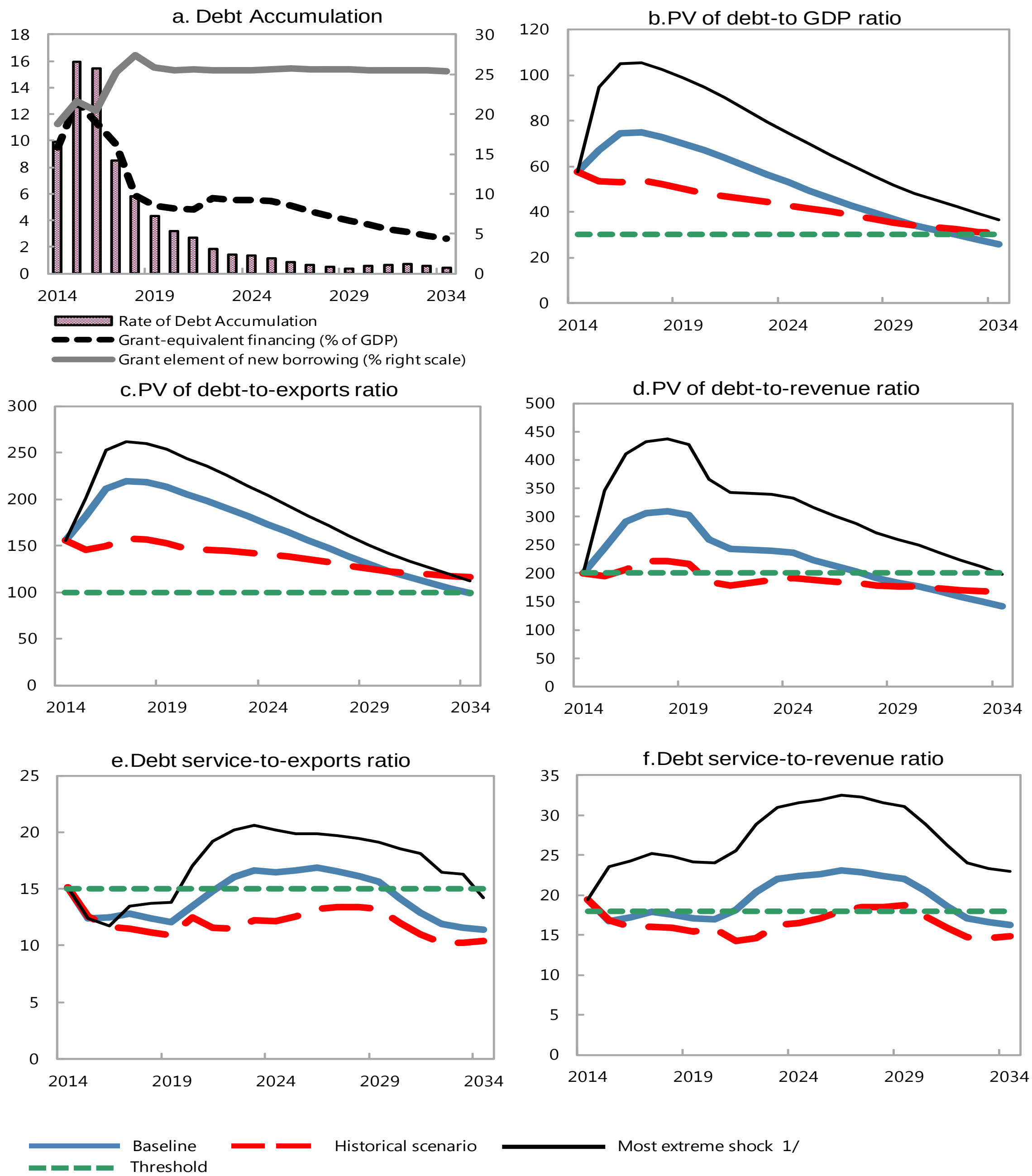
CONCLUSION

10. Djibouti remains at a high risk of debt distress, and both solvency and liquidity risks increased significantly since the last DSA. There are significant and protracted breaches of thresholds for the present values of the external debt-to-GDP and the debt-to-exports ratios. Under the baseline scenario, both ratios are sensitive to exchange rate depreciation. The DSA also indicates that Djibouti may face liquidity pressures in the near future. Debt service indicators are sensitive to most standardized stress tests, including higher cost of financing and exchange rate depreciation.

11. The debt sustainability analysis suggests that the borrowing space is extremely limited. Policy advice would be to minimize issuance of government debt guarantees and encourage private sector participation in direct financing of investment projects. Any PPG borrowing on nonconcessional terms would lead to additional debt service costs over the medium term and should be avoided.

12. The authorities acknowledge high risk attached to the current financing strategy. They believe, however, that this strategy may be viable if it generates growth and that it will crowd in sufficient inflow of FDI. They claim that both domestic and external arrears are being cleared. The setting up of a Debt committee comprising the Ministry of budget, the Ministry of economy and finance, and the central bank, is being considered. The authorities have also underscored that provision of government guarantees can significantly reduce the cost of financing.

Figure 2. Djibouti: Indicators of Public and Publicly Guaranteed External Debt Under Alternative Scenarios, 2014–34



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 2024. 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 Terms shock and in figure f. to a One-time depreciation shock

Table 4. Djibouti: External Debt Sustainability Framework, Baseline Scenario, 2011–34 1/
(In percent of GDP, unless otherwise indicated)

	Actual			Historical 6/ Average	Standard 6/ Deviation	Projections									
	2011	2012	2013			2014	2015	2016	2017	2018	2019	2014-2019 Average	2024	2034	2020-2034 Average
External debt (nominal) 1/	**52.3**	**49.2**	**48.4**			**55.8**	**69.8**	**79.4**	**81.5**	**79.8**	**75.4**		**59.2**	**31.4**	
of which: public and publicly guaranteed (PPG)	52.3	49.2	48.4			55.8	69.8	79.4	81.5	79.8	75.4		59.2	31.4	
Change in external debt	-2.3	-3.1	-0.8			7.4	14.0	9.6	2.1	-1.8	-4.3		-3.4	-2.2	
Identified net debt-creating flows	2.5	7.8	0.2			16.7	16.4	9.0	-1.1	-1.5	-3.5		-2.4	-2.8	
Non-interest current account deficit	**13.0**	**19.6**	**22.7**	**12.0**	**9.4**	**25.2**	**25.4**	**20.3**	**11.0**	**11.4**	**11.4**		**9.7**	**8.9**	9.6
Deficit in balance of goods and services	20.6	28.0	29.4			35.8	37.9	31.2	21.5	18.3	16.8		16.4	15.6	
Exports	33.9	33.8	33.4			37.0	36.8	35.3	34.1	33.4	32.9		30.7	26.6	
Imports	54.4	61.8	62.7			72.8	74.7	66.4	55.7	51.7	49.7		47.1	42.2	
Net current transfers (negative = inflow)	-1.3	-1.5	-0.3	-0.8	0.8	-1.8	-3.8	-3.4	-3.0	-2.8	-2.6		-1.8	-0.8	-1.5
of which: official	-2.0	-2.2	-1.0			-2.5	-4.4	-4.0	-3.6	-3.3	-3.0		-2.2	-1.1	
Other current account flows (negative = net inflow)	-6.3	-6.9	-6.4			-8.8	-8.7	-7.5	-7.5	-4.1	-2.8		-4.9	-5.9	
Net FDI (negative = inflow)	**-6.4**	**-8.1**	**-19.7**	**-12.9**	**8.0**	**-8.1**	**-8.0**	**-8.4**	**-9.6**	**-9.7**	**-10.7**		**-10.7**	**-10.7**	-10.7
Endogenous debt dynamics 2/	**-4.1**	**-3.7**	**-2.8**			**-0.4**	**-1.0**	**-2.9**	**-2.4**	**-3.2**	**-4.2**		**-1.5**	**-1.0**	
Contribution from nominal interest rate	0.8	0.7	0.6			2.2	2.3	1.5	2.7	2.0	0.9		2.0	0.8	
Contribution from real GDP growth	-2.2	-2.3	-2.3			-2.7	-3.3	-4.4	-5.1	-5.2	-5.1		-3.4	-1.8	
Contribution from price and exchange rate changes	-2.7	-2.1	-1.2			...	...	...	...	...	...		...	...	
Residual (3-4) 3/	**-4.8**	**-10.9**	**-1.0**			**-9.3**	**-2.3**	**0.6**	**3.2**	**-0.3**	**-0.8**		**-0.9**	**0.6**	
of which: exceptional financing	-1.1	-0.7	-0.2			0.2	0.1	0.0	0.0	0.0	0.0		0.0	0.0	
PV of external debt 4/	...	...	52.9			57.5	67.0	74.4	74.8	72.8	69.9		52.9	25.9	
In percent of exports	...	...	158.4			155.3	182.1	211.0	219.0	217.6	212.4		172.0	97.6	
PV of PPG external debt	**...**	**...**	**52.9**			**57.5**	**67.0**	**74.4**	**74.8**	**72.8**	**69.9**		**52.9**	**25.9**	
In percent of exports	**...**	**...**	**158.4**			**155.3**	**182.1**	**211.0**	**219.0**	**217.6**	**212.4**		**172.0**	**97.6**	
In percent of government revenues	**...**	**...**	**193.1**			**199.5**	**245.0**	**291.1**	**306.3**	**309.6**	**302.7**		**235.6**	**141.0**	
Debt service-to-exports ratio (in percent)	**8.2**	**8.8**	**8.4**			**15.1**	**12.4**	**12.5**	**12.8**	**12.4**	**12.0**		**16.4**	**11.3**	
PPG debt service-to-exports ratio (in percent)	**8.2**	**8.8**	**8.4**			**15.1**	**12.4**	**12.5**	**12.8**	**12.4**	**12.0**		**16.4**	**11.3**	
PPG debt service-to-revenue ratio (in percent)	**9.9**	**11.5**	**10.2**			**19.4**	**16.7**	**17.2**	**17.9**	**17.6**	**17.1**		**22.4**	**16.3**	
Total gross financing need (Billions of U.S. dollars)	0.1	0.2	0.1			0.4	0.4	0.3	0.1	0.1	0.1		0.2	0.1	
Non-interest current account deficit that stabilizes debt ratio	15.3	22.7	23.5			17.8	11.4	10.7	8.8	13.2	15.8		13.1	11.1	
Key macroeconomic assumptions															
Real GDP growth (in percent)	4.5	4.8	5.0	4.4	1.0	6.0	6.5	7.0	7.1	7.1	7.0	6.8	6.0	6.0	6.0
GDP deflator in US dollar terms (change in percent)	5.1	4.2	2.4	4.2	2.2	3.0	3.0	3.5	3.5	3.5	3.0	3.2	3.0	3.0	3.0
Effective interest rate (percent) 5/	1.5	1.5	1.4	1.4	0.1	5.0	4.5	2.4	3.7	2.7	1.2	3.3	3.5	2.7	3.1
Growth of exports of G&S (US dollar terms, in percent)	-0.3	9.0	6.1	6.9	5.5	21.2	8.9	6.2	7.3	8.5	8.5	10.1	7.4	7.4	7.6
Growth of imports of G&S (US dollar terms, in percent)	36.8	24.0	9.2	12.8	17.3	26.7	12.5	-1.5	-7.1	3.0	5.9	6.6	8.1	6.9	8.0
Grant element of new public sector borrowing (in percent)	...	...	...	...	...	18.8	21.6	20.4	25.3	27.4	25.9	23.2	25.6	25.4	25.6
Government revenues (excluding grants, in percent of GDP)	28.1	25.9	27.4			28.8	27.3	25.6	24.4	23.5	23.1		22.4	18.4	21.5
Aid flows (in Billions of US dollars) 7/	0.1	0.1	0.1			0.1	0.2	0.2	0.2	0.1	0.1		0.2	0.2	
of which: Grants	0.1	0.1	0.1			0.1	0.1	0.1	0.1	0.1	0.1		0.2	0.2	
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/	...	...	...			9.5	13.0	11.4	9.7	5.9	5.1		5.5	2.6	4.4
Grant-equivalent financing (in percent of external financing) 8/	...	...	...			44.3	43.3	42.7	52.7	49.3	52.9		60.0	55.6	57.4
Memorandum items:															
Nominal GDP (Billions of US dollars)	1.2	1.4	1.5			1.6	1.7	1.9	2.1	2.4	2.6		4.1	9.8	
Nominal dollar GDP growth	9.8	9.2	7.5			9.2	9.7	10.7	10.8	10.8	10.2	10.3	9.2	9.2	9.2
PV of PPG external debt (in Billions of US dollars)			0.8			0.9	1.2	1.4	1.6	1.7	1.8		2.1	2.5	
(PVt-PVt-1)/GDPt-1 (in percent)						9.9	16.0	15.4	8.5	5.9	4.3	10.0	1.3	0.4	1.1
Gross workers' remittances (Billions of US dollars)	...	...	...			...	...	...	...	...	...		...	...	
PV of PPG external debt (in percent of GDP + remittances)	...	...	52.9			57.5	67.0	74.4	74.8	72.8	69.9		52.9	25.9	
PV of PPG external debt (in percent of exports + remittances)	...	...	158.4			155.3	182.1	211.0	219.0	217.6	212.4		172.0	97.6	
Debt service of PPG external debt (in percent of exports + remittance	...	...	8.4			15.1	12.4	12.5	12.8	12.4	12.0		16.4	11.3	

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 5. Djibouti: Sensitivity Analysis for Key Indicators of Public and Publicly Guaranteed External Debt, 2014–34

		Projections						
	2014	2015	2016	2017	2018	2019	**2024**	2034
PV of debt-to GDP ratio								
Baseline	57	67	74	75	73	70	**53**	26
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2014-2034 1/	57	53	53	54	52	50	**43**	31
A2. New public sector loans on less favorable terms in 2014-2034 2	57	71	82	85	84	82	**67**	41
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2015-2016	57	69	79	80	77	74	**56**	28
B2. Export value growth at historical average minus one standard deviation in 2015-2016 3/	57	69	79	79	77	74	**55**	26
B3. US dollar GDP deflator at historical average minus one standard deviation in 2015-2016	57	68	76	77	75	72	**54**	27
B4. Net non-debt creating flows at historical average minus one standard deviation in 2015-2016 4/	57	72	85	84	82	78	**58**	27
B5. Combination of B1-B4 using one-half standard deviation shocks	57	72	86	86	84	80	**60**	28
B6. One-time 30 percent nominal depreciation relative to the baseline in 2015 5/	57	94	105	106	103	99	**75**	37
PV of debt-to-exports ratio								
Baseline	155	182	211	219	218	213	**173**	99
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2014-2034 1/	155	145	150	158	156	152	**140**	117
A2. New public sector loans on less favorable terms in 2014-2034 2	155	194	233	248	251	248	**218**	156
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2015-2016	155	182	211	219	218	213	**173**	99
B2. Export value growth at historical average minus one standard deviation in 2015-2016 3/	155	201	253	261	259	253	**204**	112
B3. US dollar GDP deflator at historical average minus one standard deviation in 2015-2016	155	182	211	219	218	213	**173**	99
B4. Net non-debt creating flows at historical average minus one standard deviation in 2015-2016 4/	155	196	240	247	245	239	**190**	101
B5. Combination of B1-B4 using one-half standard deviation shocks	155	200	246	255	253	246	**197**	107
B6. One-time 30 percent nominal depreciation relative to the baseline in 2015 5/	155	182	211	219	218	213	**173**	99
PV of debt-to-revenue ratio								
Baseline	200	245	291	306	310	303	**236**	141
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2014-2034 1/	200	195	207	221	222	216	**191**	167
A2. New public sector loans on less favorable terms in 2014-2034 2	200	261	322	346	356	353	**297**	222
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2015-2016	200	252	310	326	330	322	**251**	150
B2. Export value growth at historical average minus one standard deviation in 2015-2016 3/	200	252	310	325	328	320	**246**	143
B3. US dollar GDP deflator at historical average minus one standard deviation in 2015-2016	200	248	298	314	317	310	**242**	145
B4. Net non-debt creating flows at historical average minus one standard deviation in 2015-2016 4/	200	264	331	346	348	340	**258**	144
B5. Combination of B1-B4 using one-half standard deviation shocks	200	263	337	353	356	347	**266**	152
B6. One-time 30 percent nominal depreciation relative to the baseline in 2015 5/	200	346	411	432	437	427	**332**	199

Table 5. Djibouti: Sensitivity Analysis for Key Indicators of Public and Publicly Guaranteed External Debt, 2014–34 (concluded)

Debt service-to-exports ratio

Baseline	15	12	12	13	12	12	**16**	11
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2014-2034 1/	15	13	12	11	11	11	**12**	10
A2. New public sector loans on less favorable terms in 2014-2034 2	15	12	12	13	14	14	**20**	14
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2015-2016	15	12	12	13	12	12	**16**	11
B2. Export value growth at historical average minus one standard deviation in 2015-2016 3/	15	13	14	15	14	14	**20**	13
B3. US dollar GDP deflator at historical average minus one standard deviation in 2015-2016	15	12	12	13	12	12	**16**	11
B4. Net non-debt creating flows at historical average minus one standard deviation in 2015-2016 4/	15	12	13	14	13	13	**18**	12
B5. Combination of B1-B4 using one-half standard deviation shocks	15	13	14	14	14	13	**19**	13
B6. One-time 30 percent nominal depreciation relative to the baseline in 2015 5/	15	12	12	13	12	12	**16**	11

Debt service-to-revenue ratio

Baseline	19	17	17	18	18	17	**22**	16
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2014-2034 1/	19	17	16	16	16	15	**17**	15
A2. New public sector loans on less favorable terms in 2014-2034 2	19	17	16	19	20	20	**28**	20
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2015-2016	19	17	18	19	19	18	**24**	17
B2. Export value growth at historical average minus one standard deviation in 2015-2016 3/	19	17	17	18	18	18	**24**	17
B3. US dollar GDP deflator at historical average minus one standard deviation in 2015-2016	19	17	18	18	18	18	**23**	17
B4. Net non-debt creating flows at historical average minus one standard deviation in 2015-2016 4/	19	17	18	19	19	18	**25**	18
B5. Combination of B1-B4 using one-half standard deviation shocks	19	17	19	20	19	19	**26**	18
B6. One-time 30 percent nominal depreciation relative to the baseline in 2015 5/	19	24	24	25	25	24	**32**	23
Memorandum item:								
Grant element assumed on residual financing (i.e., financing required above baseline) 6/	23	23	23	23	23	23	**23**	23

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 as 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 6. Djibouti: Public Debt Sustainability Framework, Baseline Scenario, 2011–34

	Actual			Average 5/	Standard Deviation 5/	Estimate	Projections								
	2011	2012	2013			2014	2015	2016	2017	2018	2019	2014-19 Average	2024	2034	2020-34 Average
Public sector debt 1/	60.6	58.5	56.8			62.0	74.3	83.2	84.6	82.3	79.1		60.5	31.7	
of which: foreign-currency denominated	52.3	49.2	48.4			55.8	69.8	79.4	81.5	79.8	75.4		59.2	31.4	
Change in public sector debt	-6.2	-2.2	-1.7			5.2	12.3	8.9	1.4	-2.2	-3.2		-3.5	-2.2	
Identified debt-creating flows	-4.9	-2.4	-10.9			7.1	8.2	5.0	-4.7	-2.7	-3.1		-5.3	-2.7	
Primary deficit	0.6	2.0	5.2	1.4	2.2	9.7	11.5	10.7	0.8	3.6	3.6	6.6	-1.9	-0.7	-1.6
Revenue and grants	34.1	34.5	31.8			35.6	35.6	33.0	31.2	27.1	26.6		26.7	20.3	
of which: grants	6.0	8.6	4.4			6.7	8.3	7.5	6.7	3.6	3.5		4.3	1.9	
Primary (noninterest) expenditure	34.7	36.5	37.0			45.3	47.1	43.7	31.9	30.6	30.2		24.8	19.6	
Automatic debt dynamics	-5.2	-4.4	-3.5			-2.5	-3.2	-5.7	-5.5	-6.3	-6.8		-3.4	-2.0	
Contribution from interest rate/growth differential	-3.7	-3.3	-3.0			-1.9	-2.5	-4.6	-4.4	-5.3	-6.0		-2.8	-1.7	
of which: contribution from average real interest rate	-0.8	-0.5	-0.2			1.3	1.3	0.2	1.2	0.3	-0.7		0.8	0.2	
of which: contribution from real GDP growth	-2.9	-2.8	-2.8			-3.2	-3.8	-4.9	-5.5	-5.6	-5.4		-3.6	-1.9	
Contribution from real exchange rate depreciation	-1.5	-1.2	-0.5			-0.6	-0.7	-1.1	-1.1	-1.0	-0.7		...	...	
Other identified debt-creating flows	-0.3	0.0	-12.7			-0.1	-0.1	0.0	0.0	0.0	0.0		0.0	0.0	
Privatization receipts (negative)	0.0	0.0	-12.7			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)	-0.3	0.0	0.0			-0.1	-0.1	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	-1.3	0.2	9.2			-1.9	4.1	3.9	6.1	0.5	0.0		1.8	0.5	
Other Sustainability Indicators															
PV of public sector debt	...	...	61.2			63.7	71.5	78.2	77.8	75.3	73.6		54.2	26.2	
of which: foreign-currency denominated	...	...	52.9			57.5	67.0	74.4	74.8	72.8	69.9		52.9	25.9	
of which: external	...	...	52.9			57.5	67.0	74.4	74.8	72.8	69.9		52.9	25.9	
PV of contingent liabilities (not included in public sector debt)	...	...	...			...	...	...	...	...	...		...	...	
Gross financing need 2/	3.6	5.3	8.1			15.4	16.1	15.1	5.2	7.7	7.6		3.2	2.3	
PV of public sector debt-to-revenue and grants ratio (in percent)	...	...	192.5			179.2	200.8	236.8	249.7	278.1	276.6		203.0	129.0	
PV of public sector debt-to-revenue ratio (in percent)	...	...	223.7			221.1	261.6	306.0	318.7	320.5	318.7		241.4	142.4	
of which: external 3/	...	...	193.1			199.5	245.0	291.1	306.3	309.6	302.7		235.6	141.0	
Debt service-to-revenue and grants ratio (in percent) 4/	8.8	9.4	9.0			15.9	13.0	13.4	14.1	15.4	14.9		18.8	14.8	
Debt service-to-revenue ratio (in percent) 4/	10.7	12.5	10.5			19.6	16.9	17.3	18.0	17.7	17.2		22.4	16.3	
Primary deficit that stabilizes the debt-to-GDP ratio	6.8	4.2	6.9			4.5	-0.8	1.8	-0.6	5.8	6.8		1.6	1.5	
Key macroeconomic and fiscal assumptions															
Real GDP growth (in percent)	4.5	4.8	5.0	4.4	1.0	6.0	6.5	7.0	7.1	7.1	7.0	6.8	6.0	6.0	6.0
Average nominal interest rate on forex debt (in percent)	1.5	1.5	1.4	1.4	0.1	5.0	4.5	2.4	3.7	2.7	1.2	3.3	3.5	2.7	3.1
Average real interest rate on domestic debt (in percent)	-4.5	-3.9	...	-3.9	2.1	...	...	...	...	...	...		...	...	
Real exchange rate depreciation (in percent, + indicates depreciation)	-2.8	-2.3	-1.0	-1.9	2.0	-1.3	...	...	...	...	...	...	...	...	...
Inflation rate (GDP deflator, in percent)	5.1	4.2	2.4	4.2	2.2	3.0	3.0	3.5	3.5	3.5	3.0	3.2	3.0	3.0	3.0
Growth of real primary spending (deflated by GDP deflator, in percent)	1.8	10.2	6.7	1.9	3.6	29.6	10.8	-0.7	-21.8	2.8	5.6	4.4	3.2	3.8	3.0
Grant element of new external borrowing (in percent)	...	...	...	...	...	18.8	21.6	20.4	25.3	27.4	25.9	23.2	25.6	25.4	...

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.]

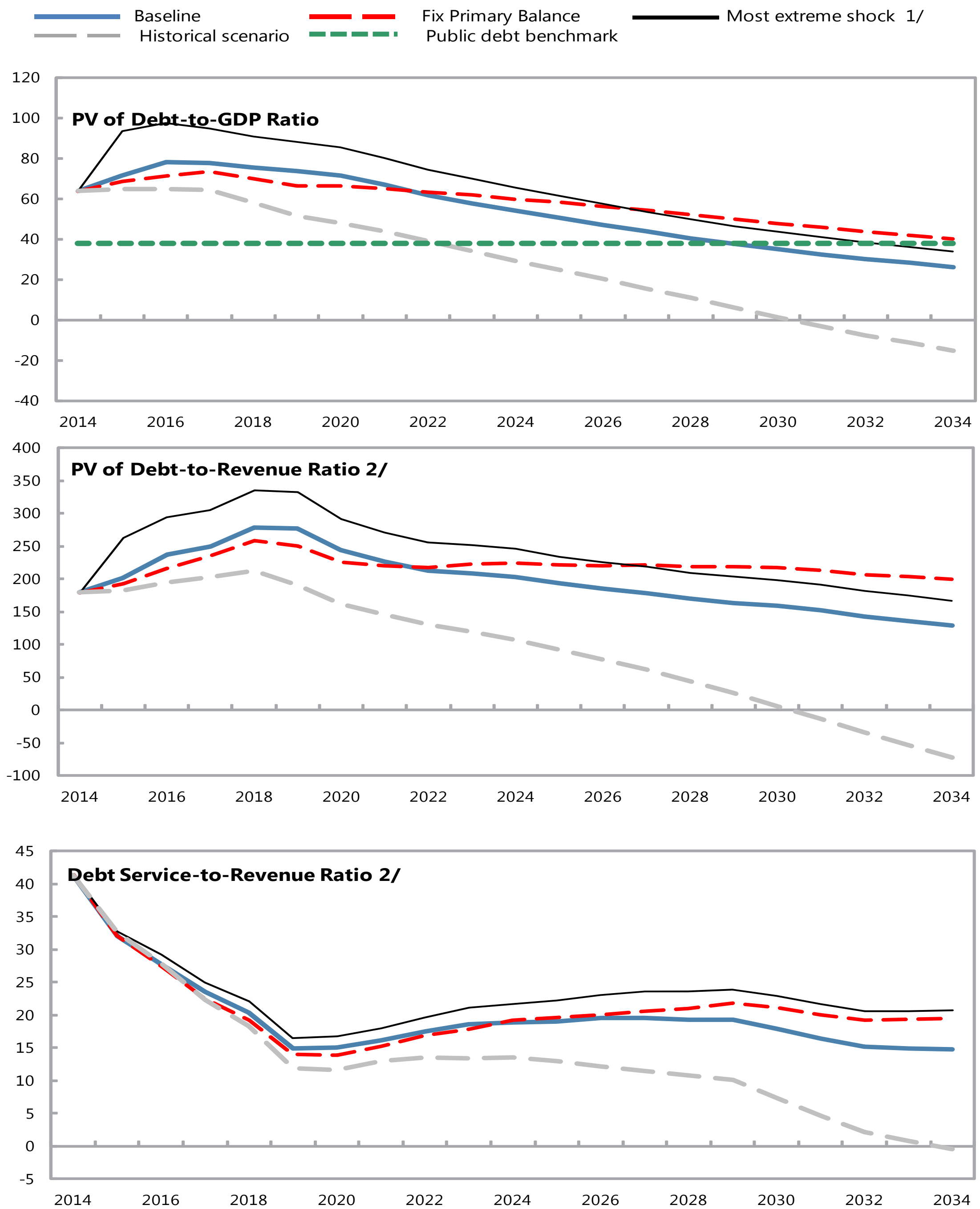
2/ Gross financing need is defined as the primary deficit plus debt service plus the stock of short-term debt at the end of the last period.

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.

Figure 3. Djibouti: Indicators of Public Debt Under Alternative Scenarios, 2014–34



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 2024.
2/ Revenues are defined inclusive of grants.

Table 7. Djibouti: Sensitivity Analysis for Key Indicators of Public Debt, 2014–34

		Projections						
	2014	2015	2016	2017	2018	2019	2024	2034
PV of Debt-to-GDP Ratio								
Baseline	64	72	78	78	75	74	54	26
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	64	65	67	69	67	66	67	57
A2. Primary balance is unchanged from 2014	64	70	76	83	85	87	108	124
A3. Permanently lower GDP growth 1/	64	72	79	79	76	75	57	32
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2015-2016	64	74	85	86	84	83	67	41
B2. Primary balance is at historical average minus one standard deviations in 2015-2016	64	66	67	67	65	64	47	22
B3. Combination of B1-B2 using one half standard deviation shocks	64	66	69	70	69	69	55	34
B4. One-time 30 percent real depreciation in 2015	64	93	97	95	91	88	66	34
B5. 10 percent of GDP increase in other debt-creating flows in 2015	64	79	86	85	82	80	59	29
PV of Debt-to-Revenue Ratio 2/								
Baseline	179	201	237	250	278	277	203	129
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	179	182	200	218	245	243	243	269
A2. Primary balance is unchanged from 2014	179	197	231	265	313	328	404	609
A3. Permanently lower GDP growth 1/	179	201	238	252	281	281	213	158
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2015-2016	179	207	254	272	308	310	249	201
B2. Primary balance is at historical average minus one standard deviations in 2015-2016	179	184	203	216	241	241	176	110
B3. Combination of B1-B2 using one half standard deviation shocks	179	185	206	222	254	257	206	165
B4. One-time 30 percent real depreciation in 2015	179	263	294	304	336	332	246	167
B5. 10 percent of GDP increase in other debt-creating flows in 2015	179	222	259	272	302	299	220	141
Debt Service-to-Revenue Ratio 2/								
Baseline	16	13	13	14	15	15	19	15
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	16	13	13	13	14	14	20	25
A2. Primary balance is unchanged from 2014	16	13	13	14	16	17	28	50
A3. Permanently lower GDP growth 1/	16	13	13	14	16	15	19	17
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2015-2016	16	13	14	15	17	17	22	21
B2. Primary balance is at historical average minus one standard deviations in 2015-2016	16	13	13	12	13	13	16	12
B3. Combination of B1-B2 using one half standard deviation shocks	16	13	13	13	14	14	18	17
B4. One-time 30 percent real depreciation in 2015	16	16	19	20	23	22	29	28
B5. 10 percent of GDP increase in other debt-creating flows in 2015	16	13	14	16	17	16	21	16

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.