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KYRGYZ REPUBLIC

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

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Based on this lite update on the debt sustainability analysis (DSA), the outlook for external debt sustainability outlook has remained broadly unchanged since the Article IV Consultation in October 2017. Following a sharp decline in 2016, external public debt is expected to further decline to 54.5 percent of GDP in 2017 and toward 50 percent in the medium term. 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, a deceleration in real GDP growth and a deterioration of the fiscal balance, 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 the Kyrgyz Republic is 3.63, which is an average for the 2014-16 period, maintaining the classification as a medium policy performer.

UNDERLYING ASSUMPTIONS

1. **The current DSA takes into account the revised macroeconomic assumptions compared to the Article IV Consultation.** Based on recent economic developments, economic growth in 2017–18 is now expected to be weaker than at the time of the Article IV Consultation. Due to a pickup in exports and strong remittance inflows, the current account deficit is expected to narrow in the medium term following a temporary widening in 2018. The fiscal balance is projected to improve at a faster rate than anticipated at the time of the Article IV Consultation.

Kyrgyz Republic: Selected Indicators, 2016-2020
(In millions of U.S. dollars)

	2016	2017	2018	2019	2020
Real GDP growth					
Current DSA	3.8	3.2	3.3	4.9	4.6
Previous DSA (2017 Article IV)	3.8	3.7	3.8	4.9	4.5
Overall fiscal balance (percent of GDP) 1/					
Current DSA	-6.9	-5.9	-4.0	-5.3	-3.2
Previous DSA (2017 Article IV)	-6.9	-7.0	-5.2	-6.2	-3.9
Current account balance (percent of GDP)					
Current DSA	-12.1	-10.0	-13.1	-12.2	-11.6
Previous DSA (2017 Article IV)	-9.7	-9.1	-11.4	-11.5	-11.2
PIP Disbursements					
Current DSA	311	368	341	400	258
Previous DSA (2017 Article IV)	311	416	325	400	258

Sources: Kyrgyz authorities and IMF staff estimates.
1/ Including onlending.

EXTERNAL DSA[2]

2. **The debt outlook remains vulnerable to external and domestic shocks.** Driven by the som appreciation, the postponement of some public investment projects by the authorities, and the write-off of Russian debt,[3] external public and publicly guaranteed (PPG) debt is projected to decrease to 54.5 percent of GDP in 2017, down from 63.5 percent in 2015 and 56.6 percent in 2016. However, the postponement of these projects will lead to increasing public investment and thus external PPG-debt is expected to level off

[2] Given the importance of remittances for the Kyrgyz economy (around 27-30 percent of GDP between 2014-16), staff applied the remittance-modified debt indicators in the debt sustainability analysis. The use of this approach is also supported by the following conditions: (i) remittances have been a reliable source of financing over the past few years and are expected to increase further in the medium term, partly driven by the easier movement of labor in the Eurasian Economic Union; (ii) breaches of thresholds before taking account of remittances are not protracted; and (iii) the modified debt burden indicators are significantly lower than the thresholds.

[3] The initial agreement between Russia and the Kyrgyz Republic signed in 2014 consisted of a write-off of a $300 million debt in equal tranches over a 10-year period. $60 million were written off in 2015–16. However, the agreement was revised earlier this year to write off the outstanding $240 million in 2017.

at around 56 percent in 2019, before starting to gradually decline in outer years. Total external debt is expected to decline from 85.4 percent of GDP in 2016 to 79.9 percent in 2017 and around 78 percent in the medium term, well below 85 percent of GDP at the third review.[4]

3. **The Kyrgyz Republic remains at moderate risk of debt distress.** Public and publicly guaranteed (PPG) external debt in present value (PV) terms is estimated to remain below 36 percent of the sum of GDP and remittances and to continuously decline under the baseline scenario 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 decline in exports and non-debt flows as well as combined external shocks.** The ratio of the PV of debt to GDP plus remittances rises above the relevant indicative thresholds over the medium term under four of the six stress tests (one standard deviation shock to exports and net debt creating flows, a combined shock, and a 30 percent exchange rate shock (see Table 2)).[5] The most severe bound test for the debt-to-GDP+remittances ratio is that of a combination shock, which yields a breach of threshold that is large (averaging 25 percent above threshold) and protracted (13 years), and sufficient to assess the country's external risk of debt distress as moderate (Figure 1).

PUBLIC DSA

5. **The public debt outlook has remained broadly unchanged since the Article IV Consultation.** Public debt (external plus domestic) is expected to reach 57.1 percent of GDP in 2017, down from 58.1 percent in 2016, partly driven by the write-off of Russian debt. Total public debt is expected to be manageable in the medium and long term, but remains highly sensitive to shocks to real GDP growth and the exchange rate or to failure to reduce the primary deficit over the medium term. Under the historical and fixed primary balance scenarios, public debt is projected to be on upward path in the long term, suggesting the importance of fiscal consolidation and

Kyrgyz Republic: Comparison of Debt Ratio
(In percent of GDP)

	2016	2017	2018	2019	2020	Long Term (2025)
PPGE debt to GDP ratio						
Current DSA	56.6	54.5	55.8	56.1	54.1	46.8
Previous DSA (2017 Article IV)	56.6	55.2	56.1	56.3	54.4	47.7
Public debt to GDP ratio						
Current DSA	58.1	57.1	58.2	58.4	56.2	50.0
Previous DSA (2017 Article IV)	58.1	57.2	58.6	59.4	58.3	52.9

Sources: Kyrgyz authorities and IMF staff estimates.

[4] This implies that private external debt (for example, debt of commercial banks) would be in the range of 25-29 percent of GDP in the medium term.

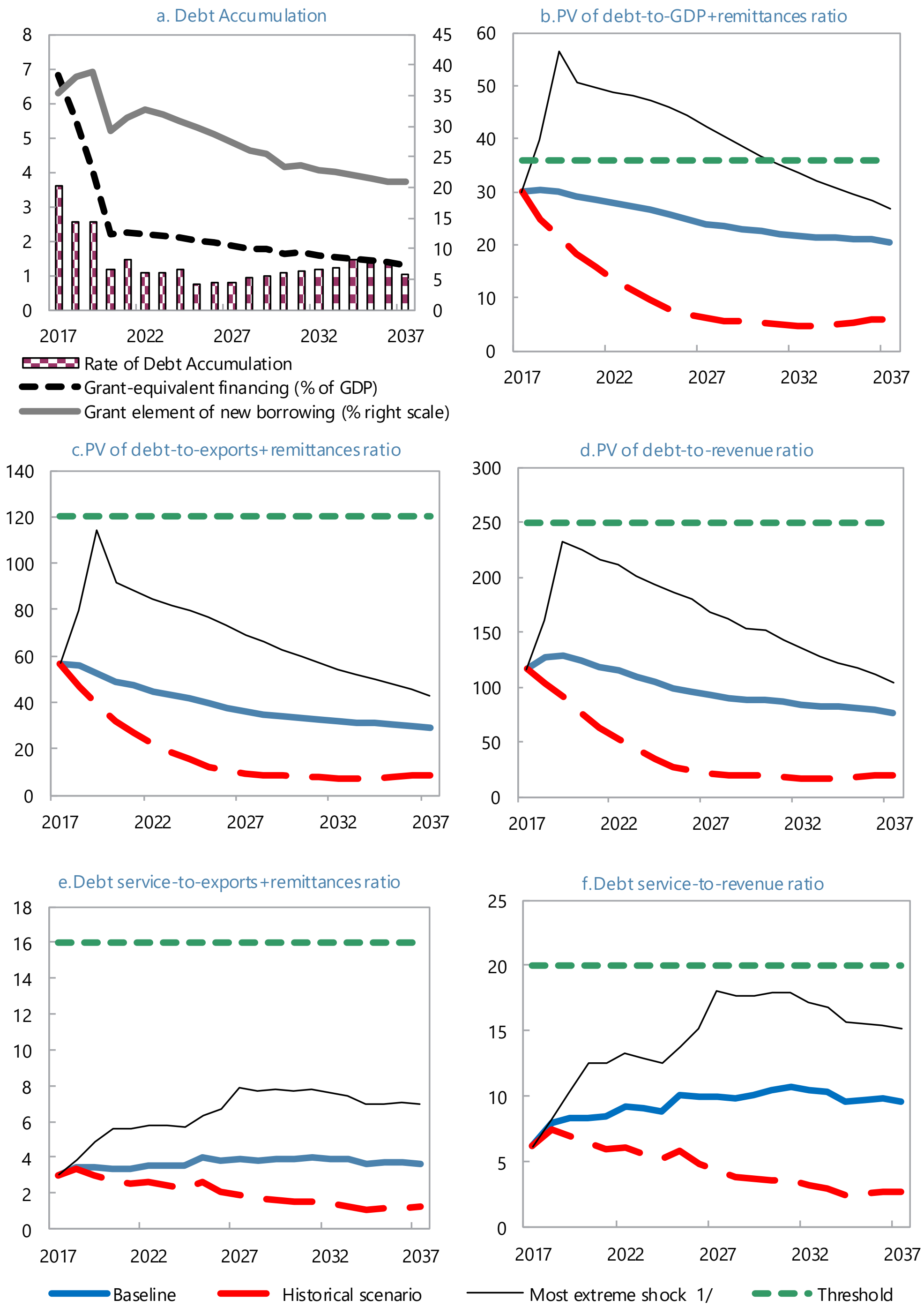
[5] Under these scenarios, exports growth and non-debt creating flows are at historical average minus one standard deviation.

growth-friendly reforms to preserve fiscal sustainability. Liquidity risks associated with public debt are expected to increase in the years ahead, with debt service increasing from around 5 percent toward 15 percent of revenues. 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.

CONCLUSION

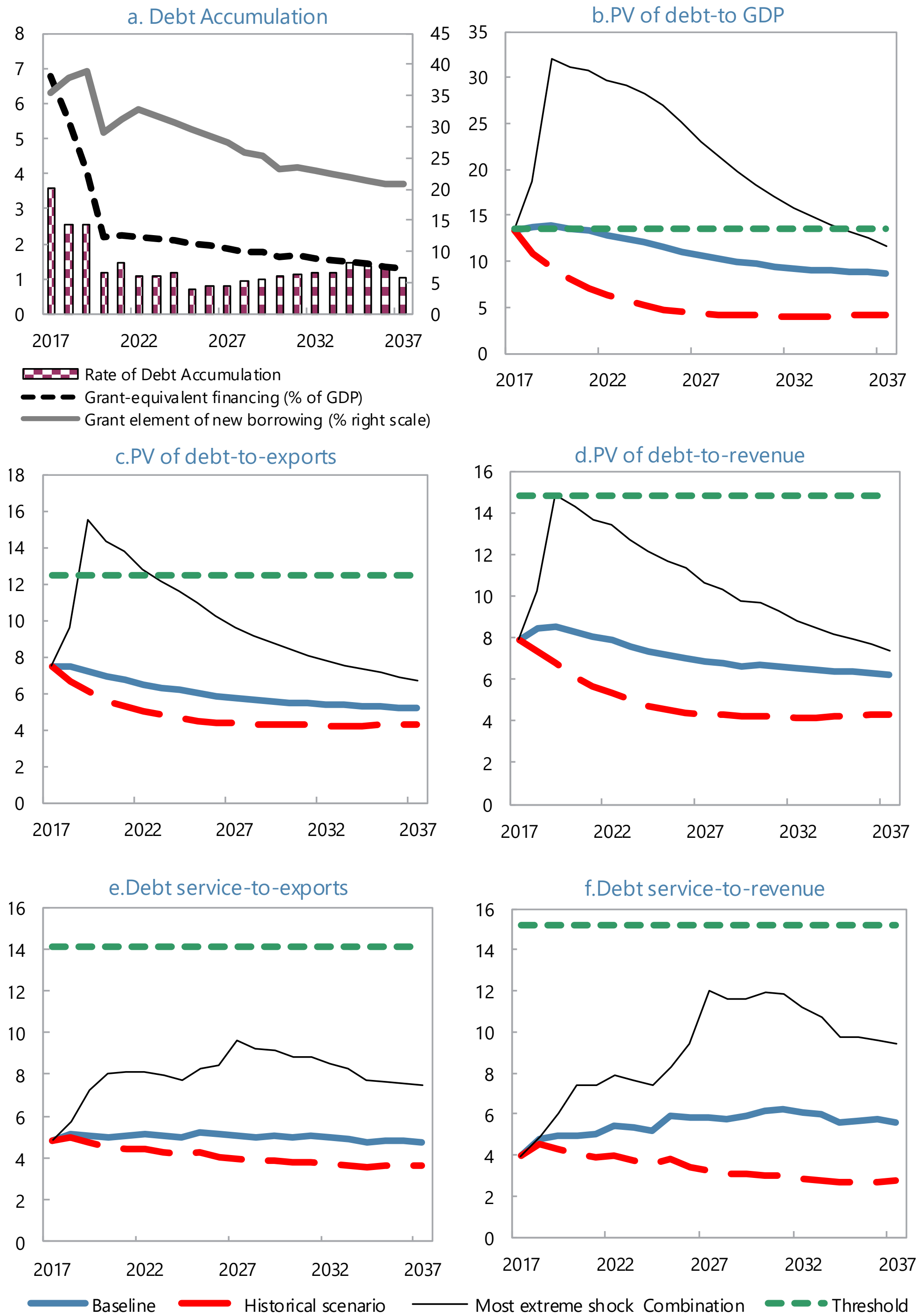
6. The authorities need to remain cautious when contracting and guaranteeing new debt, and should resume fiscal consolidation. In 2018-19, the primary fiscal deficit is expected to exceed the debt-stabilizing level, resulting in an increase in the public debt-to-GDP ratio. While necessary to fill the 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.

Figure 1. Kyrgyz Republic: Indicators of Public and Publicly Guaranteed External Debt Under Alternative Scenarios, 2017-37[1]



Sources: Kyrgyz authorities and IMF staff estimates and projections.
1/ The most extreme stress test is the test that yields the highest ratio on or before 2027. In figure b. it corresponds to a Combination shock; in c. to a Exports shock; in d. to a Combination shock; in e. to a Exports shock and in figure f. to a Combination shock.

Figure 2. Kyrgyz Republic: Probability of Debt Distress of Public and Publicly Guaranteed External Debt Under Alternative Scenarios, 2017-37[1]



Sources: Country authorities; and staff estimates and projections.

1/ The most extreme stress test is the test that yields the highest ratio on or before 2027. In figure b. it corresponds to a Combination shock; in c. to a Exports shock; in d. to a Combination shock; in e. to a Exports shock and in figure f. to a Combination shock.

Figure 3. Kyrgyz Republic: Indicators of Public Debt Under Alternative Scenarios, 2017-37 1/

Sources: Kyrgyz authorities; and staff estimates and projections.
1/ The most extreme stress test is the bound test (see Table 4) that yields the highest ratio on or before 2027.
2/ Revenues are defined inclusive of grants.

Table 1. Kyrgyz Republic: External Debt Sustainability Framework, Baseline Scenario, 2014-37

(In percent of GDP; unless otherwise indicated)

	Actual			Historical 6/	Standard 6/	Projections									
				Average	Deviation							2017-2022			2023-2037
	2014	2015	2016			2017	2018	2019	2020	2021	2022	Average	2027	2037	Average
External debt (nominal) 1/	**80.1**	**94.8**	**85.4**			**79.9**	**79.9**	**80.1**	**80.0**	**80.2**	**78.7**		**69.0**	**53.5**	
of which: public and publicly guaranteed (PPG)	50.5	63.5	56.6			54.5	55.8	56.1	54.1	53.1	51.5		43.2	36.1	
Change in external debt	7.4	14.8	-9.4			-5.5	0.0	0.2	-0.1	0.1	-1.4		-2.3	-1.7	
Identified net debt-creating flows	11.6	10.4	5.2			2.2	4.2	1.1	0.7	0.7	-0.5		-0.9	-0.9	
Non-interest current account deficit	**14.9**	**15.0**	**11.0**	**6.9**	**7.4**	**8.6**	**11.6**	**10.6**	**9.8**	**9.5**	**8.8**		**4.8**	**4.1**	5.1
Deficit in balance of goods and services	42.0	36.4	35.7			37.6	42.6	42.4	42.1	42.8	41.5		36.2	28.2	
Exports	45.3	37.0	37.4			38.1	39.3	42.5	44.6	45.8	48.3		55.8	62.5	
Imports	87.3	73.4	73.1			75.7	81.9	84.9	86.7	88.7	89.8		92.0	90.7	
Net current transfers (negative = inflow)	-30.2	-24.2	-29.1	-28.7	2.3	-32.4	-34.4	-35.1	-35.7	-36.8	-36.5		-33.5	-25.9	-31.0
of which: official	-2.8	-1.5	-1.3			-1.6	-1.5	-0.9	-0.1	0.0	0.0		0.0	0.0	
Other current account flows (negative = net inflow)	3.1	2.9	4.4			3.4	3.3	3.3	3.4	3.5	3.8		2.1	1.8	
Net FDI (negative = inflow)	**-3.1**	**-15.1**	**-8.8**	**-7.8**	**3.7**	**-5.3**	**-6.3**	**-7.4**	**-7.4**	**-7.4**	**-7.4**		**-5.5**	**-5.1**	-5.6
Endogenous debt dynamics 2/	**-0.2**	**10.5**	**3.0**			**-1.1**	**-1.0**	**-2.1**	**-1.8**	**-1.4**	**-1.9**		**-0.2**	**0.2**	
Contribution from nominal interest rate	1.1	1.1	1.1			1.5	1.6	1.6	1.7	1.6	1.8		2.9	2.5	
Contribution from real GDP growth	-2.9	-3.1	-3.7			-2.5	-2.6	-3.7	-3.5	-3.1	-3.7		-3.1	-2.3	
Contribution from price and exchange rate changes	1.6	12.6	5.5			...	...	...	...	...	...		...	...	
Residual (3-4) 3/	**-4.2**	**4.3**	**-14.6**			**-7.7**	**-4.2**	**-0.9**	**-0.8**	**-0.5**	**-0.9**		**-1.4**	**-0.9**	
of which: exceptional financing	0.0	0.0	-0.5			-3.8	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
PV of external debt 4/	...	...	66.3			64.6	64.3	64.3	65.3	66.1	65.2		57.8	43.3	
In percent of exports	...	...	177.2			169.3	163.6	151.5	146.4	144.1	135.0		103.5	69.2	
PV of PPG external debt	**...**	**...**	**37.4**			**39.1**	**40.1**	**40.4**	**39.4**	**39.0**	**38.0**		**32.0**	**25.8**	
In percent of exports	**...**	**...**	**100.0**			**102.6**	**102.2**	**95.0**	**88.4**	**85.1**	**78.5**		**57.2**	**41.3**	
In percent of government revenues	**...**	**...**	**115.1**			**116.2**	**127.7**	**128.9**	**123.9**	**118.8**	**115.9**		**92.4**	**77.7**	
Debt service-to-exports ratio (in percent)	**15.1**	**28.4**	**27.9**			**21.2**	**20.0**	**16.9**	**16.7**	**18.4**	**20.1**		**22.9**	**17.5**	
PPG debt service-to-exports ratio (in percent)	**3.5**	**5.3**	**7.1**			**5.4**	**6.4**	**6.2**	**6.0**	**6.1**	**6.3**		**6.2**	**5.4**	
PPG debt service-to-revenue ratio (in percent)	**4.7**	**5.8**	**8.2**			**6.2**	**8.0**	**8.4**	**8.4**	**8.5**	**9.2**		**10.0**	**10.1**	
Total gross financing need (Billions of U.S. dollars)	1.4	0.7	0.8			0.8	1.0	0.8	0.8	0.9	1.0		1.5	2.2	
Non-interest current account deficit that stabilizes debt ratio	7.5	0.3	20.5			14.1	11.5	10.4	9.9	9.3	10.2		7.1	5.8	
Key macroeconomic assumptions															
Real GDP growth (in percent)	4.0	3.5	3.8	4.7	3.6	3.2	3.3	4.9	4.6	4.0	4.8	4.1	4.6	4.4	4.3
GDP deflator in US dollar terms (change in percent)	-2.1	-13.6	-5.5	4.8	14.4	4.9	-0.2	0.8	0.8	0.7	0.8	1.3	2.0	2.0	1.9
Effective interest rate (percent) 5/	1.5	1.2	1.2	1.1	0.2	1.8	2.1	2.2	2.3	2.1	2.3	2.1	4.3	4.8	4.5
Growth of exports of G&S (US dollar terms, in percent)	-13.1	-26.9	-0.9	7.3	22.7	10.4	6.2	14.4	10.8	7.6	11.4	10.1	8.8	7.9	8.1
Growth of imports of G&S (US dollar terms, in percent)	-3.0	-24.8	-2.3	10.8	26.1	12.1	11.5	9.7	7.7	7.1	7.0	9.2	6.5	6.9	6.4
Grant element of new public sector borrowing (in percent)	...	...	...	...	...	35.5	38.0	38.9	29.2	31.3	32.8	34.3	27.4	20.9	25.1
Government revenues (excluding grants, in percent of GDP)	32.9	33.5	32.5			33.7	31.4	31.3	31.8	32.8	32.7		34.6	33.2	33.6
Aid flows (in Billions of US dollars) 7/	0.3	0.2	0.2			0.4	0.4	0.3	0.1	0.2	0.2		0.2	0.3	
of which: Grants	0.2	0.1	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			0.1	0.1	0.1	0.0	0.1	0.1		0.1	0.1	
Grant-equivalent financing (in percent of GDP) 8/	...	...	...			6.8	5.5	4.0	2.2	2.2	2.2		1.8	1.3	1.7
Grant-equivalent financing (in percent of external financing) 8/	...	...	...			65.5	63.7	56.1	53.5	49.3	50.0		40.9	29.3	36.8
Memorandum items:															
Nominal GDP (Billions of US dollars)	7.5	6.7	6.6			7.1	7.3	7.7	8.2	8.5	9.0		12.1	22.5	
Nominal dollar GDP growth	1.8	-10.6	-1.9			8.2	3.1	5.8	5.4	4.8	5.6	5.5	6.6	6.5	6.3
PV of PPG external debt (in Billions of US dollars)			2.5			2.7	2.9	3.1	3.2	3.3	3.4		3.8	5.8	
(PVt-PVt-1)/GDPt-1 (in percent)						3.6	2.6	2.5	1.2	1.4	1.1	2.1	0.8	1.0	1.1
Gross workers' remittances (Billions of US dollars)	2.0	1.5	1.8			2.2	2.4	2.6	2.9	3.2	3.3		4.1	5.8	
PV of PPG external debt (in percent of GDP + remittances)	...	...	29.3			29.9	30.2	30.1	29.1	28.5	27.8		23.9	20.5	
PV of PPG external debt (in percent of exports + remittances)	...	...	57.4			56.8	55.7	52.7	49.1	47.2	44.8		35.8	29.2	
Debt service of PPG external debt (in percent of exports + remittance	...	...	4.1			3.0	3.5	3.4	3.3	3.4	3.6		3.9	3.8	

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. Kyrgyz Republic: Sensitivity Analysis for Key Indicators of Public and Publicly Guaranteed External Debt, 2017-37[1/] (In percent)

	Projections							
	2017	2018	2019	2020	2021	2022	**2027**	2037
PV of debt-to-GDP+remittances ratio								
Baseline	30	30	30	29	29	28	**24**	21
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2017-2037 1/	30	25	22	18	16	13	**6**	6
A2. New public sector loans on less favorable terms in 2017-2037 2/	30	31	32	31	31	31	**31**	37
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2018-2019	30	30	31	30	29	29	**25**	21
B2. Export value growth at historical average minus one standard deviation in 2018-2019 3/	30	35	45	44	43	42	**37**	24
B3. US dollar GDP deflator at historical average minus one standard deviation in 2018-2019	30	32	34	33	32	32	**27**	24
B4. Net non-debt creating flows at historical average minus one standard deviation in 2018-2019 4/	30	38	46	42	41	40	**35**	24
B5. Combination of B1-B4 using one-half standard deviation shocks	30	40	56	50	50	49	**42**	27
B6. One-time 30 percent nominal depreciation relative to the baseline in 2018 5/	30	38	38	37	36	35	**30**	26
PV of debt-to-exports+remittances ratio								
Baseline	57	56	53	49	47	45	**36**	29
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2017-2037 1/	57	46	39	32	27	22	**9**	9
A2. New public sector loans on less favorable terms in 2017-2037 2/	57	57	55	53	52	50	**47**	53
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2018-2019	57	55	52	48	46	44	**35**	29
B2. Export value growth at historical average minus one standard deviation in 2018-2019 3/	57	72	103	96	92	89	**73**	49
B3. US dollar GDP deflator at historical average minus one standard deviation in 2018-2019	57	55	52	48	46	44	**35**	29
B4. Net non-debt creating flows at historical average minus one standard deviation in 2018-2019 4/	57	74	85	71	68	65	**52**	34
B5. Combination of B1-B4 using one-half standard deviation shocks	57	80	114	91	88	84	**69**	43
B6. One-time 30 percent nominal depreciation relative to the baseline in 2018 5/	57	55	52	48	46	44	**35**	29
PV of debt-to-revenue ratio								
Baseline	116	127	129	124	119	116	**92**	77
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2017-2037 1/	116	103	91	75	62	52	**21**	19
A2. New public sector loans on less favorable terms in 2017-2037 2/	116	130	135	132	130	130	**121**	139
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2018-2019	116	128	135	129	124	121	**96**	80
B2. Export value growth at historical average minus one standard deviation in 2018-2019 3/	116	146	193	187	179	176	**140**	91
B3. US dollar GDP deflator at historical average minus one standard deviation in 2018-2019	116	138	156	150	143	140	**111**	93
B4. Net non-debt creating flows at historical average minus one standard deviation in 2018-2019 4/	116	152	184	178	171	167	**133**	89
B5. Combination of B1-B4 using one-half standard deviation shocks	116	161	232	224	215	211	**169**	104
B6. One-time 30 percent nominal depreciation relative to the baseline in 2018 5/	116	179	181	174	167	163	**129**	108

Table 2. Sensitivity Analysis for Key Indicators of Public and Publicly Guaranteed External Debt, 2017-37[1/] (In percent) (Concluded)

	Projections							
	2017	2018	2019	2020	2021	2022	**2027**	2037
Debt service-to-exports+remittances ratio								
Baseline	3	3	3	3	3	4	**4**	4
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2017-2037 1/	3	3	3	3	3	3	**2**	1
A2. New public sector loans on less favorable terms in 2017-2037 2/	3	3	3	3	4	4	**4**	5
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2018-2019	3	3	3	3	3	4	**4**	4
B2. Export value growth at historical average minus one standard deviation in 2018-2019 3/	3	4	5	6	6	6	**8**	7
B3. US dollar GDP deflator at historical average minus one standard deviation in 2018-2019	3	3	3	3	3	4	**4**	4
B4. Net non-debt creating flows at historical average minus one standard deviation in 2018-2019 4/	3	4	4	4	4	4	**6**	5
B5. Combination of B1-B4 using one-half standard deviation shocks	3	4	5	5	5	5	**7**	6
B6. One-time 30 percent nominal depreciation relative to the baseline in 2018 5/	3	3	3	3	3	4	**4**	4
Debt service-to-revenue ratio								
Baseline	6	8	8	8	8	9	**10**	10
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2017-2037 1/	6	7	7	6	6	6	**4**	3
A2. New public sector loans on less favorable terms in 2017-2037 2/	6	8	8	9	9	10	**10**	13
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2018-2019	6	8	9	9	9	10	**11**	11
B2. Export value growth at historical average minus one standard deviation in 2018-2019 3/	6	8	9	11	11	12	**15**	13
B3. US dollar GDP deflator at historical average minus one standard deviation in 2018-2019	6	9	10	10	10	11	**12**	12
B4. Net non-debt creating flows at historical average minus one standard deviation in 2018-2019 4/	6	8	9	10	11	11	**14**	13
B5. Combination of B1-B4 using one-half standard deviation shocks	6	8	10	13	13	13	**18**	15
B6. One-time 30 percent nominal depreciation relative to the baseline in 2018 5/	6	11	12	12	12	13	**14**	14
Memorandum item:								
Grant element assumed on residual financing (i.e., financing required above baseline) 6/	17	17	17	17	17	17	**17**	17

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 3. Kyrgyz Republic: Public Sector Debt Sustainability Framework, Baseline Scenario, 2014–37

(in percent of GDP; unless otherwise specified)

	Actual					Estimate	Projections								
	2014	2015	2016	Average 5/	Standard Deviation 5/	2017	2018	2019	2020	2021	2022	2017-22 Average	2027	2037	2023-37 Average
Public sector debt 1/	52.3	64.9	58.1			57.1	58.2	58.4	56.2	55.0	53.2		47.9	42.3	
of which: foreign-currency denominated	50.5	63.5	56.6			54.5	55.8	56.1	54.1	53.1	51.5		43.2	36.1	
	1.7	1.4	1.6			2.6	2.4	2.2	2.1	1.9	1.8		4.7	6.2	
Change in public sector debt	6.1	12.6	-6.8			-1.0	1.1	0.1	-2.2	-1.2	-1.8		-1.0	-1.2	
Identified debt-creating flows	6.1	13.2	-2.6			-0.5	1.7	2.1	0.2	0.0	-0.6		-0.6	-0.2	
Primary deficit	2.8	2.1	5.9	5.8	7.5	4.6	2.7	4.1	2.0	1.4	1.2	2.7	0.9	0.6	0.8
Revenue and grants	35.3	35.6	34.7			38.5	35.1	33.4	33.3	34.1	34.0		35.6	34.1	
of which: grants	2.4	2.2	2.2			4.8	3.6	2.0	1.4	1.2	1.1		0.8	0.5	
Primary (noninterest) expenditure	38.2	37.8	40.6			43.2	37.7	37.5	35.3	35.5	35.1		36.6	34.7	
Automatic debt dynamics	3.3	11.0	-8.0			-1.3	-0.9	-2.0	-1.8	-1.4	-1.8		-1.5	-0.8	
Contribution from interest rate/growth differential	-2.2	-1.7	-2.4			-1.6	-1.6	-2.5	-2.4	-2.0	-2.3		-1.5	-0.8	
of which: contribution from average real interest rate	-0.4	0.1	0.0			0.2	0.3	0.2	0.2	0.2	0.2		0.7	1.1	
of which: contribution from real GDP growth	-1.8	-1.8	-2.4			-1.8	-1.8	-2.7	-2.6	-2.2	-2.5		-2.1	-1.8	
Contribution from real exchange rate depreciation	5.4	12.7	-5.6			0.2	0.6	0.5	0.6	0.6	0.6		...	...	
Other identified debt-creating flows	0.0	0.0	-0.5			-3.8	0.0	0.0	0.0	0.0	0.0		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	-0.5			-3.8	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Other (specify, e.g. bank recapitalization)	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Residual, including asset changes	0.0	-0.5	-4.1			-0.6	-0.6	-1.9	-2.4	-1.2	-1.3		-0.4	-1.0	
Other Sustainability Indicators															
PV of public sector debt	...	...	39.0			41.7	42.6	42.6	41.5	40.9	39.7		36.6	32.1	
of which: foreign-currency denominated	...	...	37.4			39.1	40.1	40.4	39.4	39.0	38.0		32.0	25.8	
of which: external	...	...	37.4			39.1	40.1	40.4	39.4	39.0	38.0		32.0	25.8	
PV of contingent liabilities (not included in public sector debt)	...	...	...			...	...	...	...	...	...		...	...	
Gross financing need 2/	6.0	5.1	9.7			8.5	6.9	8.2	6.2	5.4	5.3		7.2	4.9	
PV of public sector debt-to-revenue and grants ratio (in percent)	...	...	112			108	121	127	125	120	117		103	94	
PV of public sector debt-to-revenue ratio (in percent)	...	...	120			124	135	136	130	124	121		105	95	
of which: external 3/	...	...	115			116	127	129	124	119	116		92	77	
Debt service-to-revenue and grants ratio (in percent) 4/	5.3	6.0	9.2			8.2	8.6	9.2	9.6	9.3	9.9		14.1	15.5	
Debt service-to-revenue ratio (in percent) 4/	5.7	6.4	9.8			9.3	9.6	9.8	10.0	9.7	10.3		14.5	15.7	
Primary deficit that stabilizes the debt-to-GDP ratio	-3.2	-10.5	12.6			5.7	1.5	3.9	4.2	2.5	3.0		2.0	1.8	
Key macroeconomic and fiscal assumptions															
Real GDP growth (in percent)	4.0	3.5	3.8	4.7	3.6	3.2	3.3	4.9	4.6	4.0	4.8	4.1	4.6	4.4	4.3
Average nominal interest rate on forex debt (in percent)	1.3	1.3	1.3	1.1	0.2	1.4	1.6	1.6	1.6	1.7	1.8	1.6	2.1	2.5	2.4
Average real interest rate on domestic debt (in percent)	5.6	13.9	26.2	-3.0	26.5	29.7	16.9	15.5	15.7	15.7	15.6	18.2	14.4	13.1	14.4
Real exchange rate depreciation (in percent, + indicates depreciation)	13.1	26.1	-9.3	-0.6	15.3	0.5	...	...	...	...	...	...	...	...	...
Inflation rate (GDP deflator, in percent)	8.4	3.8	2.5	31.7	65.4	3.4	3.7	3.8	3.8	3.8	3.8	3.7	4.0	4.0	4.0
Growth of real primary spending (deflated by GDP deflator, in percent)	6.8	2.4	11.5	2.1	4.0	9.8	-9.7	4.2	-1.5	4.6	3.8	1.9	4.4	5.4	4.2
Grant element of new external borrowing (in percent)	...	...	...	...	...	35.5	38.0	38.9	29.2	31.3	32.8	34.3	27.4	20.9	...

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 4. Kyrgyz Republic: Sensitivity Analysis for Key Indicators of Public Debt, 2017–37

	Projections							
	2017	2018	2019	2020	2021	2022	2027	2037
PV of Debt-to-GDP Ratio								
Baseline	42	43	43	41	41	40	37	32
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	42	45	46	48	51	53	66	92
A2. Primary balance is unchanged from 2017	42	44	45	46	48	49	59	80
A3. Permanently lower GDP growth 1/	42	43	44	44	44	44	51	80
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2018-2019	42	44	47	48	49	49	54	61
B2. Primary balance is at historical average minus one standard deviations in 2018-2019	42	51	59	57	57	55	51	43
B3. Combination of B1-B2 using one half standard deviation shocks	42	48	54	53	53	52	52	50
B4. One-time 30 percent real depreciation in 2018	42	59	58	57	56	54	50	45
B5. 10 percent of GDP increase in other debt-creating flows in 2018	42	51	51	49	49	48	44	37
PV of Debt-to-Revenue Ratio 2/								
Baseline	108	121	127	125	120	117	103	94
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	108	127	138	144	149	157	185	270
A2. Primary balance is unchanged from 2017	108	126	134	137	140	145	166	235
A3. Permanently lower GDP growth 1/	108	123	131	131	130	130	144	235
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2018-2019	108	126	142	143	143	145	151	180
B2. Primary balance is at historical average minus one standard deviations in 2018-2019	108	146	176	173	167	163	143	125
B3. Combination of B1-B2 using one half standard deviation shocks	108	138	161	159	156	154	145	146
B4. One-time 30 percent real depreciation in 2018	108	170	175	171	164	160	139	131
B5. 10 percent of GDP increase in other debt-creating flows in 2018	108	145	152	149	143	140	123	109
Debt Service-to-Revenue Ratio 2/								
Baseline	8	9	9	10	9	10	14	16
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	8	8	9	10	10	11	17	26
A2. Primary balance is unchanged from 2017	8	9	9	10	10	11	16	24
A3. Permanently lower GDP growth 1/	8	9	9	10	10	11	16	24
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2018-2019	8	9	10	10	10	11	17	22
B2. Primary balance is at historical average minus one standard deviations in 2018-2019	8	9	10	12	11	12	17	19
B3. Combination of B1-B2 using one half standard deviation shocks	8	9	10	11	11	11	17	20
B4. One-time 30 percent real depreciation in 2018	8	10	13	13	13	14	20	23
B5. 10 percent of GDP increase in other debt-creating flows in 2018	8	9	10	11	10	11	16	17

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.