ISLAMIC REPUBLIC OF AFGHANISTAN

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STAFF REPORT FOR THE 2017 ARTICLE IV CONSULTATION AND SECOND REVIEW UNDER THE EXTENDED CREDIT FACILITY ARRANGEMENT, AND REQUEST FOR MODIFICATION OF PERFORMANCE CRITERIA—DEBT SUSTAINABILITY ANALYSIS

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International Monetary Fund[1]
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This debt sustainability analysis (DSA)[2] concludes that the country's external debt sustainability continues to be assessed at high risk of external debt distress. Although public debt remains modest at below 7 percent of GDP, Afghanistan's debt sustainability hinges on continued donor grants' inflows (estimated at 39 percent of GDP in 2016 for on and off-budget grants) against substantial fiscal and external deficits and downside risks to the economic outlook. Even a gradual replacement of donor grants with loan financing (a customized illustrative scenario) would quickly lead to an unsustainable debt burden. Other significant downside risks include the fragile security situation, political uncertainty, domestic revenue shortfalls, and the potential more rapid exchange rate depreciation. Accordingly, the authorities should continue their efforts to mobilize revenue and press ahead with their reform efforts, while donors should continue to provide financing in the form of grants.

[1] This DSA was prepared by IMF and World Bank staff, using the standard debt sustainability framework for low-income countries (LIC-DSA); see "Staff Guidance Note on the Application of the Joint Bank-Fund Debt Sustainability Framework for Low-Income Countries". The LIC-DSA compares the evolution over the projection period of debt-burden indicators against policy-dependent indicative thresholds, using the three-year average of the World Bank's Country Policy and Institutional Assessment (CPIA). With an average 2014–16 CPIA of 2.69, Afghanistan is classified as having "weak performance" under the LIC-DSF.

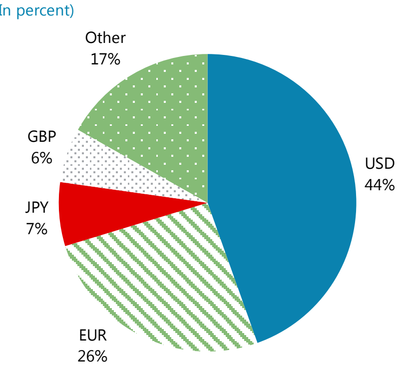
[2] This joint International Monetary Fund (IMF) and World Bank (WB) DSA updates the May 2017 DSA update prepared for the first review of the three-year Extended Credit Facility (ECF) arrangement.

BACKGROUND

1. **Over the past years, Afghanistan's government has relied mainly on grant financing and limited concessional borrowing to finance its development needs**. At end-2016, Afghanistan's total reported public external debt stood at US$1,240 million or 6.3 percent of GDP. The low level of debt is the result of past debt relief under the Enhanced HIPC Initiative, additional debt cancellation from Paris Club creditors, and little borrowing since then.[3] The borrowing comes mostly from multilateral institutions and is mainly denominated in U.S. dollars and euros. There is no borrowing from the domestic market, except for outstanding debt to DAB that is related to the resolution of the Kabul Bank crisis. In addition to the Asian Development Bank (ADB) and the International Development Agency (IDA), other multilateral creditors include the International Monetary Fund (IMF), and the Islamic Development Bank (IsDB). Among the bilateral creditors, the Saudi Fund was the main creditor (5 percent of total debt outstanding) followed by the Kuwait Fund (2 percent).

2. **The overall risk is somewhat mitigated by the maturity structure of the portfolio**. Overall, the cost of the reported loan portfolio is manageable. The current annual interest payment is lower than 0.1 percent of GDP. The entire portfolio bears fixed interest rates. The average time to maturity is 14 years. The redemption profile shows stable principal payments throughout the period. The main risk is the exchange rate depreciation since the entire portfolio is denominated in foreign currency. But this risk is mitigated by the long repayment periods of the concessional borrowing.

External Public Debt by Currency
(End-2016; In percent)



Sources: Afghan authorities.

3. **Public debt recording and monitoring needs to be strengthened**. The latest IMF assessment of public debt recording and monitoring capacity, made in consultation with the World Bank (November 2016), pointed to the need to build stronger capacity in this area. The scope of the current DSA is the central government debt. The financial balance of some thirty-six state-owned enterprises (SOEs) and sixteen state-owned corporations (SOCs) and the associated risks for the government are not centrally and effectively monitored, as their operational functions are supervised through their respective line ministries. The government provides support to SOEs and SOCs in the form of loans, guarantees, concessions, tax expenditures, subsidies, and recapitalizations.[4] An increasing number of infrastructure projects will likely involve sovereign financing and guarantees, particularly in the electricity sector. Progress on debt recording and monitoring, including on-lending by the government, would require further technical assistance and training with the aim to ensure full consistency between debt servicing and budget and liquidity planning.

[3] This debt stock is after delivery of the already-pledged debt relief commitments. Afghanistan is still following up with one Paris Club creditor on its debt relief commitments (US$900 billion). The delay with the Paris Club creditor is due to a technical reason and the debt relief is expected to be finalized by the end of the year.

[4] Conversely, anecdotal information indicates that the government runs some arrears vis-à-vis SOEs & SOCs.

Some progress is expected to come from the rolling out of a Medium-Term Debt Strategy (MTDS) for 2017–19, supported by World Bank assistance. The World Bank is also involved in a project on assessing SOEs' financial position.

UNDERLYING DSA ASSUMPTIONS

4. **The DSA's baseline macroeconomic scenario 2017-2037 assumes a gradual increase from the near-term projection of 3–4 percent to the estimated growth potential of 6 percent beyond a five-year projection period**.[5]

- Staffs projects lower average growth over 2016–20 than in the May 2017 update owing to downward revisions of growth in 2017–18 reflecting the short- and medium-term uncertainties. Given persistent security challenges, the point at which this growth potential is assumed to be reached has been pushed into the future. Post–2024 growth is assumed to remain at its potential of 6 percent.[6]

- Over time, stronger growth and job creation are assumed to be supported by extractive industries, agricultural development, public investment in education and health, and regional trade integration. If security conditions worsen, aid falls short, or reforms stall, growth would be lower with attendant effects on unemployment and poverty. Alternatively, lasting peace with insurgents would boost private sector confidence and facilitate a shift in public spending from security to development, leading to higher and more inclusive growth.

Macroeconomic Assumptions Comparison Table

	DSA update May 2017		DSA October 2017		Current vs. previous	
	2016-20	2021-37	2016-20	2021-37	Medium term	Long term
Real growth (%)	3.4	5.0	3.1	5.8	-0.3	0.8
Inflation (GDP, deflator, %)	5.7	4.5	5.8	4.7	0.0	0.2
Nominal GDP (Billions of Afghanis)	1,557	4,973	1,583	5,529	27	556
Revenue and grants (% GDP)	27.1	26.8	26.0	26.7	-1.1	-0.1
Grants (% GDP)	15.8	11.1	15.0	10.9	-0.8	-0.2
Primary expenditure (% GDP)	27.0	28.3	25.9	27.0	-1.1	-1.3
Primary deficit (% GDP)	-0.1	1.5	-0.1	0.3	0.0	-1.2
Exports of G&S (% GDP)	6.5	9.7	7.0	11.8	0.5	2.0
Noninterest current account balance (%GDP)	3.8	-3.1	3.8	-6.9	0.0	-3.8

Sources: Afghan authorities; and IMF staff estimates and projections.

[5] This assumption is based on growth accounting and is consistent with the analysis by the World Bank that emphasizes development of agriculture and extractive industries, public investment in education and health, and regional integration.

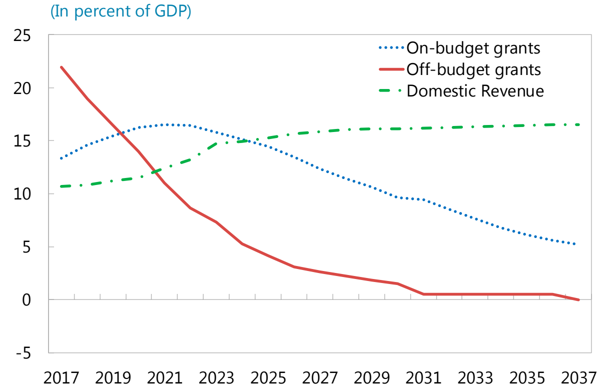
[6] The DSA is based on the medium-term baseline scenario of the second review of the arrangement under the ECF.

- As in the previous DSA, the scenario incorporates a gradual decline in donor aid with an increasing share being disbursed through the budget and provided to the civilian sector. Higher GDP growth results in lower grant-to-GDP ratios with a corresponding decrease in expenditure-to-GDP ratios, thus keeping positive primary balances. The underlying assumption of this scenario is long-run improvements of security and political stability.

- Export growth is slightly higher in the revised long-term scenario based on completion of the ongoing regional infrastructure/trade projects. The long-term agenda aiming at diversifying the economy as well as progress with regional integration should result in attracting FDIs into tradable sectors. Growing FDIs (mining, services—transport infrastructure, banking, communication, distribution) will contribute to covering the widening current account deficit stemming from declining grants.

5. **The potential for increased domestic revenue is strengthening**. Despite impressive progress in recent years, the Afghan government has a pressing need to increase revenues to meet its security and development goals. Further improvements are possible; the World Bank estimates that the revenue potential is around 60 percent above current levels. Two complementary policies stand out as ways to achieve higher revenues: establishing a modern Large Taxpayers Office (LTO) and replacing the current Business Receipts Tax (BRT) with a value-added tax (VAT) levied on LTO firms. In addition, transit fees could be collected from Afghanistan's participation in major regional energy trade projects.

Grants and Domestic Revenue 2017-37
(In percent of GDP)



Sources: Afghan authorities and IMF projections.

EXTERNAL DSA

6. **Assuming continued donor support in the form of grants, Afghanistan's debt outlook is benign**. Afghanistan's public debt remains modest. External public and publicly guaranteed debt, mostly to multilateral creditors, amounted to 6.3 percent of GDP in 2016. A limited amount of concessional borrowing (US$18 million from a bilateral creditor) and a non-concessional loan from the Islamic Development Bank (US$75 million) linked to large infrastructure projects with potentially high rates of economic and social returns were contracted in 2017.

External Debt Contracted in 2017[1/]

PPG external debt contracted or guaranteed	Volume of new debt, USD million
Sources of debt financing	
Multilateral, semi-concessional debt [2/]	75
Bilateral, concessional	18
Uses of debt financing	
Infrastructure	93
Budget financing	0

1/ As of end-October 2017.

2/ Debt with a positive grant element which does not meet the minimum grant element of 60 percent.

7. **Moderate external borrowing is planned in the short run.** The authorities have not yet established an annual borrowing plan. They expect a moderate amount of additional net concessional borrowing to take place during 2017–19 including two loans of EUR 7 million for road construction and EUR 65 million for railway construction from a Paris Club creditor in line with the current policy of borrowing only for infrastructure projects.

8. **A change in the structure of financing with a shift of 15 percent of grants towards concessional lending from 2020 onward would put Afghanistan at a high risk of external debt distress**. Under such a scenario, the threshold for the present value of debt to exports ratio is breached and the dynamics for other solvency and liquidity indicators deteriorate post-2020.[7]

PUBLIC DSA

9. **The baseline scenario assumes that the government will issue domestic public debt in the mid-2020s**. The only domestic component of public debt (1.7 percent of GDP in 2016) is currently a promissory note issued by the Ministry of Finance in 2012 to underwrite DAB's lender-of-last-resort exposure to Kabul Bank; consistent with the structural conditionality of the ECF, it is expected to be fully repaid through capital transfers to DAB by end-2019. The country is assumed to start issuing domestic public debt (sukuk) during the forthcoming decade at moderate levels (about 0.2 percent of GDP) before gradually increasing this source of financing along the forecast period. A sukuk law and operational framework is under preparation with the help of the IsDB.

AUTHORITIES' VIEWS

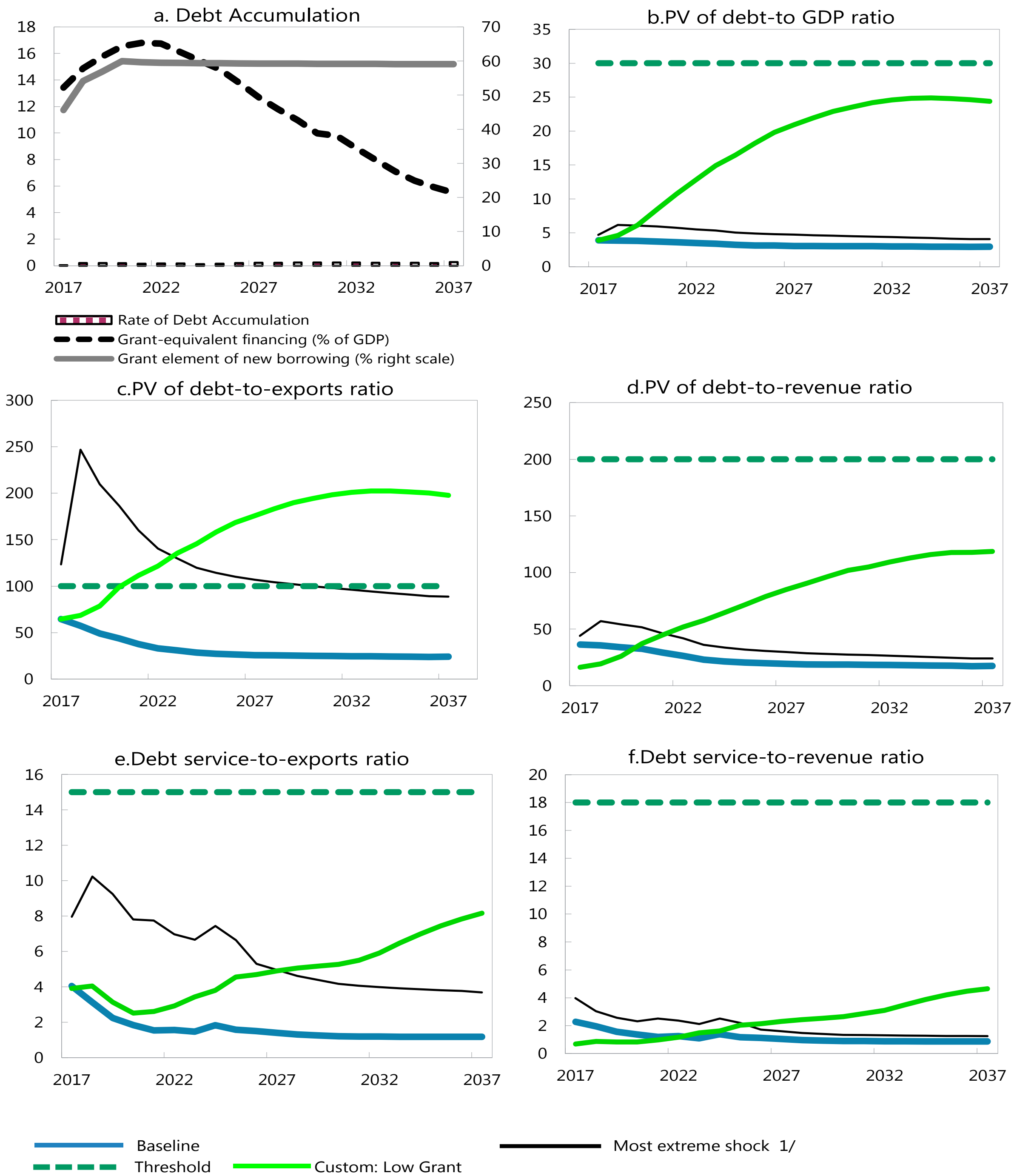
10. **The authorities agreed with the conclusions of the DSA.** They remain committed to ensuring debt sustainability and to relying on donor grants and limited concessional borrowing. They nonetheless emphasized the country's very large financing needs to boost growth and job creation. The authorities would welcome targeted TA on recording and monitoring public debt and fiscal risks in the context of the implementation of PPPs, as well as assistance for the introduction of sukuk. The government intends to use sukuks as a liquidity management instrument, to finance its development and possibly recurrent spending.

[7] The scenario is subject to high uncertainties regarding the sources and uses of grants and concessional borrowing.

CONCLUSIONS

11. **Afghanistan's debt sustainability hinges on continued donor grant inflows**. The debt outlook under the baseline scenario is benign. However, a change in the structure of donor financing with a shift to loans as shown in the customized scenario would quickly lead to an unsustainable debt burden. Hence, Afghanistan remains at a high risk of external debt distress. Reducing dependence on external financing requires expanding the tax base and further strengthening revenue collection. The authorities' capacity to plan, evaluate and contract borrowing, and to monitor debt and fiscal risks needs to be strengthened. This includes adequate accounting of government guarantees which may emerge from private-public partnerships. Establishing a database of ongoing and potential infrastructure projects that may involve public debt and guarantees is also needed. For the time being, Afghanistan's financing needs need to be met with donor grants and highly concessional external borrowing (grant element of at least 60 percent) to meet foreign-currency denominated obligations.

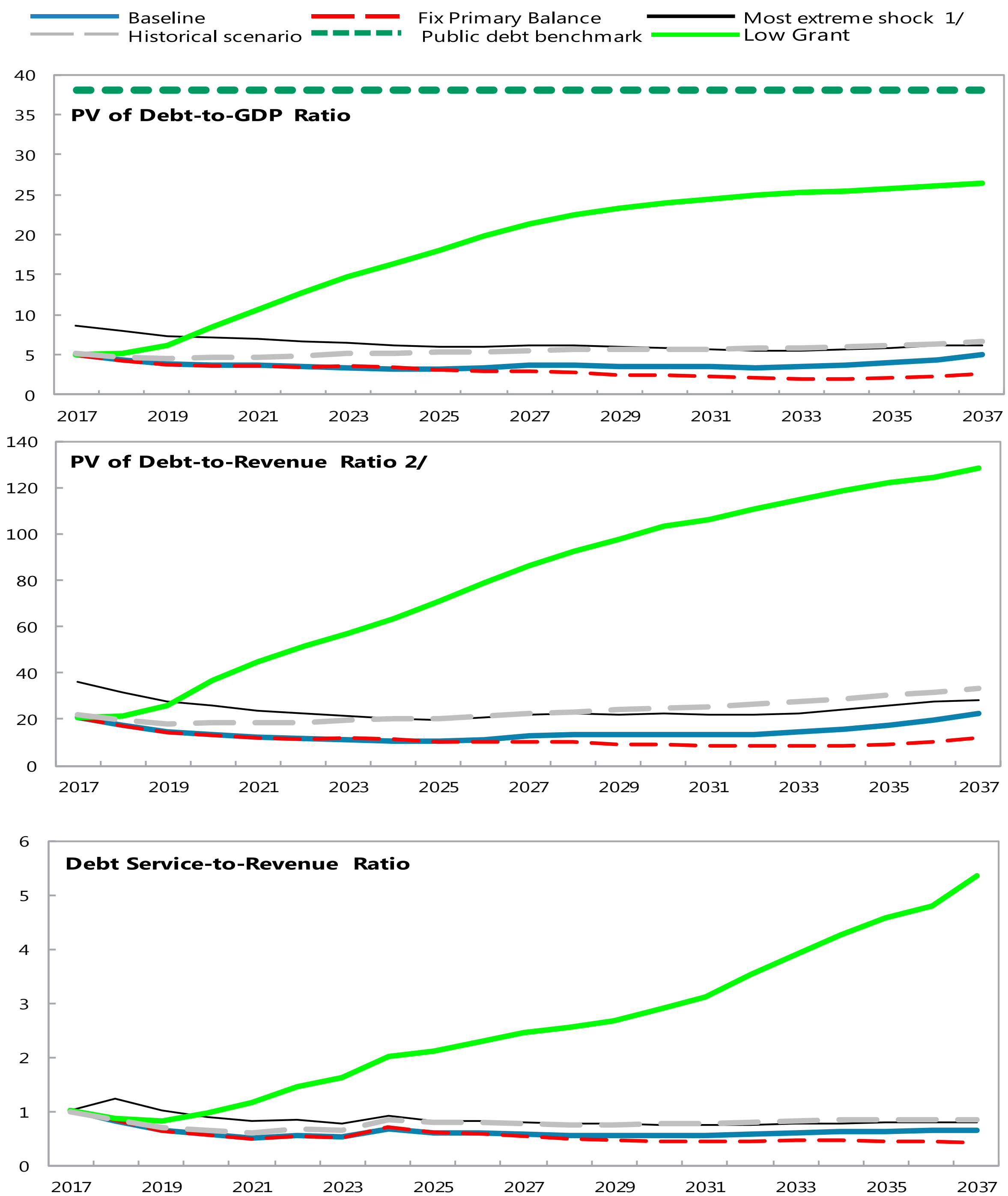
Figure 1. Afghanistan: Indicators of Public and Publicly Guaranteed External Debt Under Alternatives Scenarios, 2017–37 1/



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 2027.

Figure 2. Afghanistan: Indicators of Public Debt Under Alternative Scenarios, 2017–37 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 2027
2/ Revenues are defined inclusive of grants.

Table 1a. Afghanistan: External Debt Sustainability Framework, Baseline Scenario, 2014–37 1/

(In percent of GDP, unless otherwise indicated)

	Actual			Historical 6/	Standard 6/	Projections									
				Average	Deviation							2017-2022			2023-2037
	2014	2015	2016			2017	2018	2019	2020	2021	2022	Average	2027	2037	Average
External debt (nominal) 1/	6.4	6.8	6.3	11.6	8.4	6.1	6.1	6.1	6.1	6.0	5.9	6.1	5.9	5.9	5.9
of which: public and publicly guaranteed (PPG)	6.4	6.8	6.3	10.4	5.7	6.1	6.1	6.1	6.1	6.0	5.9	6.1	5.9	5.9	5.9
Change in external debt	-0.6	0.5	-0.5	-1.7	6.6	-0.2	0.0	0.0	-0.1	-0.1	-0.1	-0.1	0.0	0.0	0.0
Identified net debt-creating flows	-5.9	-8.1	-7.3	-25.3	22.4	-5.1	-4.0	-3.3	-2.3	-1.0	0.1	-2.6	4.9	2.8	3.9
Non-interest current account deficit	-5.6	-7.5	-7.1	-22.7	20.1	-4.5	-3.4	-2.6	-1.6	-0.3	1.2	-1.8	8.3	7.9	7.7
Deficit in balance of goods and services	31.3	31.3	32.6	27.5	9.3	34.6	31.9	31.1	30.4	29.0	28.1	30.8	25.1	14.2	21.6
Exports	9.6	11.7	5.8	13.4	4.9	6.0	6.7	7.8	8.6	9.6	10.6	8.2	11.9	12.3	12.0
Imports	40.9	43.0	38.4	40.8	5.6	40.6	38.6	38.9	38.9	38.6	38.6	39.0	37.1	26.6	33.6
Net current transfers (negative = inflow)	-36.9	-37.9	-39.4	-49.9	13.2	-38.5	-34.7	-33.1	-31.5	-28.8	-26.4	-32.2	-16.5	-6.2	-13.6
of which: official	-37.5	-37.6	-38.2	-50.1	13.7	-37.4	-33.6	-32.0	-30.3	-27.6	-25.1	-31.0	-15.0	-5.2	-12.2
Other current account flows (negative = net inflow)	0.0	-0.9	-0.3	-0.2	0.4	-0.6	-0.6	-0.5	-0.5	-0.5	-0.4	-0.5	-0.3	-0.2	-0.3
Net FDI (negative = inflow)	-0.2	-0.8	-0.5	-0.9	0.6	-0.5	-0.5	-0.5	-0.5	-0.5	-0.9	-0.6	-3.1	-4.9	-3.6
Endogenous debt dynamics 2/	-0.1	0.2	0.2	-1.7	2.0	-0.1	-0.1	-0.2	-0.2	-0.2	-0.2	-0.2	-0.3	-0.3	-0.3
Denominator: 1+g+r+gr	1.0	1.0	1.0	1.1	0.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Contribution from nominal interest rate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
Contribution from real GDP growth	-0.2	-0.1	-0.2	-1.2	1.7	-0.1	-0.2	-0.2	-0.2	-0.3	-0.3	-0.2	-0.3	-0.3	-0.3
Contribution from price and exchange rate changes	0.0	0.3	0.4	-0.6	1.3	...	...	...	...	...	...	...	...	...	
Residual (3-4) 3/	5.3	8.6	6.8	23.6	21.7	5.0	4.0	3.2	2.3	1.0	-0.2	2.5	-4.9	-2.8	-3.9
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	0.0	0.0	0.0	0.0
PV of external debt 4/	...	4.3	4.1	4.2	0.2	3.9	3.9	3.8	3.7	3.6	3.5	3.7	3.1	3.0	3.1
In percent of exports	...	37.1	70.2	53.7	23.4	64.6	57.4	49.0	43.7	37.6	33.1	47.6	25.8	24.0	25.7
PV of PPG external debt	...	4.3	4.1	4.2	0.2	3.9	3.9	3.8	3.7	3.6	3.5	3.7	3.1	3.0	3.1
In percent of exports	...	37.1	70.2	53.7	23.4	64.6	57.4	49.0	43.7	37.6	33.1	47.6	25.8	24.0	25.7
In percent of government revenues	...	43.6	38.3	41.0	3.8	36.4	35.7	34.1	32.6	29.2	26.5	32.4	19.3	17.5	19.0
Debt service-to-exports ratio (in percent)	3.9	1.9	3.9	1.4	1.5	4.0	3.1	2.2	1.8	1.5	1.6	2.4	1.4	1.2	1.3
PPG debt service-to-exports ratio (in percent)	3.9	1.9	3.9	1.4	1.5	4.0	3.1	2.2	1.8	1.5	1.6	2.4	1.4	1.2	1.3
PPG debt service-to-revenue ratio (in percent)	4.4	2.2	2.1	1.4	1.3	2.3	1.9	1.6	1.4	1.2	1.3	1.6	1.0	0.9	1.0
Total gross financing need (Billions of U.S. dollars)	-1.1	-1.6	-1.4	-2.7	1.9	-1.0	-0.8	-0.7	-0.5	-0.2	0.1	-0.5	2.3	2.9	2.5
Non-interest current account deficit that stabilizes debt ratio	-5.0	-8.0	-6.5	-21.0	19.5	-4.3	-3.4	-2.6	-1.5	-0.2	1.3	-1.8	8.3	7.9	7.7
Key macroeconomic assumptions															
Real GDP growth (in percent)	2.7	1.3	2.4	7.9	6.3	2.5	3.0	3.5	4.0	4.5	5.0	3.8	6.0	6.0	6.0
GDP deflator in US dollar terms (change in percent)	-0.5	-3.9	-5.4	3.3	8.8	5.3	4.1	2.7	2.7	2.7	2.9	3.4	1.4	1.8	1.8
Effective interest rate (percent) 5/	0.4	0.5	0.4	0.3	0.1	0.4	0.4	0.5	0.5	0.5	0.6	0.5	0.9	1.0	0.9
Growth of exports of G&S (US dollar terms, in percent)	42.7	18.8	-51.7	0.8	30.3	11.4	20.1	22.9	17.4	20.6	18.6	18.5	8.8	8.3	9.0
Growth of imports of G&S (US dollar terms, in percent)	-17.6	2.4	-13.5	9.8	20.1	14.2	1.9	6.9	7.1	6.4	8.1	7.4	5.7	4.0	5.2
Grant element of new public sector borrowing (in percent)	...	...	...	...		45.6	54.1	56.9	60.0	59.6	59.5	56.0	59.3	59.1	59.2
Government revenues (excluding grants, in percent of GDP)	8.5	10.0	10.7	9.5	1.3	10.7	10.9	11.2	11.5	12.4	13.2	11.6	16.0	16.9	16.2
Aid flows (in Billions of US dollars) 7/	3.2	2.9	3.0	2.3	0.9	2.9	3.4	3.8	4.3	4.7	5.0	4.0	5.6	5.2	5.5
of which: Grants	3.1	2.9	3.0	2.2	0.9	2.8	3.3	3.7	4.2	4.5	4.9	3.9	5.3	4.8	5.2
of which: Concessional loans	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.4	0.3
Grant-equivalent financing (in percent of GDP) 8/	...	...	15.5	15.5		13.4	14.9	15.8	16.5	16.8	16.8	15.7	12.7	5.5	10.5
Grant-equivalent financing (in percent of external financing) 8/	...	...	99.0	99.0		99.0	98.4	98.7	98.9	98.9	98.8	98.8	98.2	96.5	97.7
Memorandum items:															
Nominal GDP (Billions of US dollars)	20.6	20.1	19.5	16.5	4.6	21.0	22.5	23.9	25.6	27.4	29.6	25.0	43.0	92.2	57.1
Nominal dollar GDP growth	2.2	-2.6	-3.1	11.4	11.4	8.0	7.2	6.3	6.9	7.3	8.0	7.3	7.5	8.0	7.9
PV of PPG external debt (in Billions of US dollars)		0.8	0.8	0.8	0.0	0.8	0.9	0.9	0.9	1.0	1.0	0.9	1.3	2.7	1.7
(PVt-PVt-1)/GDPt-1 (in percent)						0.0	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.3	0.2
Gross workers' remittances (Billions of US dollars)	0.1	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1
PV of PPG external debt (in percent of GDP + remittances)	...	4.3	4.1	4.2	0.2	3.9	3.9	3.8	3.7	3.6	3.5	3.7	3.1	3.0	3.1
PV of PPG external debt (in percent of exports + remittances)	...	33.8	65.0	49.4	22.1	60.2	54.0	46.5	41.8	36.2	32.0	45.1	25.2	23.7	25.1
Debt service of PPG external debt (in percent of exports + remittances)	...	1.7	3.6	2.7	1.4	3.8	2.9	2.1	1.8	1.5	1.5	2.3	1.4	1.2	1.3

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 1b. Afghanistan: Sensitivity Analysis for Key Indicators of Public and Publicly Guaranteed External Debt, 2017–37

(In percent)

	Projections							
	2017	2018	2019	2020	2021	2022	2027	2037
PV of debt-to GDP ratio								
Baseline	4	4	4	4	4	3	3	3
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2016-2036 1/	-3	-10	-17	-24	-31	-38	-70	-110
A2. New public sector loans on less favorable terms in 2016-2036 2	4	4	4	4	4	4	4	5
A3. Alternative Scenario: Low Grant	4	5	6	8	11	13	21	24
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2017-2018	4	4	4	4	4	4	3	3
B2. Export value growth at historical average minus one standard deviation in 2017-2018 3/	5	6	6	6	6	6	5	4
B3. US dollar GDP deflator at historical average minus one standard deviation in 2017-2018	4	5	5	5	4	4	4	4
B4. Net non-debt creating flows at historical average minus one standard deviation in 2017-2018 4/	5	4	4	4	4	4	3	3
B5. Combination of B1-B4 using one-half standard deviation shocks	3	2	2	2	2	2	2	2
B6. One-time 30 percent nominal depreciation relative to the baseline in 2017 5/	5	5	5	5	5	5	4	4
PV of debt-to-exports ratio								
Baseline	65	57	49	44	38	33	26	24
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2016-2036 1/	-54	-156	-224	-284	-323	-359	-589	-895
A2. New public sector loans on less favorable terms in 2016-2036 2	65	59	53	49	43	40	37	43
A3. Alternative Scenario: Low Grant	65	69	79	99	112	122	176	198
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2017-2018	64	56	48	43	37	33	26	24
B2. Export value growth at historical average minus one standard deviation in 2017-2018 3/	123	247	210	186	160	140	107	89
B3. US dollar GDP deflator at historical average minus one standard deviation in 2017-2018	64	56	48	43	37	33	26	24
B4. Net non-debt creating flows at historical average minus one standard deviation in 2017-2018 4/	77	58	50	44	38	34	26	24
B5. Combination of B1-B4 using one-half standard deviation shocks	70	62	54	48	42	37	30	33
B6. One-time 30 percent nominal depreciation relative to the baseline in 2017 5/	64	56	48	43	37	33	26	24
PV of debt-to-revenue ratio								
Baseline	36	36	34	33	29	26	19	18
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2016-2036 1/	-30	-97	-155	-211	-251	-287	-439	-653
A2. New public sector loans on less favorable terms in 2016-2036 2	37	37	37	36	34	32	28	31
A3. Alternative Scenario: Low Grant	16	19	26	37	45	52	85	119
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2017-2018	37	36	34	33	29	27	19	18
B2. Export value growth at historical average minus one standard deviation in 2017-2018 3/	44	57	54	52	46	42	30	24
B3. US dollar GDP deflator at historical average minus one standard deviation in 2017-2018	40	43	41	39	35	32	23	21
B4. Net non-debt creating flows at historical average minus one standard deviation in 2017-2018 4/	44	36	34	33	30	27	20	18
B5. Combination of B1-B4 using one-half standard deviation shocks	32	23	22	21	19	18	13	14
B6. One-time 30 percent nominal depreciation relative to the baseline in 2017 5/	51	49	47	45	40	37	27	24

Table 1b. Afghanistan: Sensitivity Analysis for Key Indicators of Public and Publicly Guaranteed External Debt, 2017–37 (continued)

(In percent)

Debt service-to-exports ratio								
Baseline	4	3	2	2	2	2	1	**1**
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2016-2036 1/	5	1	-2	-4	-5	-6	-12	**-18**
A2. New public sector loans on less favorable terms in 2016-2036 2	5	3	3	2	3	2	2	**1**
A3. Alternative Scenario: Low Grant	5	4	3	3	3	3	3	**7**
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2017-2018	5	3	3	2	2	2	2	**1**
B2. Export value growth at historical average minus one standard deviation in 2017-2018 3/	8	10	9	8	8	7	5	**4**
B3. US dollar GDP deflator at historical average minus one standard deviation in 2017-2018	5	3	3	2	2	2	2	**1**
B4. Net non-debt creating flows at historical average minus one standard deviation in 2017-2018 4/	5	4	3	2	2	2	2	**1**
B5. Combination of B1-B4 using one-half standard deviation shocks	7	6	4	3	4	3	2	**2**
B6. One-time 30 percent nominal depreciation relative to the baseline in 2017 5/	5	3	3	2	2	2	2	**1**
Debt service-to-revenue ratio								
Baseline	2	2	2	1	1	1	1	1
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2016-2036 1/	3	0	-1	-3	-4	-5	-9	-13
A2. New public sector loans on less favorable terms in 2016-2036 2	3	2	2	2	2	2	1	0
A3. Alternative Scenario: Low Grant	3	2	2	2	2	2	2	5
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2017-2018	3	2	2	2	2	2	1	1
B2. Export value growth at historical average minus one standard deviation in 2017-2018 3/	3	2	2	2	2	2	1	1
B3. US dollar GDP deflator at historical average minus one standard deviation in 2017-2018	3	3	2	2	2	2	1	1
B4. Net non-debt creating flows at historical average minus one standard deviation in 2017-2018 4/	3	2	2	2	2	2	1	1
B5. Combination of B1-B4 using one-half standard deviation shocks	3	2	2	1	2	2	1	1
B6. One-time 30 percent nominal depreciation relative to the baseline in 2017 5/	4	3	3	2	3	2	2	1
Memorandum item:								
Grant element assumed on residual financing (i.e., financing required above baseline) 6/	62	62	62	62	62	62	62	62

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 2a. Afghanistan: Public Sector Debt Sustainability Framework, Baseline Scenario, 2014–37

(In percent of GDP, unless otherwise indicated)

	Actual					Projections									
	2014	2015	2016	Average 5/	Standard Deviation 5/	2017	2018	2019	2020	2021	2022	2017-22 Average	2027	2037	2023-37 Average
Public sector debt 1/	8.7	9.1	8.0			7.2	6.6	6.1	6.1	6.0	5.9		6.4	8.0	6.5
of which: foreign-currency denominated	6.4	6.8	6.3			6.1	6.1	6.1	6.1	6.0	5.9		5.9	5.9	
Change in public sector debt	-0.8	0.4	-1.1			-0.8	-0.6	-0.5	-0.1	-0.1	-0.1		0.4	0.5	
Identified debt-creating flows	1.1	2.1	-1.0			-0.6	-0.4	-0.5	-0.4	-0.5	-0.5		0.3	0.4	
Primary deficit	1.7	1.3	-0.1	1.1	1.4	-0.1	0.0	-0.1	-0.1	-0.1	-0.1	-0.1	0.7	0.9	0.4
Revenue and grants	23.7	24.5	26.1			24.0	25.4	26.7	27.8	28.9	29.7		28.4	22.1	
of which: grants	15.2	14.6	15.4			13.3	14.6	15.5	16.3	16.5	16.5		12.4	5.2	
Primary (noninterest) expenditure	25.4	25.9	25.9			23.9	25.4	26.6	27.7	28.9	29.6		29.1	23.0	
Automatic debt dynamics	-0.3	0.8	-0.7			-0.5	-0.4	-0.4	-0.4	-0.4	-0.4		-0.4	-0.5	
Contribution from interest rate/growth differential	-0.4	-0.1	-0.4			-0.4	-0.4	-0.3	-0.3	-0.3	-0.4		-0.4	-0.5	
of which: contribution from average real interest rate	-0.2	0.0	-0.2			-0.2	-0.2	-0.1	-0.1	-0.1	-0.1		-0.1	-0.1	
of which: contribution from real GDP growth	-0.3	-0.1	-0.2			-0.2	-0.2	-0.2	-0.2	-0.3	-0.3		-0.3	-0.4	
Contribution from real exchange rate depreciation	0.1	0.9	-0.3			-0.1	0.0	-0.1	0.0	0.0	-0.1	...		...	
Other identified debt-creating flows	-0.2	0.0	-0.2			0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Privatization receipts (negative)	0.0	0.0	-0.2			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)	-0.2	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	-1.9	-1.7	-0.1			-0.3	-0.1	0.0	0.4	0.4	0.4		0.1	0.2	
Other Sustainability Indicators															
PV of public sector debt	...	6.7	5.8			5.0	4.4	3.8	3.7	3.6	3.5		3.6	5.0	
of which: foreign-currency denominated	...	4.3	4.1			3.9	3.9	3.8	3.7	3.6	3.5		3.1	3.0	
of which: external	...	4.3	4.1			3.9	3.9	3.8	3.7	3.6	3.5		3.1	3.0	
PV of contingent liabilities (not included in public sector debt)	...	...	...			...	...	...	...	...	...		...	...	
Gross financing need 2/	2.1	1.6	0.1			0.1	0.2	0.1	0.1	0.1	0.1		0.9	1.0	
PV of public sector debt-to-revenue and grants ratio (in percent)	...	27.1	22.4			20.6	17.1	14.3	13.5	12.5	11.8		12.9	22.7	
PV of public sector debt-to-revenue ratio (in percent)	...	66.8	54.6			46.3	40.2	34.1	32.6	29.2	26.5		22.8	29.7	
of which: external 3/	...	43.6	38.3			36.4	35.7	34.1	32.6	29.2	26.5		19.3	17.5	
Debt service-to-revenue and grants ratio (in percent) 4/	1.6	0.9	0.9			1.0	0.8	0.7	0.6	0.5	0.6		0.6	0.7	
Debt service-to-revenue ratio (in percent) 4/	4.4	2.2	2.1			2.3	1.9	1.6	1.4	1.2	1.3		1.0	0.9	
Primary deficit that stabilizes the debt-to-GDP ratio	2.5	0.9	1.0			0.7	0.5	0.4	0.0	0.0	0.0		0.4	0.4	
Key macroeconomic and fiscal assumptions															
Real GDP growth (in percent)	2.7	1.3	2.4	7.9	6.3	2.5	3.0	3.5	4.0	4.5	5.0	3.9	6.0	6.0	6.0
Average nominal interest rate on forex debt (in percent)	0.4	0.5	0.4	0.3	0.1	0.4	0.4	0.5	0.5	0.5	0.6	0.5	0.9	1.0	0.9
Average real interest rate on domestic debt (in percent)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Real exchange rate depreciation (in percent, + indicates depreciation)	1.0	14.5	-4.6	-0.9	7.8	...	...	...	...	...	...	... ...		...	...
Inflation rate (GDP deflator, in percent)	3.1	2.5	5.0	6.3	5.4	5.6	6.1	6.1	6.0	6.0	6.0	6.0	4.5	4.0	4.5
Growth of real primary spending (deflated by GDP deflator, in percent)	4.5	3.3	2.6	1.7	2.1	-5.5	9.4	8.3	8.3	8.9	7.6	6.4	3.0	4.9	4.2
Grant element of new external borrowing (in percent)	...	...	38.7	38.7	...	45.6	54.1	56.9	60.0	59.6	59.5	56.5	59.3	59.1	59.2

Sources: Country authorities; and staff estimates and projections.
1/ Covers central government gross debt.
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. Afghanistan: Sensitivity Analysis for Key Indicators of Public Debt, 2017–37

	Projections							
	2017	2018	2019	2020	2021	2022	2027	2037
PV of Debt-to-GDP Ratio								
Baseline	5	4	4	4	4	3	4	5
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	5	5	4	5	5	5	6	7
A2. Primary balance is unchanged from 2016	5	4	4	4	4	3	3	3
A3. Permanently lower GDP growth 1/	5	5	4	4	5	5	9	23
A4. Alternative Scenario: Low Grant	5	5	6	8	11	13	21	26
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2017-2018	5	4	4	4	4	4	4	5
B2. Primary balance is at historical average minus one standard deviations in 2017-2018	6	6	6	6	5	5	5	5
B3. Combination of B1-B2 using one half standard deviation shocks	6	6	5	4	4	4	3	1
B4. One-time 30 percent real depreciation in 2017	7	6	5	5	5	4	4	4
B5. 10 percent of GDP increase in other debt-creating flows in 2017	9	8	7	7	7	7	6	6
PV of Debt-to-Revenue Ratio 2/								
Baseline	21	17	14	13	13	12	13	23
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	22	20	18	18	18	19	23	33
A2. Primary balance is unchanged from 2016	21	17	14	13	12	11	10	12
A3. Permanently lower GDP growth 1/	21	18	16	16	16	16	28	95
A4. Alternative Scenario: Low Grant	21	21	26	37	44	52	86	128
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2017-2018	21	17	15	14	13	13	15	24
B2. Primary balance is at historical average minus one standard deviations in 2017-2018	25	25	21	20	19	17	18	24
B3. Combination of B1-B2 using one half standard deviation shocks	23	22	18	17	15	13	9	7
B4. One-time 30 percent real depreciation in 2017	27	23	19	17	16	14	13	18
B5. 10 percent of GDP increase in other debt-creating flows in 2017	36	31	28	26	24	22	22	28
Debt Service-to-Revenue Ratio 2/								
Baseline	1	1	1	1	1	1	1	1
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	1	1	1	1	1	1	1	1
A2. Primary balance is unchanged from 2016	1	1	1	1	1	1	1	0
A3. Permanently lower GDP growth 1/	1	1	1	1	1	1	1	2
A4. Alternative Scenario: Low Grant	1	1	1	1	1	1	2	5
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2017-2018	1	1	1	1	1	1	1	1
B2. Primary balance is at historical average minus one standard deviations in 2017-2018	1	1	1	1	1	1	1	1
B3. Combination of B1-B2 using one half standard deviation shocks	1	1	1	1	1	1	1	0
B4. One-time 30 percent real depreciation in 2017	1	1	1	1	1	1	1	1
B5. 10 percent of GDP increase in other debt-creating flows in 2017	1	1	1	1	1	1	1	1

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.