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KYRGYZ REPUBLIC

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THIRD REVIEW UNDER THE THREE-YEAR ARRANGEMENT UNDER THE EXTENDED CREDIT FACILITY, AND REQUEST FOR MODIFICATION OF PERFORMANCE CRITERIA—DEBT SUSTAINABILITY ANALYSIS UPDATE

Approved By Juha Kähkönen and Zeine Zeidane (IMF) and John Panzer (IDA)

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

Due to the appreciation of the som and re-prioritization of public investment projects, the outlook for debt sustainability in the Kyrgyz Republic has improved significantly. External public debt is expected to decline to 60.7 percent of GDP in 2016 from 64.6 percent in the previous year, and the DSA assesses the Kyrgyz Republic to remain at moderate risk of debt distress. However, the debt outlook remains vulnerable, in particular to a sizeable exchange rate depreciation or scaling-up of public investment, which could tilt the assessment to high risk of debt distress. In order to avoid this adverse development, the authorities need to remain cautious when contracting and guaranteeing new debt and continue fiscal consolidation.[1]

[1] The updated CPIA score of Kyrgyz is 3.58, which is an average of the 2013-15 period, maintaining the classification of the Kyrgyz Republic as a medium policy performer.

UNDERLYING ASSUMPTIONS

1. **The current DSA takes into account the revised macroeconomic assumptions compared to the second review.** Based on economic developments in the first nine months of the year, 2016 economic growth is now expected to be weaker than at the time of the second review. Due to weak imports driven by sluggish economic activity and the scaling back of public investment projects, the current account deficit will decline further. Following the steady appreciation of the Kyrgyz som in the beginning of the year, the exchange rate has stabilized in recent months and most likely will remain stronger than expected in the medium-term. The postponement of some of the externally financed public investment projects resulted in an improved fiscal balance (including on-lending) in 2016, but some deterioration in the medium-term.

Selected Indicators

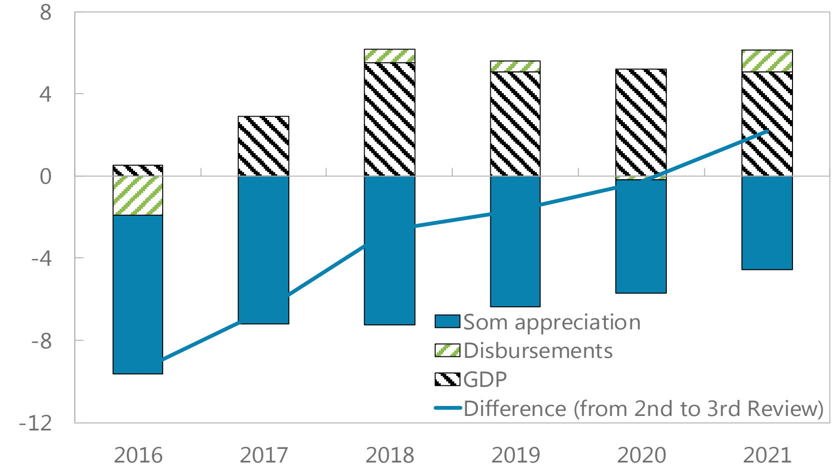
	2016	2017	2018	2019	2020
Real GDP growth					
Current DSA	2.6	2.3	2.9	5.9	5.3
Previous DSA (Second Review)	3.0	3.0	5.2	4.6	5.7
Overall fiscal balance (percent of GDP)*					
Current DSA	-7.9	-6.2	-4.0	-3.0	-1.5
Previous DSA (Second Review)	-8.8	-5.2	-2.8	-2.0	-0.5
Current account balance (percent of GDP)					
Current DSA	-10.0	-13.6	-13.8	-11.9	-11.7
Previous DSA (Second Review)	-15.2	-15.3	-12.6	-12.2	-10.1
PIP Disbursements					
Current DSA	366	406	356	350	323
Previous DSA (Second Review)	497	385	310	312	298

*Including onlending
Sources: Authorities data and IMF staff calculations.

EXTERNAL DSA

2. **The debt outlook has improved, but remains vulnerable to external and domestic shocks.** Driven by the som appreciation and the postponement of some public investment projects by the authorities, external public and publicly guaranteed debt[2] is projected to decrease to 60.7 percent of GDP in 2016, compared to 64.6 percent in 2015. The 2016 external debt ratio had been revised down by 9.5 percentage points from the previous DSA due to the stronger than anticipated exchange rate and the authorities' decision to re-prioritize some externally financed public investment projects. The external debt-to-GDP ratio is also revised down over the medium term, mainly on the account of the stronger exchange rate projection, which is only partly offset by the weaker GDP forecast. External PPG-debt is now expected to level off at around 64 percent in 2018 and gradually decline afterwards.

[2] External public and publicly guaranteed debt includes the debt of the 19 largest SOEs.



Sources: National authorities; and IMF staff calculations.

3. **The Kyrgyz Republic remains at moderate risk of debt distress, but it is no longer considered a borderline case.** Public and publicly guaranteed external debt is estimated to remain well-below 36 percent of GDP and remittances in present value (PV) terms under baseline conditions over the projection period. Other indicators of debt sustainability also remain below their indicative thresholds and suggest, in particular, limited liquidity risks.

4. **The external PPG debt outlook remains vulnerable to large external shocks, in particular to a falloff in exports, and sizeable depreciation of the exchange rate.** The PV of the debt to GDP plus remittances ratio rises above the relevant indicative thresholds over the medium term under five of the six stress tests (one standard deviation shock to exports, the most severe of these scenarios, and net debt creating flows, U.S. dollar GDP deflator below historical average, a combined shock, and a 30 percent exchange rate shock (see Table 2). The breach of threshold under the export shock is large and protracted (figure AII.1, panel b), and sufficient to assess the country's external risk of debt distress as moderate**.**

5. **While externally financed public investments are necessary to close the country's sizeable infrastructure gap, a massive scaling-up of public investments could undermine debt sustainability**. As indicated by the adverse fiscal scenario in Annex I, under the assumption of: (i) an 0.7 multiplier of public investments (reflecting Kyrgyz's low public investment efficiency) and (ii) a 1 percent increase in the cost of new public borrowing (due to the increased reliance on Chinese loans), a 4 percentage point permanent increase in the public investment to GDP ratio would result in a non-stabilizing external debt path[3]. This

[3] The adverse scenario also assumes a temporary 30 percent drop in the USD nominal exchange rate, which has a direct impact on the external debt to GDP ratio. The assumptions are extreme, but not unrealistic. Given that the baseline scenario of this exercise is the 2014 October WEO forecast, a permanent 4 percentage points public investment to GDP shock corresponds to PIPs running around USD 500 million in the coming years, and gradually

(continued)

finding underlines the risks associated with a debt-financed investment-based growth model in the Kyrgyz Republic and the need for ensuring prioritiziation and sufficient profitability of public investment projects.

PUBLIC DSA

6. **The public debt outlook has also improved significantly compared to the previous DSA, mainly driven by the factors affecting external debt.** Public debt (external plus domestic) is expected to reach 62.1 percent of GDP in 2016, a 3 percentage points drop compared to 2015. Total public debt is expected to be manageable in the medium and long term, but remains highly sensitive to shocks that reduce real GDP growth or failure to reduce the primary deficit over the medium term. Liquidity risks associated with the servicing of public debt are expected to increase in the years ahead and reach 30 percent of revenues by 3036. This is due to the rising share of domestic debt in total public debt, which is serviced at higher domestic interest rates. Rising liquidity risks underline the importance of continued fiscal consolidation.

Comparison of Debt Ratio

	2016	2017	2018	2019	2020	Long Term (2025)
PPGE debt to GDP ratio						
Current DSA	60.7	63.0	64.4	63.1	61.2	49.0
Previous DSA (Second Review)	70.2	69.6	67.0	64.8	61.4	47.5
Public debt to GDP ratio						
Current DSA	62.1	64.2	65.5	64.2	62.2	56.9
Previous DSA (Second Review)	72.0	71.2	68.5	66.1	62.6	57.7

Sources: Authorities data and IMF staff calculations.

CONCLUSION

7. **The authorities need to remain cautious when contracting and guaranteeing new debt, and should resume fiscal consolidation.** In 2017, the primary fiscal deficit is expected to be 2.5 percentage points higher than the debt-stabilizing level, resulting in an increase in the public debt ratio. While necessary to fill the large infrastructure gap, externally financed public investments, could undermine debt sustainability. In this context, further efforts are needed to strengthen public debt and public investment management, in order to ensure that potential gains from externally financed public investment projects are fully realized.

increase afterwards. Nonetheless, the limited absorption capacity of the Kyrgyz economy could make such significant scale-up of public investment difficult.

Table 1. Kyrgyz Republic: External Debt Sustainability Framework, Baseline Scenario, 2016–36[1/]

(In percent of GDP; unless otherwise indicated)

	Actual											Historical 6/	Standard 6/	Projections									
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Average	Deviation	2016	2017	2018	2019	2020	2021	2016-2021 Average	2026	2036	2022-2036 Average
External debt (nominal) 1/	78.5	66.3	90.9	73.6	89.9	93.2	76.9	80.2	72.9	80.5	94.5			92.6	91.8	90.9	88.9	87.3	85.4		70.4	50.0	
of which: public and publicly guaranteed (PPG)	78.5	66.3	51.7	44.5	54.2	55.9	45.6	46.3	43.7	50.6	63.6			60.7	63.0	64.4	63.1	61.2	59.4		46.0	31.9	
Change in external debt	...	-12.3	24.7	-17.3	16.3	3.3	-16.3	3.3	-7.3	7.6	14.1			-1.9	-0.9	-0.8	-2.1	-1.5	-2.0		-3.9	-1.1	
Identified net debt-creating flows	...	-14.4	-17.3	-17.1	2.2	-9.2	-29.2	-12.9	-15.4	11.6	4.5			-0.4	4.4	3.9	-0.4	0.2	0.9		-2.6	-1.0	
Non-interest current account deficit	-5.3	1.8	4.4	13.8	-1.8	1.4	2.3	-4.5	0.2	14.9	10.0	4.3	6.5	7.8	12.4	12.5	10.1	9.5	9.1		4.9	4.8	5.1
Deficit in balance of goods and services	14.0	27.1	31.4	38.5	21.0	24.8	21.9	24.9	26.5	42.0	31.1			32.0	36.0	36.4	32.9	30.9	30.4		24.3	20.8	
Exports	42.8	52.3	53.1	54.0	49.8	50.6	50.5	58.0	57.7	45.3	39.3			40.5	41.6	41.9	44.9	46.6	46.4		49.4	46.9	
Imports	56.8	79.4	84.5	92.5	70.8	75.4	72.4	82.9	84.2	87.4	70.4			72.5	77.6	78.3	77.7	77.6	76.9		73.8	67.7	
Net current transfers (negative = inflow)	-21.3	-26.3	-27.7	-29.7	-25.8	-28.9	-29.6	-31.2	-31.1	-30.2	-23.9	-28.4	2.4	-26.6	-26.0	-26.2	-25.2	-23.8	-23.7		-21.8	-17.9	-20.6
of which: official	-1.9	-1.0	-1.7	-1.9	-4.2	-1.6	-1.3	-1.0	-1.7	-2.8	-1.5			-1.4	-0.7	-1.0	-0.6	0.0	0.0		0.0	0.0	
Other current account flows (negative = net inflow)	2.1	1.0	0.7	5.0	2.9	5.6	10.0	1.9	4.8	3.1	2.8			2.3	2.4	2.4	2.4	2.4	2.4		2.3	1.9	
Net FDI (negative = inflow)	-1.7	-6.4	-5.5	-8.0	-4.0	-9.1	-11.2	-4.4	-8.5	-3.1	-14.9	-7.5	3.6	-8.1	-7.2	-7.3	-7.3	-7.2	-7.1		-5.8	-5.6	-5.9
Endogenous debt dynamics 2/	...	-9.7	-16.3	-22.9	8.1	-1.5	-20.3	-4.0	-7.0	-0.2	9.5			-0.1	-0.8	-1.2	-3.2	-2.2	-1.2		-1.6	-0.3	
Contribution from nominal interest rate	...	0.7	0.6	0.5	1.0	0.8	0.7	0.7	1.0	1.1	1.0			2.4	1.2	1.3	1.9	2.2	2.4		2.4	2.1	
Contribution from real GDP growth	...	-2.1	-4.2	-5.1	-2.3	0.4	-4.3	0.6	-7.9	-2.9	-3.1			-2.6	-2.0	-2.5	-5.1	-4.4	-3.6		-4.0	-2.4	
Contribution from price and exchange rate changes	...	-8.3	-12.7	-18.4	9.4	-2.7	-16.6	-5.4	-0.1	1.6	11.5			...	...	...	...	...	...		...	...	
Residual (3-4) 3/	...	2.1	42.0	-0.2	14.1	12.5	12.9	16.2	8.0	-4.0	9.6			-1.5	-5.3	-4.7	-1.6	-1.7	-2.9		-1.3	0.0	
of which: exceptional financing	...	-0.3	0.0	0.0	-0.1	-0.1	0.0	0.0	0.0	0.0	0.0			-0.5	-0.4	-0.4	-0.4	-0.4	-0.4		0.0	0.0	
PV of external debt 4/	...	...	...	...	...	...	...	...	...	...	71.7			71.3	69.8	68.5	66.9	66.5	65.7		55.8	39.4	
In percent of exports	...	...	...	...	...	...	...	...	...	...	182.3			176.1	168.0	163.4	149.1	142.7	141.4		113.0	84.2	
PV of PPG external debt	...	...	...	...	...	...	...	...	...	...	40.7			39.4	41.0	41.9	41.2	40.4	39.7		31.5	21.4	
In percent of exports	...	...	...	...	...	...	...	...	...	...	103.6			97.3	98.7	100.0	91.8	86.7	85.4		63.7	45.7	
In percent of government revenues	...	...	...	...	...	...	...	...	...	...	121.6			117.0	126.7	128.0	123.4	119.0	115.9		95.5	72.5	
Debt service-to-exports ratio (in percent)	11.9	5.7	11.3	14.4	29.9	18.7	9.4	11.1	17.7	15.1	26.5			24.0	19.5	18.3	17.5	19.0	20.7		22.6	17.1	
PPG debt service-to-exports ratio (in percent)	10.7	4.7	3.4	2.7	3.6	3.7	3.1	3.8	6.8	3.5	4.9			5.4	5.5	6.1	5.9	5.7	6.0		6.3	6.0	
PPG debt service-to-revenue ratio (in percent)	18.9	9.3	6.3	5.2	6.5	6.7	5.3	6.9	12.3	4.7	5.7			6.5	7.1	7.8	8.0	7.9	8.1		9.4	9.5	
Total gross financing need (Billions of U.S. dollars)	...	...	...	...	0.4	0.1	-0.2	-0.1	0.2	1.4	0.4			0.6	0.9	0.9	0.8	0.9	1.0		1.1	1.5	
Non-interest current account deficit that stabilizes debt ratio	...	14.0	-20.2	31.1	-18.1	-1.9	18.6	-7.7	7.5	7.4	-4.1			9.7	13.3	13.3	12.2	11.1	11.1		8.8	5.9	
Key macroeconomic assumptions																							
Real GDP growth (in percent)	-0.2	3.1	8.5	7.6	2.9	-0.5	6.0	-0.9	10.9	4.0	3.5	4.5	3.8	2.6	2.3	2.9	5.9	5.3	4.3	3.9	5.8	5.1	5.0
GDP deflator in US dollar terms (change in percent)	11.3	11.8	23.7	25.3	-11.3	3.1	21.7	7.5	0.1	-2.1	-12.5	6.7	13.8	-5.5	1.0	1.8	0.7	0.8	0.8	-0.1	1.0	1.0	1.0
Effective interest rate (percent) 5/	1.8	1.0	1.2	0.8	1.2	0.9	0.9	1.0	1.3	1.5	1.2	1.1	0.2	2.5	1.4	1.5	2.2	2.7	2.9	2.2	3.5	4.4	3.8
Growth of exports of G&S (US dollar terms, in percent)	2.9	40.9	36.2	37.0	-15.8	4.3	28.5	22.6	10.3	-20.0	-21.5	12.3	24.5	-0.1	6.0	5.6	14.3	10.3	4.7	6.8	7.7	5.4	6.0
Growth of imports of G&S (US dollar terms, in percent)	23.9	61.3	42.8	47.5	-30.1	9.2	23.8	22.2	12.6	5.7	-27.1	16.8	29.8	-0.1	10.4	5.6	6.0	5.9	4.2	5.4	5.2	5.2	5.1
Grant element of new public sector borrowing (in percent)		...	...	...	...	...	...	...	...	...	...	...	...	37.5	40.5	45.3	43.6	41.4	39.4	41.3	36.3	23.8	31.6
Government revenues (excluding grants, in percent of GDP)	24.3	26.3	28.6	27.9	27.7	28.4	29.6	32.2	32.0	32.9	33.5			33.6	32.4	32.7	33.4	34.0	34.2		33.0	29.5	32.0
Aid flows (in Billions of US dollars) 7/	0.1	0.1	0.1	0.1	0.3	0.3	0.4	0.3	0.3	0.3	0.2			0.4	0.4	0.4	0.3	0.2	0.1		0.2	0.3	
of which: Grants	0.0	0.0	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.1			0.3	0.3	0.2	0.1	0.1	0.1		0.1	0.1	
of which: Concessional loans	0.1	0.1	0.1	0.0	0.1	0.2	0.2	0.1	0.1	0.1	0.1			0.1	0.2	0.3	0.2	0.1	0.1		0.1	0.2	
Grant-equivalent financing (in percent of GDP) 8/	...	...	...	...	...	...	...	...	...	...	...			6.8	6.4	5.0	3.8	2.3	2.0		1.6	1.2	1.5
Grant-equivalent financing (in percent of external financing) 8/	...	...	...	...	...	...	...	...	...	...	...			62.9	63.2	63.6	59.1	56.5	55.8		51.5	32.3	44.5
Memorandum items:																							
Nominal GDP (Billions of US dollars)	2.5	2.8	3.8	5.1	4.7	4.8	6.2	6.6	7.3	7.5	6.8			6.6	6.8	7.1	7.6	8.0	8.4		11.2	20.1	
Nominal dollar GDP growth	...	15.3	34.2	34.8	-8.8	2.6	29.0	6.6	11.0	1.8	-9.5			-3.0	3.3	4.7	6.7	6.1	5.2	3.8	6.8	6.1	6.0
PV of PPG external debt (in Billions of US dollars)											2.31			2.5	2.8	2.9	3.1	3.2	3.3		3.5	4.2	
(PVt-PVt-1)/GDPt-1 (in percent)														3.5	3.4	2.4	2.0	1.7	1.3	2.4	0.2	0.9	0.4
Gross workers' remittances (Billions of US dollars)	0.5	0.7	1.0	1.4	1.0	1.3	1.8	2.0	2.2	2.0	1.5			1.7	1.7	1.8	1.9	1.9	2.0		2.4	3.6	
PV of PPG external debt (in percent of GDP + remittances)									...	...	33.2			31.4	32.7	33.5	33.0	32.7	32.1		25.9	18.2	
PV of PPG external debt (in percent of exports + remittances)									...	...	65.9			60.0	61.3	62.4	59.3	57.4	56.6		44.2	33.1	
Debt service of PPG external debt (in percent of exports + remittances)									...	...	3.1			3.3	3.4	3.8	3.8	3.8	4.0		4.4	4.3	

Sources: Country authorities; and staff estimates and projections.

1/ Includes both public and private sector external debt.

2/ Derived as [r - g - ρ(1+g)]/(1+g+ρ+gρ) times previous period debt ratio, with r = nominal interest rate; g = real GDP growth rate, and ρ = growth rate of GDP deflator in U.S. dollar terms.

3/ Includes exceptional financing (i.e., changes in arrears and debt relief); changes in gross foreign assets; and valuation adjustments. For projections also includes contribution from price and exchange rate changes.

4/ Assumes that PV of private sector debt is equivalent to its face value.

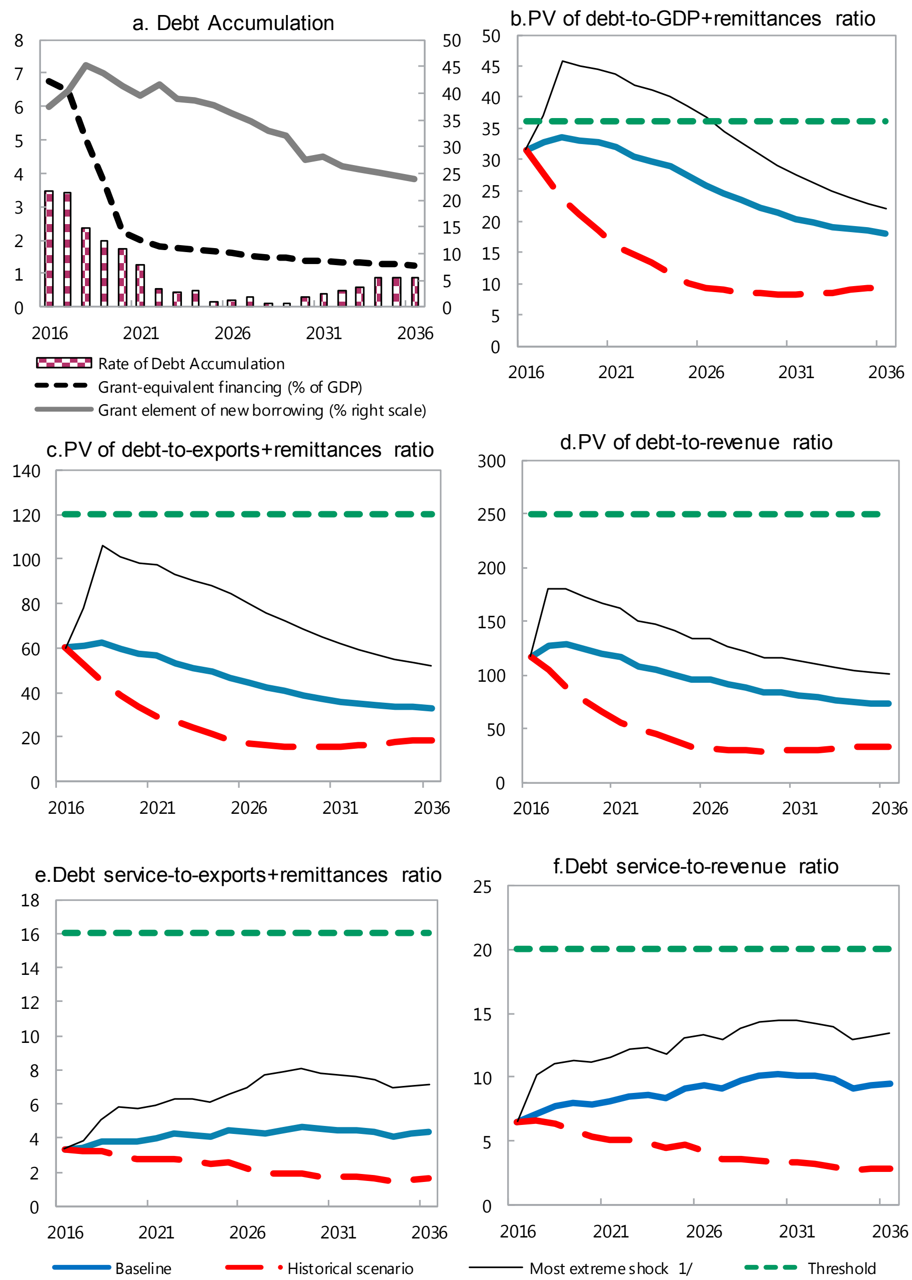
5/ Current-year interest payments divided by previous period debt stock.

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

7/ Defined as grants, concessional loans, and debt relief.

8/ Grant-equivalent financing includes grants provided directly to the government and through new borrowing (difference between the face value and the PV of new debt).

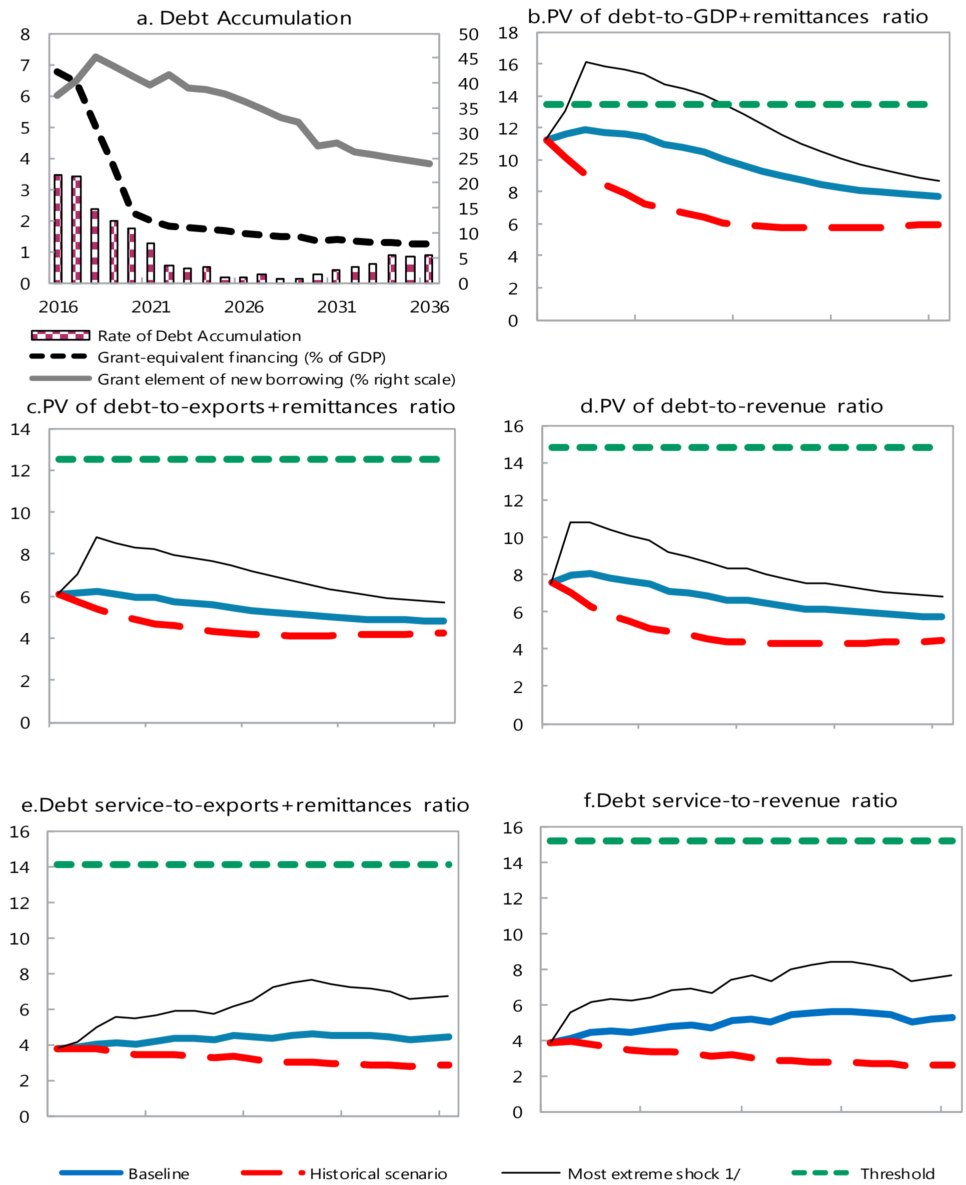
Figure 1. Kyrgyz Republic: Indicators of Public and Publicly Guaranteed External Debt Under Alternative Scenarios, 2016–36 /1



Sources: Country authorities; and staff estimates and projections.

1/ The most extreme stress test is the test that yields the highest ratio on or before 2026. In figure b. it corresponds to a Exports shock; in c. to a Exports shock; in d. to a One-time depreciation shock; in e. to a Exports shock and in figure f. to a One-time depreciation shock

Figure 2. Kyrgyz Republic: Probability of Debt Distress of Public and Publicly Guaranteed External Debt Under Alternative Scenarios, 2016–36 /1



Sources: Country authorities; and staff estimates and projections.

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Table 2. Kyrgyz Republic: Indicators of Public and Publicly-Guaranteed External Debt Under Alternative Scenarios, 2016–36[1/]

	Projections							
	2016	2017	2018	2019	2020	2021	**2026**	2036
PV of debt-to-GDP+remittances ratio								
Baseline	31.4	32.72	33.47	33.05	32.66	32.07	**25.9**	18.2
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2016-2036 1/	31	28	24	21	19	16	**9**	9
A2. New public sector loans on less favorable terms in 2016-2036 2	31	33.8	35.3	35.8	35.8	35.7	**32**	31
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2017-2018	31.4	33.0	33.9	33.5	33.1	32.5	**26.1**	18.2
B2. Export value growth at historical average minus one standard deviation in 2017-2018 3/	31.4	37.1	45.6	45.0	44.4	43.7	**36.6**	22.0
B3. US dollar GDP deflator at historical average minus one standard deviation in 2017-2018	31.4	34.8	37.8	37.3	36.9	36.2	**29.2**	20.5
B4. Net non-debt creating flows at historical average minus one standard deviation in 2017-2018 4/	31.4	34.7	37.4	36.9	36.4	35.8	**29.2**	19.2
B5. Combination of B1-B4 using one-half standard deviation shocks	31.4	34.3	39.2	38.8	38.3	37.7	**31.0**	20.0
B6. One-time 30 percent nominal depreciation relative to the baseline in 2017 5/	31.4	42.7	43.2	42.7	42.3	41.5	**33.5**	23.7
PV of debt-to-exports+remittances ratio								
Baseline	60	61	62	59	57	57	**44**	33
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2016-2036 1/	60	52	45	39	34	29	**17**	19
A2. New public sector loans on less favorable terms in 2016-2036 2	60	63	66	64	63	63	**55**	57
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2017-2018	60	61	62	58	56	56	**43**	32
B2. Export value growth at historical average minus one standard deviation in 2017-2018 3/	60	78	106	101	98	97	**80**	52
B3. US dollar GDP deflator at historical average minus one standard deviation in 2017-2018	60	61	62	58	56	56	**43**	32
B4. Net non-debt creating flows at historical average minus one standard deviation in 2017-2018 4/	60	65	70	66	64	63	**50**	35
B5. Combination of B1-B4 using one-half standard deviation shocks	60	66	76	73	70	69	**56**	38
B6. One-time 30 percent nominal depreciation relative to the baseline in 2017 5/	60	61	62	58	56	56	**43**	32
PV of debt-to-revenue ratio								
Baseline	117	127	128	123	119	116	**95**	72
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2016-2036 1/	117	105	88	76	65	55	**31**	33
A2. New public sector loans on less favorable terms in 2016-2036 2	117	131	135	134	131	129	**118**	125
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2017-2018	117	128	131	126	121	118	**97**	73
B2. Export value growth at historical average minus one standard deviation in 2017-2018 3/	117	144	175	168	162	158	**135**	88
B3. US dollar GDP deflator at historical average minus one standard deviation in 2017-2018	117	137	150	145	139	136	**111**	84
B4. Net non-debt creating flows at historical average minus one standard deviation in 2017-2018 4/	117	134	143	138	133	129	**108**	76
B5. Combination of B1-B4 using one-half standard deviation shocks	117	134	152	147	141	138	**116**	81
B6. One-time 30 percent nominal depreciation relative to the baseline in 2017 5/	117	180	179	173	167	162	**133**	100

Table 2. Kyrgyz Republic: Sensitivity Analysis for Key Indicators of Public and Publicly-Guaranteed External Debt, 2016–36 (continued)[1/]

				Debt service-to-exports+remittances ratio				
Baseline	3	3	4	4	4	4	**4**	4
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2016-2036 1/	3	3	3	3	3	3	**2**	2
A2. New public sector loans on less favorable terms in 2016-2036 2	3	3	4	4	4	4	**5**	5
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2017-2018	3	3	4	4	4	4	**4**	4
B2. Export value growth at historical average minus one standard deviation in 2017-2018 3/	3	4	5	6	6	6	**7**	7
B3. US dollar GDP deflator at historical average minus one standard deviation in 2017-2018	3	3	4	4	4	4	**4**	4
B4. Net non-debt creating flows at historical average minus one standard deviation in 2017-2018 4/	3	3	4	4	4	4	**5**	5
B5. Combination of B1-B4 using one-half standard deviation shocks	3	4	4	4	4	5	**5**	5
B6. One-time 30 percent nominal depreciation relative to the baseline in 2017 5/	3	3	4	4	4	4	**4**	4
				Debt service-to-revenue ratio				
Baseline	7	7	8	8	8	8	**9**	9
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2016-2036 1/	7	7	6	6	5	5	**4**	3
A2. New public sector loans on less favorable terms in 2016-2036 2	7	7	8	8	8	9	**10**	10
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2017-2018	7	7	8	8	8	8	**10**	10
B2. Export value growth at historical average minus one standard deviation in 2017-2018 3/	7	7	8	10	9	10	**12**	12
B3. US dollar GDP deflator at historical average minus one standard deviation in 2017-2018	7	8	9	9	9	10	**11**	11
B4. Net non-debt creating flows at historical average minus one standard deviation in 2017-2018 4/	7	7	8	9	8	9	**10**	10
B5. Combination of B1-B4 using one-half standard deviation shocks	7	7	8	9	9	9	**11**	11
B6. One-time 30 percent nominal depreciation relative to the baseline in 2017 5/	7	10	11	11	11	12	**13**	13
Memorandum item:								
Grant element assumed on residual financing (i.e., financing required above baseline) 6/	22	22	22	22	22	22	**22**	22

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 assu 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 3. Kyrgyz Republic: Public Sector Debt Sustainability Framework, Baseline Scenario, 2013–36

(In percent of GDP; unless otherwise indicated)

	Actual					Estimate	Projections								
	2013	2014	2015	Average 5/	Standard Deviation 5/	2016	2017	2018	2019	2020	2021	2016-21 Average	2026	2036	2022-36 Average
Public sector debt 1/	46.1	52.3	65.0			62.1	64.2	65.5	64.2	62.2	60.3		55.2	46.5	
of which: foreign-currency denominated	43.7	50.6	63.6			60.7	63.0	64.4	63.1	61.2	59.4		46.0	31.9	
Change in public sector debt	-2.9	6.2	12.7			-2.9	2.1	1.3	-1.3	-2.0	-2.0		-1.6	-0.6	
Identified debt-creating flows	-1.0	6.2	13.3			-0.3	3.1	1.4	-1.5	-2.5	-1.9		-1.3	-0.6	
Primary deficit	2.7	2.8	2.3	3.0	2.0	6.8	4.9	2.9	2.1	0.7	0.7	3.0	1.5	1.3	1.5
Revenue and grants	34.4	35.3	35.6			38.0	36.3	35.4	35.1	35.0	35.2		33.7	30.0	
of which: grants	2.4	2.4	2.1			4.4	3.9	2.6	1.8	1.0	1.0		0.7	0.4	
Primary (noninterest) expenditure	37.2	38.2	37.8			44.8	41.2	38.2	37.2	35.7	35.9		35.2	31.3	
Automatic debt dynamics	-3.8	3.3	11.0			-6.6	-1.4	-1.1	-3.3	-2.8	-2.2		-2.8	-1.9	
Contribution from interest rate/growth differential	-5.3	-2.2	-1.7			-1.6	-1.3	-1.8	-4.0	-3.5	-2.8		-3.3	-1.6	
of which: contribution from average real interest rate	-0.5	-0.4	0.1			0.0	0.1	0.0	-0.3	-0.3	-0.2		-0.1	0.7	
of which: contribution from real GDP growth	-4.8	-1.8	-1.8			-1.7	-1.4	-1.8	-3.7	-3.2	-2.6		-3.1	-2.3	
Contribution from real exchange rate depreciation	1.6	5.5	12.7			-5.0	-0.1	0.7	0.7	0.7	0.6		...	...	
Other identified debt-creating flows	0.0	0.0	0.0			-0.5	-0.4	-0.4	-0.4	-0.4	-0.4		0.0	0.0	
Privatization receipts (negative)	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Recognition of implicit or contingent liabilities	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Debt relief (HIPC and other)	0.0	0.0	0.0			-0.5	-0.4	-0.4	-0.4	-0.4	-0.4		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	-1.8	0.0	-0.6			-2.7	-0.9	0.0	0.2	0.6	-0.1		-0.3	-0.1	
Other Sustainability Indicators															
PV of public sector debt	...	1.7	42.1			40.7	42.3	43.1	42.2	41.4	40.6		40.7	35.9	
of which: foreign-currency denominated	...	0.0	40.7			39.4	41.0	41.9	41.2	40.4	39.7		31.5	21.4	
of which: external	...	...	40.7			39.4	41.0	41.9	41.2	40.4	39.7		31.5	21.4	
PV of contingent liabilities (not included in public sector debt)	...	...	...			...	...	...	...	...	...		...	...	
Gross financing need 2/	7.7	6.0	5.2			10.1	8.3	6.3	5.4	3.9	3.9		9.4	5.2	
PV of public sector debt-to-revenue and grants ratio (in percent)	...	4.9	118.4			107.1	116.5	121.7	120.3	118.3	115.3		120.7	119.9	
PV of public sector debt-to-revenue ratio (in percent)	...	5.3	125.8			121.0	130.5	131.6	126.6	121.9	118.6		123.4	121.6	
of which: external 3/	...	...	121.6			117.0	126.7	128.0	123.4	119.0	115.9		95.5	72.5	
Debt service-to-revenue and grants ratio (in percent) 4/	11.6	5.3	6.0			6.9	7.6	8.1	7.8	7.9	8.0		15.0	17.8	
Debt service-to-revenue ratio (in percent) 4/	12.5	5.7	6.4			7.8	8.5	8.8	8.2	8.2	8.3		15.3	18.1	
Primary deficit that stabilizes the debt-to-GDP ratio	5.6	-3.4	-10.4			9.7	2.8	1.5	3.5	2.7	2.6		3.2	2.0	
Key macroeconomic and fiscal assumptions															
Real GDP growth (in percent)	10.9	4.0	3.5	4.5	3.8	2.6	2.3	2.9	5.9	5.3	4.3	3.9	5.8	5.1	5.0
Average nominal interest rate on forex debt (in percent)	1.2	1.3	1.3	1.1	0.2	1.3	1.4	1.3	1.4	1.4	1.4	1.4	1.6	2.2	1.8
Average real interest rate on domestic debt (in percent)	17.1	5.6	13.9	3.0	9.0	28.5	29.5	23.6	2.9	2.1	2.1	14.8	0.0	0.0	0.0
Real exchange rate depreciation (in percent, + indicates depreciation	3.8	13.3	26.1	-0.9	14.2	-8.1	...	...	...	...	...	...	...	...	...
Inflation rate (GDP deflator, in percent)	3.2	8.4	3.8	10.9	7.2	2.3	5.2	3.7	3.8	3.8	3.9	3.8	4.0	4.0	4.0
Growth of real primary spending (deflated by GDP deflator, in percer	5.0	6.8	2.6	1.5	2.5	21.7	-6.0	-4.5	3.2	0.9	4.8	3.3	-0.3	4.7	4.0
Grant element of new external borrowing (in percent)	...	...	0.0	0.0	...	37.5	40.5	45.3	43.6	41.4	39.4	41.3	36.3	23.8	...

Sources: Country authorities; and staff estimates and projections.

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

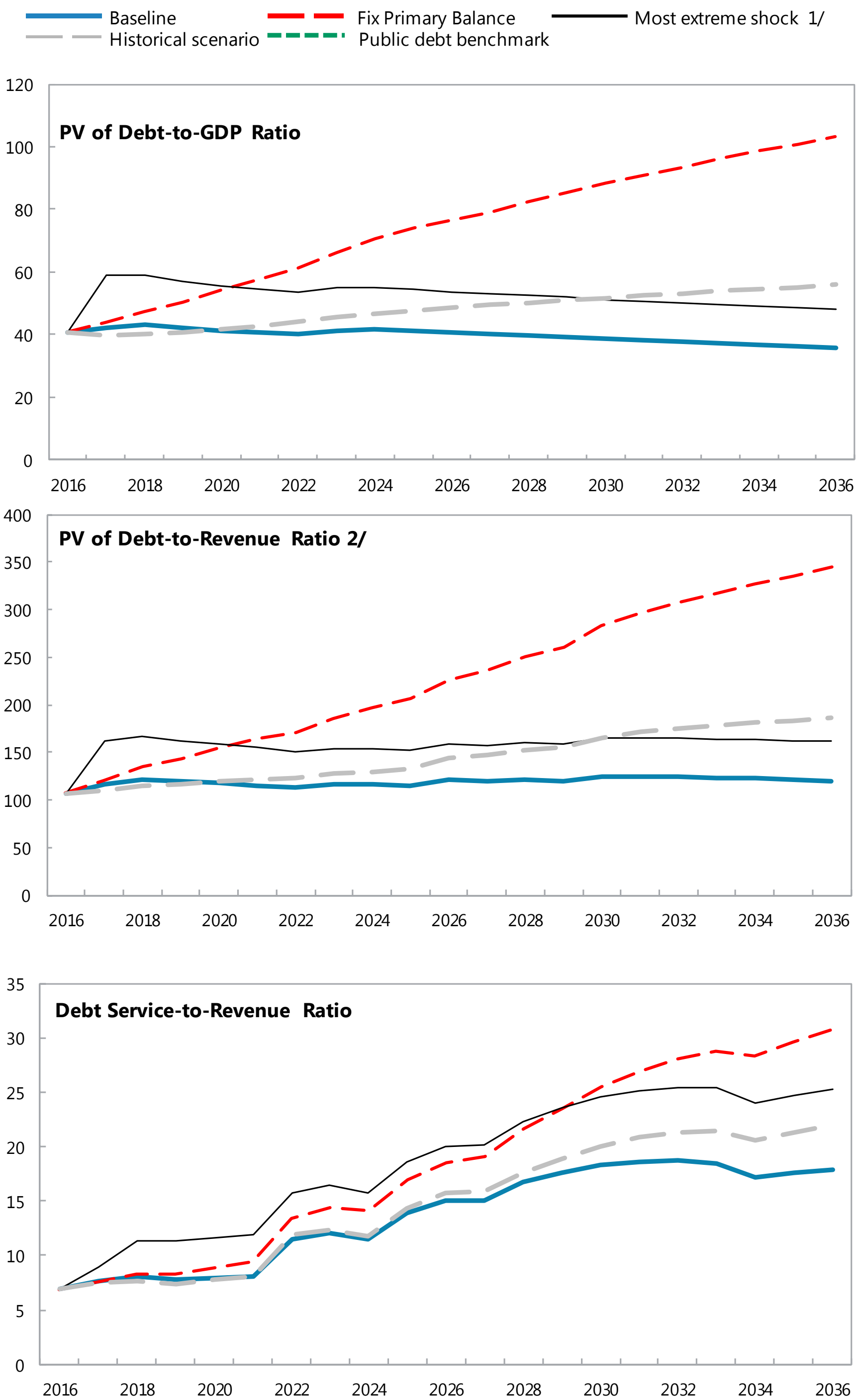
2/ Gross financing need is defined as the primary deficit plus debt service plus the stock of short-term debt at the end of the last period.

3/ Revenues excluding grants.

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

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

Figure 3. Kyrgyz Republic: Indicators of Public Debt Under Alternative Scenarios, 2016-2036 1/



Sources: Country authorities; and staff estimates and projections.

1/ The most extreme stress test is the test that yields the highest ratio on or before 2026.

2/ Revenues are defined inclusive of grants.

Table 4. Kyrgyz Republic: Sensitivity Analysis for Key Indicators of Public Debt 2016-2036

	Projections							
	2016	2017	2018	2019	2020	2021	2026	2036
PV of Debt-to-GDP Ratio								
Baseline	41	42	43	42	41	41	41	36
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	41	40	40	41	42	43	49	56
A2. Primary balance is unchanged from 2016	41	44	48	50	54	58	76	103
A3. Permanently lower GDP growth 1/	41	43	44	44	45	45	56	82
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2017-20	41	43	46	46	46	46	51	52
B2. Primary balance is at historical average minus one standard deviations in 2017-201	41	42	45	44	43	42	42	37
B3. Combination of B1-B2 using one half standard deviation shocks	41	41	43	42	41	41	41	36
B4. One-time 30 percent real depreciation in 2017	41	59	59	57	55	54	54	48
B5. 10 percent of GDP increase in other debt-creating flows in 2017	41	50	51	50	49	48	48	41
PV of Debt-to-Revenue Ratio 2/								
Baseline	107	117	122	120	118	115	121	120
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	107	110	114	116	120	122	144	186
A2. Primary balance is unchanged from 2016	107	121	135	143	154	164	227	345
A3. Permanently lower GDP growth 1/	107	118	125	127	128	129	165	273
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2017-20	107	119	130	131	132	131	151	174
B2. Primary balance is at historical average minus one standard deviations in 2017-201	107	117	126	125	123	120	125	123
B3. Combination of B1-B2 using one half standard deviation shocks	107	114	122	120	118	115	120	119
B4. One-time 30 percent real depreciation in 2017	107	162	166	162	158	154	159	161
B5. 10 percent of GDP increase in other debt-creating flows in 2017	107	138	144	142	140	136	141	137
Debt Service-to-Revenue Ratio 2/								
Baseline	7	8	8	8	8	8	15	18
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	7	7	8	7	8	8	16	22
A2. Primary balance is unchanged from 2016	7	8	8	8	9	9	18	31
A3. Permanently lower GDP growth 1/	7	8	8	8	8	9	17	27
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2017-20	7	8	8	8	8	9	16	21
B2. Primary balance is at historical average minus one standard deviations in 2017-201	7	8	8	8	8	8	15	18
B3. Combination of B1-B2 using one half standard deviation shocks	7	8	8	8	8	8	15	18
B4. One-time 30 percent real depreciation in 2017	7	9	11	11	12	12	20	25
B5. 10 percent of GDP increase in other debt-creating flows in 2017	7	8	9	9	9	9	16	19

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.