FOR AGENDA

EBS/12/80
Supplement 2

June 19, 2012

To: Members of the Executive Board

From: The Secretary

Subject: **Islamic Republic of Afghanistan—First Review Under the Extended Credit Facility Arrangement, Request for Waiver of Nonobservance of a Performance Criterion, Modification of Performance Criteria, and Rephasing of Disbursements—Debt Sustainability Analysis**

The attached debt sustainability analysis, prepared jointly by the staffs of the Fund and the Bank, is being issued as a supplement to the paper on the first review under the Extended Credit Facility arrangement for the Islamic Republic of Afghanistan and its request for a waiver of nonobservance of a performance criterion, modification of performance criteria, and rephasing of disbursements (EBS/12/80, 6/19/12), which is tentatively scheduled for discussion on **Friday, June 29, 2012**. Unless an objection from the authorities of the Islamic Republic of Afghanistan is received prior to the conclusion of the Board's consideration, the document will be published. Any requests for modifications for publication are expected to be received two days before the Board concludes its consideration.

Questions may be referred to Mr. Schimmelpfennig (ext. 34663), Mr. Abdychev (ext. 35852), and Mr. Sasin (ext. 37446) in MCD.

Unless the Documents Section (ext. 36760) is otherwise notified, the document will be transmitted, in accordance with the procedures approved by the Executive Board and with the appropriate deletions, to the Asian Development Bank and the Islamic Development Bank, following its consideration by the Executive Board.

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ISLAMIC REPUBLIC OF AFGHANISTAN

Joint World Bank/IMF Debt Sustainability Analysis Update

Prepared by the Staffs of the International Monetary Fund and the
International Development Association

June 19, 2012

Afghanistan continues to be at a high risk of debt distress.[1], [2] *Following debt relief under the enhanced HIPC initiative and MDRI, Afghanistan's external and public debt burden indicators have improved. However, and as noted in the HIPC Initiative Paper prepared in early 2010*[3] *and the November 2011 debt sustainability analysis,*[4] *debt burden indicators could deteriorate rapidly if Afghanistan's substantial financing needs were met with new loans, even concessional ones, instead of the hoped for grant financing, which would be discussed at the upcoming Tokyo Conference. Afghanistan's vulnerability is illustrated by the country-specific alternative scenarios.*

A. Macroeconomic Outlook

1. **The growth outlook underlying the DSA remains cautiously optimistic and is predicated on a stable security situation and grant-financed social and development spending.** Real GDP growth rates are projected to reach an average of 5.5 percent during 2013–20 and to decline to about 4 percent thereafter (Box 1).[5] The mining sector, as part of industry, is expected to become an important contributor to growth, in addition to agriculture

[1] The results presented here are based on an update of the debt sustainability analysis based on the joint IMF/World Bank debt sustainability framework for low-income countries (see http://www.imf.org/external/pubs/ft/dsa/lic.htm and http://www.imf.org/External/np/pp/eng/2005/032805.htm).

[2] 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 2010 CPIA of 2.5, Afghanistan is classified as a "weak performer" according to the Debt Sustainability Framework (DSF).

[3] Afghanistan: HIPC Initiative Paper, IMF Country Report No. 10/40 (http://www.imf.org/external/pubs/ft/scr/2010/cr1040.pdf); and Memorandum and Recommendation of the President of the International Development Association to the Executive Directors on Assistance to the Islamic Republic of Afghanistan under the Enhanced Heavily Indebted Poor Countries Initiative and the Multilateral Debt Relief Initiative Report No.51184-AF.

[4] EBS/11/159, Supplement 2, November 3, 2011.

[5] GDP estimates do not reflect opium production.

and services. To support sustainable inclusive growth, Afghanistan's business environment and economic governance will need to be strengthened significantly.

2. **Over the medium term, domestic revenue is expected to be boosted by tax measures and mining revenues**. The implementation of a VAT in 2014 could generate about 2 percent of GDP. In addition, the updated DSA incorporates the introduction of excises in 2018, yielding about 1 percent of GDP, to achieve the authorities' revenue target presented at the Bonn Conference in December 2011; alternative revenue measures could be considered. Fiscal revenue stemming from mining projects could reach 2 percent of GDP by 2020, but there is significant uncertainty over the timing and level of these revenues. With these measures and developments in place, domestic revenue could reach 17 percent of GDP by 2025; a level that is in the upper range of what comparable countries achieve.

Box 1. Macroeconomic Assumptions Comparison Table 1/

	DSA Nov. 2011		DSA June 2012			Differences (current vs. previous)	
	2011-15	2016-30	2012	2012-16	2017-32	Medium term	Long term
Real growth (%)	6.1	4.6	6.4	5.9	4.4	-0.2	-0.2
Inflation (GDP deflator, %)	6.2	4.3	9.0	6.1	5.0	-0.1	0.7
Nominal GDP (Bil. Afghani)	1082	2947	1028	1298	3586	216	639
Revenue and grants (% GDP)	24.0	22.9	17.2	29.9	35.1	5.9	12.2
Grants (% GDP)	11.4	5.5	8.9	17.4	18.5	6.1	13.0
Primary expenditure (% GDP)	25.1	24.9	17.4	30.3	36.4	5.2	11.4
Primary deficit (% GDP)	-1.2	-2.1	-0.3	-0.4	-1.2	0.8	0.8
Exports of G&S (% GDP)	16.0	22.4	15.8	14.8	24.5	-1.2	2.2
Imports of G&S (% GDP)	48.4	32.4	60.9	54.8	47.4	6.5	15.0
Noninterest current account deficit (% GDP)	-2.6	-1.5	2.2	-1.3	-2.0	1.3	-0.5

1/ The differences in projections between the current and the previous DSAs are largely explained by new and improved information available at this stage. In particular, higher imports and grants reflect better accounting for the off-budget activities by the international community.

3. **Expenditures will be driven by security, the take-over of the recurrent costs associated with donor projects, and the size of the civil service, and development needs:**

- Security-related outlays are estimated by the International Security Assistance Force (ISAF) to reach US$4.1 billion in 2017 (or 14 percent of GDP). These projections assume that the size of the security forces is reduced by about one third in 2015–16—about 120,000 troops. The authorities believe that such a sharp reduction may not be feasible over such a short period of time. If the troop size stayed at 350,000, security costs would be about US$700 million higher in 2017 (2½ percent of GDP). Beyond 2017 and with a constant troop size, security costs would decline only marginally as a share of GDP.
- Operating expenditures are expected to rise by a cumulative 4–5 percent of GDP by 2018, as the government assumes responsibility for previously donor-funded projects. In addition, operating expenditures will be pushed up by increases in the size of the

civil service, mainly in the education and health sectors. At the same time, wage growth is projected quite conservatively at 1 percentage point over inflation, implying that the civil service would not benefit in full from the gains of real GDP growth. This may create wage pressures and could lead to even higher spending.

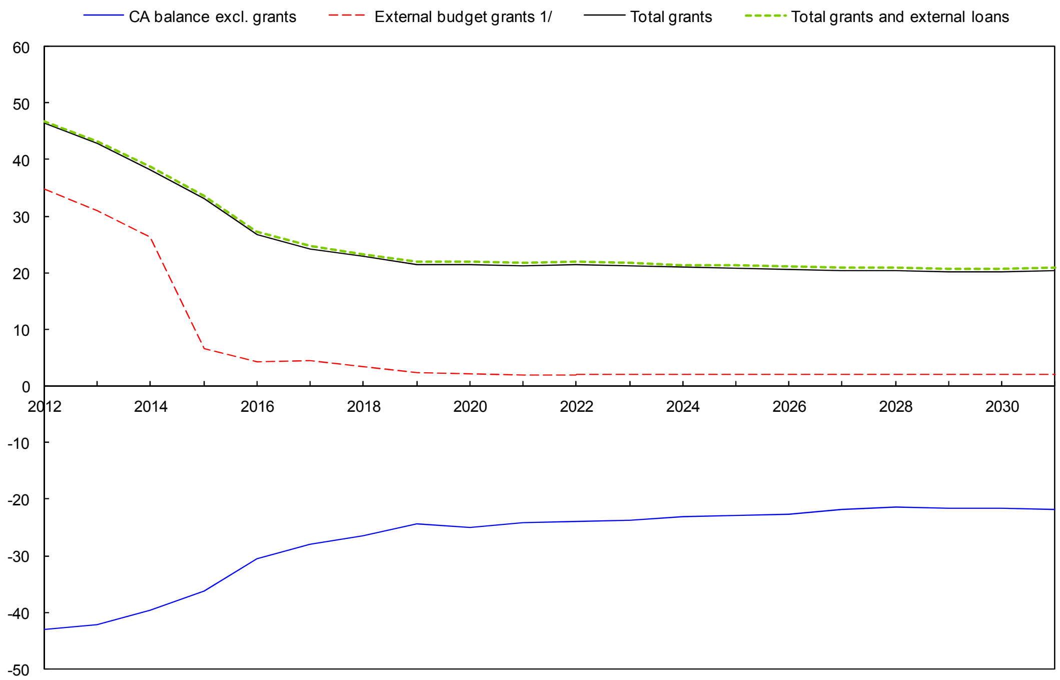
- Given Afghanistan's large development needs, the government is assumed to target development spending of 10 percent of GDP.

4. **In view of these revenue and expenditure trends, Afghanistan's total financing needs are expected to remain higher than those of comparable low-income countries.** Over the long term, the overall deficit (excluding grants) will remain at around 25 percent of GDP (Figures 1 and 2). A small share of this is likely to be financed from external concessional loans, and there is also some scope for domestic financing through the sukuk instrument that will be introduced in 2014—mainly for market development and liquidity management purposes. The remaining financing gap is expected to stabilize at just over 20 percent of GDP in 2020 and beyond.

5. **In this scenario, Afghanistan would continue to rely on donor support even for nonsecurity operating spending.** Fiscal sustainability—defined as domestic revenues covering operating expenditures—is becoming a more distant goal, likely to be reached only after 2032. In the November 2011 DSA, fiscal sustainability was projected to be reached in 2025. The reason for this deterioration in outlook is that the current projections—based on better information—now incorporate the full operations and maintenance costs related to donor-funded projects in both security and the nonsecurity sectors. In the November 2011 DSA, this had been included as a risk since full information on the cost implications was not available.

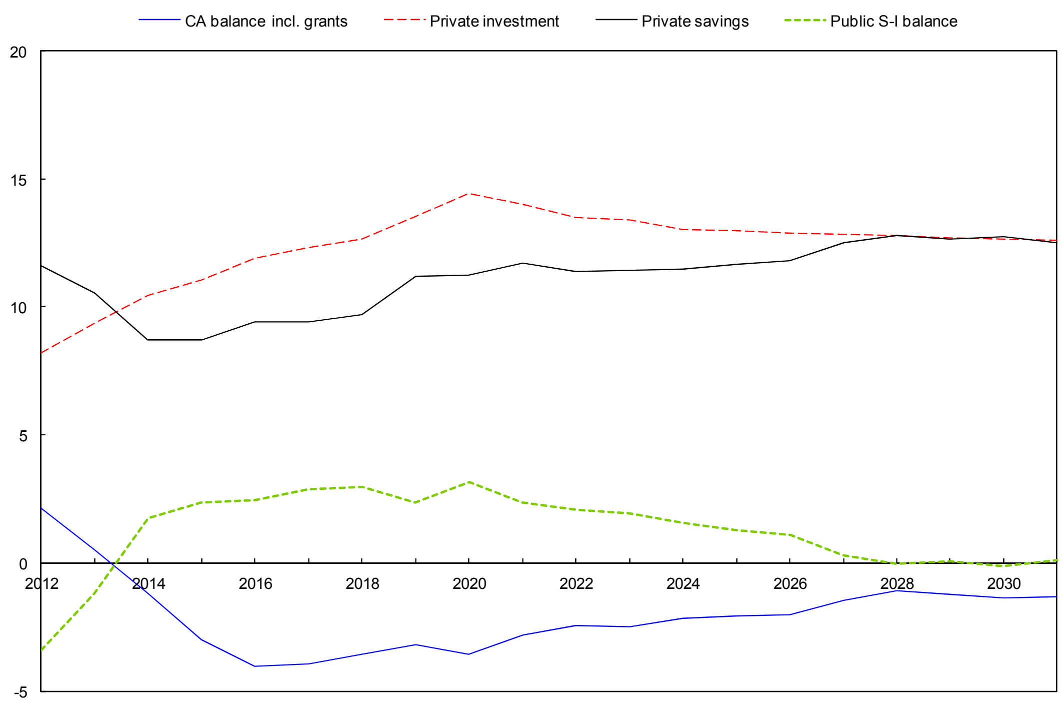
6. **The scenario desribed above is only viable if donors meet the government's financing needs of 20 percent of GDP with grants through 2025 and beyond.** The May 2012 Chicago NATO summit fell short by US$300 million of the US$4.1 billion target considered necessary to cover Afghanistan's security spending needs through 2017, implying that security remains underfunded. The summit also asked that the government of Afghanistan should assume full responsibility for its financing needs by 2024, hence eliminating its dependency on donor aid in this sector. While a progressive increase in Afghanistan's contribution to the financing of its security needs is incorporated in the scenario, full financing of security by domestic revenues could only be achieved by (i) cutting security spending, or (ii) reallocating substantial domestic resources toward security spending at the cost of development spending, leaving the latter significantly underfunded. This increases the pressure on development assistance, which will be discussed at the Tokyo Conference on July 8th. At the time of writing, the authorities were still finalizing their own projections and financing request for this conference.

Figure 1. Afghanistan: Current Account Balance Excluding Grants
(In percent of GDP)



1/ Estimated activity off-budget by international community.

Figure 2. Afghanistan: Current Account Balance Including Grants
(In percent of GDP)



7. **In case donor funding should not be forthcoming over the longer term in the amounts needed to fill the financing gap, the authorities will face difficult decisions.** Any grant shortfall will have to be met by additional revenue measures, which may be limited, or by spending cuts. Such fiscal consolidation is likely to weigh on short-term and long-term growth. There is only very limited scope to substitute debt financing for grants.

8. **Given the large trade-off between civilian and development spending, the authorities should conduct regular public expenditure reviews to ensure that the expenditure mix remains appropriate**. Under the baseline scenario, security spending remains high at 14.5 percent of GDP, compared to about 2–5 percent of GDP in other post-conflict countries, though security situations are not easily comparable. The adequate provision of security services will remain a principal development objective in Afghanistan. However, over the years, the authorities should periodically review the country's security needs in line with developments. If the security situation were to be better than what underpins ISAF's projections, security spending might be lower than currently expected. In this context, the authorities can explore opportunities for more efficient, effective and transparent spending in all areas of government activity.

B. Debt Sustainability Analysis

9. **Although Afghanistan's external and public debt burden indicators have improved significantly, following debt relief under the enhanced HIPC initiative and MDRI, the country remains at high risk of external debt distress.** In 2011, Afghanistan's external public and publicly guaranteed debt amounted to US$1.2 billion, or 7 percent of GDP, in 2011 (Tables 1 and 2). The bulk of this debt was owed to Paris Club and multilateral creditors. In present value terms, it reached about 4 percent of GDP at end-2011. Under the baseline scenario—in which Afghanistan's financing needs are fully met by grants—the present value of public external debt would reach about 5 percent of GDP by the end of the projection period, below the indicative debt-burden threshold applying to a country like Afghanistan.[6] However, as set out in the alternative scenarios below, significant risks remain.

10. **The first alternative scenario depicts a deterioration of the fiscal outlook with more limited access to grants.** As a proxy for the above, Tables 3a, 3b, and 4 and Figures 3 and 4 present the results of a customized alternative "lower grants" scenario in which grants are expected to fall short by 50 percent compared to the baseline. This implies that Afghanistan would still receive about 10 percent of GDP in grants, the upper range for comparable low-income countries. The government is assumed to have access to concessional loans, and hence the economy adjusts by borrowing both externally and domestically to offset the shortfall in grants. As a result, Afghanistan would face a rapid deterioration of debt burden indicators, with the PV of the debt-to-GDP ratio reaching 105 percent, the PV of the debt-to-exports ratio projected at 628 percent, and the PV of debt-

[6] Afghanistan is classified as a "weak performer" and its thresholds therefore: 30 percent of NPV for the debt-to-GDP ratio; 100 percent of NPV for the debt-to-exports ratio; 200 percent for the debt-to-revenue ratio; 15 percent for the debt service-to-exports ratio; and 25 percent for the debt service-to-revenue ratio.

to-revenue ratio reaching exceeding 600 percent by the end of the projection period. Other thresholds would also be breached. A shortfall in grants may also entail external adjustment needs, i.e. pressure on the exchange rate, which would add to the debt burden.

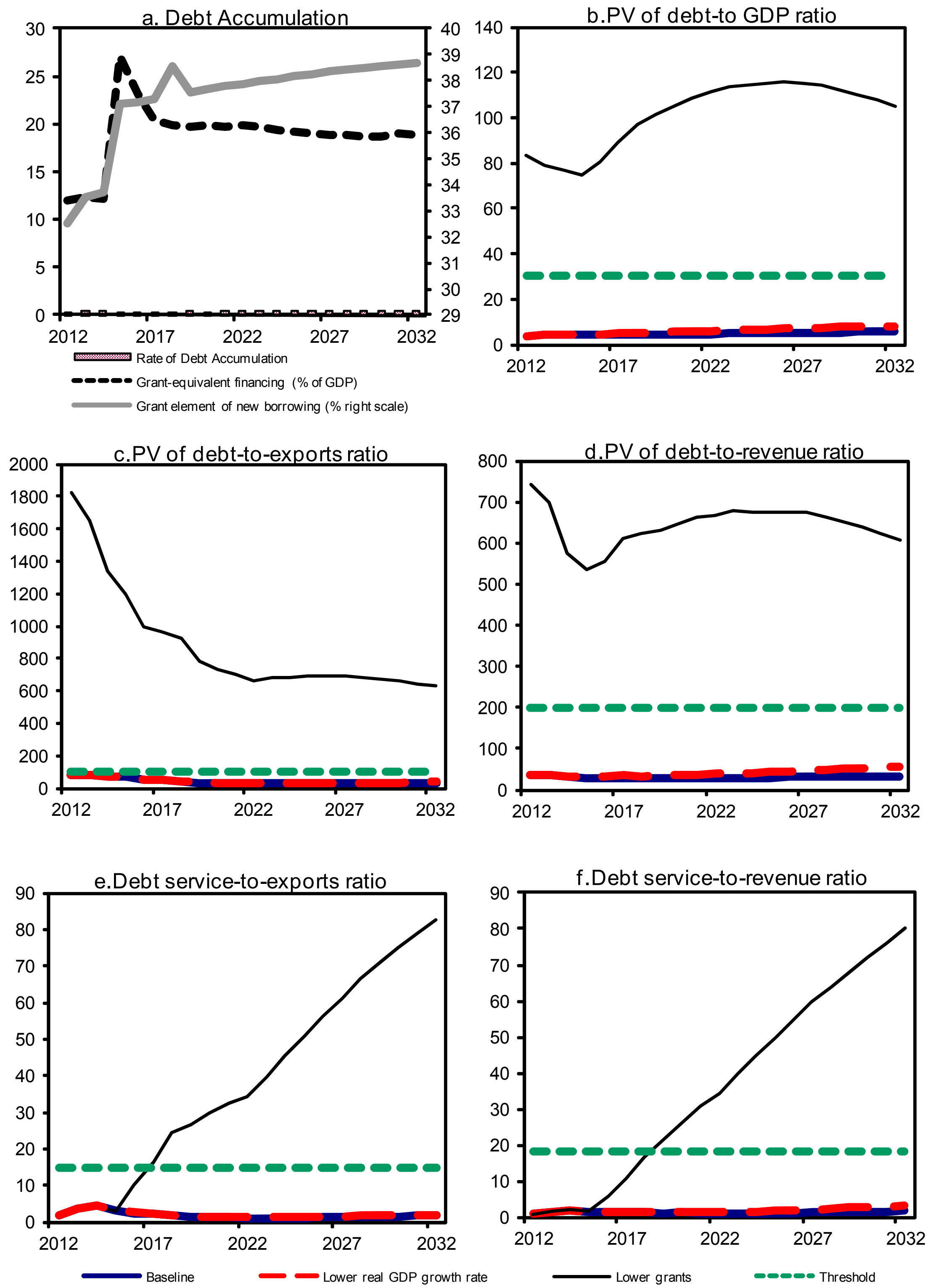
11. **Risks to the outlook are tilted to the downside, linked to security prospects and the strength of future reforms.**[7] A fragile security situation, in combination with delays in key reforms, would potentially discourage investment and external support, and also result in lower exports, as well as a slowdown in revenue effort. Under the second alternative scenario, real GDP growth falls from 3 percent on average (instead of 5.5 percent in the baseline) in the medium-term (2013–20) to 1 percent (instead of 4 percent in the baseline) in the long-term (2025–30). Tables 3a, 3b, and 4 and Figures 3 and 4 present the results of a customized alternative "low-growth" scenario, depicting the absence of gains in security, governance, and public sector reforms, as well as a slower reform path with respect to financial sector reform and the business environment. Under this scenario, the PV of debt-to-GPD ratio approaches 200 percent, while the PV of debt-to-revenue ratio is expected to reach 434 percent by the end of the forecast period, leaving very limited fiscal space for investments or social expenditure. Accordinglyfiscal debt indicators set out on an explosive path, threatening the sustainability of government functions.

C. Conclusions

12. **Afghanistan remains at high risk of debt distress after the HIPC completion point and delivery of debt relief under the MDRI.** Despite the substantial amount of debt forgiven under the HIPC and MDRI, Afghanistan's very high security and development spending needs as well as risks to the macroeconomic outlook underscore the importance of substantial long-term grant financing, in combination with a strong reform agenda and progress in security and governance. Should donor support be insufficient to meet the country's financing needs, security fail to stabilize, or structural reforms and governance improvements fail to materialize, Afghanistan's debt burden would become unsustainable, and the government would be forced to undertake significant fiscal adjustment. As such, the government needs to prioritize very carefully its spending needs and avoid rapid expenditure increase until continuous financing has been clearly identified or domestic revenue mobilization picks up commensurately.

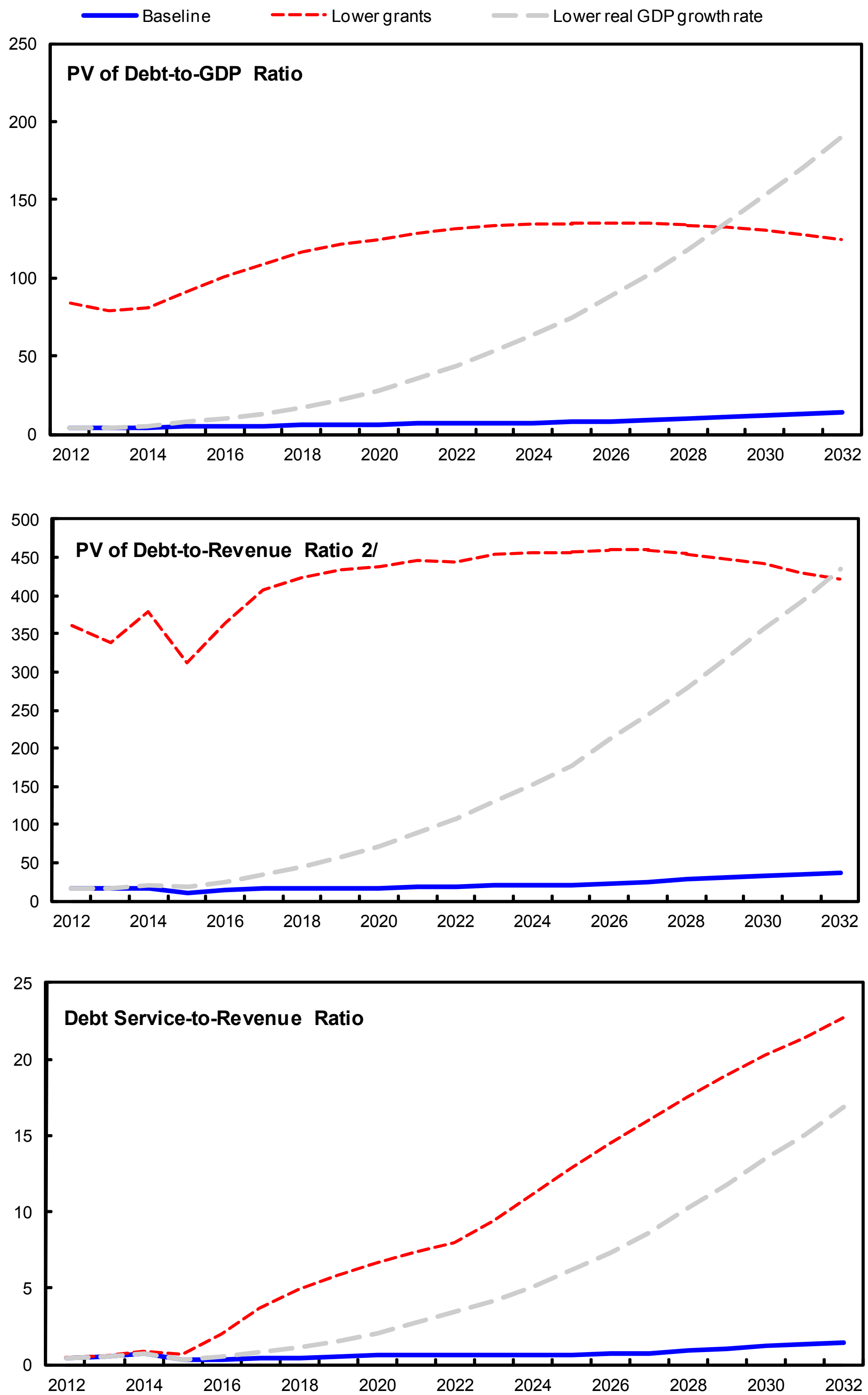
[7] This DSA does not include the standard stress tests, as these would not be characterized by additional vulnerabilities.

Figure 3. Afghanistan: Indicators of Public and Publicly Guaranteed External Debt under Alternatives Scenarios, 2012-2032



Sources: Country authorities; and staff estimates and projections.

Figure 4. Afghanistan: Indicators of Public Debt Under Alternative Scenarios, 2012-2032



Sources: Country authorities; and staff estimates and projections.
1/ Revenues are defined inclusive of grants.

Table 1. Afghanistan: External Debt Sustainability Framework, Baseline Scenario, 2009-2032 1/
(In percent of GDP, unless otherwise indicated)

	Actual			Historical 6/ Average	Standard 6/ Deviation
	2009	2010	2011		
External debt (nominal) 1/	**9.3**	**8.2**	**7.0**		
o/w public and publicly guaranteed (PPG)	9.3	8.2	7.0		
Change in external debt	-20.5	-1.1	-1.2		
Identified net debt-creating flows	-8.8	-7.9	-6.1		
Non-interest current account deficit	**-1.7**	**-3.9**	**-3.4**	**-2.3**	**2.5**
Deficit in balance of goods and services	76.7	62.6	58.3		
Exports	4.9	4.5	4.4		
Imports	81.6	67.1	62.7		
Net current transfers (negative = inflow)	-60.2	-50.8	-47.8	-51.6	28.7
o/w official	-57.6	-48.5	-45.7		
Other current account flows (negative = net inflow)	-18.2	-15.7	-13.8		
Net FDI (negative = inflow)	**-2.4**	**-2.0**	**-1.7**	**-2.2**	**1.4**
Endogenous debt dynamics 2/	**-4.7**	**-2.0**	**-1.0**		
Contribution from nominal interest rate	0.1	0.0	0.0		
Contribution from real GDP growth	-5.3	-0.6	-0.4		
Contribution from price and exchange rate changes	0.4	-1.4	-0.7		
Residual (3-4) 3/	**-11.7**	**6.7**	**4.9**		
o/w exceptional financing	-8.5	0.0	0.0		
PV of external debt 4/	…	…	4.0		
In percent of exports	…	…	90.6		
PV of PPG external debt	**…**	**…**	**4.0**		
In percent of exports	**…**	**…**	**90.6**		
In percent of government revenues	**…**	**…**	**38.3**		
Debt service-to-exports ratio (in percent)	**2.4**	**1.0**	**1.0**		
PPG debt service-to-exports ratio (in percent)	**2.4**	**1.0**	**1.0**		
PPG debt service-to-revenue ratio (in percent)	**1.1**	**0.4**	**0.4**		
Total gross financing need (millions of U.S. dollars)	-497.6	-930.1	-922.9		
Non-interest current account deficit that stabilizes debt ratio	18.8	-2.8	-2.2		
Key macroeconomic assumptions					
Real GDP growth (in percent)	21.0	8.4	5.8	8.8	6.0
GDP deflator in US dollar terms (change in percent)	-1.5	17.7	8.6	8.8	6.2
Effective interest rate (percent) 5/	0.5	0.5	0.5	0.4	0.2
Growth of exports of G&S (US dollar terms, in percent)	-15.1	17.3	12.5	9.2	12.0
Growth of imports of G&S (US dollar terms, in percent)	6.4	4.9	7.4	11.5	6.1
Grant element of new public sector borrowing (in percent)	…	…	…	…	…
Government revenues (excluding grants, in percent of GDP)	10.3	11.0	10.5		
Aid flows (in millions of US dollars) 7/	1,276	1,748	1,799		
o/w Grants	1,276	1,748	1,798		
o/w Concessional loans	0.3	0.2	0.2		
Grant-equivalent financing (in percent of GDP) 8/	…	…	…		
Grant-equivalent financing (in percent of external financing) 8/	…	…	…		
Memorandum items:					
Nominal GDP (millions of US dollars)	12,487	15,940	18,315		
Nominal dollar GDP growth	19.3	27.7	14.9		
PV of PPG external debt (in millions of US dollars)			713		
(PVt-PVt-1)/GDPt-1 (in percent)					
Gross workers' remittances (millions of US dollars)	0.0	0.0	0.0		
PV of PPG external debt (in percent of GDP + remittances)	…	…	4.0		
PV of PPG external debt (in percent of exports + remittances)	…	…	90.6		
Debt service of PPG external debt (in percent of exports + remittance	…	…	1.0		

	Projections									
	2012	2013	2014	2015	2016	2017	2012-2017 Average	2022	2032	2018-2032 Average
External debt (nominal) 1/	**6.6**	**6.7**	**6.8**	**6.9**	**7.0**	**7.2**		**7.4**	**8.4**	
o/w public and publicly guaranteed (PPG)	6.6	6.7	6.8	6.9	7.0	7.2		7.4	8.4	
Change in external debt	-0.4	0.0	0.2	0.1	0.1	0.2		0.1	0.1	
Identified net debt-creating flows	-3.7	-3.6	-2.9	-0.9	-0.3	0.1		-0.3	-0.5	
Non-interest current account deficit	**-1.8**	**-0.6**	**0.7**	**3.0**	**3.7**	**3.6**		**2.4**	**1.2**	2.1
Deficit in balance of goods and services	58.4	54.8	50.0	46.6	40.4	37.5		32.5	31.9	
Exports	4.6	4.8	5.7	6.3	8.1	9.3		16.9	16.8	
Imports	62.9	59.6	55.8	52.9	48.5	46.7		49.4	48.6	
Net current transfers (negative = inflow)	-48.3	-45.5	-40.6	-35.4	-28.8	-26.3		-23.2	-21.5	-22.6
o/w official	-46.3	-43.6	-38.8	-33.6	-27.1	-24.6		-21.7	-20.3	
Other current account flows (negative = net inflow)	-11.8	-9.9	-8.7	-8.1	-7.9	-7.5		-6.8	-9.2	
Net FDI (negative = inflow)	**-1.6**	**-2.7**	**-3.4**	**-3.7**	**-3.8**	**-3.4**		**-2.5**	**-1.5**	-2.3
Endogenous debt dynamics 2/	**-0.3**	**-0.3**	**-0.2**	**-0.2**	**-0.2**	**-0.1**		**-0.2**	**-0.2**	
Contribution from nominal interest rate	0.1	0.1	0.1	0.2	0.2	0.2		0.1	0.1	
Contribution from real GDP growth	-0.3	-0.4	-0.4	-0.4	-0.3	-0.3		-0.3	-0.3	
Contribution from price and exchange rate changes	…	…	…	…	…	…		…	…	
Residual (3-4) 3/	**3.3**	**3.6**	**3.1**	**1.0**	**0.4**	**0.1**		**0.4**	**0.6**	
o/w exceptional financing	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
PV of external debt 4/	3.9	4.0	4.1	4.2	4.2	4.3		4.6	5.6	
In percent of exports	85.3	83.1	71.6	66.2	52.1	46.7		27.3	33.6	
PV of PPG external debt	**3.9**	**4.0**	**4.1**	**4.2**	**4.2**	**4.3**		**4.6**	**5.6**	
In percent of exports	**85.3**	**83.1**	**71.6**	**66.2**	**52.1**	**46.7**		**27.3**	**33.6**	
In percent of government revenues	**34.7**	**35.3**	**30.7**	**29.7**	**29.1**	**29.7**		**27.7**	**32.7**	
Debt service-to-exports ratio (in percent)	**1.8**	**3.5**	**4.4**	**3.1**	**2.5**	**2.1**		**1.1**	**1.6**	
PPG debt service-to-exports ratio (in percent)	**1.8**	**3.5**	**4.4**	**3.0**	**2.5**	**2.1**		**1.1**	**1.6**	
PPG debt service-to-revenue ratio (in percent)	**0.7**	**1.5**	**1.9**	**1.4**	**1.4**	**1.3**		**1.1**	**1.6**	
Total gross financing need (millions of U.S. dollars)	-665.8	-697.5	-583.2	-114.6	29.0	116.1		31.6	-27.9	
Non-interest current account deficit that stabilizes debt ratio	-1.4	-0.7	0.5	2.9	3.6	3.5		2.3	1.1	
Key macroeconomic assumptions										
Real GDP growth (in percent)	5.2	6.5	5.9	5.9	5.3	4.2	5.5	4.4	4.0	4.4
GDP deflator in US dollar terms (change in percent)	3.8	3.4	1.8	1.0	1.0	1.0	2.0	1.2	1.3	1.1
Effective interest rate (percent) 5/	1.1	1.9	2.3	2.5	2.5	2.4	2.1	1.2	1.3	1.3
Growth of exports of G&S (US dollar terms, in percent)	12.7	15.3	28.6	17.1	37.1	20.5	21.9	14.0	5.4	10.1
Growth of imports of G&S (US dollar terms, in percent)	9.6	4.2	0.9	1.4	-2.4	1.5	2.5	7.7	5.6	5.8
Grant element of new public sector borrowing (in percent)	32.5	33.6	33.7	37.1	37.2	37.3	35.2	37.9	38.7	38.2
Government revenues (excluding grants, in percent of GDP)	11.3	11.3	13.4	14.0	14.5	14.5		16.7	17.2	16.8
Aid flows (in millions of US dollars) 7/	2,394	2,680	2,873	6,854	6,210	5,763		7,583	12,000	
o/w Grants	2,376	2,659	2,850	6,829	6,183	5,734		7,536	11,887	
o/w Concessional loans	18.5	20.7	22.8	24.8	26.9	28.9		46.6	113.4	
Grant-equivalent financing (in percent of GDP) 8/	12.0	12.3	12.2	27.1	23.1	20.4		20.0	18.9	19.3
Grant-equivalent financing (in percent of external financing) 8/	98.2	96.3	96.2	98.7	98.5	98.3		98.3	97.8	98.1
Memorandum items:										
Nominal GDP (millions of US dollars)	19,997	22,030	23,747	25,407	27,043	28,447		38,171	63,883	
Nominal dollar GDP growth	9.2	10.2	7.8	7.0	6.4	5.2	7.6	5.7	5.3	5.5
PV of PPG external debt (in millions of US dollars)	770	867	958	1,037	1,119	1,206		1,733	3,536	
(PVt-PVt-1)/GDPt-1 (in percent)	0.3	0.5	0.4	0.3	0.3	0.3	0.4	0.4	0.4	0.4
Gross workers' remittances (millions of US dollars)	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
PV of PPG external debt (in percent of GDP + remittances)	3.9	4.0	4.1	4.2	4.2	4.3		4.6	5.6	
PV of PPG external debt (in percent of exports + remittances)	85.3	83.1	71.6	66.2	52.1	46.7		27.3	33.6	
Debt service of PPG external debt (in percent of exports + remittance	1.8	3.5	4.4	3.0	2.5	2.1		1.1	1.6	

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 2. Afghanistan: Public Sector Debt Sustainability Framework, Baseline Scenario, 2009-2032
(In percent of GDP, unless otherwise indicated)

	Actual					Estimate	Projections								
	2009	2010	2011	Average 5/	Standard Deviation 5/	2012	2013	2014	2015	2016	2017	2012-17 Average	2022	2032	2018-32 Average
Public sector debt 1/	9.3	8.2	7.0			6.6	6.7	7.1	7.3	8.1	8.2		9.8	16.2	
o/w foreign-currency denominated	9.3	8.2	7.0			6.6	6.7	6.8	6.9	7.0	7.2		7.4	8.4	
Change in public sector debt	-20.5	-1.1	-1.2			-0.4	0.0	0.4	0.3	0.8	0.1		0.4	0.9	
Identified debt-creating flows	-12.9	-3.2	-0.2			3.0	2.0	1.0	1.3	-0.6	0.7		0.0	1.0	
Primary deficit	1.3	-0.9	0.5	2.4	3.2	1.0	0.7	-0.3	0.8	1.4	0.9	0.8	0.4	1.5	0.9
Revenue and grants	20.5	22.0	20.3			23.2	23.4	25.4	40.9	37.4	34.7		36.4	35.8	
of which: grants	10.2	11.0	9.8			11.9	12.1	12.0	26.9	22.9	20.2		19.7	18.6	
Primary (noninterest) expenditure	21.8	21.1	20.9			24.2	24.1	25.1	41.7	38.7	35.6		36.8	37.3	
Automatic debt dynamics	-5.5	-1.9	-0.7			-0.6	-0.5	-0.3	-0.3	-0.3	-0.2		-0.4	-0.5	
Contribution from interest rate/growth differential	-5.3	-0.8	-0.5			-0.4	-0.4	-0.3	-0.3	-0.3	-0.3		-0.4	-0.6	
of which: contribution from average real interest rate	-0.1	-0.1	-0.1			0.0	0.0	0.0	0.0	0.1	0.0		0.0	0.0	
of which: contribution from real GDP growth	-5.2	-0.7	-0.4			-0.3	-0.4	-0.4	-0.4	-0.4	-0.3		-0.4	-0.6	
Contribution from real exchange rate depreciation	-0.2	-1.1	-0.2			-0.3	-0.1	0.0	0.1	0.1	0.1		…	…	
Other identified debt-creating flows	-8.7	-0.3	-0.1			2.6	1.9	1.6	0.7	-1.8	0.0		0.0	0.0	
Privatization receipts (negative)	-0.2	-0.3	-0.1			-0.4	-0.3	0.0	-0.4	-2.5	-0.4		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)	-8.5	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			2.9	2.1	1.6	1.1	0.7	0.3		0.0	0.0	
Residual, including asset changes	-7.6	2.0	-1.0			-3.3	-2.0	-0.6	-1.0	1.4	-0.5		0.4	0.0	
Other Sustainability Indicators															
PV of public sector debt	…	…	4.0			3.9	4.0	4.4	4.6	5.3	5.4		7.0	13.4	
o/w foreign-currency denominated	…	…	4.0			3.9	4.0	4.1	4.2	4.2	4.3		4.6	5.6	
o/w external	…	…	4.0			3.9	4.0	4.1	4.2	4.2	4.3		4.6	5.6	
PV of contingent liabilities (not included in public sector debt)	…	…	…			…	…	…	…	…	…		…	…	
Gross financing need 2/	1.3	-0.9	0.6			1.1	0.8	-0.1	1.0	1.5	1.1		0.6	2.0	
PV of public sector debt-to-revenue and grants ratio (in percent)	…	…	19.8			16.9	17.1	17.1	11.2	14.1	15.4		19.3	37.5	
PV of public sector debt-to-revenue ratio (in percent)	…	…	38.3			34.7	35.3	32.5	32.6	36.4	36.8		42.1	78.2	
o/w external 3/	…	…	38.3			34.7	35.3	30.7	29.7	29.1	29.7		27.7	32.7	
Debt service-to-revenue and grants ratio (in percent) 4/	0.1	0.1	0.4			0.4	0.6	0.7	0.3	0.3	0.4		0.6	1.4	
Debt service-to-revenue ratio (in percent) 4/	0.2	0.2	0.7			0.9	1.1	1.3	0.8	0.8	0.9		1.3	2.9	
Primary deficit that stabilizes the debt-to-GDP ratio	21.8	0.2	1.7			1.4	0.6	-0.7	0.6	0.6	0.8		0.0	0.6	
Key macroeconomic and fiscal assumptions															
Real GDP growth (in percent)	21.0	8.4	5.8	8.8	6.0	5.2	6.5	5.9	5.9	5.3	4.2	5.5	4.4	4.0	4.4
Average nominal interest rate on forex debt (in percent)	0.5	0.5	0.5	0.4	0.2	1.1	1.9	2.3	2.5	2.5	2.4	2.1	1.2	1.3	1.3
Average real interest rate on domestic debt (in percent)	…	…	…			…	…	…	2.2	4.4	0.2	2.3	0.6	0.5	0.6
Real exchange rate depreciation (in percent, + indicates depreciat	-0.7	-13.4	-2.4	-7.4	4.6	-3.8	…	…	…	…	…	…	…	…	…
Inflation rate (GDP deflator, in percent)	-4.7	9.4	13.3	9.5	6.2	9.0	6.7	5.1	4.8	5.0	5.0	5.9	5.1	5.0	5.0
Growth of real primary spending (deflated by GDP deflator, in perc	0.2	0.0	0.0	0.2	0.1	0.2	0.1	0.1	0.8	0.0	0.0	0.2	0.1	0.0	0.0
Grant element of new external borrowing (in percent)	…	…	…	…	…	32.5	33.6	33.7	37.1	37.2	37.3	35.2	37.9	38.7	…

Sources: Country authorities; and staff estimates and projections.

1/ Refers to net public debt of the central government.

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 3a. Afghanistan: Sensitivity Analysis for Key Indicators of Public and Publicly Guaranteed External Debt, 2012-2032
(In percent)

	Projections							
	2012	2013	2014	2015	2016	2017	**2022**	2032
PV of debt-to GDP ratio								
Baseline	4	4	4	4	4	4	**5**	6
A. Alternative Scenarios								
A1. Lower real GDP growth rate	4	4	4	4	5	5	**6**	8
A2. Lower grants	84	79	77	75	81	89	**111**	105
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2013-2014	4	4	4	4	4	5	**5**	6
B2. Export value growth at historical average minus one standard deviation in 2013-2014 3/	4	4	6	6	6	6	**6**	6
B3. US dollar GDP deflator at historical average minus one standard deviation in 2013-2014	4	4	4	4	4	4	**5**	6
B4. Net non-debt creating flows at historical average minus one standard deviation in 2013-2014 4/	4	20	32	31	30	30	**26**	15
B5. Combination of B1-B4 using one-half standard deviation shocks	4	10	12	12	12	12	**11**	8
B6. One-time 30 percent nominal depreciation relative to the baseline in 2013 5/	4	6	6	6	6	6	**6**	8
PV of debt-to-exports ratio								
Baseline	85	83	72	66	52	47	**27**	34
A. Alternative Scenarios								
A1. Lower real GDP growth rate	85	83	73	70	55	50	**29**	36
A2. Lower grants	1823	1647	1341	1192	999	967	**663**	628
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2013-2014	85	82	70	65	51	46	**27**	33
B2. Export value growth at historical average minus one standard deviation in 2013-2014 3/	85	109	160	145	113	100	**55**	58
B3. US dollar GDP deflator at historical average minus one standard deviation in 2013-2014	85	82	70	65	51	46	**27**	33
B4. Net non-debt creating flows at historical average minus one standard deviation in 2013-2014 4/	85	407	556	493	374	323	**156**	91
B5. Combination of B1-B4 using one-half standard deviation shocks	85	230	311	278	213	185	**94**	71
B6. One-time 30 percent nominal depreciation relative to the baseline in 2013 5/	85	82	70	65	51	46	**27**	33
PV of debt-to-revenue ratio								
Baseline	35	35	31	30	29	30	**28**	33
A. Alternative Scenarios								
A1. Lower real GDP growth rate	35	35	32	32	33	34	38	57
A2. Lower grants	742	699	575	535	556	613	**667**	608
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2013-2014	35	36	32	31	30	31	**29**	34
B2. Export value growth at historical average minus one standard deviation in 2013-2014 3/	35	39	44	42	40	40	**36**	36
B3. US dollar GDP deflator at historical average minus one standard deviation in 2013-2014	35	35	30	29	29	29	**27**	32
B4. Net non-debt creating flows at historical average minus one standard deviation in 2013-2014 4/	35	173	238	221	209	205	**159**	89
B5. Combination of B1-B4 using one-half standard deviation shocks	35	86	91	85	81	80	**65**	47
B6. One-time 30 percent nominal depreciation relative to the baseline in 2013 5/	35	49	42	41	40	41	**38**	45

Table 3b. Afghanistan: Sensitivity Analysis for Key Indicators of Public and Publicly Guaranteed External Debt, 2012-2032 (continued)
(In percent)

Debt service-to-exports ratio

Baseline	2	3	4	3	2	2	**1**	2
A. Alternative Scenarios								
A1. Lower real GDP growth rate	2	3	4	3	3	2	**1**	2
A2. Lower grants	2	3	4	3	10	17	**34**	83
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2013-2014	2	3	4	3	2	2	**1**	2
B2. Export value growth at historical average minus one standard deviation in 2013-2014 3/	2	4	7	6	4	4	**2**	3
B3. US dollar GDP deflator at historical average minus one standard deviation in 2013-2014	2	3	4	3	2	2	**1**	2
B4. Net non-debt creating flow s at historical average minus one standard deviation in 2013-2014 4/	2	3	9	11	8	7	**7**	7
B5. Combination of B1-B4 using one-half standard deviation shocks	2	4	9	8	6	5	**4**	5
B6. One-time 30 percent nominal depreciation relative to the baseline in 2013 5/	2	3	4	3	2	2	**1**	2
Debt service-to-revenue ratio								
Baseline	1	1	2	1	1	1	**1**	2
A. Alternative Scenarios								
A1. Lower real GDP growth rate	1	1	2	1	2	2	**2**	3
A2. Lower grants	1	1	2	1	6	10	**34**	80
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2013-2014	1	2	2	1	1	1	**1**	2
B2. Export value growth at historical average minus one standard deviation in 2013-2014 3/	1	1	2	2	2	2	**1**	2
B3. US dollar GDP deflator at historical average minus one standard deviation in 2013-2014	1	1	2	1	1	1	**1**	2
B4. Net non-debt creating flow s at historical average minus one standard deviation in 2013-2014 4/	1	1	4	5	5	5	**7**	7
B5. Combination of B1-B4 using one-half standard deviation shocks	1	1	3	2	2	2	**3**	3
B6. One-time 30 percent nominal depreciation relative to the baseline in 2013 5/	1	2	3	2	2	2	**2**	2
Memorandum item:								
Grant element assumed on residual financing (i.e., financing required above baseline) 6/	36	36	36	36	36	36	**36**	36

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 4. Afghanistan: Sensitivity Analysis for Key Indicators of Public Debt 2012-2032

	Projections							
	2012	2013	2014	2015	2016	2017	2022	2032
PV of Debt-to-GDP Ratio								
Baseline	4	4	4	5	5	5	7	13
A. Alternative scenarios								
A1. Lower real GDP growth rate	4	4	5	7	10	12	44	191
A2. Lower grants	84	79	81	91	100	109	131	124
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2013-20'	4	4	5	6	7	8	13	25
B2. Primary balance is at historical average minus one standard deviations in 2013-201	4	7	11	11	11	11	12	17
B3. Combination of B1-B2 using one half standard deviation shocks	4	6	9	9	10	10	11	17
B4. One-time 30 percent real depreciation in 2013	4	6	6	6	6	6	8	14
B5. 10 percent of GDP increase in other debt-creating flows in 2013	4	9	9	9	9	10	12	18
PV of Debt-to-Revenue Ratio 2/								
Baseline	17	17	17	11	14	15	19	38
A. Alternative scenarios								
A1. Lower real GDP growth rate	17	17	20	18	24	34	107	434
A2. Lower grants	361	338	379	312	364	407	445	423
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2013-20'	17	18	21	15	19	23	34	68
B2. Primary balance is at historical average minus one standard deviations in 2013-201	17	30	43	27	30	33	34	48
B3. Combination of B1-B2 using one half standard deviation shocks	17	26	35	22	26	28	31	49
B4. One-time 30 percent real depreciation in 2013	17	24	22	14	17	18	21	40
B5. 10 percent of GDP increase in other debt-creating flows in 2013	17	40	36	22	25	28	33	50
Debt Service-to-Revenue Ratio 2/								
Baseline	0	1	1	0	0	0	1	1
A. Alternative scenarios								
A1. Lower real GDP growth rate	0	1	1	0	1	1	3	17
A2. Lower grants	0	1	1	1	2	4	8	23
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2013-20'	0	1	1	1	1	1	1	3
B2. Primary balance is at historical average minus one standard deviations in 2013-201	0	1	1	1	1	1	1	3
B3. Combination of B1-B2 using one half standard deviation shocks	0	1	1	1	1	1	1	2
B4. One-time 30 percent real depreciation in 2013	0	1	1	1	1	1	1	2
B5. 10 percent of GDP increase in other debt-creating flows in 2013	0	1	2	1	1	1	1	3

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.