

INTERNATIONAL MONETARY FUND AND
INTERNATIONAL DEVELOPMENT ASSOCIATION

ISLAMIC REPUBLIC OF AFGHANISTAN

Joint World Bank/IMF Debt Sustainability Analysis

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

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Afghanistan continues to be at a high risk of debt distress.^{1 2} Following debt relief under the enhanced Heavily Indebted Poor Countries (HIPC) initiative and Multilateral Debt Relief Initiative (MDRI), Afghanistan's external and public debt burden indicators improve in the near term. However, and as noted in the HIPC Initiative Paper prepared in early 2010, debt burden indicators could deteriorate rapidly if the country's substantial financing needs were met with new loans, even concessional ones, instead of the current grant financing.³ In a nutshell, Afghanistan should restrict any borrowing to highly concessional financing for specific projects with a clearly identified economic return. The baseline scenario is optimistic, not least in terms of the assumption on security, and the probability of the alternative scenarios (or stress tests) is high; in many ways, the outlook could be characterized as bi-modal. The alternative scenarios, therefore, do not only illustrate Afghanistan's vulnerability, but depict possible outcomes that reflect the challenges of envisaged transition and transformation in the wake of the withdrawal of large-scale foreign presence.

¹ The results presented here are based on an update of the debt sustainability analysis (DSA) based on the joint IMF/World Bank debt sustainability framework for low-income countries (LICs) (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 2.6, 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.

A. Baseline Scenario

1. **The baseline macroeconomic scenario depicts an optimistic outlook predicated on a stable security situation.** The political and economic backdrop in Afghanistan has altered since January 2010. The financial sector crisis and periods of foreign military withdrawal (transition) and gradual donor disengagement (transformation) are important developments that have entered the projections. Accordingly, the baseline has been revised in light of these recent changes. It also assumes that security will remain stable during the transition phase and that civilian foreign assistance will be reduced only gradually over the longer-term transformation. While this is clearly a desired outcome, it is by no means guaranteed. In comparison to the previous debt sustainability analysis (DSA),⁴ external and fiscal sustainability remains vulnerable to external shocks (Tables 1–6), and Afghanistan remains at risk of high debt distress.

Box 1. Macroeconomic Assumptions Comparison Table

	Previous DSA		Current DSA			Differences (current vs. previous)	
	MT	LT	2011	MT	LT	MT	LT
	Real growth (%)	6.9	5.7	5.7	6.1	4.6	-0.9	-1.1
Inflation (GDP deflator, %)	4.0	3.5	11.7	6.2	4.3	2.2	0.8
Nominal GDP (Bil. Afghani)	949	2662	862	1082	2947	133	284
Revenue and grants (% GDP)	19.8	18.2	23.7	24.0	23.0	4.2	4.7
Grants (% GDP)	10.1	5.5	12.2	11.4	5.5	1.3	0.0
Primary expenditure (% GDP)	22.0	20.6	23.8	25.3	25.4	3.3	4.9
Primary deficit (% GDP)	-2.1	-2.0	-0.1	-1.2	-2.0	0.9	0.0
Exports of G&S (% GDP)	7.0	8.0	5.8	6.3	9.1	-0.7	1.1
Imports of G&S (% GDP)	59.2	36.7	54.6	48.4	32.4	-10.8	-4.3
Noninterest current account deficit (% GDP)	-3.4	-4.7	0.1	-2.5	-1.5	0.9	3.2

Note: For current DSA, MT stands for medium term and reflects average over 2011-2015, and LT refers to long term reflecting average over 2016-2030. For previous DSA (January 2010), MT and LT correspond to the periods 2010-2014 and 2015-2029 respectively.

2. **Projections are based on the progress made in 2010/11, marked by successful disinflation and economic growth.** Under the baseline scenario, continued economic reforms, including improvements in governance and the business environment, will allow for major investment in the mining sector, agriculture, transport, and reconstruction. Accordingly, the nonagricultural sector is expected to outperform agriculture. In particular, Afghanistan has considerable potential in the mining industry, with exploitation of mineral

⁴ Afghanistan: HIPC Initiative Paper, IMF Country Report No. 10/40, February 2010.

wealth expected to begin in 2014/15.⁵ Over the medium term (2011/12–2015/16), real GDP growth is expected to average 6 percent, compared with 10 percent in the recent decade. Over the longer term (2025/26–2030/31), growth is projected to converge to 4 percent.⁶

Table 1. Islamic Republic of Afghanistan: Medium and Long-Term Macroeconomic Framework, 2010/11–2029/30

2010/11	Projection									
	2011/12	Medium Term			Long Term					
Prel.	2011/12	2012/13	2013/14	2017/18	2019/20	2021/22	2024/25	2026/27	2029/30	
(Annual percentage change, unless otherwise indicated)										
Output and prices 1/										
Real GDP	8.4	5.7	7.1	5.8	6.6	5.6	5.4	3.9	4.0	4.0
GDP per capita (in U.S. dollars)	528	591	612	637	758	802	860	918	969	1,062
Consumer prices (period average)	7.7	10.5	4.6	5.0	5.0	4.8	4.5	4.1	4.0	4.0
Investment and savings	(In percent of GDP, unless otherwise indicated)									
Gross domestic investment	26.3	22.6	21.9	21.6	23.6	25.6	25.1	23.2	22.3	21.0
<i>Of which: Private</i>	8.5	8.6	8.9	9.5	13.7	16.2	16.1	15.0	14.6	13.8
Gross domestic savings	27.9	22.6	20.9	19.0	19.0	21.8	22.4	21.8	21.5	21.1
<i>Of which: Private</i>	9.2	8.6	9.3	8.5	10.7	14.7	15.7	15.9	16.0	16.0
Public finances										
Domestic revenues and grants	22.0	23.7	23.7	24.0	23.4	22.1	22.5	22.8	22.8	23.0
Domestic revenues	11.0	11.5	11.3	11.6	15.6	15.5	16.4	17.4	17.9	18.5
Grants	11.0	12.2	12.4	12.4	7.7	6.6	6.1	5.4	4.9	4.5
Expenditures	21.1	23.8	25.3	25.7	25.1	24.6	25.1	25.3	25.4	25.5
Operating 2/	15.1	17.6	18.6	18.7	17.4	16.5	16.7	17.4	17.7	18.2
Development	5.9	6.2	6.6	7.0	7.7	8.1	8.4	8.0	7.7	7.3
Overall balance (including grants)	0.9	0.0	-1.6	-1.7	-1.7	-2.5	-2.6	-2.6	-2.6	-2.5
Operating balance										
Including grants 3/	3.3	1.6	0.4	0.2	0.9	-0.9	-0.3	0.0	0.2	0.3
Excluding grants 4/	-4.1	-6.1	-7.4	-7.1	-1.7	-1.0	-0.3	0.0	0.2	0.3
External sector 1/										
Exports of goods 5/	17.8	15.8	13.5	12.2	17.3	17.5	20.1	20.3	20.2	20.1
Imports of goods	57.4	50.0	46.8	43.9	36.2	32.5	31.2	27.8	26.3	24.3
Merchandise trade balance	-39.6	-34.1	-33.3	-31.7	-18.9	-15.0	-11.1	-7.6	-6.0	-4.2
Current account balance										
Excluding official transfers	-39.8	-34.3	-33.2	-31.5	-21.3	-17.3	-14.1	-10.4	-8.5	-6.3
Including official transfers	1.7	0.1	-1.1	-2.6	-4.6	-3.7	-2.8	-1.4	-0.8	0.1
Gross reserves (in millions of U.S. dollars)	5,321	6,121	6,627	7,178	6,877	6,732	6,410	5,928	5,830	5,691
Memorandum items:										
External budget grants 6/	30.5	22.1	19.7	16.5	9.0	6.9	5.2	3.6	2.8	2.0
Total external debt 7/	8.0	7.9	8.6	9.1	10.6	11.6	12.6	14.9	16.3	17.8
Public sector debt	8.0	12.1	13.7	15.2	13.4	14.7	17.3	21.0	23.3	26.1

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

1/ Excluding the narcotics economy.

2/ Comprising mainly current spending.

3/ Defined as domestic revenues plus operating grants minus operating expenditures.

4/ Defined as domestic revenues minus operating expenditures.

5/ Includes official recorded exports, estimates of smuggling, reexports and sales to nonresidents.

6/ Estimated direct expenditures by donors on public projects not included in the government budget.

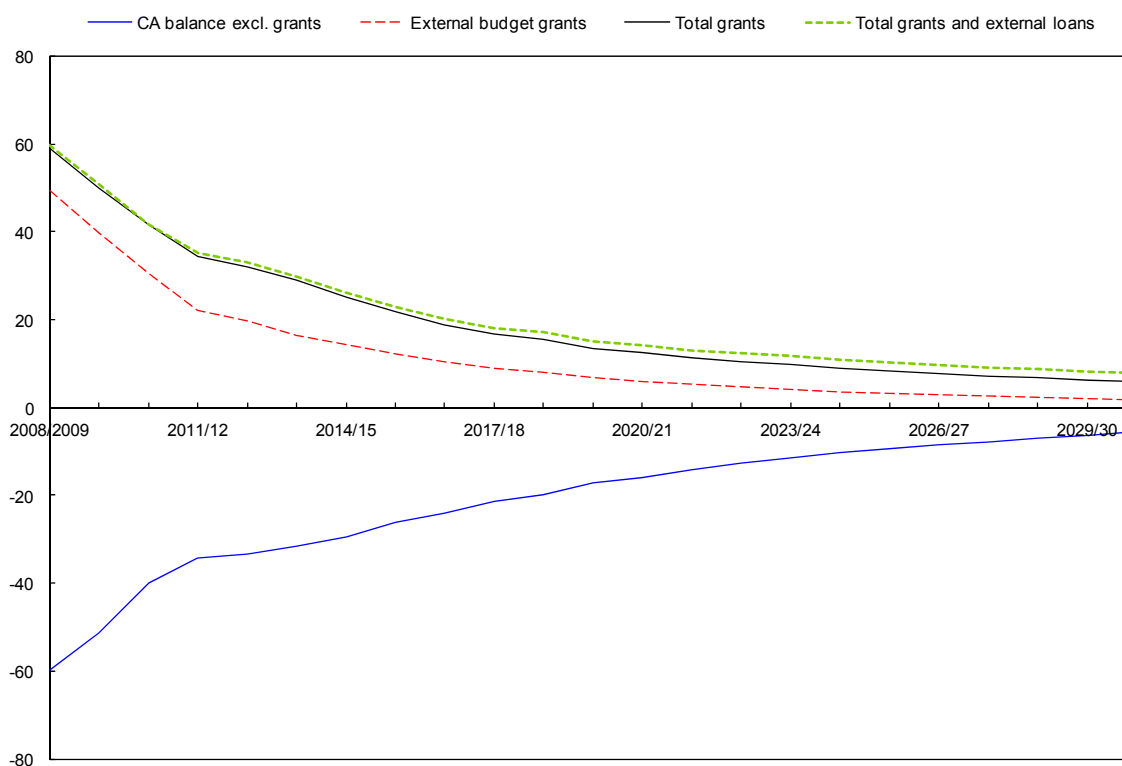
7/ After HIPC and MDRI debt relief, as well as debt relief beyond HIPC relief from Paris Club creditors. Debt includes obligations to the IMF.

⁵ Under the baseline scenario, the production of copper from the Aynak mine is assumed to start in 2014/15 at 20,000 tons and to increase to 200,000 tons by 2016/17. Based on copper price projections from the IMF's World Economic Outlook Database, the value of copper production (assumed to equal the value of exports) is expected to reach US\$2 billion in the outer years of the projection period. Iron exports from Hajigak and other mining projects are estimated to begin in 2019/20 at about US\$200 million and increase thereafter to around US\$1.4 billion in 2030/31.

⁶ Private investment as a share of GDP is projected to increase from about 9 percent at present to about 16 percent by the end of this decade.

3. **While the overall macroeconomic situation is expected to improve, Afghanistan will likely remain dependent on donor support in the foreseeable future.** Large financing gaps are projected for the remainder of this decade, and total donor support to finance both operating and development expenditures (on- and off-budget) is expected to remain substantial, at about US\$3–4 billion per year by 2030/31. However, as the economy becomes increasingly self-sustained over time through economic growth, higher exports, and higher foreign investment, the share of total external support (the sum of grants and loans) to GDP is projected to decline from 35 percent in 2011/12 to 9 percent by the end of the 20-year projection period. While revenues are projected to increase to just under 19 percent of GDP by 2030/31, the share of grants in total external support is expected to decline gradually from 97 percent in 2011/12 to 76 percent at the end of projection period (equal to 6 percent of GDP). Such an increase in revenues over the long term will only be possible if the security situation is stable and the authorities implement key reforms in a timely manner.

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

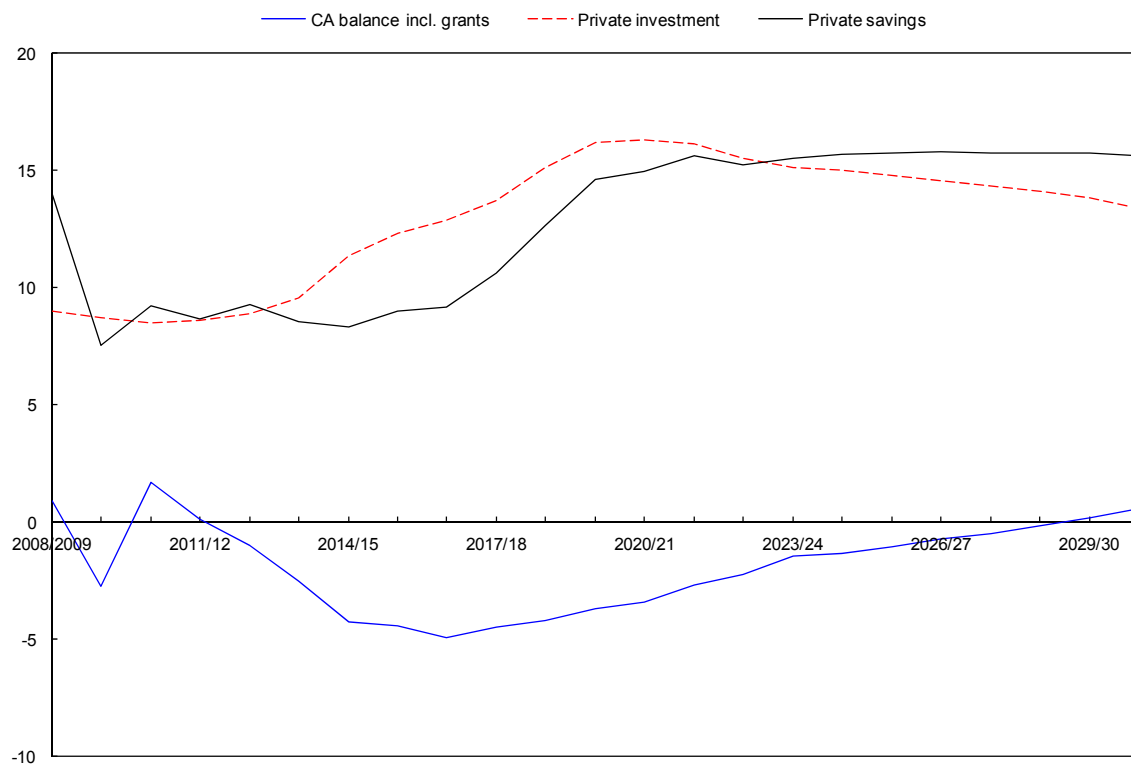


4. **Over the projection period, exports are expected to increase significantly, while somewhat lower growth in imports is associated with a decline of government-related imports, resulting from lower donor expenditure.** Projections are based on the assumption that improvements in security, regional stability and economic reforms in combination with an enhanced investment climate, including in the mining sector, will contribute to higher

total factor productivity. Basic infrastructure is expected to improve, allowing for some import substitution in light industries. In view of its unique geographical position, Afghanistan could develop into a regional hub in transit trade, with significant potential for exports of transportation services associated with trade between the Middle East and Central Asia. These are clearly very tenuous assumptions.

5. **The current account deficit is projected to decline over the projection period.** In 2010/11, officially recorded exports accounted for only 3 percent of GDP, while officially recorded imports reached 46 percent of GDP (of which donor-related imports amounted to 25 percent of GDP). Accordingly, the current account deficit (excluding official transfers)—which was high at 40 percent of GDP—is projected to decline to 26 percent by 2015/16 and further to about 6 percent at the end of the projection period, mirroring the projected decline in grants, in particular external budget grants (Figure 1). The improvement in the current account will be supported by a continuous increase in exports and some import substitution. Under a more favorable scenario, if Afghanistan’s potential in the mining industry and in transit trade should be greater than assumed in the baseline, the current account deficit could decline faster in the outer years.

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



B. External Debt Sustainability Analysis

6. **Following debt relief under the enhanced HIPC initiative and MDRI, Afghanistan's external and public debt burden indicators have improved significantly.** Afghanistan's external public and publicly guaranteed debt amounted to US\$1.3 billion, or 8 percent of GDP, in 2010/11. 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-2010/11, or 72 percent of exports. Public external debt service was equivalent to 0.8 percent of exports of goods and services.

7. **The present value of public external debt would gradually increase to about 12 percent of GDP by the end of the projection period under the baseline scenario.** However, the present value of the debt-to-exports ratio is expected to breach the 100 percent threshold in the outer years of the projection period (Figure 3), implying the potential for debt distress. The indicative thresholds for the low-income country (LIC) DSA could be breached toward the end of the projection period.

Table 2. Islamic Republic of Afghanistan: Public and Publicly-Guaranteed External Debt, 2009/10–2015/16

	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16
	Act.	Est.	Proj.	Proj.	Proj.	Proj.	Proj.
(In millions of U.S. dollars)							
Total government external debt 1/	1,146.9	1,279.6	1,454.1	1,678.7	1,908.9	2,147.1	2,390.0
Bilateral creditors	13.6	13.6	13.2	12.7	12.2	11.6	11.0
<i>Of which: Paris Club creditors 2/</i>	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Multilateral creditors	1,133.3	1,263.3	1,441.7	1,692.2	1,911.1	2,129.2	2,349.6
<i>Of which: use of Fund resources</i>	92.4	89.7	111.4	173.3	197.8	216.8	193.8
Service on government external debt	19.8	12.5	14.4	22.2	43.6	66.4	56.2
<i>Of which: to the Fund</i>	1.7	0.1	1.1	6.5	14.9	21.6	23.9
Amortization paid	1.1	1.3	2.6	7.9	26.9	47.2	32.0
<i>Of which: to the Fund</i>	0.0	0.0	0.9	5.9	14.3	21.0	23.2
Interest paid	18.7	11.2	11.8	14.4	16.8	19.2	24.2
<i>Of which: to the Fund</i>	1.7	0.1	0.1	0.5	0.6	0.6	0.6
(In percent of GDP)							
Total government external debt	9.0	8.0	8.2	8.7	9.2	9.7	10.0
Bilateral creditors	0.1	0.1	0.1	0.1	0.1	0.1	0.0
<i>Of which: Paris Club creditors 2/</i>	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Multilateral creditors	8.9	7.9	8.1	8.8	9.2	9.6	9.8
<i>Of which: use of Fund resources</i>	0.7	0.6	0.6	0.9	1.0	1.0	0.8
Service on government debt	0.2	0.1	0.1	0.1	0.2	0.3	0.2
Amortization	0.0	0.0	0.0	0.0	0.1	0.2	0.1
Interest	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Sources: Country authorities; and staff estimates and projections.

1/ According to the BOP Manual, a debt reorganization operation is considered to be completed and can be fully reflected in the balance of payments only if all preconditions mentioned in agreements are fulfilled. For agreements with the Paris Club, this provision is interpreted flexibly by regarding the signature of the Agreed Minute with the Paris Club as sufficient to treat such an agreement as completed in the BOP. The latter treatment has been followed by the staffs in preparing this Debt Sustainability Analysis.

2/ Excludes Russian claims prior to their regularization via a Paris Club rescheduling.

Alternative Scenarios

8. **Risks to the outlook are heavily on the downside, linked to security prospects, the strength of future reforms, and a deteriorating fiscal outlook.**⁷ Should security remain fragile or worsen, economic growth would consequently suffer. Figure 3 presents the results of a customized alternative “lower-growth” scenario, in line with the scenario depicted in, Appendix II of the staff report. The “lower-growth” scenario (A1) depicts 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. A fragile security situation, in combination with delays in key reforms, would potentially discourage investment and external support, and result in lower exports, as well as a slowdown in revenue effort. With the possibility of delays of mining production, revenues from this sector would also suffer. Under this scenario, real GDP growth falls from 2 percent on average (instead of 6 percent in the baseline) in the medium term (2011/12–2015/16) to 1½ percent (instead of 4 percent in the baseline) in the long term (2025/26–2030/31). The present value (PV) of the debt-to-GDP ratio would reach 138 percent by the end of projection period, while the PV of the debt-to-exports ratio would reach 1,239 percent. Under this scenario, the remaining thresholds would also be breached with a significant margin. The second alternative scenario (A2) implies a deterioration of the fiscal outlook with lower resources and use of funds. Under this scenario, Afghanistan would face a rapid deterioration of debt- burden indicators, with the PV of the debt-to-GDP ratio reaching 118 percent and the PV of the debt-to-exports ratio projected at 1,068 percent by the end of the projection period.

9. **Afghanistan remains at high risk of external debt distress.**⁸ Given the sustained and large breaches of the thresholds under the alternative scenarios, the staffs of the IMF and World Bank continue to classify Afghanistan as “high risk”, based on guidance for debt distress assessments. A mild deterioration in the profile of donor grants even in the baseline could increase the risk of debt distress, further strengthening the rationale for the classification.

C. Fiscal Debt Sustainability

10. **Public debt indicators grow markedly under the baseline (Table 5 and Figure 4).** To enhance the monitoring of the domestic debt burden in the long run, the LIC DSA explicitly includes net domestic financing (NDF) and service obligations on this debt.⁹

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

⁸ Afghanistan is classified as a “weak performer” and its thresholds therefore: 30 percent of net present value 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.

⁹ An interest rate of 5 percent is assumed on NDF.

Security-related expenditure will continue to account for a large share of operating expenditures. The baseline scenario assumes that (i) a value-added tax (VAT) will be introduced in 2014/15; (ii) a national tax and customs administration will be established in order to minimize political interference; (iii) the taxpayers segmentation approach will be strengthened further by enhancing the small, medium and large taxpayers offices; (iv) corruption will be combated by adopting modern business models and IT systems; (v) management will be strengthened to ensure that the reform momentum is maintained and more weight given to strategic planning of tax and customs operations; and (vi) minimal operations and maintenance expenditure (O&M) beyond those already included by the government in the operating budget. While development spending is expected to increase and raise potential GDP, investment will depend on the strength of reforms and a stable environment. In view of strong expenditure pressures expected on the budget, debt service of 6 percent of fiscal revenues by the end of the forecast period (over 2 percent of which is for servicing domestic debt) is of concern. The expansion of domestic debt reinforces the risk of a high debt distress rating.

11. The alternative scenarios and stress tests demonstrate the fragility of Afghanistan's economy. Under the scenario with permanently lower GDP growth (A1), debt service reaches about 34 percent of revenues by the end of the forecast period, leaving very limited fiscal space for investments or social expenditure. Risks to the outlook are also linked to revenue potential and grant financing. Figure 4 also presents the results of a customized alternative “lower sources and higher uses” scenario (A2).

12. The alternative scenarios look at risks to revenue targets and expenditure control. The “lower sources and higher uses” scenario assumes a reduction in revenues and grants while spending pressures increase. Specifically, the scenario incorporates a one-year delay in the implementation of the VAT as well as a reduction in revenue efficiency due to lagging reforms. This translates into an erosion in total revenue effort of approximately 1 percent of GDP on average over the horizon. At the same time, donors are assumed to disengage at a faster rate, through both on-budget and off-budget grants, with grants leveling off at the same proportion of GDP by 2030/31. To this we add increased operating expenditures from nonsecurity operations and maintenance (O&M) costs due to the takeover of projects and existing capital stocks from donors.¹⁰ Current estimates put these costs in the order of US\$900 million in 2011.¹¹ The customized scenarios highlight the importance of a stable revenue outlook and a level of grants and concessional borrowing in line with baseline projections. The explosive trajectory for expenditures due to O&M costs highlights the need

¹⁰ The O&M costs excluding those that arise from the security sector are also likely to be substantial and are much harder to quantify. See Appendix III: “*Fiscal Survival and Fiscal Sustainability*” of the staff report.

¹¹ World Bank, forthcoming, “Transition in Afghanistan Looking Beyond 2014,” Washington, D.C.

for continued donor involvement, without which the primary balance moves into excessive deficit, triggering significant debt distress.

D. Conclusions

13. **Afghanistan remains at high risk of debt distress after the HIPC completion point and the delivery of debt relief under the MDRI.** Despite the substantial amount of debt forgiven under the HIPC and MDRI,¹² continuing risks to the macroeconomic outlook and large financing needs underscore the importance of substantial and long-term grant financing, in combination with a strong reform agenda and progress in security and governance. Should donors decide to reduce aid rapidly and security fail to stabilize, or structural reforms and governance improvements lag, Afghanistan's debt burden would quickly become unsustainable.

14. **The authorities recognize the risks and are committed to ensuring debt sustainability.** The government is cognizant of its responsibilities, but remains very concerned about the speed of donor withdrawal. Rapid exit by the international community could jeopardize the long-term reform process, which is critical to ensuring a favorable business and investment environment, and would place significant additional pressure on an already constrained pool of resources.

¹² A 100 percent debt forgiveness agreement with the United States in the amount of US\$109 million came into effect in September 2010, and the authorities signed a final debt forgiveness agreement with Germany in the amount of US\$17 million in January 2011. Saudi Arabia, Iraq, and Croatia also provided 100 percent debt relief. The authorities are still discussing debt restructuring and relief with non-Paris Club creditors, namely Bulgaria, Iran, Kuwait and OPEC.

Table 3.: External Debt Sustainability Framework, Baseline Scenario, 2008-30 1/
(In percent of GDP, unless otherwise indicated)

	Actual			Historical 0 Standard		Projections								
	2008	2009	2010	Average	0 Deviation	2011	2012	2013	2014	2015	2011-2015 Average	2020	2030	2016-2030 Average
External debt (nominal) 1/	19.8	9.0	8.0			8.2	8.7	9.2	9.7	10.0		12.3	18.5	
o/w public and publicly guaranteed (PPG)	19.8	9.0	8.0			8.2	8.7	9.2	9.7	10.0		12.3	18.5	
Change in external debt	-3.1	-10.7	-1.1			0.2	0.5	0.5	0.5	0.3		0.5	0.4	
Identified net debt-creating flows	-7.5	-2.8	-4.3			-2.6	-1.8	-0.8	0.3	0.1		-0.9	-3.4	
Non-interest current account deficit	-1.0	2.7	-1.7	3.4	5.6	-0.1	1.0	2.5	4.2	4.4	2.4	3.4	-0.7	1.9
Deficit in balance of goods and services	83.1	70.4	56.4			48.8	45.1	41.9	39.7	37.0		28.4	16.2	
Exports	8.4	6.5	6.0			5.8	6.2	6.3	6.5	6.5		7.8	11.1	
Imports	91.5	76.9	62.4			54.6	51.2	48.2	46.1	43.5		36.2	27.3	
Net current transfers (negative = inflow)	-65.1	-51.1	-43.8	-58.5	15.9	-36.5	-34.2	-31.0	-27.2	-23.6	-30.5	-14.2	-7.4	-12.2
o/w official	-60.5	-48.5	-41.5			-34.4	-32.2	-29.0	-25.3	-21.8		-12.6	-6.2	
Other current account flows (negative = net inflow)	-19.0	-16.6	-14.3			-12.4	-9.9	-8.4	-8.2	-9.0		-10.8	-9.5	
Net FDI (negative = inflow)	-2.9	-2.4	-2.1	-2.6	1.0	-2.1	-2.3	-2.9	-3.6	-3.8	-2.9	-3.8	-2.3	-3.0
Endogenous debt dynamics 2/	-3.7	-3.1	-0.6			-0.4	-0.5	-0.4	-0.3	-0.4		-0.4	-0.5	
Contribution from nominal interest rate	0.1	0.1	0.0			0.0	0.1	0.1	0.1	0.1		0.2	0.2	
Contribution from real GDP growth	-0.7	-3.5	-0.6			-0.4	-0.5	-0.5	-0.5	-0.6		-0.6	-0.7	
Contribution from price and exchange rate changes	-3.1	0.3	...			...	...	...	...	...		...	...
Residual (3-4) 3/	4.4	-7.9	3.2			2.8	2.3	1.3	0.2	0.2		1.4	3.8	
o/w exceptional financing	0.0	-8.5	0.0			0.0	0.0	0.0	-0.1	-0.1		0.0	0.0	
PV of external debt 4/	...	4.7	4.3			4.6	5.1	5.5	5.9	6.1		7.8	12.5	
In percent of exports	...	71.4	71.7			78.9	82.8	87.3	91.0	93.9		99.8	112.6	
PV of PPG external debt	...	4.7	4.3			4.6	5.1	5.5	5.9	6.1		7.8	12.5	
In percent of exports	...	71.4	71.7			78.9	82.8	87.3	91.0	93.9		99.8	112.6	
In percent of government revenues	...	45.0	39.0			40.2	45.3	47.8	43.9	42.4		49.3	66.3	
Debt service-to-exports ratio (in percent)	1.2	1.9	0.8			0.8	1.2	2.5	3.7	2.7		3.8	4.6	
PPG debt service-to-exports ratio (in percent)	1.2	1.9	0.8			0.8	1.2	2.5	3.6	2.7		3.8	4.6	
PPG debt service-to-revenue ratio (in percent)	1.2	1.2	0.4			0.4	0.6	1.4	1.8	1.2		1.9	2.7	
Total gross financing need (millions of U.S. dollars)	-391.3	45.4	-592.8			-400.6	-237.2	-53.4	195.6	169.0		-50.9	-1,358.7	
Non-interest current account deficit that stabilizes debt ratio	2.1	13.4	-0.6			-0.4	0.5	1.9	3.8	4.1		2.9	-1.1	
Key macroeconomic assumptions														
Real GDP growth (in percent)	3.6	21.0	8.4	9.1	6.3	5.7	7.1	5.8	5.4	6.3	6.1	5.4	4.0	4.6
GDP deflator in US dollar terms (change in percent)	15.6	-1.5	17.7	8.8	6.7	9.0	-0.4	1.3	1.4	1.6	2.6	0.9	1.2	1.1
Effective interest rate (percent) 5/	0.5	0.7	0.5	0.5	0.2	0.5	0.9	1.2	1.4	1.6	1.1	1.5	1.2	1.3
Growth of exports of G&S (US dollar terms, in percent)	38.1	-7.1	17.1	30.1	39.0	12.8	12.4	10.2	9.3	9.0	10.7	9.8	8.8	9.5
Growth of imports of G&S (US dollar terms, in percent)	14.1	0.2	3.6	19.7	26.1	0.9	0.1	0.8	2.3	2.0	1.2	5.9	2.9	2.5
Grant element of new public sector borrowing (in percent)	...	...	38.6	...	...	37.3	36.4	36.7	36.8	39.2	37.3	39.2	39.2	39.2
Government revenues (excluding grants, in percent of GDP)	7.8	10.3	11.0			11.5	11.3	11.6	13.4	14.4		15.8	18.8	17.0
Aid flows (in millions of US dollars) 7/	1,025	1,276	1,782			2,294	2,493	2,670	2,541	2,395		2,354	2,737	
o/w Grants	1,025	1,276	1,746			2,249	2,439	2,610	2,473	2,319		2,220	2,466	
o/w Concessional loans	0.2	0.2	36.0			45.0	54.1	60.5	67.9	76.0		134.1	270.9	
Grant-equivalent financing (in percent of GDP) 8/	...	...	11.3			12.6	12.9	12.8	11.4	10.0		7.1	5.0	6.5
Grant-equivalent financing (in percent of external financing) 8/	...	...	95.6			95.4	94.6	94.6	93.9	94.0		89.9	83.8	87.6
Memorandum items:														
Nominal GDP (millions of US dollars)	10,471	12,481	15,928			18,364	19,603	21,015	22,477	24,273		33,576	55,817	
Nominal dollar GDP growth	19.7	19.2	27.6			15.3	6.7	7.2	7.0	8.0	8.8	6.4	5.3	5.7
PV of PPG external debt (in millions of US dollars)	...	590	690			819	982	1,142	1,302	1,465		2,578	6,865	
(PV-PV-1)/GDPt-1 (in percent)	...	...	0.8			0.8	0.9	0.8	0.8	0.7	0.8	0.8	1.0	0.9
Gross remittances (millions of US dollars)	...	...	...			...	...	...	...	...		...	...
PV of PPG external debt (in percent of GDP + remittances)	...	4.7	4.3			4.6	5.1	5.5	5.9	6.1		7.8	12.5	
PV of PPG external debt (in percent of exports + remittances)	...	71.4	71.7			78.9	82.8	87.3	91.0	93.9		99.8	112.6	
Debt service of PPG external debt (in percent of exports + remittances)	...	1.9	0.8			0.8	1.2	2.5	3.6	2.7		3.8	4.6	

Sources: Country authorities; and staff estimates and projections.

1/ Includes both public and private sector external debt.

2/ Derived as $[r - g - \rho(1+g)] / (1+g+\rho)$ 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 4a. Afghanistan: Sensitivity Analysis for Key Indicators of Public and Publicly Guaranteed External Debt, 2011-2030
(In percent)

	Projections						
	2011	2012	2013	2014	2015	2020	2030
PV of debt-to GDP ratio							
Baseline	5	5	6	6	6	8	12
A. Alternative Scenarios							
A1. Lower growth	4	5	5	6	7	29	138
A2. Lower sources and use of funds	4	4	5	7	12	56	118
B. Bound Tests							
B1. Real GDP growth at historical average minus one standard deviation in 2012-2013	5	5	6	6	6	8	13
B2. Export value growth at historical average minus one standard deviation in 2012-2013 3/	5	5	5	6	6	8	12
B3. US dollar GDP deflator at historical average minus one standard deviation in 2012-2013	5	5	6	6	6	8	13
B4. Net non-debt creating flows at historical average minus one standard deviation in 2012-2013 4/	5	4	1	2	2	4	11
B5. Combination of B1-B4 using one-half standard deviation shocks 5/	5	6	4	4	5	6	11
B6. One-time 30 percent nominal depreciation relative to the baseline in 2012 6/	6	7	7	8	8	11	17
PV of debt-to-exports ratio							
Baseline	79	83	87	91	94	100	113
A. Alternative Scenarios							
A1. Lower growth	62	74	86	96	102	364	1,239
A2. Lower sources and use of funds	62	69	77	109	179	715	1,068
B. Bound Tests							
B1. Real GDP growth at historical average minus one standard deviation in 2012-2013	76	81	86	90	92	98	111
B2. Export value growth at historical average minus one standard deviation in 2012-2013 3/	79	81	83	87	90	95	108
B3. US dollar GDP deflator at historical average minus one standard deviation in 2012-2013	76	81	86	90	92	98	111
B4. Net non-debt creating flows at historical average minus one standard deviation in 2012-2013 4/	79	60	19	26	32	55	96
B5. Combination of B1-B4 using one-half standard deviation shocks 5/	79	96	72	80	82	94	114
B6. One-time 30 percent nominal depreciation relative to the baseline in 2012 6/	76	81	86	90	92	98	111
PV of debt-to-revenue ratio							
Baseline	40	45	48	44	42	49	66
A. Alternative Scenarios							
A1. Lower growth	31	42	52	61	64	243	1,133
A2. Lower sources and use of funds	31	38	42	60	91	372	621
B. Bound Tests							
B1. Real GDP growth at historical average minus one standard deviation in 2012-2013	40	48	50	46	45	52	70
B2. Export value growth at historical average minus one standard deviation in 2012-2013 3/	40	44	47	43	42	48	65
B3. US dollar GDP deflator at historical average minus one standard deviation in 2012-2013	41	46	49	45	43	50	68
B4. Net non-debt creating flows at historical average minus one standard deviation in 2012-2013 4/	40	33	10	12	14	27	57
B5. Combination of B1-B4 using one-half standard deviation shocks 5/	40	50	36	33	33	40	58
B6. One-time 30 percent nominal depreciation relative to the baseline in 2012 6/	54	61	65	60	58	67	90

Table 4b. Afghanistan: Sensitivity Analysis for Key Indicators of Public and Publicly Guaranteed External Debt, 2011-2030
(In percent)

Debt service-to-exports ratio							
Baseline	1	1	2	4	3	4	5
A. Alternative Scenarios							
A1. Lower growth	1	1	3	5	4	33	121
A2. Lower sources and use of funds	1	1	3	7	12	67	104
B. Bound Tests							
B1. Real GDP growth at historical average minus one standard deviation in 2012-2013	1	1	2	4	3	4	5
B2. Export value growth at historical average minus one standard deviation in 2012-2013 3/	1	1	2	4	3	4	4
B3. US dollar GDP deflator at historical average minus one standard deviation in 2012-2013	1	1	2	4	3	4	5
B4. Net non-debt creating flows at historical average minus one standard deviation in 2012-2013 4/	1	1	2	2	2	3	3
B5. Combination of B1-B4 using one-half standard deviation shocks 5/	1	1	3	3	3	4	4
B6. One-time 30 percent nominal depreciation relative to the baseline in 2012 6/	1	1	2	4	3	4	5
Debt service-to-revenue ratio							
Baseline	0	1	1	2	1	2	3
A. Alternative Scenarios							
A1. Lower growth	0	1	2	3	2	22	111
A2. Lower sources and use of funds	0	1	2	4	6	35	60
B. Bound Tests							
B1. Real GDP growth at historical average minus one standard deviation in 2012-2013	0	1	1	2	1	2	3
B2. Export value growth at historical average minus one standard deviation in 2012-2013 3/	0	1	1	2	1	2	3
B3. US dollar GDP deflator at historical average minus one standard deviation in 2012-2013	0	1	1	2	1	2	3
B4. Net non-debt creating flows at historical average minus one standard deviation in 2012-2013 4/	0	1	1	1	1	2	2
B5. Combination of B1-B4 using one-half standard deviation shocks 5/	0	1	1	1	1	2	2
B6. One-time 30 percent nominal depreciation relative to the baseline in 2012 6/	1	1	2	2	2	3	4
<i>Memorandum item:</i>							
Grant element assumed on residual financing (i.e., financing required above baseline) 6/	37	37	37	37	37	37	37

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. Net current transfers modelled as minus 1.5 times standard deviation.

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

Table 5. Afghanistan: Public Sector Debt Sustainability Framework, Baseline Scenario, 2008-30
(In percent of GDP, unless otherwise indicated)

				Average	Standard Deviation	Projections					2011-15		2016-30	
	2008	2009	2010			2011	2012	2013	2014	2015	Average	2020	2030	Average
Public sector debt 1/	19.8	9.0	8.0			8.7	11.2	13.5	14.3	12.1		16.7	29.4	
o/w foreign-currency denominated	19.8	9.0	8.0			8.2	8.7	9.2	9.7	10.0		12.3	18.5	
Change in public sector debt	-3.1	-10.7	-1.1			0.8	2.5	2.2	0.8	-2.2		1.4	0.9	
Identified debt-creating flows	-0.1	-2.1	-2.8			2.8	3.6	2.9	2.1	-0.9		1.6	1.0	
Primary deficit	4.1	1.6	-0.9	1.5	1.8	0.1	1.6	1.6	1.3	1.2	1.2	2.2	1.8	
Revenue and grants	17.5	20.5	22.0			23.7	23.7	24.0	24.4	24.0		22.5	23.2	
of which: grants	9.8	10.2	11.0			12.2	12.4	12.4	11.0	9.6		6.6	4.4	
Primary (noninterest) expenditure	21.7	22.1	21.1			23.8	25.3	25.6	25.8	25.2		24.6	25.0	
Automatic debt dynamics	-3.5	-3.4	-1.9			-0.7	-0.6	-0.6	-0.7	-0.8		-0.5	-0.8	
Contribution from interest rate/growth differential	-1.4	-3.4	-0.8			-0.5	-0.7	-0.7	-0.7	-0.8		-0.7	-0.9	
of which: contribution from average real interest rate	-0.6	0.1	-0.1			-0.1	-0.1	-0.1	0.0	0.0		0.1	0.2	
of which: contribution from real GDP growth	-0.8	-3.4	-0.7			-0.4	-0.6	-0.6	-0.7	-0.8		-0.8	-1.1	
Contribution from real exchange rate depreciation	-2.0	-0.1	-1.1			-0.2	0.0	0.0	0.0	0.0		...	...
Other identified debt-creating flows	-0.8	-0.2	0.0			3.4	2.6	1.9	1.4	-1.4		0.0	0.0	
Privatization receipts (negative)	-0.8	-0.2	0.0			-0.3	0.0	0.0	0.0	-2.3		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	
Debt relief (HIPC and other)	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Other (specify, e.g. bank recapitalization)	0.0	0.0	0.0			3.7	2.7	1.9	1.4	1.0		0.0	0.0	
Residual, including asset changes	-3.0	-8.7	1.7			-2.0	-1.1	-0.7	-1.2	-1.3		-0.2	-0.1	
Other Sustainability Indicators														
PV of public sector debt	0.0	4.7	4.3			5.2	7.6	9.8	10.5	8.2		12.2	23.4	
o/w foreign-currency denominated	0.0	4.7	4.3			4.6	5.1	5.5	5.9	6.1		7.8	12.5	
o/w external	...	4.7	4.3			4.6	5.1	5.5	5.9	6.1		7.8	12.5	
PV of contingent liabilities (not included in public sector debt)	...	...	...			...	...	...	...	...		...	...
Gross financing need 2/	4.1	1.6	-0.9			0.1	2.1	4.1	5.5	5.7		5.8	12.5	
PV of public sector debt-to-revenue and grants ratio (in percent)	0.0	22.6	19.5			21.8	32.2	40.7	43.0	34.3		54.4	100.9	
PV of public sector debt-to-revenue ratio (in percent)	0.0	45.0	39.0			45.0	67.8	84.5	78.3	57.0		77.0	124.7	
o/w external 3/	...	45.0	39.0			40.2	45.3	47.8	43.9	42.4		49.3	66.3	
Debt service-to-revenue and grants ratio (in percent) 4/	0.2	0.1	0.1			-0.1	0.1	0.7	1.3	1.3		2.0	4.5	
Debt service-to-revenue ratio (in percent) 4/	0.4	0.2	0.2			-0.3	0.2	1.4	2.4	2.2		2.9	5.6	
Primary deficit that stabilizes the debt-to-GDP ratio	7.2	12.3	0.2			-0.7	-1.0	-0.6	0.5	3.4		0.8	0.9	
Key macroeconomic and fiscal assumptions														
Real GDP growth (in percent)	3.6	21.0	8.4	4.6	6.3	5.7	7.1	5.8	5.4	6.3	6.1	5.4	4.0	
Average nominal interest rate on forex debt (in percent)	0.5	0.7	0.5	0.5	0.2	0.5	0.9	1.2	1.4	1.6	1.1	1.5	1.2	
Average real interest rate on domestic debt (in percent)	...	...	...	...	...	...	-3.0	-0.6	0.5	1.9	-0.3	5.4	3.5
Real exchange rate depreciation (in percent, + indicates depreciation)	-9.5	-0.3	-13.1	-7.8	4.5	...	...	...	...	...	...	...	...
Inflation rate (GDP deflator, in percent)	18.2	-4.7	9.4	9.1	6.5	11.7	4.8	4.9	4.8	4.7	6.2	4.6	4.0	
Growth of real primary spending (deflated by GDP deflator, in percent)	0.0	0.2	0.0	0.2	0.1	0.2	0.1	0.1	0.1	0.0	0.1	0.1	0.0	
Grant element of new external borrowing (in percent)	...	...	38.6	...	...	37.3	36.4	36.7	36.8	39.2	37.3	39.2	39.2

Sources: Country authorities; and staff estimates and projections.

1/ [Indicate coverage of public sector, e.g., general government or nonfinancial public sector. Also whether net or gross debt is used.]

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

3/ Revenues excluding grants.

4/ Debt service is defined as the sum of interest and amortization of medium and long-term debt.

5/ Historical averages and standard deviations are generally derived over the past 10 years, subject to data availability.

Table 6. Afghanistan: Sensitivity Analysis for Key Indicators of Public Debt 2011-30

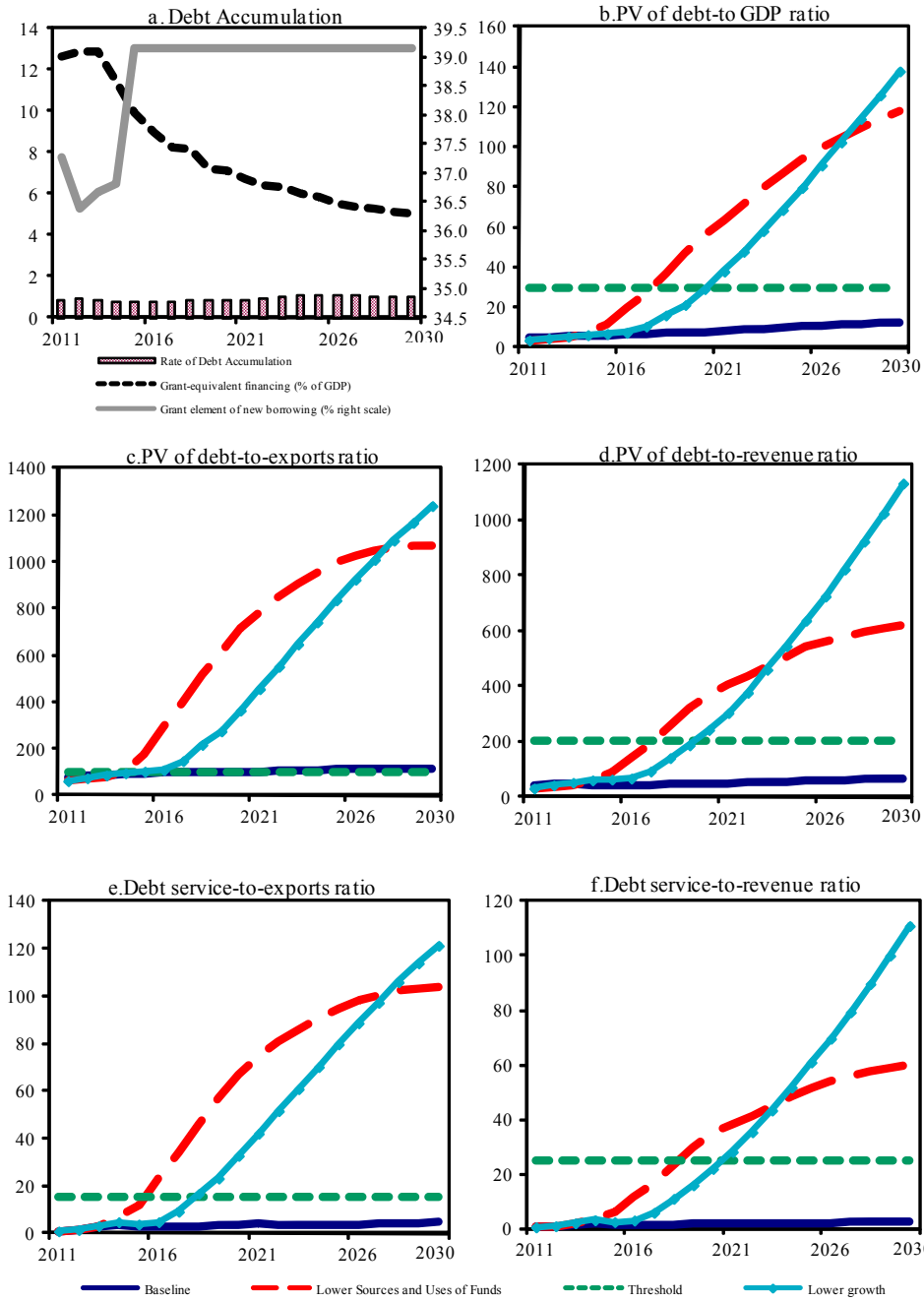
	Projections						
	2011	2012	2013	2014	2015	2020	2030
PV of Debt-to-GDP Ratio							
Baseline	5	8	10	11	8	12	23
A. Alternative scenarios							
A1. Lower growth	4	8	13	18	20	49	158
A2. Lower sources and use of funds	4	11	17	26	31	76	138
B. Bound tests							
B1. Real GDP growth is at historical average minus one standard deviations in 2012-2013	5	8	10	11	9	14	29
B2. Primary balance is at historical average minus one standard deviations in 2012-2013	8	12	14	15	12	16	28
B3. Combination of B1-B2 using one half standard deviation shocks	5	8	11	12	10	15	29
B4. One-time 30 percent real depreciation in 2012	7	9	11	12	9	13	26
B5. 10 percent of GDP increase in other debt-creating flows in 2012	15	18	20	21	19	24	37
PV of Debt-to-Revenue Ratio							
Baseline	22	32	41	43	34	54	101
A. Alternative scenarios							
A1. Lower growth	18	34	53	65	77	211	759
A2. Lower sources and use of funds	18	45	78	116	138	352	551
B. Bound tests							
B1. Real GDP growth is at historical average minus one standard deviations in 2012-2013	22	33	42	45	37	63	123
B2. Primary balance is at historical average minus one standard deviations in 2012-2013	34	51	59	60	51	72	119
B3. Combination of B1-B2 using one half standard deviation shocks	22	35	46	49	41	67	126
B4. One-time 30 percent real depreciation in 2012	29	39	46	48	39	59	111
B5. 10 percent of GDP increase in other debt-creating flows in 2012	64	74	83	85	78	108	161
Debt Service-to-Revenue Ratio							
Baseline	0	0	1	1	1	2	5
A. Alternative scenarios							
A1. Lower growth	0	0	1	2	2	8	34
A2. Lower sources and use of funds	0	0	1	3	4	13	25
B. Bound tests							
B1. Real GDP growth is at historical average minus one standard deviations in 2012-2013	0	0	1	2	2	3	7
B2. Primary balance is at historical average minus one standard deviations in 2012-2013	0	1	2	3	3	4	7
B3. Combination of B1-B2 using one half standard deviation shocks	0	0	1	2	2	3	7
B4. One-time 30 percent real depreciation in 2012	0	1	1	2	2	4	8
B5. 10 percent of GDP increase in other debt-creating flows in 2012	0	3	4	5	5	6	12

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.

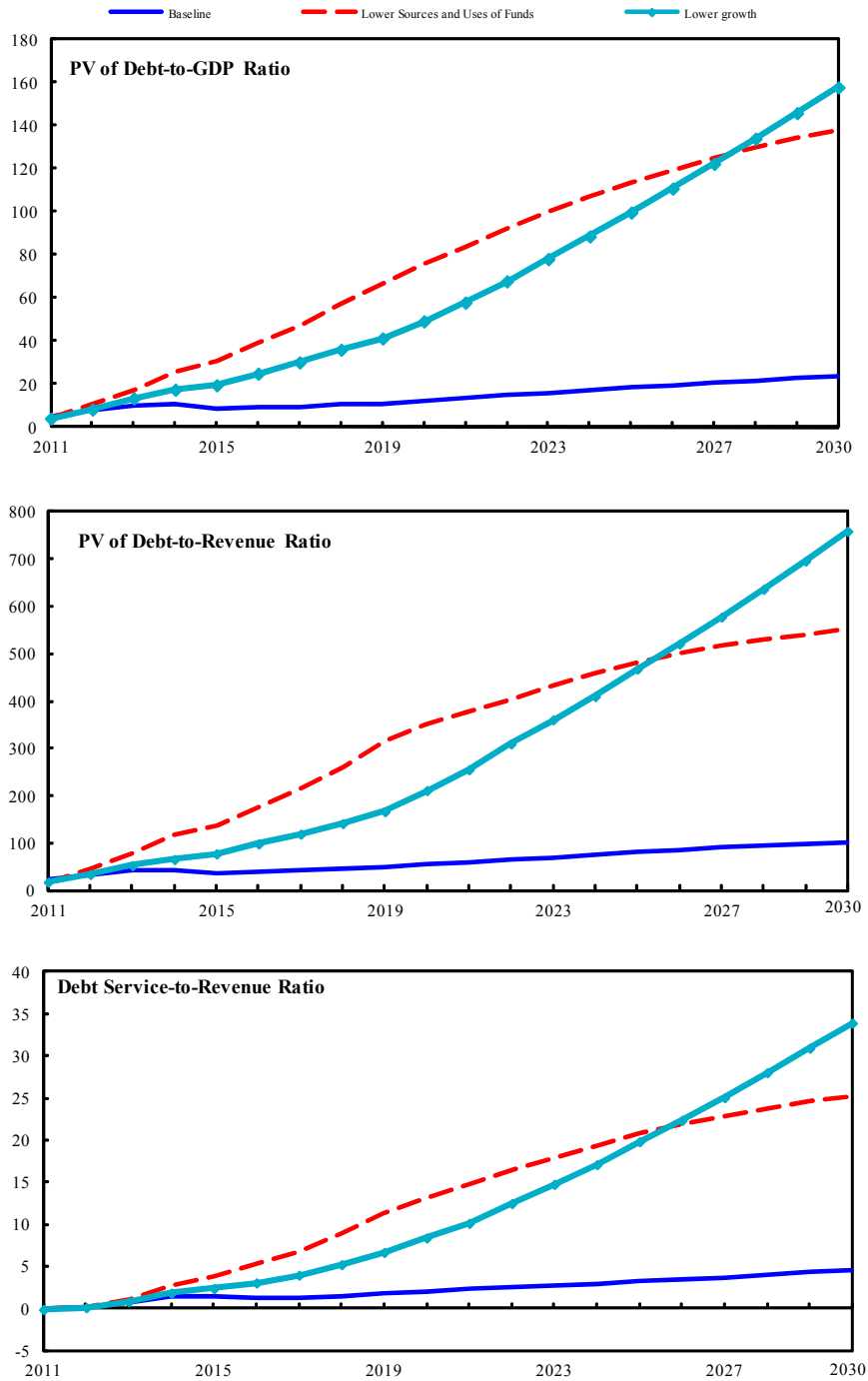
2/ Revenues are defined inclusive of grants.

Figure 3. Afghanistan: Indicators of Public and Publicly Guaranteed External Debt under Alternative Scenarios, 2011-30



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

Figure 4. Afghanistan: Indicators of Public Debt Under Alternative Scenarios, 2011-30 1/



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