ISLAMIC REPUBLIC OF AFGHANISTAN

November 13, 2015

STAFF REPORT FOR THE 2015 ARTICLE IV CONSULTATION AND FIRST REVIEW UNDER THE STAFF-MONITORED PROGRAM—DEBT SUSTAINABILITY ANALYSIS

Approved By
Adnan Mazarei and Dhaneshwar Ghura (IMF), and Satu Kahkonen (IDA)

International Monetary Fund[15]
International Development Association

Afghanistan's external debt is low after extensive debt relief, but given its heavy reliance on grant financing (43 percent of GDP in 2014, including both on and off-budget grants), public external debt is judged to remain at high risk of distress according to the IMF-World Bank framework. Under the baseline scenario, with strong reform effort and donor support, improved security and reduced uncertainty, debt is sustainable. However, under a scenario assuming a plausible grant-financing shortfall, debt burden indicators quickly become unsustainable. If security and macroeconomic conditions improve, an improvement of the risk rating could be considered in a future assessment. Accordingly, the authorities should continue their efforts to mobilize revenue, raise the efficiency of public spending through careful prioritization, and press ahead with their reform efforts, while donors should continue to provide financing in the form of grants.

[15] This DSA was prepared by IMF staff with input from World Bank, 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" http://www.imf.org/external/np/pp/eng/2013/110513.pdf. 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 2012–14 CPIA of 2.7, Afghanistan is classified as having "weak performance" under the LIC-DSF.

MACROECONOMIC OUTLOOK

8. **The DSA's baseline macroeconomic scenario assumes a gradual improvement of security with continued reform and donor support during the Transformation Decade (2015–24).** This scenario is similar to the previous DSA of April 2014 (Box 1). The baseline also assumes political stability with regular election cycles and continued economic reform with governments delivering on Afghanistan's development goals and priorities that improve the business environment and governance to support private-sector-led inclusive growth. The baseline scenario also assumes continued donor support, in line with donors' statements at the December 2014 London Conference, namely, their Tokyo commitment of providing $16 billion through 2015, and sustaining support, through 2017, at or near the levels of the past decade. Going forward, donors committed to significant and continuing support that would decline.[16] This support for Afghanistan's social and economic development priorities through the Transformation Decade is predicated on the Afghan government delivering on its commitments under the Mutual Accountability Framework. At the same time, donors expect that Afghanistan will gradually increase its contribution and, over time, assume financial costs of the security sector.

Box 1. Macroeconomic Assumptions Comparison Table 1/

	DSA February 2014		DSA October 2015		Current vs. previous	
	2014-18	2019-33	2014-18	2019-33	2014-18	2019-33
Real growth (%)	4.6	4.6	3.1	5.0	-1.6	0.4
Inflation (GDP, deflator, %)	5.3	4.9	3.1	5.0	-2.2	0.0
Nominal GDP (Billions of Afghanis)	1539	4314	1298	3619	-241	-695
Revenue and grants (% GDP)	31.5	34.1	29.4	32.4	-2.1	-1.7
Grants (% GDP)	19.5	17.0	19.0	15.9	-0.5	-1.1
Primary expenditure (% GDP)	32.0	35.2	29.7	33.2	-2.3	-2.0
Primary balance (% GDP)	-0.6	-1.1	-0.3	-0.7	0.3	0.3
Exports of G&S (% GDP)	13.3	25.0	14.8	23.3	1.4	-1.6
Imports of G&S (% GDP) 2/	49.0	45.0	55.4	44.7	6.4	-0.2
Noninterest current account balance (%GDP)	-1.4	0.7	2.0	-0.2	3.5	-0.9

Sources: Afghan authorities; and IMF staff estimates and projections.
1/ The differences between the base period exports and imports in the current and previous DSAs are explained by having new and improved data as well as new mining sector projections.
2/ Change in imports in 2014-18 between the current and previous DSAs is due to higher grant related imports.

9. **In this scenario, growth is projected to recover and the external current account (before grants) to improve gradually**. GDP growth is projected to average about 5 percent in the

[16] In the baseline, total off budget and on budget grants are projected to decline as a share of GDP, from 45 percent in 2015 to 30 percent in 2020, and 12 percent in 2035, with an increasing share provided to the civilian sector.

medium term (2016–20), supported by investment and production in the mining industry later in the decade, and to stabilize at about 4½ percent in the long run (Table 1), similar to the projection in the previous DSA. The main change relative to the previous DSA relates to lower growth rates in the near term. This lower growth is due to a slower recovery in economic confidence than projected earlier, because the political transition was longer than expected and some delays in planned implementation of mining projects as well as lower commodity prices. This lower growth is expected to be temporary, as the political transition has been completed. Growth is expected to gain steam with a recovery in confidence, increasing mining and energy related activity from 2018 onwards and the impact of continued reform, although there is downside risk that mining development could be delayed with renegotiation of several contracts and weaker commodity prices. The external current account deficit before grants is expected to improve gradually over the projection period as a whole. The initial deterioration of the external current account reflects the import of mining-related capital goods in minerals extraction. Non-mineral exports are projected to increase progressively from a low level. At the same time, imports are projected to stabilize in outer years with donor-financed imports slowing. Accordingly, the current account deficit excluding grants should narrow gradually from about 37 percent of GDP in 2014 to about 10 percent of GDP at the end of the projection horizon (Figure 1).

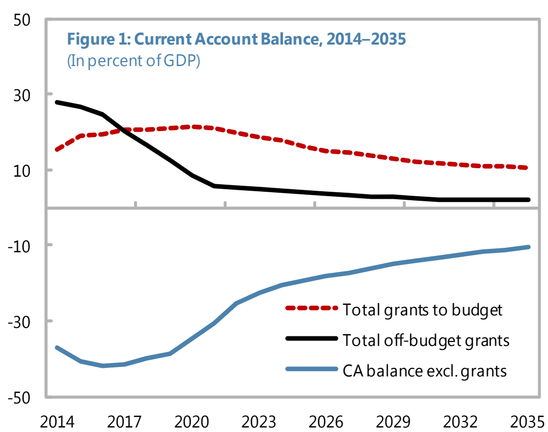


Figure 1: Current Account Balance, 2014–2035
(In percent of GDP)

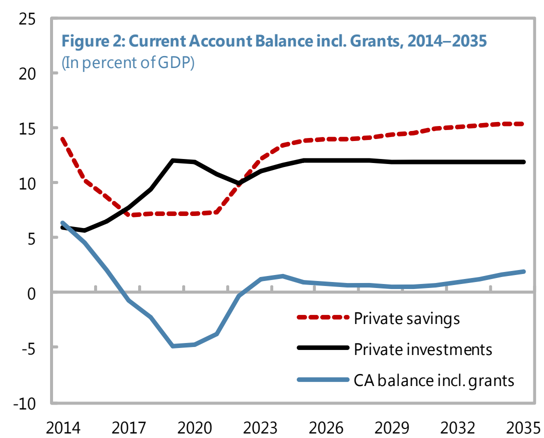


Figure 2: Current Account Balance incl. Grants, 2014–2035
(In percent of GDP)

Sources: Afghan authorities; and IMF staff calculations.

10. **Expenditures would decline marginally as a share of GDP over the coming decade.** Expenditures are driven by three factors: security, development, and the civilian operating costs, including wages, pension contributions, and operating and maintenance costs of public infrastructure. Security spending will remain substantial and is projected to reach 17 percent of GDP by 2020, decline to 13 percent by 2025, and stabilize at about 7–8 percent in the outer years, as security conditions improve and with some reduction in the size of security forces that will start toward the end of this decade. Non-security operating spending is expected to grow as the on-budget transfer of spending that was previously donor-managed and the associated large

operations and maintenance costs related to donor-funded infrastructure projects continues.[17] Finally, public spending will also rise on account of increases in the size of the civil service, particularly in health and education, to facilitate a meaningful progress towards the Sustainable Development Goals, and a gradual rise in pensions.[18] Given Afghanistan's large development needs, development spending, including off budget spending, is projected to be about 10 percent of GDP, an increase of 1 percent of GDP on budget in this decade to meet Afghanistan's human development and infrastructure needs.

11. **Significant growth in domestic revenues is projected in the medium term, despite the VAT introduction and mining revenue coming on stream only later.** Domestic revenues declined by 2.5 percentage points of GDP during 2011–2014, reflecting lower compliance and enforcement as well as lower import growth and economic activity due to political and security uncertainties. Furthermore, VAT implementation planned for 2015 has been postponed. Other revenue measures were introduced in 2015, to help mitigate the revenue impact of the postponement of the VAT introduction, and are expected to mobilize revenue of around 1 percent of GDP per year in the medium term. The impact of mining and energy projects on the medium-term revenue outlook remains substantial notwithstanding the delay compared to the 2014 DSA. The introduction of VAT by the end of decade and a sustained effort to improve compliance will also be needed. The baseline scenario assumes that: (i) the VAT introduction in 2019 will yield around 1 percent of GDP in its initial years and above 2 percent of GDP in the long term; (ii) the tax policy mix is improved, e.g. through the introduction of excise and property taxes, and rationalization of exemptions will yield up to 1 percent of GDP in additional revenues after 2020; (iii) tax and customs administration reforms will be forcefully implemented; and (iv) revenues from mining and energy projects will start flowing in 2018. As a result, by 2025 the ratio of domestic revenues to GDP will reach 16-17 percent of GDP, similar to the previous DSA, and 20 percent of GDP by 2035, a level that is typical for a low-income country.

12. **Given these revenue and expenditure trends, Afghanistan's total financing needs are expected to remain significant.** Over the long term, the overall budget deficit (excluding grants) will remain at above 12 percent of GDP, as in the previous DSA. A small share could be financed from external concessional loans, and there is also some limited scope for domestic financing through a sukuk— projected to be introduced in 2018—mainly for market development and liquidity management purposes. This will leave a projected financing gap of over 10 percent of GDP in 2020 and beyond. Fiscal sustainability—defined as domestic revenues covering operating spending—will likely only to be reached after 2035.

---

[17] The recurrent operation and maintenance costs for all assets built in Afghanistan since 2002, excluding the security sector, are estimated at about $1 billion annually or more—and growing as new assets are being built. Sustainment costs in the security sector are harder to estimate, but could be as high as $2 billion per year.

[18] Wage restraint is assumed, with the wage growth rate indexed to inflation until 2020 and limited to 3 percentage points over inflation until 2025, and equal to nominal GDP growth rate after 2025.

Table 1. Islamic Republic of Afghanistan: Medium-Term Macroeconomic Framework, 2014–35

	Act.	Projections								
		Medium-term						Long-term Averages		
	2014	2015	2016	2017	2018	2019	2020	2021-25	2026-30	2031-35
	(Annual percentage change, unless otherwise indicated)									
Output and prices 1/										
Real GDP	1.3	2.0	3.0	4.0	5.0	6.0	6.0	5.1	4.6	4.7
Nominal GDP (in billions of U.S. dollars)	20.4	19.4	19.6	20.9	22.2	23.8	25.4	30.8	42.0	58.2
Consumer prices (period average) 2/	4.7	-1.3	3.1	5.0	5.0	5.0	5.0	5.0	5.0	5.0
	(In percent of GDP, unless otherwise indicated)									
Public finances (central government)										
Domestic revenues and grants	23.9	28.5	30.2	31.8	32.6	33.5	34.5	34.3	31.3	30.3
Domestic revenues	8.5	9.7	10.6	11.3	11.9	12.5	13.0	15.6	17.6	19.3
Grants	15.4	18.8	19.6	20.5	20.7	21.1	21.5	18.7	13.7	11.0
Expenditures	25.6	28.5	30.3	31.6	32.6	33.6	34.6	34.6	32.8	32.4
Operating 3/	19.4	21.5	22.9	24.0	25.0	25.8	26.6	26.6	24.8	24.4
Development	6.2	7.0	7.4	7.6	7.6	7.8	8.0	8.0	8.0	8.0
Operating balance (excluding grants) 4/	-10.9	-11.8	-12.2	-12.7	-13.1	-13.3	-13.6	-11.0	-7.2	-5.1
Overall budget balance (including grants)	-1.7	0.0	-0.1	0.2	0.0	-0.1	0.0	-0.3	-1.5	-2.0
External sector 1/										
Exports of goods (in U.S. dollars, percent change)	8.5	4.7	26.8	24.0	24.9	24.9	31.8	18.0	5.3	5.8
Imports of goods (in U.S. dollars, percent change)	-3.9	-1.5	5.5	7.5	5.4	7.3	0.9	2.5	3.8	5.5
Merchandise trade balance	-39.6	-40.9	-41.9	-41.3	-39.8	-38.7	-34.2	-23.9	-17.9	-15.6
Current account balance, including official transfers	6.3	4.5	2.0	-0.7	-2.3	-4.9	-4.7	-0.1	0.6	1.2
Excluding official transfers	-37.0	-40.9	-42.0	-41.4	-39.7	-38.6	-34.6	-23.7	-16.1	-11.8
Gross reserves (in millions of U.S. dollars)	7,248	7,110	7,500	7,650	7,700	7,700	7,800	7,850	8,100	8,350
Public Debt										
Total public debt	6.4	7.0	6.9	6.7	9.4	9.5	9.4	9.2	12.2	18.3
of which: Public external debt 5/	6.4	7.0	6.9	6.7	6.5	6.3	6.1	5.9	6.0	6.4

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

1/ Excluding the narcotics economy.
2/ Revised with improved coverage.
3/ Comprising mainly current spending. It is assumed that donors' recurrent expenditure off-budget is moved onto the budget by 2020. The actual rate of transfer on-budget is uncertain.
4/ Defined as domestic revenues minus operating expenditures.
5/ After HIPC and MDRI debt relief, as well as debt relief beyond HIPC relief from Paris Club creditors.

DEBT SUSTAINABILITY ANALYSIS

13. **Afghanistan's public debt remains modest.** Afghanistan passed the HIPC completion point and received debt relief in 2006. External public and publicly guaranteed debt amounted to $1.3 billion, or 6.4 percent of GDP in 2014, mostly to multilateral creditors.[19] It is equivalent to 3.4

[19] This debt stock is after delivery of the already-pledged debt relief commitments and excluding some minimal amounts of non-yet-reconciled or disputed debt. Afghanistan is still following up with one Paris Club creditor on its debt relief commitments, as well as with several non-Paris Club creditors on debt relief on comparable terms. In terms of debt structure and composition: apart from a small amount of legacy debt (less than 1 percent of total), most of the external debt is owed to multilateral institutions, mainly regional and international financial institutions.

percent of GDP in present value (PV) terms, and to about 22 percent of exports and 40 percent of government revenues (Table 2a). Under the baseline scenario—in which Afghanistan's financing gap, net of domestic financing, is entirely met by grants—the present value of public external debt would be about 3.3 percent of GDP by the end of the projection period, while total public debt would be 19.7 percent of GDP, both below the indicative debt-burden threshold applicable to a country like Afghanistan.[20]

14. **Although the debt burden is modest, potential risks to grant financing put Afghanistan at high risk of external debt distress.** Risks to this baseline include an abrupt decline in grants (an alternative scenario) combined with a shift towards debt financing, a deterioration in the security situation, which would put upward pressure on spending, or slow or reverse revenue mobilization reforms. These factors could put Afghanistan's debt burden on an unsustainable path. While donors have reconfirmed their financial support in the short to medium term at the 2014 London Conference, the longer-term prospects are less certain and will be discussed in 2016 at the Warsaw and Brussels conferences.

15. **The standard Debt Sustainability Framework shocks result in benign outcomes**. They result only in three breaches of the debt thresholds (the present value (PV) of external debt to exports and PV of external debt to revenue during this decade and PV of public debt to GDP ratio by the end of the projection period).[21] However, the standard shocks generated by the Debt Sustainability Framework are mostly driven by the economic performance over the past ten years. While for many countries the recent past might be a useful guide for projections, this is less so in the case of Afghanistan—with average annual real GDP growth of 8.9 percent and official transfers of 53 percent of GDP. The high GDP growth represented a catch-up from a low post-conflict base, and while large grant financing has been committed for the medium term, its projected magnitude is less (as a share of GDP) than grants received over the past decade, which were exceptionally large and front-loaded to finance post-conflict rehabilitation and reconstruction. Therefore, to ensure the risks are correctly captured, a customized illustrative scenario, which examines debt sustainability with plausible downside risks that are Afghanistan-specific, is developed.

16. **The customized illustrative scenario takes into account Afghanistan's circumstances and possible downside risks and indicates that Afghanistan faces significant risks, which if realized, would breach debt thresholds and result in a high risk of debt distress.**[22] The customized scenario focuses on the debt dynamics generated by a downward shift in the grant path. This scenario does not take into account second round effects on trade, security, interest rates, and

[20] Under the DSA framework, the external debt thresholds for countries with similar economic performance and income level as Afghanistan are: for the PV of debt—30 percent of GDP, 100 percent of exports, and 200 percent of revenues; for debt service, 15 percent of exports and 18 percent of revenues.

[21] The PV of debt to exports and PV of debt to revenue ratio thresholds are breached when net official transfers and net FDI are one standard deviation below their historical average (Figure 3). The shock is applied to two years (2016-2017) and thereafter the PV of debt to exports declines.

[22] This treatment is in line with paragraphs 63 and 74 of the LIC-DSF Guidance Note.

growth. However, on the upside, if security stabilizes, and macroeconomic conditions continue to improve, the external risk rating may be lowered in future DSAs.

17. **The customized illustrative scenario assumes a gradual drop in grants starting in 2017**. This scenario assumes that lack of progress in reforms, donor fatigue, and/or a shift in donors' priorities lead to a gradual reduction in aid beginning in 2017 and reaching a level of 50 percent of the baseline by 2021 and beyond. At the same time, it is assumed that the nominal GDP levels are similar to the baseline, the level of public services envisaged in the baseline scenario is preserved, and additional revenue is not mobilized. 80 percent of the resulting financing gap is covered with concessional external loans, and the remainder with domestic non-concessional borrowing. Under this scenario, debt burden indicators deteriorate rapidly, breaching virtually every threshold. The PV of external debt would reach over 90 percent of GDP, or about 375 percent of exports, by the end of the projection period. The PV of total public debt would reach over 130 percent of GDP, around 660 percent of revenues, and the debt-service-to-revenue ratio will rise to about 35 percent (Figure 4).

AUTHORITIES' VIEWS

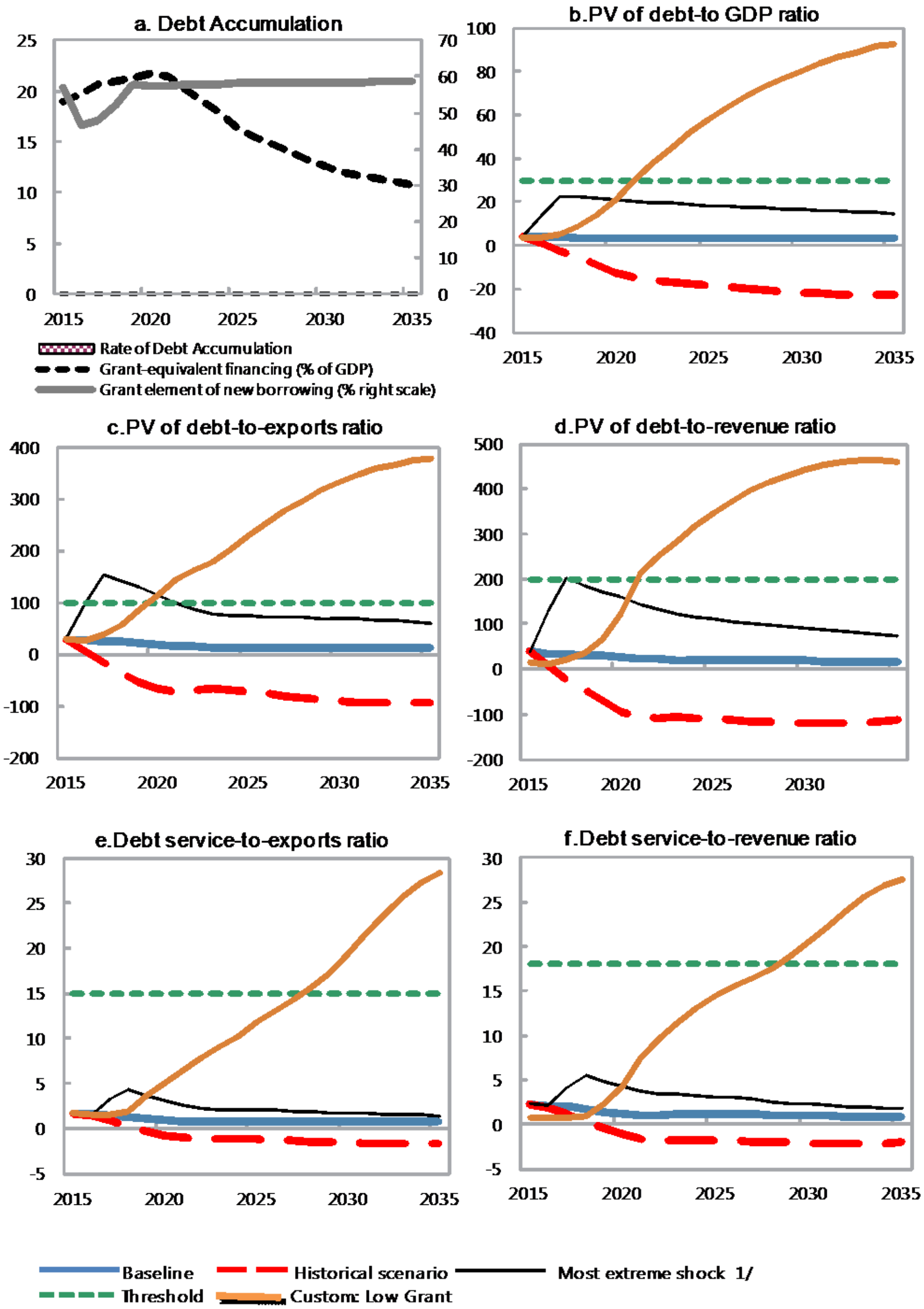
18. **The authorities broadly agreed with the conclusions of the DSA**. They emphasized that continued donor financing is critical to ensure debt sustainability, while delivering on their commitments to the donor community, and that they wished to keep the debt level low. They recognized substantial risks going forward, including potential donor fatigue and underscored the importance of prudent fiscal policy. The authorities also pointed out Afghanistan's large upfront expenditure needs, particularly big infrastructure projects with potentially high rates of economic and social returns, which could support regional integration and growth, and were open to exploring options to mobilize other types of financing in addition to existing donor grants, including concessional loans. They also acknowledged the IMF's advice that contracting concessional loans would require careful project selection and an independent technical appraisal of expected returns to maintain debt sustainability, given the limited debt service capacity, and for transparent recording of its financial impact. They shared staff's view that sukuks (domestic borrowing) should be used as a liquidity management instrument and to build up the treasury's cash balance, rather than to finance projects or recurrent fiscal deficits. They underscored that further aligning donor support with Afghan priorities and channeling more funds through the budget could potentially result in expenditure savings.

CONCLUSIONS

19. **Afghanistan's debt sustainability will hinge on improved security, and continued donor grant inflows.** After extensive debt relief and substantial medium-term pledges from donors, Afghanistan's debt outlook, under the baseline scenario, is benign. However, this is predicated on continued economic growth, progress in reforms, improvements in security as well as all donor assistance being provided in the form of grants. The outlook is subject to three main risks. First, an escalated and prolonged conflict would dampen or stop economic growth and would imply limited

economic reforms and a highly constrained ability by the central government to generate budget revenues. Second, mining revenues may be delayed, lower than hoped for, or highly volatile, leading to additional financing needs, and potentially spending cuts that would impact growth. And third, donor grants may not be forthcoming in the amounts needed, also leading to spending cuts and lower growth. Under any of these scenarios, Afghanistan would need to implement compensatory measures and, in the event of a sustained drop in grants (customized illustrative scenario), its debt burden would quickly become unsustainable and could threaten, in the extreme case, the continuity of government functions. This analysis underscores the need to redouble efforts to mobilize domestic revenue—with new policy measures as well as through administrative reforms to improve compliance—prioritize spending carefully, pursue expenditure rationalization, and raise the efficiency of public spending. In addition, maintaining macroeconomic stability and vigorous economic reform efforts will continue to be needed to improve economic governance, strengthen the financial sector, and spur future growth.

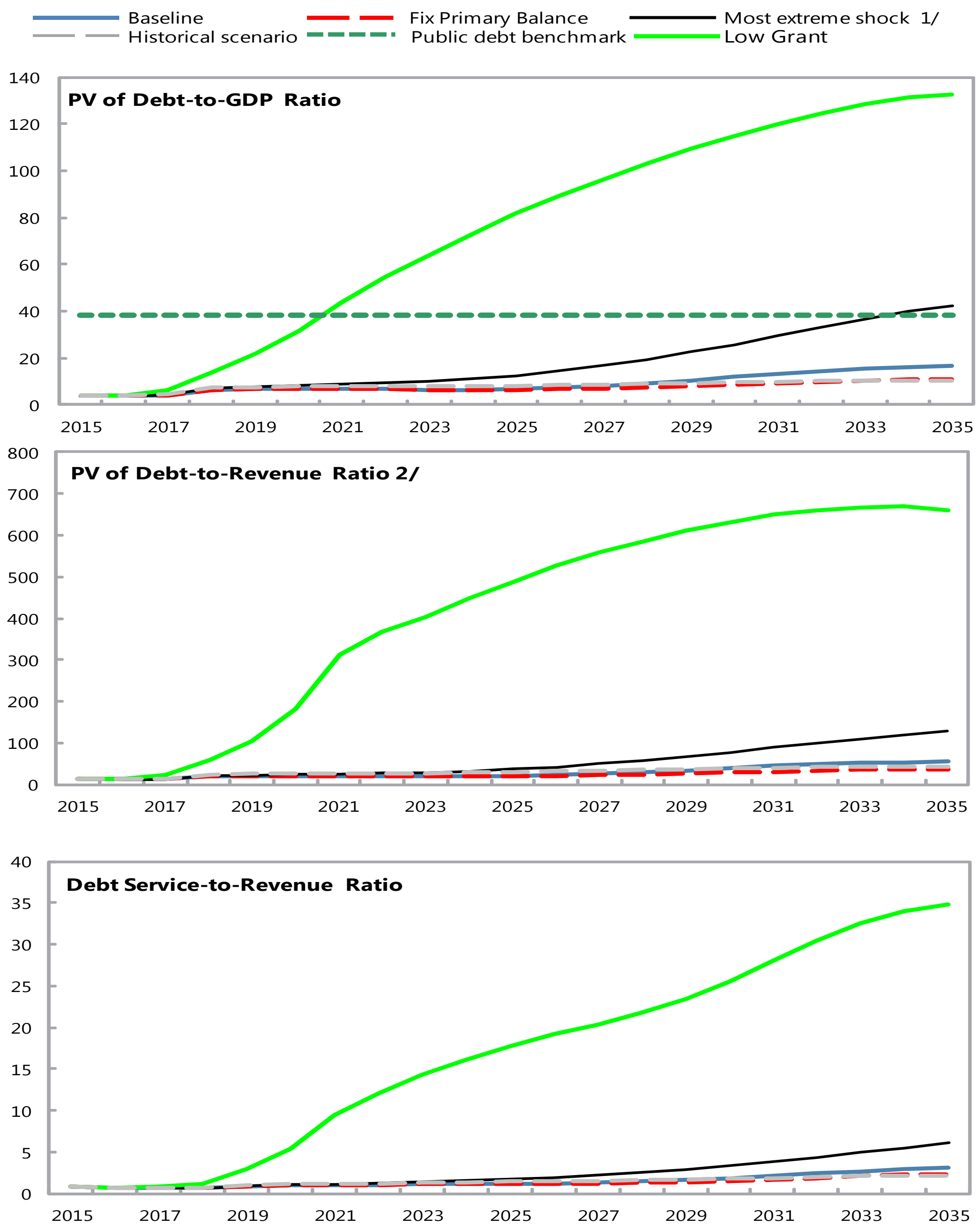
Figure 3. Islamic Republic of Afghanistan: Indicators of Public and Publicly Guaranteed External Debt under Alternatives Scenarios, 2015–35 1/



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

1/ The most extreme stress test (under the standardized stress tests) is the test that yields the highest ratio on or before 2025. In figure b. it corresponds to a Non-debt flows shock; in c. to a Non-debt flows shock; in d. to Non-debt flows shock; in e. to a Non-debt flows shock and in figure f. to a Non-debt flows shock

Figure 4. Islamic Republic of Afghanistan: Indicators of Public Debt Under Alternative Scenarios, 2015–35 1/



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

1/ The most extreme stress test is the test that yields the highest ratio on or before 2025.
2/ Revenues are defined inclusive of grants.

Table 2a. Islamic Republic of Afghanistan: External Debt Sustainability Framework, Baseline Scenario, 2012–35 1/

(In percent of GDP, unless otherwise indicated)

	Actual			Historical [6/] Average	Standard [6/] Deviation	Projections									
	2012	2013	2014			2015	2016	2017	2018	2019	2020	2015-2020 Average	2025	2035	2021-2035 Average
External debt (nominal) 1/	**6.8**	**6.9**	**6.4**			**7.0**	**6.9**	**6.7**	**6.5**	**6.3**	**6.1**		**5.8**	**6.4**	
of which: public and publicly guaranteed (PPG)	6.8	6.9	6.4			7.0	6.9	6.7	6.5	6.3	6.1		5.8	6.4	
Change in external debt	-0.7	0.1	-0.5			0.6	-0.2	-0.1	-0.2	-0.2	-0.2		0.0	0.0	
Identified net debt-creating flows	-7.8	-7.9	-7.0			-5.0	-3.2	-1.3	-1.0	1.0	1.0		-2.8	-3.5	
Non-interest current account deficit	**-6.0**	**-7.5**	**-6.3**	**-8.6**	**10.6**	**-4.6**	**-2.1**	**0.6**	**2.2**	**4.8**	**4.7**		**-1.0**	**-1.9**	-0.7
Deficit in balance of goods and services	43.1	36.3	37.2			41.2	42.5	42.0	40.4	39.4	35.2		19.7	12.2	
Exports	18.5	19.9	15.8			13.5	14.3	14.7	15.6	16.5	18.4		25.1	24.6	
Imports	61.6	56.2	53.0			54.7	56.8	56.7	56.0	56.0	53.6		44.8	36.8	
Net current transfers (negative = inflow)	-47.6	-42.3	-42.7	-42.2	24.9	-44.8	-43.5	-40.3	-37.2	-33.6	-29.9		-20.7	-14.1	-18.7
of which: official	-48.1	-42.9	-43.3			-45.4	-44.1	-40.7	-37.4	-33.8	-29.9		-20.1	-12.4	
Other current account flows (negative = net inflow)	-1.5	-1.5	-0.9			-1.0	-1.1	-1.1	-1.0	-1.0	-0.6		0.0	-0.1	
Net FDI (negative = inflow)	**-0.9**	**-0.5**	**-0.6**	**-0.9**	**0.7**	**-0.3**	**-1.0**	**-1.7**	**-2.9**	**-3.5**	**-3.3**		**-1.5**	**-1.3**	-1.6
Endogenous debt dynamics 2/	**-0.9**	**0.1**	**-0.1**			**-0.1**	**-0.2**	**-0.2**	**-0.3**	**-0.3**	**-0.3**		**-0.2**	**-0.2**	
Contribution from nominal interest rate	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.1	0.1	
Contribution from real GDP growth	-0.9	-0.3	-0.1			-0.1	-0.2	-0.3	-0.3	-0.4	-0.4		-0.3	-0.3	
Contribution from price and exchange rate changes	0.0	0.3	0.0			...	...	...	...	...	...		...	...	
Residual (3-4) 3/	**7.1**	**8.1**	**6.5**			**5.6**	**3.1**	**1.2**	**0.8**	**-1.3**	**-1.2**		**2.8**	**3.5**	
of which: exceptional financing	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
PV of external debt 4/	...	...	3.4			3.8	3.7	3.7	3.6	3.5	3.5		3.3	3.3	
In percent of exports	...	...	21.6			27.9	26.1	25.1	23.3	21.4	18.7		13.0	13.3	
PV of PPG external debt	**...**	**...**	**3.4**			**3.8**	**3.7**	**3.7**	**3.6**	**3.5**	**3.5**		**3.3**	**3.3**	
In percent of exports	**...**	**...**	**21.6**			**27.9**	**26.1**	**25.1**	**23.3**	**21.4**	**18.7**		**13.0**	**13.3**	
In percent of government revenues	**...**	**...**	**40.0**			**39.0**	**35.1**	**32.8**	**30.5**	**28.3**	**26.6**		**19.6**	**16.4**	
Debt service-to-exports ratio (in percent)	**0.3**	**0.7**	**2.4**			**1.7**	**1.6**	**1.5**	**1.3**	**1.0**	**0.9**		**0.8**	**0.7**	
PPG debt service-to-exports ratio (in percent)	**0.3**	**0.7**	**2.4**			**1.7**	**1.6**	**1.5**	**1.3**	**1.0**	**0.9**		**0.8**	**0.7**	
PPG debt service-to-revenue ratio (in percent)	**0.5**	**1.5**	**4.5**			**2.3**	**2.2**	**2.0**	**1.7**	**1.3**	**1.2**		**1.2**	**0.8**	
Total gross financing need (Billions of U.S. dollars)	-1.4	-1.6	-1.3			-0.9	-0.6	-0.2	-0.1	0.4	0.4		-0.8	-2.1	
Non-interest current account deficit that stabilizes debt ratio	-5.3	-7.6	-5.8			-5.2	-1.9	0.8	2.4	5.1	4.8		-1.0	-1.9	
Key macroeconomic assumptions															
Real GDP growth (in percent)	14.0	3.9	1.3	8.9	5.9	2.0	3.0	4.0	5.0	6.0	6.0	4.3	4.6	4.7	4.8
GDP deflator in US dollar terms (change in percent)	-0.5	-4.4	0.1	5.8	7.5	-7.0	-2.1	2.8	1.2	1.0	0.7	-0.6	1.5	3.2	1.8
Effective interest rate (percent) 5/	0.2	0.4	0.4	0.2	0.1	0.6	0.5	0.5	0.6	0.6	0.7	0.6	0.9	1.1	0.9
Growth of exports of G&S (US dollar terms, in percent)	-4.0	7.2	-19.6	12.1	25.3	-19.1	7.0	10.3	12.3	13.6	19.2	7.2	4.1	8.5	8.8
Growth of imports of G&S (US dollar terms, in percent)	4.4	-9.3	-4.4	10.7	14.3	-2.1	4.7	6.8	4.9	7.1	2.3	3.9	2.3	6.7	4.0
Grant element of new public sector borrowing (in percent)	...	...	...	...	...	57.1	46.7	47.8	52.4	57.8	57.5	53.2	58.1	58.5	58.2
Government revenues (excluding grants, in percent of GDP)	10.1	9.8	8.5			9.6	10.6	11.3	11.9	12.5	13.0		16.7	20.0	17.5
Aid flows (in Billions of US dollars) 7/	3.1	3.0	3.2			3.7	3.8	4.3	4.6	5.0	5.5		5.6	7.1	
of which: Grants	3.1	2.9	3.1			3.6	3.8	4.3	4.6	5.0	5.5		5.5	6.9	
of which: Concessional loans	0.1	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.1	0.2	
Grant-equivalent financing (in percent of GDP) 8/	...	...	...			18.9	19.7	20.7	20.9	21.2	21.7		16.3	10.7	14.8
Grant-equivalent financing (in percent of external financing) 8/	...	...	...			99.6	99.0	99.0	99.2	99.4	99.4		98.7	97.9	98.4
Memorandum items:															
Nominal GDP (Billions of US dollars)	20.3	20.2	20.4			19.4	19.5	20.9	22.2	23.8	25.4		34.6	66.6	
Nominal dollar GDP growth	13.4	-0.6	1.4			-5.2	0.8	7.0	6.3	7.1	6.8	3.8	6.2	8.0	6.6
PV of PPG external debt (in Billions of US dollars)			0.7			0.7	0.7	0.8	0.8	0.8	0.9		1.1	2.2	
(PVt-PVt-1)/GDPt-1 (in percent)						0.0	0.2	0.2	0.2	0.1	0.2	0.1	0.2	0.2	0.2
Gross workers' remittances (Billions of US dollars)	0.3	0.4	0.4			0.4	0.5	0.5	0.5	0.5	0.5		0.6	0.8	
PV of PPG external debt (in percent of GDP + remittances)	...	...	3.3			3.7	3.6	3.6	3.6	3.5	3.4		3.2	3.2	
PV of PPG external debt (in percent of exports + remittances)	...	...	19.1			23.9	22.5	21.8	20.5	19.0	16.9		12.2	12.7	
Debt service of PPG external debt (in percent of exports + remittance	...	...	2.2			1.4	1.4	1.3	1.1	0.9	0.8		0.8	0.7	

Sources: Afghan authorities; and IMF 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 2b. Islamic Republic of Afghanistan: Sensitivity Analysis for Key Indicators of Public and Publicly Guaranteed External Debt, 2015–35
(In percent)

	Projections							
	2015	2016	2017	2018	2019	2020	2025	2035
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 2015-2035 1/	4	1	-2	-5	-9	-12	-18	-23
A2. New public sector loans on less favorable terms in 2015-2035 2	4	4	4	4	4	4	4	5
Customized 1: Lower Grants	4	4	5	9	14	21	58	92
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2016-2017	4	4	4	4	3	3	3	3
B2. Export value growth at historical average minus one standard deviation in 2016-2017 3/	4	5	7	6	6	6	6	5
B3. US dollar GDP deflator at historical average minus one standard deviation in 2016-2017	4	4	4	4	4	4	3	3
B4. Net non-debt creating flows at historical average minus one standard deviation in 2016-2017 4/	4	14	23	22	21	21	18	15
B5. Combination of B1-B4 using one-half standard deviation shocks	4	8	12	11	11	11	10	8
B6. One-time 30 percent nominal depreciation relative to the baseline in 2016 5/	4	5	5	5	5	5	5	5
PV of debt-to-exports ratio								
Baseline	28	26	25	23	21	19	13	13
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2015-2035 1/	28	6	-16	-35	-55	-66	-74	-92
A2. New public sector loans on less favorable terms in 2015-2035 2	28	27	26	25	23	21	17	22
Customized 1: Lower Grants	28	26	37	57	85	114	230	376
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2016-2017	28	26	25	23	21	18	13	13
B2. Export value growth at historical average minus one standard deviation in 2016-2017 3/	28	41	70	65	59	52	35	32
B3. US dollar GDP deflator at historical average minus one standard deviation in 2016-2017	28	26	25	23	21	18	13	13
B4. Net non-debt creating flows at historical average minus one standard deviation in 2016-2017 4/	28	97	154	142	129	112	73	60
B5. Combination of B1-B4 using one-half standard deviation shocks	28	65	103	95	87	76	50	42
B6. One-time 30 percent nominal depreciation relative to the baseline in 2016 5/	28	26	25	23	21	18	13	13
PV of debt-to-revenue ratio								
Baseline	39	35	33	31	28	27	20	16
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2015-2035 1/	39	8	-21	-46	-73	-94	-111	-113
A2. New public sector loans on less favorable terms in 2015-2035 2	39	36	34	32	30	29	25	27
Customized 1: Lower Grants	13	12	20	36	67	122	347	461
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2016-2017	39	35	33	30	28	26	19	16
B2. Export value growth at historical average minus one standard deviation in 2016-2017 3/	39	44	59	54	50	47	33	25
B3. US dollar GDP deflator at historical average minus one standard deviation in 2016-2017	39	35	34	31	29	27	20	17
B4. Net non-debt creating flows at historical average minus one standard deviation in 2016-2017 4/	39	131	201	186	171	160	110	74
B5. Combination of B1-B4 using one-half standard deviation shocks	39	76	104	96	89	83	58	40
B6. One-time 30 percent nominal depreciation relative to the baseline in 2016 5/	39	50	47	43	40	38	28	23

Table 2b. Islamic Republic of Afghanistan: Sensitivity Analysis for Key Indicators of Public and Publicly Guaranteed External Debt, 2015–2035 (concluded)

(In percent)

Debt service-to-exports ratio

Baseline	2	2	2	1	1	1	1	1
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2015-2035 1/	2	1	1	0	0	-1	-1	-2
A2. New public sector loans on less favorable terms in 2015-2035 2	2	2	2	1	1	1	1	1
Customized 1: Lower Grants	2	2	2	2	4	5	12	28
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2016-2017	2	2	2	1	1	1	1	1
B2. Export value growth at historical average minus one standard deviation in 2016-2017 3/	2	2	3	3	2	2	2	1
B3. US dollar GDP deflator at historical average minus one standard deviation in 2016-2017	2	2	2	1	1	1	1	1
B4. Net non-debt creating flows at historical average minus one standard deviation in 2016-2017 4/	2	2	3	4	4	3	2	1
B5. Combination of B1-B4 using one-half standard deviation shocks	2	2	3	3	3	2	2	1
B6. One-time 30 percent nominal depreciation relative to the baseline in 2016 5/	2	2	2	1	1	1	1	1

Debt service-to-revenue ratio

Baseline	2	2	2	2	1	1	1	1
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2015-2035 1/	2	2	1	0	0	-1	-2	-2
A2. New public sector loans on less favorable terms in 2015-2035 2	2	2	2	2	1	1	1	2
Customized 1: Lower Grants	1	1	1	1	2	4	14	28
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2016-2017	2	2	2	2	1	1	1	1
B2. Export value growth at historical average minus one standard deviation in 2016-2017 3/	2	2	2	2	2	2	2	1
B3. US dollar GDP deflator at historical average minus one standard deviation in 2016-2017	2	2	2	2	1	1	1	1
B4. Net non-debt creating flows at historical average minus one standard deviation in 2016-2017 4/	2	2	4	6	5	4	3	2
B5. Combination of B1-B4 using one-half standard deviation shocks	2	2	3	3	3	3	2	1
B6. One-time 30 percent nominal depreciation relative to the baseline in 2016 5/	2	3	3	2	2	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: Afghan authorities; and IMF 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 3a. Islamic Republic of Afghanistan: Public Sector Debt Sustainability Framework, Baseline Scenario, 2012–35

(In percent of GDP, unless otherwise indicated)

	Actual			Average 5/	Standard Deviation 5/	Estimate	Projections								
	2012	2013	2014			2015	2016	2017	2018	2019	2020	2015-20 Average	2025	2035	2021-35 Average
Public sector debt 1/	6.8	6.9	6.4			7.0	6.9	6.7	9.4	9.5	9.4		9.3	19.7	
of which: foreign-currency denominated	6.8	6.9	6.4			7.0	6.9	6.7	6.5	6.3	6.1		5.8	6.4	
Change in public sector debt	-0.7	0.1	-0.5			0.6	-0.2	-0.1	2.7	0.0	-0.1		0.4	0.2	
Identified debt-creating flows	-1.9	0.7	1.3			0.6	-0.3	-0.5	-1.7	-0.6	-0.7		0.2	-0.1	
Primary deficit	-0.2	0.6	1.7	1.0	1.5	-0.1	0.1	-0.2	-0.1	-0.1	-0.2	-0.1	0.6	0.8	0.9
Revenue and grants	25.2	24.3	23.9			28.5	30.2	31.8	32.6	33.5	34.5		32.7	30.4	
of which: grants	15.1	14.6	15.4			18.8	19.6	20.5	20.8	21.1	21.5		16.0	10.4	
Primary (noninterest) expenditure	25.0	25.0	25.6			28.4	30.3	31.6	32.6	33.5	34.4		33.3	31.3	
Automatic debt dynamics	-1.1	0.1	-0.1			0.6	-0.3	-0.3	-0.4	-0.5	-0.5		-0.4	-1.0	
Contribution from interest rate/growth differential	-1.0	-0.3	-0.2			-0.2	-0.3	-0.4	-0.4	-0.6	-0.6		-0.4	-0.9	
of which: contribution from average real interest rate	-0.1	-0.1	-0.1			-0.1	-0.1	-0.1	-0.1	-0.1	0.0		0.0	0.0	
of which: contribution from real GDP growth	-0.9	-0.3	-0.1			-0.1	-0.2	-0.3	-0.3	-0.5	-0.5		-0.4	-0.9	
Contribution from real exchange rate depreciation	0.0	0.4	0.0			0.9	0.0	0.0	0.1	0.1	0.1		...	...	
Other identified debt-creating flows	-0.6	0.0	-0.2			0.0	0.0	0.0	-1.3	0.0	0.0		0.0	0.0	
Privatization receipts (negative)	-0.6	0.0	0.0			0.0	0.0	0.0	-1.3	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	-0.2			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	1.2	-0.5	-1.8			0.0	0.1	0.4	4.4	0.7	0.5		0.2	0.4	
Other Sustainability Indicators															
PV of public sector debt	...	...	3.4			3.8	3.7	3.7	6.5	6.7	6.7		6.7	16.5	
of which: foreign-currency denominated	...	...	3.4			3.8	3.7	3.7	3.6	3.5	3.5		3.3	3.3	
of which: external	...	...	3.4			3.8	3.7	3.7	3.6	3.5	3.5		3.3	3.3	
PV of contingent liabilities (not included in public sector debt)	...	...	...			...	...	...	...	...	...		...	...	
Gross financing need 2/	-0.1	0.7	2.1			0.2	0.3	0.1	0.1	0.2	0.2		1.0	1.8	
PV of public sector debt-to-revenue and grants ratio (in percent)	...	...	14.3			13.2	12.3	11.7	20.0	20.0	19.4		20.6	54.3	
PV of public sector debt-to-revenue ratio (in percent)	...	...	40.0			39.0	35.1	32.8	54.9	53.7	51.5		40.3	82.4	
of which: external 3/	...	...	40.0			39.0	35.1	32.8	30.5	28.3	26.6		19.6	16.4	
Debt service-to-revenue and grants ratio (in percent) 4/	0.2	0.6	1.6			0.8	0.8	0.7	0.6	0.9	1.0		1.2	3.1	
Debt service-to-revenue ratio (in percent) 4/	0.5	1.5	4.5			2.3	2.2	2.0	1.7	2.5	2.6		2.3	4.6	
Primary deficit that stabilizes the debt-to-GDP ratio	0.5	0.5	2.2			-0.6	0.2	0.0	-2.8	-0.1	0.0		0.2	0.6	
Key macroeconomic and fiscal assumptions															
Real GDP growth (in percent)	14.0	3.9	1.3	8.9	5.9	2.0	3.0	4.0	5.0	6.0	6.0	4.3	4.6	4.7	4.8
Average nominal interest rate on forex debt (in percent)	0.2	0.4	0.4	0.2	0.1	0.6	0.5	0.5	0.6	0.6	0.7	0.6	0.9	1.1	0.9
Average real interest rate on domestic debt (in percent)	...	...	...	...	...	...	...	...		0.5	1.4	0.9	1.7	0.3	1.3
Real exchange rate depreciation (in percent, + indicates depreciation	-0.2	6.0	0.5	-2.9	5.2	13.7	...	...	...	...	...	...	...	...	...
Inflation rate (GDP deflator, in percent)	8.5	4.0	3.7	7.6	5.1	-1.1	3.0	5.0	4.9	4.9	4.9	3.6	5.0	6.2	5.0
Growth of real primary spending (deflated by GDP deflator, in percer	30.2	3.7	3.9	3.9	9.4	13.3	9.6	8.6	8.3	8.9	8.8	9.6	2.3	3.6	4.1
Grant element of new external borrowing (in percent)	...	...	...	...	...	57.1	46.7	47.8	52.4	57.8	57.5	53.2	58.1	58.5	...

Sources: Afghan authorities; and IMF 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 3b. Islamic Republic of Afghanistan: Sensitivity Analysis for Key Indicators of Public Debt 2015–35

	Projections							
	2015	2016	2017	2018	2019	2020	2025	2035
PV of Debt-to-GDP Ratio								
Baseline	4	4	4	7	7	7	7	17
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	4	4	4	7	8	8	8	10
A2. Primary balance is unchanged from 2015	4	4	4	7	7	7	6	11
A3. Permanently lower GDP growth 1/	4	4	4	7	8	8	12	43
A4. Alternative Scenario : Low Grant	4	4	6	14	22	32	82	132
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2016-20	4	4	4	7	7	7	7	18
B2. Primary balance is at historical average minus one standard deviations in 2016-201	4	5	6	9	9	9	9	18
B3. Combination of B1-B2 using one half standard deviation shocks	4	4	5	8	7	7	5	12
B4. One-time 30 percent real depreciation in 2016	4	5	5	8	8	8	7	16
B5. 10 percent of GDP increase in other debt-creating flows in 2016	4	9	9	11	11	11	10	19
PV of Debt-to-Revenue Ratio 2/								
Baseline	13	12	12	20	20	19	21	54
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	13	14	15	24	25	25	30	42
A2. Primary balance is unchanged from 2015	13	12	12	20	20	20	20	35
A3. Permanently lower GDP growth 1/	13	13	12	22	22	23	36	128
A4. Alternative Scenario : Low Grant	13	12	22	58	103	182	489	661
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2016-20	13	12	12	20	21	20	22	58
B2. Primary balance is at historical average minus one standard deviations in 2016-201	13	16	19	27	27	26	26	58
B3. Combination of B1-B2 using one half standard deviation shocks	13	15	17	24	23	21	17	39
B4. One-time 30 percent real depreciation in 2016	13	17	16	24	23	22	22	54
B5. 10 percent of GDP increase in other debt-creating flows in 2016	13	29	27	34	33	32	31	62
Debt Service-to-Revenue Ratio 2/								
Baseline	1	1	1	1	1	1	1	3
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	1	1	1	1	1	1	1	2
A2. Primary balance is unchanged from 2015	1	1	1	1	1	1	1	2
A3. Permanently lower GDP growth 1/	1	1	1	1	1	1	2	6
A4. Alternative Scenario : Low Grant	1	1	1	1	3	5	18	35
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2016-20	1	1	1	1	1	1	1	3
B2. Primary balance is at historical average minus one standard deviations in 2016-201	1	1	1	1	1	1	1	3
B3. Combination of B1-B2 using one half standard deviation shocks	1	1	1	1	1	1	1	2
B4. One-time 30 percent real depreciation in 2016	1	1	1	1	1	1	1	3
B5. 10 percent of GDP increase in other debt-creating flows in 2016	1	1	1	1	1	1	2	3

Sources: Afghan authorities; and IMF 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.