INTERNATIONAL MONETARY FUND

MYANMAR

STAFF REPORT FOR THE 2013 ARTICLE IV CONSULTATION AND FIRST REVIEW UNDER THE STAFF-MONITORED PROGRAM—DEBT SUSTAINABILITY ANALYSIS

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Approved By
Alfred Schipke and Dhaneshwar Ghura (IMF)
Sudarshan Gooptu and Sudhir Shetty (IDA)

Prepared By
International Monetary Fund
International Development Association

Myanmar is assessed to be at low risk of debt distress following the clearance of its external arrears.[1] [2] The baseline scenario assumes the planned resolution of Myanmar's external arrears will be completed in 2013/14 as agreed with the Paris Club creditors. The baseline scenario also assumes a gradual reduction in Myanmar's reliance on nonconcessional financing, as more concessional resources become available after the resolution of arrears. Under the baseline scenario, public and publicly guaranteed (PPG) external debt burden indicators remain well below their indicative thresholds. One alternative stress test (export shock) leads to a temporary breach of the indicative threshold for the debt-to-exports ratio. However, Myanmar's good track record of implementing large natural gas projects and contractual purchasing commitments of project partners mitigate some of the risks. While Myanmar's risk of debt distress can be characterized as low despite the breach, it requires close monitoring, in particular because of the relatively high levels of domestic debt. Maintaining the low risk categorization will require continuation of the current prudent fiscal policy, improvements in tax policy and public financial management, and increasing use of concessional financing while limiting nonconcessional borrowing to only viable and growth-enhancing projects.

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[1] External public and publicly guaranteed (PPG) debt and public domestic debt dynamics are assessed using the LICDSA framework, which recognizes that better policies and institutions allow countries to manage higher levels of debt, and thus the threshold levels are policy-dependent. The quality of a country's policies and institutions are normally measured by the World Bank's Country Policy and Institutional Assessment (CPIA). Since Myanmar does not currently have a CPIA rating, the most conservative thresholds are applied for the purposes of this DSA. The thresholds, which apply to external PPG debt, are: 30 percent for the NPV of debt-to-GDP ratio, 100 percent for the NPV of debt-to-exports ratio, 200 percent for the NPV of debt-to-revenue ratio, 15 percent for the debt service-to exports ratio, and 18 percent for the debt service-to-revenue ratio.

[2] The DSA was jointly prepared by the IMF and the World Bank in consultation with the Asian Development Bank.

BACKGROUND

1. **The external and public debt sustainability analyses are based on the standard LIC DSA framework**. The DSA framework presents the projected path of Myanmar's external and public sector debt burden indicators, and draws some conclusions on the forward-looking sustainability of debt.

2. **Myanmar's DSA builds on the macroeconomic assumptions presented in Box 1.** Compared to the previous DSA, the assumptions have been revised to take into account recent developments. In particular, the medium term GDP growth has been revised upward to 7 percent from an average of about 6.6 percent in the previous DSA, reflecting robust FDI and related private investment in productive sectors, as well as in public investment. The overall fiscal deficit remains the same as in the previous DSA in the medium-term, although revenue collection is expected to improve, reflecting the better-than-expected performance in 2012/13. Long-term growth and inflation, however, are expected to be approximately the same as in the previous DSA.

3. **The current DSA incorporates the agreed resolution of Myanmar's arrears with its multilateral and bilateral creditors**. In April 2012, Myanmar agreed with Japan, its largest creditor, on a debt restructuring plan to resolve its arrears through a bridge loan operation and cancellation of principal payments and overdue charges.[3] Furthermore, Myanmar resolved its arrears held by the World Bank and the Asian Development Bank in January 2013, with the help of a bridge financing operation by Japan. In late-January 2013, the Paris Club reached agreement with the Myanmar authorities on a debt treatment that will be completed in early 2014. Paris Club members agreed to write off 50 percent of all arrears and reschedule the remaining arrears over 15 years with a 7 year grace period. The treatment will be phased, with 25 percent of the write-off occurring immediately and 75 percent on a successful completion of the SMP. Japan signed the minutes but will continue with the more generous treatment that it had previously announced. Norway, in addition, wrote off 100 percent of its outstanding debt. In March 2013, Italy signed a bilateral agreement with Myanmar to cancel 50 percent percent of all arrears and conduct a debt-for development swap of the remaining arrears.

4. **Myanmar is expected to gradually reduce its reliance on external nonconcessional financing.** With the expected resolution of its arrears and the re-engagement of the international community, Myanmar is expected to gradually regain access to concessional resources. As donors re-engage with Myanmar, and gradually identify suitable projects, the share of nonconcessional financing is expected to decline. The authorities aim to use nonconcessional external borrowing only to finance economically viable projects in priority sectors such as energy and infrastructure, at levels consistent with maintaining low external risk and debt sustainability. In order to limit the use of nonconcessional financing, the authorities also aim to keep the fiscal deficit in FY2013/14 and over the medium-term broadly unchanged at around 5 percent of GDP.

[3] In FY2012/13 Japan cancelled arrears on payments due after 2003. Principal and interest arrears on pre-2003 payments due were rescheduled on very concessional terms also before the end of FY2012/13. Before the end of FY2013/14, Japan is expected to cancel late interest charges on pre-2003 arrears. The implementation of this agreement was done in the context of the Paris Club framework.

Box 1. Myanmar: Key Macroeconomic Assumptions Underlying the DSA for the Baseline Scenario (FY2013/14–33/34)

- Real GDP growth is assumed to average about 7 percent over the medium term, driven by commodity exports and higher investment due to the implementation of Myanmar's structural reform plans, with the support of the international community, and suspension of sanctions. Over the long term, real GDP growth is expected to increase to 7.5 percent in 2033/34, supported by prudent macroeconomic policies and robust FDI and related investments.

- Inflation (as measured by the change in the GDP deflator) is projected on average at 5.6 percent (y/y) in the medium term and expected to continue trending down and reach around 4 percent in FY2033/34. This is based on the assumption that deficit monetization will be replaced with bond financing, as well as having a consistent monetary policy framework in place.

- The primary fiscal deficit of the nonfinancial public sector in terms of GDP is expected to widen from 2.1 percent in FY2012/13 to 3.2 percent in the medium term. Revenues are expected to increase significantly over the medium term, primarily due to a substantial increase in gas export revenues expected with the completion of Shwe and Zawtika projects as well as planned improvements to tax administration and efforts to broaden the tax bases. Expenditures are also expected to increase, reflecting Myanmar's significant development needs.

- Exports as a percentage of GDP are assumed to average 24.7 percent in the medium term, reflecting mainly new natural gas projects coming on stream. Over the longer term, export growth remains robust, averaging around 30.7 percent during FY2019/20–FY2033/34, driven by export diversification beyond commodity exports supported by higher investment, including foreign direct investment.

- Imports as a percentage of GDP are assumed to average 27.8 percent in the medium term given the authorities' removal of exchange restrictions on current international payments and transfers and the import content of higher investment including FDI. Over the longer term, imports as a percentage of GDP are projected to average 35.7 percent during FY2019/20–FY2033/34, reflecting the need to for imported capital goods to support growth.

- The current account (including official grants), which in FY2012/13 registered a deficit of about 4.4 percent, is expected to remain in deficit in the medium-term. Over the long term, the current account deficit is expected to stabilize at around 5 percent of GDP.

- As of end-FY2012/13, around 35 percent of public domestic debt was in the form of treasury bonds, with the rest in the form of treasury bills (bearing a nominal interest rate of 4 percent). Treasury bonds are issued in maturities of two, three, and five years, bearing nominal interest at fixed interest rates of 8.75, 9, and 9.5 percent, respectively. Average real interest rates on domestic public debt turned positive in FY2011/12 as inflation subsided but are projected to narrow in FY2013/14, due to rising inflation and fixed nominal interest rates. Real interest rates are expected to remain positive in the short term, in line with the government's plan to further shift toward bond financing of the deficit and moderate inflation, and widen in the medium term, as the government moves toward a market-based deficit financing.

- Financing of the deficit is expected to be met by a combination of domestic public borrowing and foreign loans, including from bilateral and multilateral creditors. In the short term, deficit financing will rely on nonconcessional external financing and increasingly on the issuance of treasury bonds. Over the medium term, the share of external financing is expected to increase, especially from concessional sources. Nonetheless, treasury bond issuance is expected to continue over the medium term consistent with the goal to develop a domestic treasury bond market. This will also facilitate the liberalization of interest rates with the planned move to treasury security auctions.

Key Macroeconomic Assumptions Underlying the DSA for the Baseline Scenario (FY2013/14–33/34)				
	2013 DSA Baseline		2012 DSA Baseline	
	2013/14–2018/19	2019/20–2033/34	2012/13–2017/18	2018/19–2032/33
Real GDP Growth (in percent)	7.0	7.4	6.6	7.4
Inflation (in percent)	5.6	3.8	4.8	3.9
Overall fiscal balance (in percent of GDP)	-4.9	-4.2	-4.9	-4
Noninterest current account (in percent of GDP)	-4.2	-4.7	-4.5	-5.2
Revenue (nonfinancial public sector; in percent of GDP)	24.7	26.7	20.3	21.9
Source: IMF staff estimates				

EXTERNAL DEBT SUSTAINABILITY ANALYSIS

Myanmar: External PPG Debt Indicators			
	Indicative Thresholds	End 2012/13	End 2013/14
NPV of debt as a percent of:			
GDP	30	22.1	15.9
Exports	100	106.8	72.7
Revenue	200	96.5	68.6
Debt Service, as a percentage of:			
Exports	15	2.2	4.2
Revenue	18	2.0	3.9
Sources: IMF and World Bank			

5. **It will be essential to complete the resolution of the remaining arrears in 2013/14 to bring all external debt indicators below their indicative thresholds in 2013/14.** The first phase of the resolution of arrears conducted in 2012/13 helped to improve the debt burden indicators. However, the NPV of debt as a percentage of exports was still above the threshold in 2012/13. Under the baseline scenario, all external debt indicators will be below their indicative thresholds at end-FY2013/14, which assumes the completion of the second phase of the resolution of Myanmar's arrears. The impact of the debt rescheduling is evident in the decline in the debt burden indicators between FY2012/13 and FY2013/14 (Table 1a). For example, the PV of the debt-to-GDP ratio decreases from about 22 percent in FY2012/13 to 16 percent in FY2013/14.

6. **Standard stress tests indicate that Myanmar's external debt sustainability is vulnerable to export shocks and exchange rate depreciation.** In particular, the export shock leads to a temporary breach of the PV of debt-to-exports indicative threshold (Figure 1 and Table 1b).[4] [5] However, the temporary breach (which is initially moderate, but quickly declining) reflects the introduction of the shock at the time of the projected increase in exports due to the completion of the Shwe and Zawtika gas projects (introducing the shock at any other point in time would eliminate the breach). These two projects are on track to start exports in FY2013/14. Myanmar's good track record of implementing natural gas sector projects (e.g. the Yadana and Yetagun projects are fully operational) and contractual purchasing commitments by project partners (who have agreed to purchase most of the production from these projects), mitigate some of the risks of this particular shock, i.e. a significant slowdown in exports compared to the baseline scenario. Accordingly, Myanmar can be classified at low risk of debt distress.

[4] The typical historical scenario is not shown in this analysis. In the case of Myanmar, the historical scenario would imply an unlikely return to pre-reform policies: low non-interest current account deficits (consistent with binding international sanctions) and sustained real exchange rate pressures.

[5] The PV of debt-to-GDP ratio is temporarily above the threshold due to a combination shock. However, this is only temporary lasting FY15–17 and it marginally above the threshold.

PUBLIC DEBT SUSTAINABILITY ANALYSIS

7. Public debt burden indicators (including domestic public debt) are expected to improve initially, reflecting the impact of the planned arrears resolution. The nominal debt stock would decrease from 48.0 percent in 2012/13 to 41.9 percent in 2013/14, mainly due to the clearance of the arrears. Thereafter, the public debt burden indicators are expected to remain broadly unchanged despite robust and sustained economic growth (Figure 2 and Table 1c). This reflects the significant development needs of Myanmar and the associated overall fiscal deficits assumed in the baseline scenario. It should be noted that public sector domestic debt is high. However, risks are mitigated as the share of nonconcessional financing is expected to decline. The authorities aim to use nonconcessional external borrowing only to finance economically viable projects in priority sectors, which will also be crucial to growth.

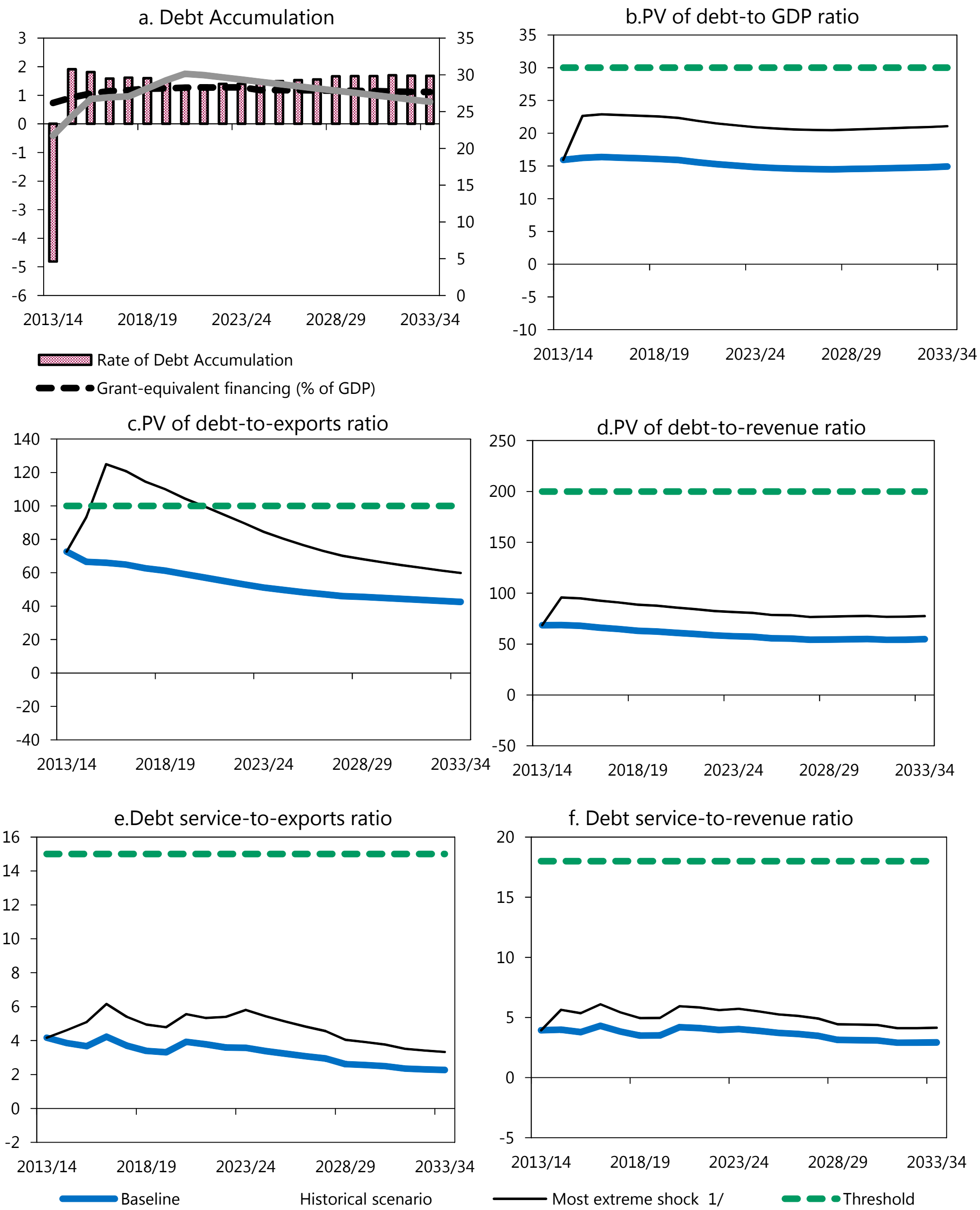
8. Stress tests indicate the presence of vulnerabilities. In particular, public debt sustainability is vulnerable to lower real GDP growth, and large and persistent primary fiscal deficits (Table 1d). The stabilization of the debt-to-GDP ratio at a relatively high level under the baseline scenario and the vulnerabilities indicated by the stress tests highlight the need for a prudent fiscal policy, through improvements in tax policy and public financial management including strengthening of debt management functions, and project assessment (i.e. ability to identify projects with good economic returns) and capacity to obtain more concessional financing.

STAFF ASSESSMENT

9. Myanmar is assessed to be at low risk of debt distress given its planned resolution of arrears. This is in line with the previous DSA, which was undertaken in November 2012. Developments since then, including a successful arrears rescheduling process consistent with assumptions, and continued strong economic performance with enhanced growth prospects, support that DSA's analysis**.** Myanmar is therefore evaluated to be at low risk of debt distress under the baseline scenario, which assumes a resolution of the remaining arrears in 2013/14 as agreed with the Paris Club. This resolution of arrears with the Paris Club creditors will improve all debt burden indicators. However, under the baseline scenario, the indicative threshold for the PV of debt-to-export ratio is temporarily breached under the export shock. As explained above, the risks associated with this shock are mitigated by the good track record of Myanmar in terms of implementation of large natural gas projects as well as contractual purchase commitments of project partners. However, it also underscores the importance of diversifying Myanmar's export base. Overall public debt sustainability is vulnerable to fiscal slippages and low real GDP growth, particularly given the relatively high domestic debt levels. This highlights the need for prudent fiscal policy, as well as improvements in tax policy to reduce reliance on nontax revenues from nonrenewable sources and public financial and debt management.

10. The authorities broadly agreed with these conclusions and with the thrust of the analysis. They concurred with staff on the need to be cautious on nonconcessional borrowing. They acknowledged the importance of the maintaining high exports in light of the temporary breach of the threshold.

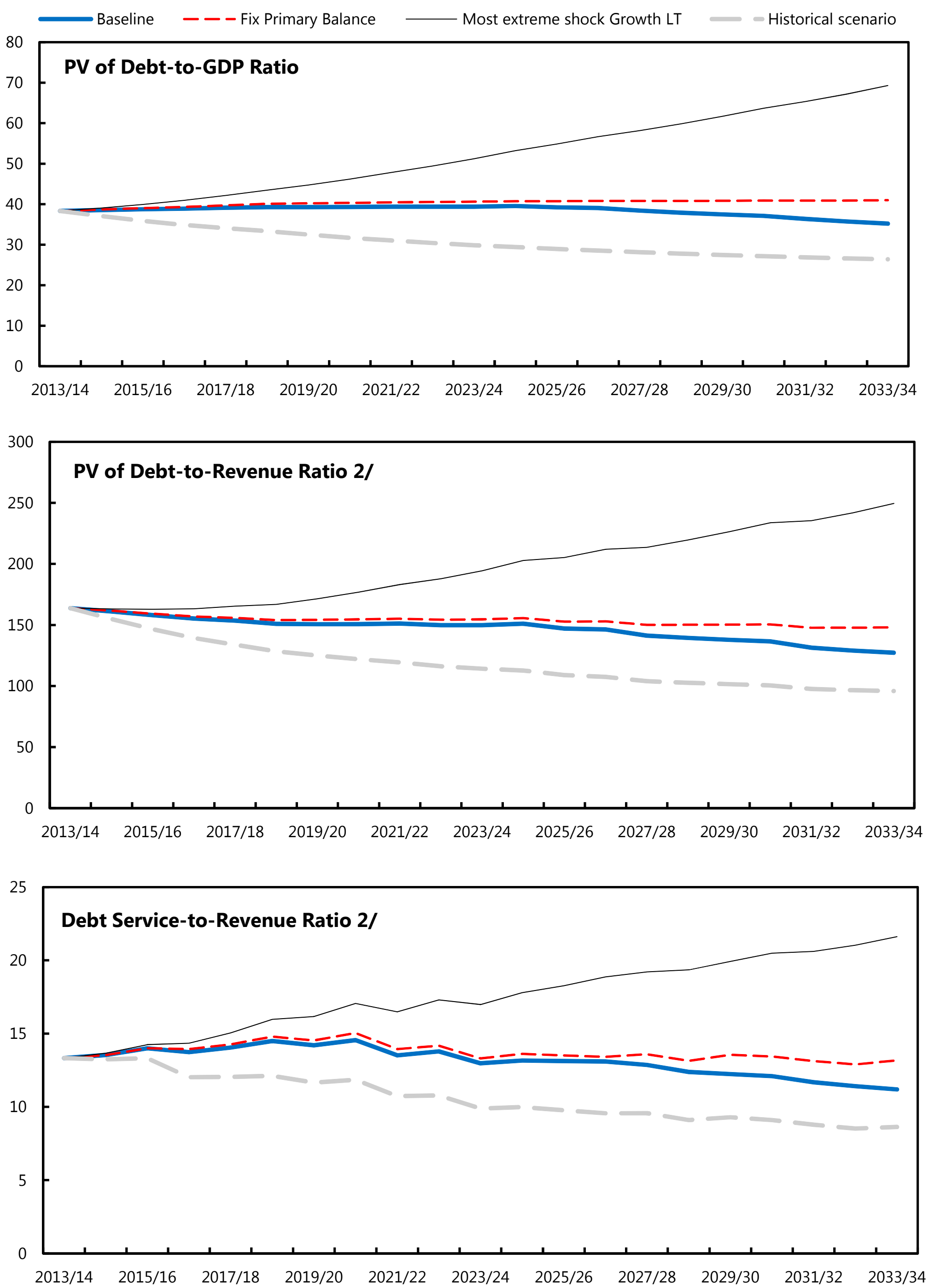
Figure 1.Myanmar: Indicators of Public and Publicly Guaranteed External Debt under Alternatives Scenarios. 2013/14–2033/34 1/



Sources: Country authorities; and staff estimates and projections.

1/ The most extreme stress test is the test that yields the highest ratio in 2023. In figure b. it corresponds to a One-time depreciation 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. Myanmar: Indicators of Public Debt Under Alternative Scenarios, 2013/14–2033/34 1/



Sources: Country authorities; and staff estimates and projections.
1/ The most extreme stress test is the test that yields the highest ratio in 2023.
2/ Revenues are defined inclusive of grants.

Table 1a. Myanmar: External Debt Sustainability Framework, Baseline Scenario, 2010/11–2033/34 1/

(In percent of GDP, unless otherwise indicated)

	Actual			Historical 2/ Average	Standard 2/ Deviation	Projections									
	2010/11	2011/12	2012/13			2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2013/14–2018/19 Average	2023/24	2033/34	2019/20–2033/34 Average
External debt (nominal) 1/	**29.0**	**27.3**	**24.8**			**19.0**	**19.6**	**20.0**	**20.0**	**20.1**	**20.1**		**19.3**	**19.6**	
of which: Public and publicly guaranteed (PPG)	29.0	27.3	24.8			19.0	19.6	20.0	20.0	20.1	20.1		19.3	19.6	
Change in external debt	-7.3	-1.6	-2.5			-5.8	0.6	0.3	0.0	0.0	0.0		-0.1	0.1	
Identified net debt-creating flows	-11.1	-4.7	-0.3			-1.0	-0.6	-0.9	-1.3	-1.2	-1.5		-2.1	-1.4	
Non-interest current account deficit	**1.3**	**1.4**	**4.3**	**-1.0**	**4.2**	**4.0**	**4.2**	**4.3**	**4.3**	**4.3**	**4.2**		**4.5**	**4.7**	4.7
Deficit in balance of goods and services	0.1	1.4	4.0			3.1	2.2	2.6	3.0	3.4	4.1		4.8	4.9	
Exports	18.3	19.3	20.7			21.9	24.4	24.9	25.0	25.8	26.2		29.0	35.0	
Imports	18.4	20.7	24.7			25.0	26.6	27.4	28.0	29.2	30.3		33.9	40.0	
Net current transfers (negative = inflow)	-0.5	-0.9	-0.9	-0.9	0.2	-1.0	-1.2	-1.2	-1.3	-1.4	-1.4		-1.3	-1.0	-1.2
of which: Official	-0.1	-0.1	-0.1			-0.2	-0.3	-0.4	-0.5	-0.6	-0.6		-0.6	-0.5	
Other current account flows (negative = net inflow)	1.7	0.8	1.2			2.0	3.2	3.0	2.6	2.3	1.5		0.9	0.8	
Net FDI (negative = inflow)	**-4.5**	**-3.7**	**-5.2**	**-3.1**	**1.1**	**-3.8**	**-3.9**	**-4.3**	**-4.6**	**-4.6**	**-4.7**		**-5.5**	**-5.0**	-5.4
Endogenous debt dynamics 3/	**-7.8**	**-2.4**	**0.6**			**-1.3**	**-0.9**	**-0.9**	**-1.0**	**-1.0**	**-1.0**		**-1.0**	**-1.1**	
Contribution from nominal interest rate	0.6	1.0	0.2			0.3	0.3	0.3	0.3	0.3	0.3		0.3	0.2	
Contribution from real GDP growth	-1.5	-1.5	-1.8			-1.6	-1.2	-1.2	-1.3	-1.3	-1.3		-1.3	-1.3	
Contribution from price and exchange rate changes	-7.0	-1.9	2.2			...	...	...	...	...	...		...	...	
Residual (3-4) 4/	**3.8**	**3.0**	**-2.1**			**-4.8**	**1.2**	**1.2**	**1.3**	**1.2**	**1.5**		**2.0**	**1.5**	
of which: Resolution of arrears	0.0	0.0	-11.0			-8.1	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
PV of external debt 5/	...	...	22.1			15.9	16.2	16.4	16.3	16.2	16.1		14.8	14.9	
In percent of exports	...	...	106.8			72.7	66.6	65.9	64.9	62.7	61.3		51.1	42.6	
PV of PPG external debt	**...**	**...**	**22.1**			**15.9**	**16.2**	**16.4**	**16.3**	**16.2**	**16.1**		**14.8**	**14.9**	
In percent of exports	**...**	**...**	**106.8**			**72.7**	**66.6**	**65.9**	**64.9**	**62.7**	**61.3**		**51.1**	**42.6**	
In percent of government revenues	**...**	**...**	**96.5**			**68.6**	**68.7**	**68.0**	**66.2**	**64.8**	**63.1**		**57.8**	**54.9**	
Debt service-to-exports ratio (in percent)	**7.6**	**10.7**	**2.2**			**4.2**	**3.9**	**3.7**	**4.2**	**3.7**	**3.4**		**3.6**	**2.3**	
PPG debt service-to-exports ratio (in percent)	**7.6**	**10.7**	**2.2**			**4.2**	**3.9**	**3.7**	**4.2**	**3.7**	**3.4**		**3.6**	**2.3**	
PPG debt service-to-revenue ratio (in percent)	**12.2**	**17.2**	**2.0**			**3.9**	**4.0**	**3.8**	**4.3**	**3.8**	**3.5**		**4.0**	**2.9**	
Total gross financing need (Billions of U.S. dollars)	-0.7	0.1	-0.1			0.8	1.0	0.9	0.8	0.8	0.6		0.3	2.9	
Non-interest current account deficit that stabilizes debt ratio	8.6	3.0	6.7			9.8	3.6	4.0	4.3	4.3	4.2		4.6	4.6	
Key macroeconomic assumptions															
Real GDP growth (in percent)	5.3	5.9	6.4	9.2	4.3	6.8	6.9	6.9	7.0	7.1	7.1	7.0	7.4	7.5	7.4
GDP deflator in U.S. dollar terms (change in percent)	23.8	6.9	-7.5	12.7	18.2	0.7	2.3	2.9	3.1	3.2	3.2	2.6	3.2	3.0	3.2
Effective interest rate (percent) 6/	2.2	3.9	0.6	1.7	1.0	1.3	1.8	1.7	1.7	1.6	1.6	1.6	1.4	1.3	1.4
Growth of exports of G&S (U.S. dollar terms, in percent)	13.6	19.4	5.6	14.8	13.2	14.0	21.7	12.1	11.2	13.8	12.3	14.2	13.4	13.1	13.0
Growth of imports of G&S (U.S. dollar terms, in percent)	18.6	27.7	17.3	19.7	23.9	9.0	16.0	13.7	12.9	14.9	14.8	13.5	13.0	12.5	12.9
Grant element of new public sector borrowing (in percent)	...	...	...	...	...	21.7	24.4	26.7	26.9	27.1	28.2	25.8	29.4	26.3	28.4
Government revenues (excluding grants, in percent of GDP)	11.4	12.0	22.9			23.2	23.6	24.1	24.6	24.9	25.4		25.7	27.2	26.3
Aid flows (in Billions of U.S. dollars) 7/	0.0	0.0	0.0			0.5	0.8	1.1	1.3	1.5	1.8		3.3	7.7	
of which: Grants	0.0	0.0	0.0			0.1	0.2	0.3	0.4	0.5	0.6		1.0	2.3	
of which: Concessional loans	0.0	0.0	0.0			0.4	0.6	0.8	0.9	1.0	1.2		2.3	5.5	
Grant-equivalent financing (in percent of GDP) 8/	...	...	...			0.7	0.9	1.1	1.1	1.2	1.2		1.3	1.1	1.2
Grant-equivalent financing (in percent of external financing) 8/	...	...	...			26.4	32.3	36.9	39.5	41.1	43.3		43.9	39.4	41.7
Memorandum items:															
Nominal GDP (Billions of U.S. dollars)	49.6	56.2	55.3			59.4	65.0	71.5	78.9	87.2	96.4		159.9	450.8	
Nominal dollar GDP growth	30.4	13.2	-1.6			7.5	9.3	10.1	10.4	10.5	10.5	9.7	10.8	10.7	10.8
PV of PPG external debt (in Billions of U.S. dollars)			11.9			9.3	10.4	11.6	12.7	14.0	15.4		23.6	67.1	
(PVt-PVt-1)/GDPt-1 (in percent)						-4.8	1.9	1.8	1.6	1.6	1.6	0.6	1.4	1.7	1.5
Gross workers' remittances (Billions of U.S. dollars)	0.2	0.4	0.5			0.5	0.6	0.6	0.7	0.7	0.8		1.1	2.4	
PV of PPG external debt (in percent of GDP + remittances)	...	...	21.9			15.8	16.1	16.2	16.1	16.0	15.9		14.7	14.8	
PV of PPG external debt (in percent of exports + remittances)	...	...	102.5			69.9	64.3	63.8	62.8	60.8	59.5		49.9	42.0	
Debt service of PPG external debt (in percent of exports + remittances)	...	...	2.1			4.0	3.7	3.6	4.1	3.6	3.3		3.5	2.2	

Sources: Country authorities; and staff estimates and projections.

1/ Includes both public and private sector external debt.
2/ Historical averages and standard deviations are generally derived over the past 10 years, subject to data availability.
3/ 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.
4/ 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.
5/ Assumes that PV of private sector debt is equivalent to its face value.
6/ Current-year interest payments divided by previous period debt stock.
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 1b. Myanmar: Sensitivity Analysis for Key Indicators of Public and Publicly Guaranteed External Debt, 2013/14–2033/34

(In percent)

	Projections							
	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	**2023/24**	2033/34
PV of debt-to GDP ratio								
Baseline	16	16	16	16	16	16	**15**	15
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2013–2033 1/	16	11	7	4	2	0	**-5**	-7
A2. New public sector loans on less favorable terms in 2013–2033 2/	16	17	18	18	19	19	**20**	23
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2014–2015	16	16	17	17	17	17	**15**	15
B2. Export value growth at historical average minus one standard deviation in 2014–2015 3/	16	19	24	23	22	22	**19**	16
B3. U.S. dollar GDP deflator at historical average minus one standard deviation in 2014–2015	16	17	19	19	19	19	**17**	18
B4. Net non-debt creating flows at historical average minus one standard deviation in 2014–2015 4/	16	18	20	20	19	19	**17**	15
B5. Combination of B1-B4 using one-half standard deviation shocks	16	19	23	22	22	21	**18**	15
B6. One-time 30 percent nominal depreciation relative to the baseline in 2014 5/	16	23	23	23	23	23	**21**	21
PV of debt-to-exports ratio								
Baseline	73	67	66	65	63	61	**51**	43
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2013–2033 1/	73	45	30	18	8	0	**-16**	-21
A2. New public sector loans on less favorable terms in 2013–2033 2/	73	69	71	73	72	73	**69**	65
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2014–2015	73	66	65	64	62	61	**51**	43
B2. Export value growth at historical average minus one standard deviation in 2014–2015 3/	73	93	125	121	114	110	**84**	60
B3. U.S. dollar GDP deflator at historical average minus one standard deviation in 2014–2015	73	66	65	64	62	61	**51**	43
B4. Net non-debt creating flows at historical average minus one standard deviation in 2014–2015 4/	73	73	81	79	75	73	**58**	44
B5. Combination of B1-B4 using one-half standard deviation shocks	73	89	110	106	101	97	**74**	53
B6. One-time 30 percent nominal depreciation relative to the baseline in 2014 5/	73	66	65	64	62	61	**51**	43
PV of debt-to-revenue ratio								
Baseline	69	69	68	66	65	63	**58**	55
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2013–2033 1/	69	47	31	18	8	0	**-18**	-27
A2. New public sector loans on less favorable terms in 2013–2033 2/	69	71	73	74	75	75	**78**	84
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2014–2015	69	69	70	68	67	65	**60**	57
B2. Export value growth at historical average minus one standard deviation in 2014–2015 3/	69	80	97	93	90	86	**72**	58
B3. U.S. dollar GDP deflator at historical average minus one standard deviation in 2014–2015	69	73	79	77	76	74	**68**	65
B4. Net non-debt creating flows at historical average minus one standard deviation in 2014–2015 4/	69	75	83	80	78	75	**65**	57
B5. Combination of B1-B4 using one-half standard deviation shocks	69	80	95	91	88	84	**71**	57
B6. One-time 30 percent nominal depreciation relative to the baseline in 2014 5/	69	96	95	93	91	89	**81**	78

Table 1b. Myanmar: Sensitivity Analysis for Key Indicators of Public and Publicly Guaranteed External Debt, 2013–2033 (concluded)

(In percent)

	Projections							
	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	**2023/24**	2033/34
Debt service-to-exports ratio								
Baseline	4	4	4	4	4	3	**4**	2
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2013–2033 1/	4	3	3	3	2	2	**1**	0
A2. New public sector loans on less favorable terms in 2013–2033 2/	4	4	4	4	4	4	**4**	3
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2014–2015	4	4	4	4	4	3	**4**	2
B2. Export value growth at historical average minus one standard deviation in 2014–2015 3/	4	5	5	6	5	5	**6**	3
B3. U.S. dollar GDP deflator at historical average minus one standard deviation in 2014–2015	4	4	4	4	4	3	**4**	2
B4. Net non-debt creating flows at historical average minus one standard deviation in 2014–2015 4/	4	4	4	4	4	4	**4**	2
B5. Combination of B1-B4 using one-half standard deviation shocks	4	4	5	5	5	4	**5**	3
B6. One-time 30 percent nominal depreciation relative to the baseline in 2014 5/	4	4	4	4	4	3	**4**	2
Debt service-to-revenue ratio								
Baseline	4	4	4	4	4	3	**4**	3
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2013–2033 1/	4	4	3	3	2	2	**1**	0
A2. New public sector loans on less favorable terms in 2013–2033 2/	4	4	4	5	4	4	**5**	4
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2014–2015	4	4	4	4	4	4	**4**	3
B2. Export value growth at historical average minus one standard deviation in 2014–2015 3/	4	4	4	5	4	4	**5**	3
B3. U.S. dollar GDP deflator at historical average minus one standard deviation in 2014–2015	4	4	4	5	5	4	**5**	3
B4. Net non-debt creating flows at historical average minus one standard deviation in 2014–2015 4/	4	4	4	5	4	4	**5**	3
B5. Combination of B1-B4 using one-half standard deviation shocks	4	4	4	5	4	4	**5**	3
B6. One-time 30 percent nominal depreciation relative to the baseline in 2014 5/	4	6	5	6	5	5	**6**	4
Memorandum item:								
Grant element assumed on residual financing (i.e., financing required above baseline) 6/	25	25	25	25	25	25	**25**	25

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 1c. Myanmar: Public Sector Debt Sustainability Framework, Baseline Scenario, 2010/11–2033/34

(In percent of GDP, unless otherwise indicated)

	Actual			Average 1/	Standard Deviation 1/	Projections									
	2010/11	2011/12	2012/13			2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2013/14–18/19 Avg.	2023/24	2033/34	2019/20–33/34 Avg.
Public sector debt 2/	49.5	49.2	48.0			41.9	42.3	42.6	42.9	43.2	43.5		44.0	39.9	
of which: Foreign-currency denominated	28.5	26.7	25.5			19.5	20.0	20.3	20.3	20.2	20.2		19.4	19.6	
Change in public sector debt	-5.4	-0.4	-1.1			-6.1	0.4	0.4	0.3	0.3	0.2		0.1	-0.5	
Identified debt-creating flows	-7.2	-1.9	3.5			0.3	0.3	0.3	0.3	0.3	0.2		0.1	-0.5	
Primary deficit	3.9	2.5	2.1	2.4	1.0	3.4	3.2	3.2	3.2	3.2	3.1	3.2	3.2	2.2	2.8
Revenue and grants 3/	11.4	12.0	23.0			23.4	23.9	24.5	25.1	25.5	26.0		26.3	27.7	
of which: Grants	0.0	0.0	0.1			0.2	0.3	0.4	0.5	0.6	0.6		0.6	0.5	
Primary (noninterest) expenditure 3/	15.4	14.5	25.0			26.8	27.2	27.7	28.3	28.7	29.1		29.5	29.8	
Automatic debt dynamics	-9.8	-3.1	1.5			-2.8	-2.9	-2.9	-2.9	-2.9	-2.9		-3.1	-2.7	
Contribution from interest rate/growth differential	-3.5	-1.8	-2.3			-3.0	-2.7	-2.7	-2.7	-2.6	-2.6		-2.9	-2.2	
of which: Contribution from average real interest rate	-0.7	0.9	0.6			0.0	0.0	0.1	0.1	0.2	0.3		0.1	0.6	
of which: Contribution from real GDP growth	-2.8	-2.8	-2.9			-3.1	-2.7	-2.7	-2.8	-2.8	-2.9		-3.0	-2.8	
Contribution from real exchange rate depreciation	-6.2	-1.3	3.8			0.3	-0.2	-0.2	-0.3	-0.3	-0.3		...	...	
Other identified debt-creating flows	-1.4	-1.3	0.0			-0.3	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Privatization receipts (negative)	-1.4	-1.3	0.0			-0.3	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			0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Other (specify, e.g. bank recapitalization)	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Residual, including asset changes	1.8	1.5	-4.7			-6.4	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Other Sustainability Indicators															
PV of public sector debt	...	...	44.7			38.3	38.6	38.7	38.9	39.1	39.3		39.4	35.2	
of which: Foreign-currency denominated	...	...	22.1			15.9	16.2	16.4	16.3	16.2	16.1		14.8	14.9	
of which: External	...	...	22.1			15.9	16.2	16.4	16.3	16.2	16.1		14.8	14.9	
PV of contingent liabilities (not included in public sector debt)	...	...	...			...	...	...	...	...	...		...	...	
Gross financing need 4/	7.2	6.7	5.1			6.8	6.7	6.9	6.9	7.0	7.1		6.8	5.4	
PV of public sector debt-to-revenue and grants ratio (in percent)	...	...	194.6			163.8	161.1	158.1	155.3	153.6	151.0		149.9	127.2	
PV of public sector debt-to-revenue ratio (in percent)	...	...	195.0			165.0	163.1	160.7	158.4	157.0	154.5		153.4	129.5	
of which: External 5/	...	...	96.5			68.6	68.7	68.0	66.2	64.8	63.1		57.8	54.9	
Debt service-to-revenue and grants ratio (in percent) 6/	24.8	32.1	12.1			13.3	13.5	14.0	13.7	14.0	14.5		13.0	11.2	
Debt service-to-revenue ratio (in percent) 6/	24.8	32.1	12.1			13.4	13.7	14.2	14.0	14.4	14.8		13.3	11.4	
Primary deficit that stabilizes the debt-to-GDP ratio	9.4	2.9	3.2			9.6	2.8	2.9	2.9	2.9	2.8		3.1	2.7	
Key macroeconomic and fiscal assumptions															
Real GDP growth (in percent)	5.3	5.9	6.4	9.2	4.3	6.8	6.9	6.9	7.0	7.1	7.1	7.0	7.4	7.5	7.4
Average nominal interest rate on forex debt (in percent)	2.3	4.0	0.6	1.7	1.0	1.3	1.8	1.7	1.7	1.7	1.7	1.6	1.5	1.3	1.4
Average nominal interest rate on domestic debt (in percent)	5.5	5.6	7.0	5.1	0.8	6.6	6.4	6.4	6.4	6.4	6.4	6.4	5.0	5.0	5.0
Average real interest rate (in percent)	-1.4	2.0	1.3	-1.2	1.8	0.1	0.0	0.2	0.3	0.5	0.7	0.3	0.2	1.7	0.4
Average real interest rate on foreign-currency debt (in percent)	-3.0	-2.5	-1.5	-2.2	0.6	-1.9	-1.8	-1.8	-1.8	-1.8	-1.8	-1.8	-1.8	0.0	-1.8
Average real interest rate on domestic debt (in percent)	-2.5	2.8	4.1	-5.7	7.6	0.9	0.1	0.4	0.8	1.1	1.4	0.8	0.8	2.0	1.2
Real exchange rate depreciation (in percent, + indicates depreciation)	-18.3	-4.7	15.2	-6.1	14.0	1.1	...	...	...	...	...	...	...	...	...
Inflation rate (GDP deflator, in percent)	8.2	2.8	2.8	12.1	8.5	5.6	6.3	6.0	5.6	5.2	4.9	5.6	4.2	3.0	3.8
Growth of real primary spending (deflated by GDP deflator, in percent) 3/	14.6	0.2	83.1	19.9	25.0	14.5	8.3	9.2	9.1	8.7	8.6	9.7	7.6	7.6	7.6
Grant element of new external borrowing (in percent)	...	...	...	...	...	21.7	24.4	26.7	26.9	27.1	28.2	25.8	29.4	26.3	...

Sources: Country authorities; and staff estimates and projections.

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

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

3/ The valuation effect raised revenues and expenditures in FY2012/13 due to the exchange rate unification on April 1, 2012.

4/ 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.

5/ Revenues excluding grants.

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

Table 1d. Myanmar: Sensitivity Analysis for Key Indicators of Public Debt 2013/14–2033/34

	Projections							
	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2023/24	2033/34
PV of Debt-to-GDP Ratio								
Baseline	38	39	39	39	39	39	39	35
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	38	37	36	35	34	33	30	26
A2. Primary balance is unchanged from 2013	38	39	39	39	40	40	41	41
A3. Permanently lower GDP growth 1/	38	39	40	41	42	43	51	69
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2014–2015	38	40	41	42	43	44	46	44
B2. Primary balance is at historical average minus one standard deviations in 2014–2015	38	39	39	39	39	39	39	35
B3. Combination of B1-B2 using one half standard deviation shocks	38	38	38	38	38	38	38	34
B4. One-time 30 percent real depreciation in 2014	38	45	44	44	44	43	41	35
B5. 10 percent of GDP increase in other debt-creating flows in 2014	38	47	46	46	45	45	43	37
PV of Debt-to-Revenue Ratio 2/								
Baseline	164	161	158	155	154	151	150	127
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	164	155	146	139	134	128	114	96
A2. Primary balance is unchanged from 2013	164	162	159	157	156	154	155	148
A3. Permanently lower GDP growth 1/	164	163	163	163	165	167	194	250
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2014–2015	164	165	168	168	168	168	175	160
B2. Primary balance is at historical average minus one standard deviations in 2014–2015	164	161	159	156	154	151	150	127
B3. Combination of B1-B2 using one half standard deviation shocks	164	159	155	152	151	148	146	124
B4. One-time 30 percent real depreciation in 2014	164	188	181	175	171	166	157	127
B5. 10 percent of GDP increase in other debt-creating flows in 2014	164	196	189	182	178	172	164	133
Debt Service-to-Revenue Ratio 2/								
Baseline	13	14	14	14	14	15	13	11
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	13	13	13	12	12	12	10	9
A2. Primary balance is unchanged from 2013	13	14	14	14	14	15	13	13
A3. Permanently lower GDP growth 1/	13	14	14	14	15	16	17	22
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2014–2015	13	14	15	15	16	16	15	14
B2. Primary balance is at historical average minus one standard deviations in 2014–2015	13	14	14	14	14	15	13	11
B3. Combination of B1-B2 using one half standard deviation shocks	13	14	14	13	14	14	13	11
B4. One-time 30 percent real depreciation in 2014	13	14	16	16	16	17	16	13
B5. 10 percent of GDP increase in other debt-creating flows in 2014	13	14	15	24	15	17	14	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.