INTERNATIONAL MONETARY FUND

SRI LANKA

# Debt Sustainability Analysis 2009

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and the World Bank

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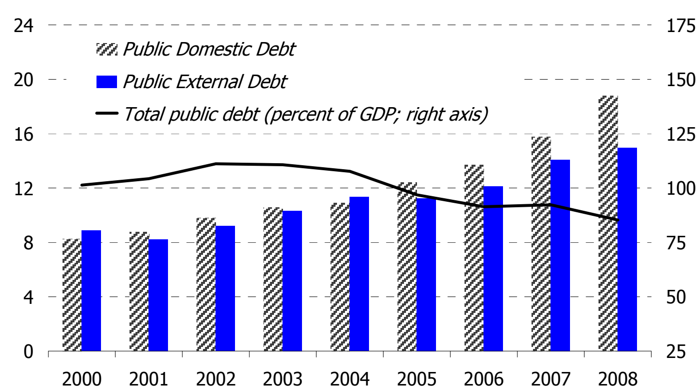
*The analysis indicates that Sri Lanka has a moderate risk of external debt distress over the medium term. This risk rating assumes that external borrowing is more concessional than it has been in recent years when the government built up a significant amount of short-term commercial debt. All debt indicators are projected to remain below indicative thresholds under the program baseline scenario. This conclusion rests heavily on the satisfactory implementation of the program, especially with regard to the fiscal consolidation measures, Moreover, the significant cost and roll-over risk of domestic debt adds to the total public debt burden and calls for a pro-active medium-term debt management strategy that aims to reduce costs and risks in the overall public debt portfolio.*

## I. The Debt Portfolio: Background and Current Context

1. Sri Lanka's stock of public debt has nearly doubled since 2000 mainly as a result of financing persistent primary fiscal deficits. The government has relied on both external and domestic sources of financing in roughly equal measure until recently when it has had to rely more heavily on domestic debt issuance, particularly in 2008 when international capital markets where all but closed. Robust GDP growth in recent years has led to decline in the debt to GDP ratio from a recent peak of 98 percent of GDP in 2005 to 87 percent in 2008.

**Figure 1. Sri Lanka: Public Debt**

*(In billions of U.S. dollars)*




A more systematic look at the debt to GDP ratio decomposition in recent years confirms that GDP growth is the primary factor that drove the debt burden down since 2005. Negative and near zero real interest rates as inflation reached double-digit levels and real appreciation of the rupee from 2005 also helped the decline. The primary fiscal deficit averaged 2¼ percent over the 2005-08 period and was the key reason for not observing an otherwise larger decline in the ratio. This year it is expected that the debt burden will increase largely due to a real exchange rate depreciation (Table 1). The expected decline in the primary deficit helps contain an otherwise larger increase underscoring the importance of fiscal adjustment under the program.

Table 1. Factors Explaining the Falling Debt Burden in 2006-09

| | 2005-06 | 2006-07 | 2007-08 | 2008-09 |
|---|---|---|---|---|
| Change in public sector debt | -3.5 | -4.2 | -4.2 | 3.9 |
| Primary deficit | 2.2 | 1.9 | 2.3 | 0.8 |
| Real GDP growth | -7.0 | -6.0 | -5.1 | -2.5 |
| Real Interest Rate | -0.2 | 0.0 | 0.2 | 4.5 |
| Real Exchange rate (+depreciation) | -0.8 | -4.0 | -3.5 | 2.5 |
| Residual | 2.3 | 4.0 | 1.9 | -1.4 |

2. While the overall debt burden has decreased in recent years, the structure of the debt portfolio has changed in ways that have increased both its costs and risks. There has been a shift from lower cost external concessional borrowing to higher cost domestic and non-concessional external borrowing (Figure 2). Nominal interest rates on domestic debt increased significantly in recent years reaching almost 19 percent on T-bills and T-Bonds in 2008.[1] Domestic interest costs are estimated to be over 26 percent of government expenditures in 2009. Moreover, more than 40 percent of the domestic debt stock will be maturing in 2009, indicating significant roll-over risk. Recognizing this risk, the government adopted a strategy to extend T-bill maturities from 3 month issues to one year maturities. Additionally, the stock of U.S. dollar denominated domestic debt has increased to about 10 percent of the total portfolio, which adds to exchange rate risk (Figure 3).

Figure 2.

**Public Debt Composition 2004**

*(In percent of total stock)*

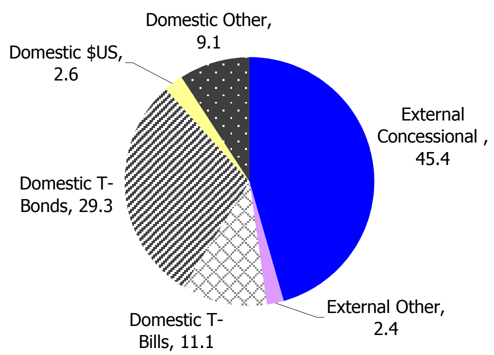
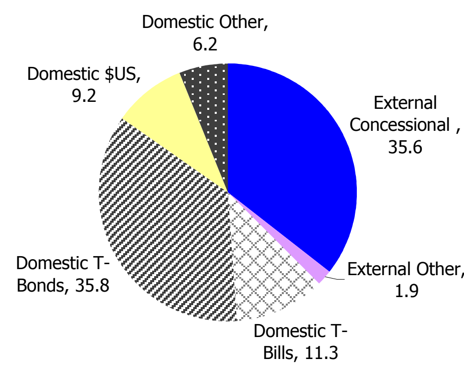



Figure 3.

**Public Debt Composition 2008**

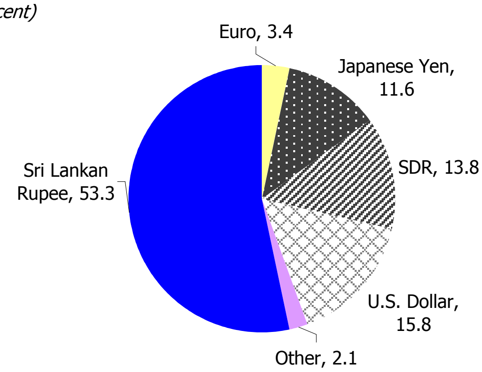
*(In percent of total stock)*




[1] Weighted average domestic debt interest cost.

3. Concessional external debt still makes up approximately 85 percent of the total public external debt portfolio, but non-concessional sources of financing have grown in recent years. The Eurobond issue in 2007 ($500 million) is one example, as are the syndicated loans and Sri Lanka development bonds issued in recent years. The opening of the T-bill market to foreign investors in 2008 has also contributed to the change in the external debt portfolio, although, much of the foreign inflows into T-bills flowed out of the country in last quarter of 2008. [2] In addition to increasing the cost of the portfolio, the non-concessional borrowings have been of shorter maturities than concessional funds thereby increasing roll-over risk in the external portfolio as well. Relying less on non-concessional sources of financing, and if the conditions allow, extending domestic debt maturities must be a key feature of the government's medium-term debt management strategy going forward.

**Currency Composition of Total Public Debt Portfolio, 2008**
*(In percent)*




## II. Macroeconomic Assumptions

4. Sri Lanka's debt sustainability analysis (DSA) builds on the program baseline scenario[3]. Macroeconomic assumptions in the previous DSA (SM/08/311) built a baseline scenario where increasing balance of payments gaps were financed with commercial borrowing over the medium and long-term. Under the current baseline program scenario external and fiscal adjustments close the financing gaps during the program period.

- Growth over 2008–2013 is projected at 5.3 percent, which is in line with the 10-year historical average of 5 percent. Growth over 2014-2028 period is projected to remain slightly higher level than the historical average.

[2] Foreign investor holdings of T-bills is subject to a 10 percent of total outstanding T-bill stock limit.

[3] Based on debt and debt service thresholds approved by the Boards of the IMF and the Work Bank for use in the assessment of LIC DSA frameworks, Sri Lanka is classified as a medium performing country based on the average of its 2004−07 Country Policy and Institutional Assessment Index (CPIA).

| | Baseline | | Historical Average | |
|---|---|---|---|---|
| | | | 10-year | 5-year |
| | 2008-13 | 2014-28 | 1998-2007 | 2003-07 |
| Real GDP growth | 5.3 | 5.5 | 5.0 | 6.4 |
| Current account deficit (percent of GDP) | 2.7 | 2.9 | 2.9 | 3.1 |
| Growth of exports | 2.9 | 10.0 | 5.5 | 10.2 |
| Growth of oil imports | 4.0 | 10.0 | 21.1 | 26.6 |
| Growth of non-oil imports | 3.2 | 11.0 | 5.6 | 10.7 |

Source: Fund staff estimates and projections.

- Export growth is projected at 2.9 percent in 2008-2013. This is 3.7 percentage points lower than 10-year historical average reflecting sharp decline in the global demand in general and tea and garment export prices in particular. Exports will recover in 2014-2028 with higher growth rate than the 10-year historical average.

- Oil imports are projected to decline to an average growth of 4 percent during 2008-2013, reflecting sharp drop in world oil prices compared with historical averages. Non-oil imports are projected at 3.2 percent in 2008-2013 and are expected to grow at 11 percent over 2014-2028 broadly in line with historical average.

- The current account deficit is projected at average 2.7 of GDP during 2008–2013, which is close to the historical average. Over the longer term current account is projected to remain at historical average. Foreign exchange reserves are projected to increase over 3.7 months of import coverage by end 2010.

- Assumptions on external financing are consistent with the program. The main sources of external financing over the medium term are multilateral and bilateral loans as commercial sources of financing are assumed to have dried out due to global financial crises. Commercial borrowing is projected to gradually increase after 2013 but would remain manageable.

- Revenues and grants would increase from around 14.9 percent of GDP in 2009 to around 16.7 percent of GDP by 2011, as the government is expected to intensify its efforts to broaden the tax base and strengthen tax administration, with a view to mitigating the decline in total revenue. Over the longer-term revenues are projected to raise gradually as the base of direct and indirect taxes is broadened through reducing the array of exemptions.

- Total primary expenditure declines in relation to GDP from 17 percent of GDP in 2008 to about 16 percent of GDP by 2010 as defense spending is reduced and untargeted subsidies are phased out. Primary spending will revert to historical levels over the long run. This trajectory also includes an important compositional change in expenditures, with the interest component falling relative to other recurrent and capital expenditures.

- Inflation is expected to increase somewhat in 2010 reflecting recovery in growth and impact of the projected exchange rate depreciation. Over the medium- to long term inflation is expected to remain in single digits.

## III. Public Debt Sustainability

5. Short -term public external and domestic debt in Sri Lanka has grown to become a significant share of the total public debt portfolio in recent years. Consequently, debt service payments are heavy this year and next. To better capture short-term debt in the subsequent analysis a modification to the DSF templates is required as the main output produced by the DSF framework considers only medium and long term public debt. e modified the Data-Input sheet in the template to add the stock of short-term debt to the total stock of public debt (according to the DFS guidelines SM/08/317). All charts and tables presented reflect this change.

6. Under the baseline macroeconomic assumptions, the primary deficit would decline from 2.3 percent of GDP in 2008 to a surplus 0.8 percent of GDP by 2011. Public debt burden indicators would remain on a downward trend over the medium term. The debt service to revenue ratio would remain manageable throughout the projection period, underscoring the importance of implementation of the program revenue measures to raise the revenue to GDP ratio. Stress tests suggest that the path of total public debt is particularly sensitive to changes in the assumptions about the extent of fiscal adjustment and a one-time depreciation of the exchange rate. The biggest risks would be posed by a failure to carry out the envisaged adjustment in the primary balance (Figure I.1 and Table I.2). The main conclusion of the analysis is that effective implementation of the program in a precondition for fiscal sustainability.

## IV. External Debt Sustainability

7. All debt burden indicators, remain below indicative thresholds under the program baseline scenario (Tables I.3, I.4 and Figure I.2). While the debt burden indicators of this year and next are influenced by a sharp decline of tea and textile exports, a growth slowdown and the IMF financing under the program, they remain below indicative thresholds. PV of external debt to exports, debt to GDP and debt to revenue ratios would remain close to the indicative thresholds in 2009-2010 and would decline thereafter. The grant element in external debt is projected to decline rapidly from 2013 as commercial sources of financing start to increase.

8. Sensitivity analyses show that slower export growth and further depreciation of the rupee could worsen the debt and debt service ratios further. The debt-to-GDP and debt-to-revenue ratios are particularly sensitive to developments in the exchange rate of the rupee.

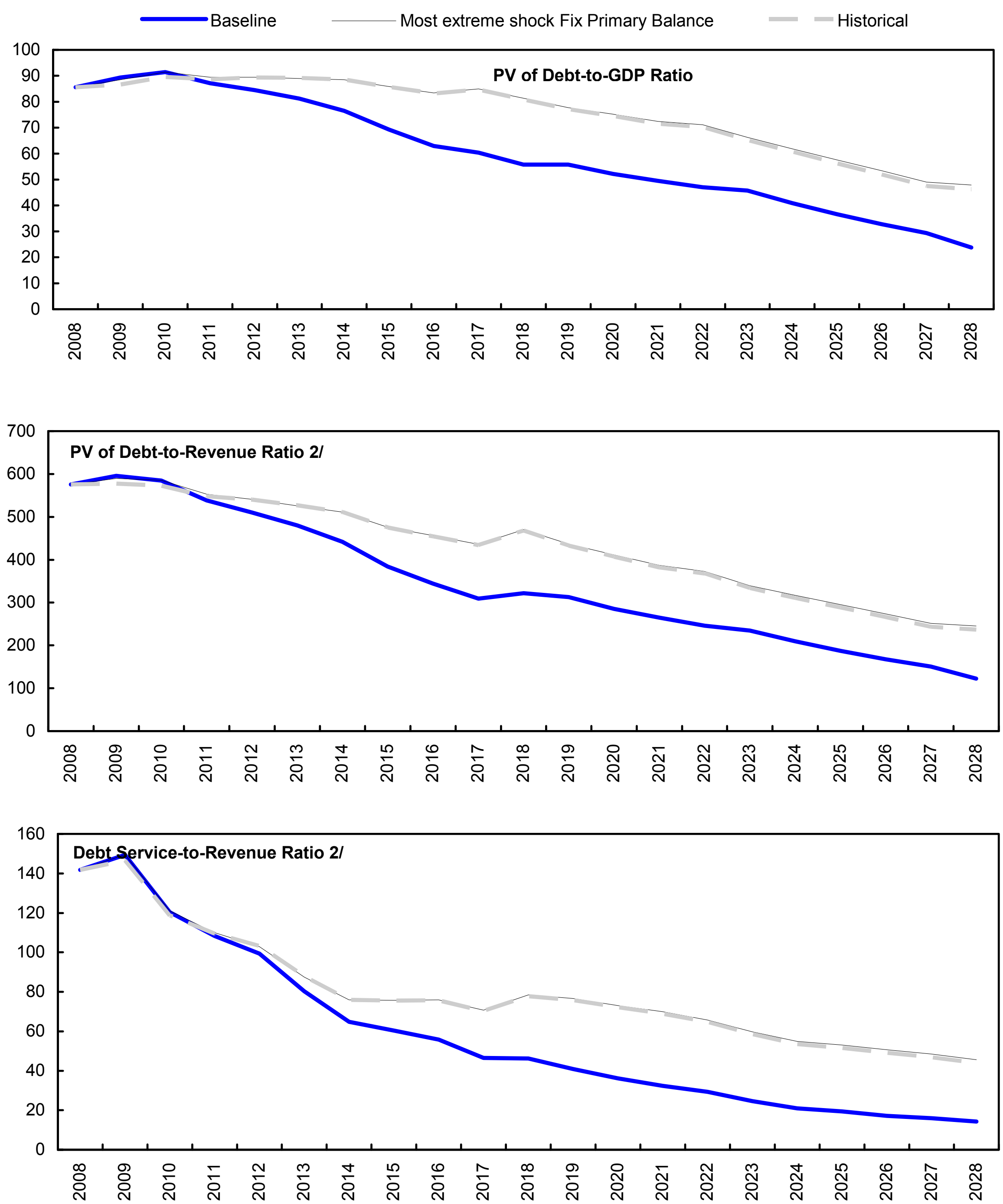
Similarly, the debt service-to-revenue ratio is most sensitive to exchange rate movements and the debt service-to-exports ratio is adversely affected by lower export growth.

9. The moderate level of the debt distress is an improvement from the high risk of the debt distress rating in the previous DSA (SM/08/311). The previous DSA rightly concluded that delay in the external and fiscal adjustment and continues reliance on commercial borrowing to fill the financing gap would lead to high risks of the debt distress. While the current DSA is built on a program scenario with substantial fiscal and external adjustments in combination with large IMF financing that close the financing gaps and bring the debt to a more sustainable path. However, without effective program implementation risks of debt distress are likely to increase.

## V. Staff Assessment

10. Staff considers Sri Lanka to be at moderate risk of external debt distress over the period. 2009–14. Both the external and public DSA suggest that debt dynamics will return to a more sustainable path with the credible fiscal consolidation to offset a decline in exports and the unsettled conditions in global financial markets. Sensitivity analyses show that slower export growth and further sharp depreciation of the rupee could worsen the debt and debt service ratios. Stress tests suggest that prolonged maintenance of an expansionary fiscal policy or a permanently lower GDP growth rate could pose risks to long-run fiscal sustainability. These considerations reinforce the need for the adoption of a more restrained fiscal stance over the medium term.

**Figure I.1. Sri Lanka: Indicators of Public Debt Under Alternative Scenarios, 2008-2028 1/**

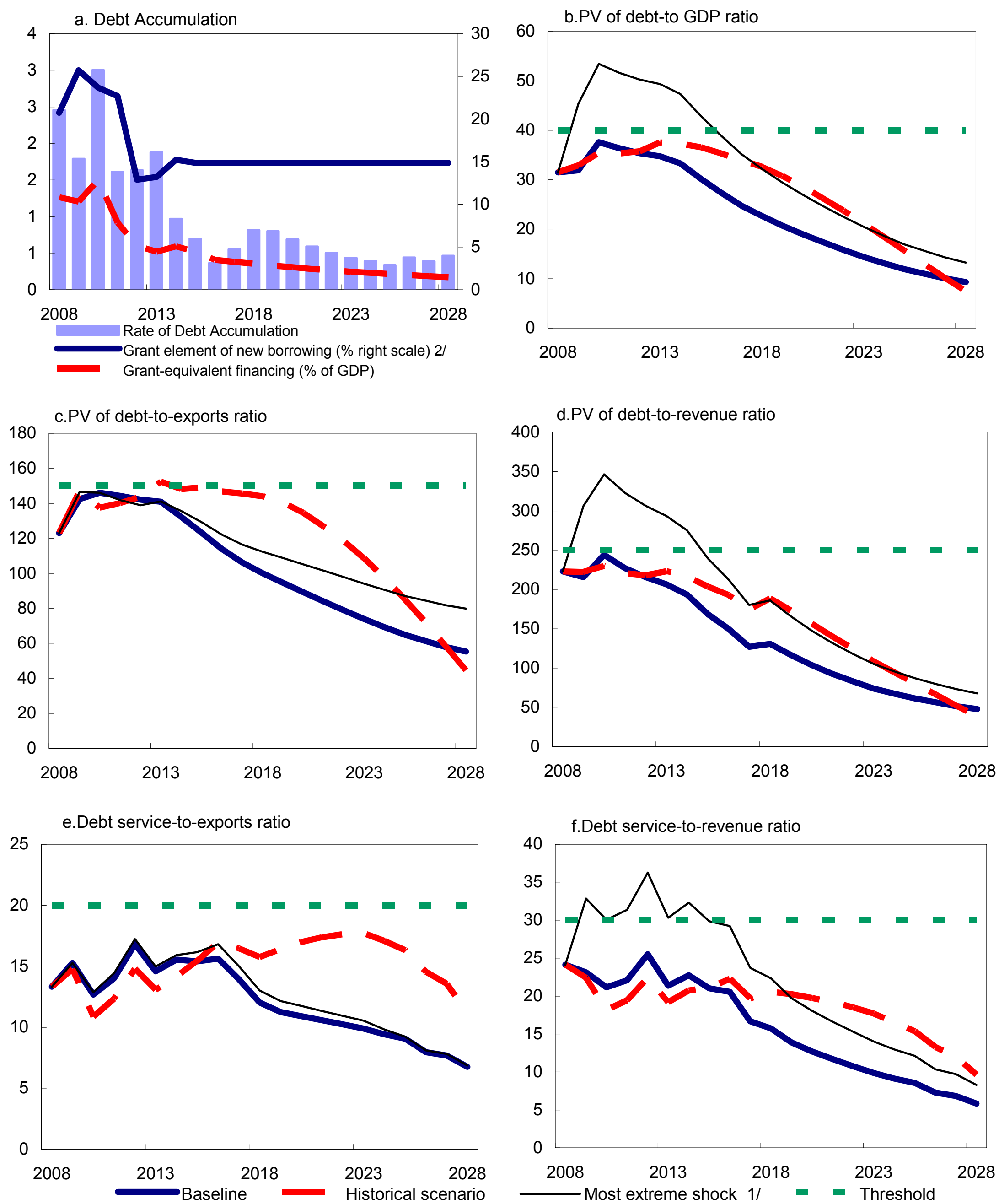



Sources: Country authorities; and Fund staff estimates and projections.

1/ The most extreme stress test is the test that yields the highest ratio in 2018.

2/ Revenues are defined inclusive of grants.

**Figure I.2. Sri Lanka: Indicators of Total External Debt under Alternatives Scenarios, 2008-2028 1/**




Source: Fund staff projections and simulations.

1/ The most extreme stress test is the test that yields the highest ratio in 2018. In figure b. it corresponds to a One-time depreciation shock; in c. to a Terms of trade shock; in d. to a One-time depreciation shock; in e. to a Non-debt flows shock and in picture f. to a One-time depreciation shock.

**Table I.1. Sri Lanka: Public Sector Debt Sustainability Framework, Baseline Scenario, 2005-2028**
(In percent of GDP, unless otherwise indicated)

| | Actual | | | | | Estimate | Projections | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2005 | 2006 | 2007 | Average | Standard Deviation | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2008-13 Average | 2018 | 2028 | 2014-28 Average |
| **Public sector debt 1/** | 98.4 | 94.9 | 90.7 | | | 86.5 | 90.5 | 93.0 | 88.2 | 84.6 | 80.5 | | 54.9 | 23.7 | |
| o/w foreign-currency denominated | 42.9 | 46.8 | 43.8 | | | 38.4 | 39.4 | 44.6 | 42.3 | 39.9 | 38.0 | | 24.4 | 10.4 | |
| Change in public sector debt | 4.8 | -3.5 | -4.2 | | | -4.2 | 3.9 | 2.5 | -4.8 | -3.6 | -4.1 | | -4.6 | -2.5 | |
| Identified debt-creating flows | -6.4 | -5.5 | -8.2 | | | -6.1 | 5.4 | 0.4 | -4.3 | -3.7 | -2.8 | | -2.5 | -1.5 | |
| Primary deficit | 2.5 | 2.2 | 1.9 | 2.2 | 1.0 | 2.3 | 0.8 | 0.1 | -0.9 | -1.2 | -1.1 | 0.0 | -0.4 | -0.4 | -0.2 |
| Revenue and grants | 16.6 | 17.3 | 16.6 | | | 14.9 | 15.0 | 15.6 | 16.2 | 16.5 | 16.9 | | 17.3 | 19.5 | |
| *of which: grants* | 1.3 | 1.0 | 0.9 | | | 0.7 | 0.2 | 0.2 | 0.2 | 0.1 | 0.1 | | 0.0 | 0.0 | |
| Primary (noninterest) expenditure | 19.0 | 19.5 | 18.6 | | | 17.2 | 15.8 | 15.7 | 15.3 | 15.3 | 15.8 | | 16.9 | 19.1 | |
| Automatic debt dynamics | -10.2 | -8.0 | -10.1 | | | -8.4 | 4.5 | 0.3 | -3.4 | -2.5 | -1.6 | | -2.1 | -1.1 | |
| Contribution from interest rate/growth differential | -5.7 | -7.2 | -6.1 | | | -4.9 | 2.0 | -3.4 | -3.1 | -2.4 | -1.6 | | -0.2 | -0.4 | |
| *of which: contribution from average real interest rate* | -0.3 | -0.2 | 0.0 | | | 0.2 | 4.5 | 0.9 | 2.6 | 2.6 | 2.9 | | 2.6 | 0.9 | |
| *of which: contribution from real GDP growth* | -5.5 | -7.0 | -6.0 | | | -5.1 | -2.5 | -4.3 | -5.7 | -5.0 | -4.4 | | -2.8 | -1.2 | |
| Contribution from real exchange rate depreciation | -4.5 | -0.8 | -4.0 | | | -3.5 | 2.5 | 3.7 | -0.3 | -0.1 | -0.1 | | ... | ... | |
| Other identified debt-creating flows | 1.4 | 0.3 | 0.0 | | | 0.0 | 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 | 0.3 | 0.3 | 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) | 1.1 | 0.0 | 0.0 | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Residual, including asset changes | 11.3 | 2.0 | 4.0 | | | 1.9 | -1.4 | 2.2 | -0.5 | 0.1 | -1.3 | | -2.0 | -1.0 | |
| **Other Sustainability Indicators** | | | | | | | | | | | | | | | |
| **PV of public sector debt** | 55.5 | 53.8 | 87.9 | | | 85.6 | 89.4 | 91.4 | 87.1 | 84.4 | 81.2 | | 55.7 | 23.8 | |
| o/w foreign-currency denominated | 0.0 | 5.8 | 41.0 | | | 37.5 | 38.3 | 43.0 | 41.2 | 39.7 | 38.6 | | 25.2 | 10.5 | |
| o/w external | ... | ... | 35.5 | | | 32.1 | 34.6 | 39.2 | 37.7 | 36.4 | 35.6 | | 23.2 | 9.5 | |
| PV of contingent liabilities (not included in public sector debt) | ... | ... | ... | | | ... | ... | ... | ... | ... | ... | | ... | ... | |
| Gross financing need 2/ | 42.1 | 39.2 | 36.4 | | | 36.4 | 34.7 | 35.4 | 31.0 | 25.6 | 23.9 | | 11.3 | 7.3 | |
| PV of public sector debt-to-revenue and grants ratio (in percent) | 334.6 | 311.3 | 528.1 | | | 575.9 | 595.7 | 585.0 | 538.7 | 510.3 | 479.7 | | 322.2 | 122.1 | |
| PV of public sector debt-to-revenue ratio (in percent) | 363.8 | 330.9 | 556.6 | | | 604.7 | 603.5 | 592.4 | 544.4 | 514.5 | 482.7 | | 322.2 | 122.1 | |
| o/w external 3/ | … | … | 224.8 | | | 226.6 | 233.8 | 253.8 | 235.3 | 222.0 | 211.7 | | 134.0 | 48.9 | |
| Debt service-to-revenue and grants ratio (in percent) 4/ | 133.6 | 134.7 | 133.3 | | | 141.8 | 149.4 | 120.3 | 108.3 | 99.4 | 80.2 | | 46.2 | 14.3 | |
| Debt service-to-revenue ratio (in percent) 4/ | 31.3 | 29.4 | 31.2 | | | 38.1 | 40.7 | 37.2 | 35.5 | 32.5 | 32.2 | | 23.2 | 8.4 | |
| Primary deficit that stabilizes the debt-to-GDP ratio | -2.4 | 5.7 | 6.1 | | | 6.5 | -3.1 | -2.5 | 3.9 | 2.4 | 3.0 | | 4.1 | 2.1 | |
| **Key macroeconomic and fiscal assumptions** | | | | | | | | | | | | | | | |
| Real GDP growth (in percent) | 6.2 | 7.7 | 6.8 | 5.0 | 2.5 | 6.0 | 3.0 | 5.0 | 6.5 | 6.0 | 5.5 | 5.3 | 5.0 | 5.0 | 5.0 |
| Average nominal interest rate on forex debt (in percent) | 1.2 | 2.3 | 2.5 | 2.3 | 0.6 | 4.2 | 3.9 | 3.9 | 3.9 | 4.1 | 4.4 | 4.1 | 5.0 | 4.8 | 4.9 |
| Average real interest rate on forex debt (in percent) | 1.4 | 3.6 | 6.6 | 12.8 | 7.3 | -0.7 | 14.9 | 28.9 | 11.4 | 10.9 | 10.4 | 12.6 | 4.5 | 2.6 | 3.2 |
| Change in GDP deflator (in percent) 6/ | 11.2 | 7.6 | 7.1 | 2.6 | 5.1 | 15.5 | 1.3 | -11.6 | 1.4 | 1.3 | 1.7 | 1.6 | 7.5 | 7.5 | 7.1 |
| Growth of real primary spending (deflated by GDP deflator, in percent) | 0.2 | 0.1 | 0.0 | 0.1 | 0.1 | 0.0 | -0.1 | 0.0 | 0.0 | 0.1 | 0.1 | 0.0 | 0.2 | -0.1 | 0.1 |
| Grant element of new external borrowing (in percent) | ... | ... | ... | … | … | 20.8 | 25.7 | 23.7 | 22.7 | 12.9 | 13.2 | 19.8 | 14.9 | 14.9 | ... |

Sources: Country authorities; and Fund staff estimates and projections.
1/ Central government and state owned enterprises.
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.
6/ From the macro-framework

**Table I.2. Sri Lanka: Sensitivity Analysis for Key Indicators of Public Debt 2008-2028**

| | Projections | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2018 | 2028 |
| **PV of Debt-to-GDP Ratio** | | | | | | | | |
| **Baseline** | 86 | 89 | 91 | 87 | 84 | 81 | 56 | 24 |
| **A. Alternative scenarios** | | | | | | | | |
| A1. Real GDP growth and primary balance are at historical averages | 86 | 87 | 90 | 89 | 89 | 89 | 81 | 46 |
| A2. Primary balance is unchanged from 2008 | 86 | 88 | 91 | 89 | 89 | 89 | 81 | 48 |
| A3. Permanently lower GDP growth 1/ | 86 | 87 | 89 | 84 | 82 | 79 | 56 | 38 |
| **B. Bound tests** | | | | | | | | |
| B1. Real GDP growth is at historical average minus one standard deviations in 2009-2010 | 86 | 88 | 91 | 86 | 83 | 80 | 55 | 27 |
| B2. Primary balance is at historical average minus one standard deviations in 2009-2010 | 86 | 89 | 93 | 88 | 84 | 80 | 53 | 22 |
| B3. Combination of B1-B2 using one half standard deviation shocks | 86 | 88 | 93 | 87 | 84 | 80 | 53 | 23 |
| B4. One-time 30 percent real depreciation in 2009 | 86 | 108 | 110 | 104 | 101 | 98 | 68 | 34 |
| B5. 10 percent of GDP increase in other debt-creating flows in 2009 | 86 | 97 | 98 | 93 | 89 | 85 | 57 | 24 |
| **PV of Debt-to-Revenue Ratio 2/** | | | | | | | | |
| **Baseline** | 576 | 596 | 585 | 539 | 510 | 480 | 322 | 122 |
| **A. Alternative scenarios** | | | | | | | | |
| A1. Real GDP growth and primary balance are at historical averages | 576 | 578 | 573 | 548 | 540 | 527 | 468 | 237 |
| A2. Primary balance is unchanged from 2008 | 576 | 590 | 585 | 553 | 541 | 526 | 470 | 245 |
| A3. Permanently lower GDP growth 1/ | 576 | 583 | 568 | 521 | 493 | 464 | 326 | 197 |
| **B. Bound tests** | | | | | | | | |
| B1. Real GDP growth is at historical average minus one standard deviations in 2009-2010 | 576 | 583 | 581 | 532 | 502 | 470 | 316 | 141 |
| B2. Primary balance is at historical average minus one standard deviations in 2009-2010 | 576 | 595 | 596 | 543 | 510 | 475 | 307 | 114 |
| B3. Combination of B1-B2 using one half standard deviation shocks | 576 | 588 | 593 | 541 | 508 | 474 | 309 | 119 |
| B4. One-time 30 percent real depreciation in 2009 | 576 | 721 | 704 | 646 | 611 | 577 | 395 | 174 |
| B5. 10 percent of GDP increase in other debt-creating flows in 2009 | 576 | 646 | 629 | 574 | 539 | 504 | 329 | 124 |
| **Debt Service-to-Revenue Ratio 2/** | | | | | | | | |
| **Baseline** | 142 | 149 | 120 | 108 | 99 | 80 | 46 | 14 |
| **A. Alternative scenarios** | | | | | | | | |
| A1. Real GDP growth and primary balance are at historical averages | 142 | 147 | 119 | 109 | 103 | 88 | 78 | 44 |
| A2. Primary balance is unchanged from 2008 | 142 | 149 | 121 | 110 | 103 | 87 | 78 | 46 |
| A3. Permanently lower GDP growth 1/ | 142 | 150 | 121 | 109 | 101 | 81 | 51 | 31 |
| **B. Bound tests** | | | | | | | | |
| B1. Real GDP growth is at historical average minus one standard deviations in 2009-2010 | 142 | 150 | 124 | 111 | 102 | 82 | 50 | 22 |
| B2. Primary balance is at historical average minus one standard deviations in 2009-2010 | 142 | 149 | 121 | 111 | 103 | 85 | 50 | 17 |
| B3. Combination of B1-B2 using one half standard deviation shocks | 142 | 148 | 122 | 111 | 103 | 85 | 50 | 18 |
| B4. One-time 30 percent real depreciation in 2009 | 142 | 156 | 130 | 121 | 115 | 96 | 71 | 37 |
| B5. 10 percent of GDP increase in other debt-creating flows in 2009 | 142 | 149 | 125 | 117 | 107 | 95 | 56 | 19 |

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

1/ Assumes that real GDP growth is at baseline minus one standard deviation divided by the length of the projection period.

2/ Revenues are defined inclusive of grants.

**Table I.3. Sri Lanka: External Debt Sustainability Framework, Baseline Scenario, 2005-2028 1/**

(In percent of GDP, unless otherwise indicated)

| | Actual | | | Historical 0 Average 0 | Standard Deviation | Projections | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2005 | 2006 | 2007 | | | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2008-2013 Average | 2018 | 2028 | 2014-2028 Average |
| **External debt (nominal) 1/** | **53.3** | **50.2** | **51.5** | | | **44.3** | **43.9** | **50.8** | **48.4** | **46.7** | **45.3** | | **29.4** | **12.8** | |
| o/w public and publicly guaranteed (PPG) | 51.8 | 48.8 | 49.8 | | | 42.7 | 43.2 | 50.5 | 48.3 | 46.3 | 44.8 | | 28.9 | 11.9 | |
| Change in external debt | -8.6 | -3.1 | 1.3 | | | -7.2 | -0.4 | 6.9 | -2.4 | -1.7 | -1.3 | | -2.8 | -1.0 | |
| Identified net debt-creating flows | -8.0 | -3.6 | -3.7 | | | 5.1 | -1.5 | -2.2 | -2.1 | -2.2 | -3.0 | | -0.1 | 2.7 | |
| **Non-interest current account deficit** | **1.6** | **4.2** | **3.0** | **1.7** | **1.9** | **7.6** | **-0.4** | **-0.4** | **0.5** | **0.0** | **-1.2** | | **1.1** | **3.4** | 1.8 |
| Deficit in balance of goods and services | 8.7 | 11.0 | 10.4 | | | 13.8 | 6.0 | 6.5 | 6.9 | 6.6 | 6.4 | | 7.2 | 7.5 | |
| Exports | 32.5 | 30.1 | 29.1 | | | 25.6 | 22.4 | 25.7 | 25.2 | 24.9 | 24.6 | | 22.6 | 16.8 | |
| Imports | 41.2 | 41.1 | 39.5 | | | 39.4 | 28.4 | 32.3 | 32.1 | 31.5 | 31.0 | | 29.8 | 24.3 | |
| Net current transfers (negative = inflow) | -7.5 | -7.1 | -7.1 | -6.5 | 0.7 | -6.7 | -6.4 | -7.0 | -6.4 | -6.7 | -7.5 | | -6.4 | -4.1 | -5.7 |
| o/w official | -0.4 | -0.4 | -0.3 | | | -0.3 | -0.2 | -0.2 | -0.2 | -0.1 | -0.1 | | 0.0 | 0.0 | |
| Other current account flows (negative = net inflow) | 0.4 | 0.2 | -0.3 | | | 0.5 | 0.1 | 0.1 | 0.1 | 0.1 | -0.1 | | 0.3 | 0.0 | |
| **Net FDI (negative = inflow)** | **-1.0** | **-1.6** | **-1.7** | **-1.1** | **0.3** | **-1.7** | **-1.4** | **-1.2** | **-1.3** | **-1.3** | **-1.3** | | **-1.1** | **-0.7** | -1.0 |
| **Endogenous debt dynamics 2/** | **-8.7** | **-6.2** | **-5.0** | | | **-0.7** | **0.3** | **-0.7** | **-1.4** | **-1.0** | **-0.6** | | **-0.1** | **0.0** | |
| Contribution from nominal interest rate | 0.8 | 1.1 | 1.4 | | | 1.8 | 1.5 | 1.7 | 1.7 | 1.7 | 1.8 | | 1.3 | 0.6 | |
| Contribution from real GDP growth | -3.3 | -3.5 | -3.0 | | | -2.5 | -1.3 | -2.4 | -3.1 | -2.7 | -2.4 | | -1.4 | -0.6 | |
| Contribution from price and exchange rate changes | -6.2 | -3.8 | -3.3 | | | … | … | … | … | … | … | | … | … | |
| **Residual (3-4) 3/** | **-0.7** | **0.5** | **4.9** | | | **-12.3** | **1.1** | **9.1** | **-0.4** | **0.5** | **1.7** | | **-2.8** | **-3.7** | |
| o/w exceptional financing | -1.1 | 0.0 | 0.0 | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| PV of external debt 4/ | ... | ... | 37.8 | | | 33.1 | 32.7 | 37.9 | 36.4 | 35.7 | 35.3 | | 23.1 | 10.2 | |
| In percent of exports | ... | ... | 129.8 | | | 129.1 | 145.7 | 147.3 | 144.5 | 143.6 | 143.4 | | 102.3 | 60.6 | |
| **PV of PPG external debt** | **...** | **...** | **36.1** | | | **31.5** | **31.9** | **37.6** | **36.3** | **35.4** | **34.7** | | **22.6** | **9.3** | |
| **In percent of exports** | **...** | **...** | **124.1** | | | **123.1** | **142.4** | **146.1** | **144.3** | **142.2** | **141.0** | | **100.1** | **55.4** | |
| **In percent of government revenues** | **...** | **...** | **228.7** | | | **222.7** | **215.5** | **243.8** | **227.1** | **215.6** | **206.6** | | **130.9** | **47.7** | |
| **Debt service-to-exports ratio (in percent)** | **7.4** | **11.0** | **13.0** | | | **16.8** | **20.2** | **16.2** | **17.6** | **19.9** | **17.6** | | **15.6** | **9.2** | |
| **PPG debt service-to-exports ratio (in percent)** | **3.5** | **6.9** | **9.0** | | | **13.3** | **15.3** | **12.7** | **14.0** | **16.8** | **14.6** | | **12.0** | **6.8** | |
| **PPG debt service-to-revenue ratio (in percent)** | **7.5** | **12.9** | **16.6** | | | **24.1** | **23.1** | **21.2** | **22.1** | **25.5** | **21.4** | | **15.7** | **5.8** | |
| Total gross financing need (billions of U.S. dollars) | 5.4 | 6.6 | 7.2 | | | 10.9 | 9.7 | 8.7 | 7.8 | 7.9 | 7.1 | | 9.5 | 19.9 | |
| Non-interest current account deficit that stabilizes debt ratio | 10.3 | 7.3 | 1.7 | | | 14.8 | 0.0 | -7.2 | 3.0 | 1.8 | 0.1 | | 4.0 | 4.4 | |
| **Key macroeconomic assumptions** | | | | | | | | | | | | | | | |
| Real GDP growth (in percent) | 6.2 | 7.7 | 6.8 | 5.0 | 2.5 | 6.0 | 3.0 | 5.0 | 6.5 | 6.0 | 5.5 | 5.3 | 5.0 | 5.0 | 5.0 |
| GDP deflator in US dollar terms (change in percent) | 11.2 | 7.6 | 7.1 | 2.6 | 5.1 | 15.5 | 1.3 | -11.6 | 1.4 | 1.3 | 1.7 | 1.6 | 7.5 | 7.5 | 7.1 |
| Effective interest rate (percent) 5/ | 1.6 | 2.5 | 3.1 | 2.6 | 0.6 | 4.2 | 3.6 | 3.6 | 3.6 | 3.8 | 4.1 | 3.8 | 4.6 | 4.8 | 4.6 |
| Growth of exports of G&S (US dollar terms, in percent) | 8.9 | 7.3 | 10.7 | 5.7 | 7.1 | 7.7 | -8.7 | 6.6 | 5.6 | 6.0 | 6.2 | 3.9 | 9.5 | 9.6 | 9.6 |
| Growth of imports of G&S (US dollar terms, in percent) | 10.5 | 15.5 | 9.9 | 7.3 | 10.4 | 22.3 | -24.9 | 5.5 | 7.4 | 5.5 | 5.6 | 3.6 | 10.6 | 10.6 | 10.6 |
| Grant element of new public sector borrowing (in percent) | ... | ... | ... | ... | ... | 20.8 | 25.7 | 23.7 | 22.7 | 12.9 | 13.2 | 19.8 | 14.9 | 14.9 | 14.9 |
| Government revenues (excluding grants, in percent of GDP) | 15.3 | 16.3 | 15.8 | | | 14.1 | 14.8 | 15.4 | 16.0 | 16.4 | 16.8 | | 17.3 | 19.5 | 18.7 |
| Aid flows (in billions of US dollars) 7/ | 1.4 | 1.5 | 1.6 | | | 1.7 | 1.9 | 2.5 | 2.9 | 3.0 | 3.1 | | 2.8 | 4.9 | |
| o/w Grants | 0.3 | 0.3 | 0.3 | | | 0.3 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | | 0.0 | 0.0 | |
| o/w Concessional loans | 1.1 | 1.2 | 1.4 | | | 1.4 | 1.8 | 2.5 | 2.8 | 3.0 | 3.0 | | 2.8 | 4.9 | |
| Grant-equivalent financing (in percent of GDP) 8/ | ... | ... | ... | | | 1.3 | 1.2 | 1.5 | 0.9 | 0.6 | 0.5 | | 0.4 | 0.2 | 0.3 |
| Grant-equivalent financing (in percent of external financing) 8/ | ... | ... | ... | | | 37.3 | 29.3 | 26.3 | 26.5 | 16.1 | 16.0 | | 14.9 | 14.9 | 15.2 |
| *Memorandum items:* | | | | | | | | | | | | | | | |
| Nominal GDP (billions of US dollars) | 24.4 | 28.3 | 32.3 | | | 39.6 | 41.3 | 38.3 | 41.4 | 44.4 | 47.7 | | 81.9 | 275.0 | |
| Nominal dollar GDP growth | 18.1 | 15.9 | 14.4 | | | 22.4 | 4.3 | -7.2 | 8.0 | 7.4 | 7.3 | 7.0 | 12.9 | 12.9 | 12.4 |
| PV of PPG external debt (in billions of US dollars) | | | 11.7 | | | 12.5 | 13.2 | 14.4 | 15.0 | 15.7 | 16.6 | | 18.5 | 25.6 | |
| (PVt-PVt-1)/GDPt-1 (in percent) | | | | | | 2.5 | 1.8 | 3.0 | 1.6 | 1.6 | 1.9 | 2.1 | 0.8 | 0.5 | 0.6 |

Source: Staff simulations.

1/ Includes both public and private sector external debt.
2/ Derived as [r - g - r(1+g)]/(1+g+r+gr) times previous period debt ratio, with r = nominal interest rate; g = real GDP growth rate, and r = 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.
Price and exhange rate change accounts of 8 percent, while reserve depletion compared to 2007 adds additional 3.2 percent
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 I.4. Sri Lanka: Sensitivity Analysis for Key Indicators of Public and Publicly Guaranteed External Debt, 2008-2028**

(In percent)

| | | | | Projections | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | **2018** | 2028 |
| **PV of debt-to GDP ratio** | | | | | | | | | | | | |
| **Baseline** | 32 | 32 | 38 | 36 | 35 | 35 | 33 | 30 | 27 | 25 | **23** | 9 |
| **A. Alternative Scenarios** | | | | | | | | | | | | |
| A1. Key variables at their historical averages in 2008-2028 1/ | 32 | 33 | 35 | 35 | 36 | 38 | 37 | 37 | 35 | 34 | **33** | 7 |
| A2. New public sector loans on less favorable terms in 2008-2028 2 | 32 | 33 | 38 | 36 | 35 | 35 | 34 | 32 | 29 | 27 | **25** | 13 |
| **B. Bound Tests** | | | | | | | | | | | | |
| B1. Real GDP growth at historical average minus one standard deviation in 2009-2010 | 32 | 32 | 39 | 37 | 36 | 36 | 34 | 31 | 28 | 26 | **23** | 10 |
| B2. Export value growth at historical average minus one standard deviation in 2009-2010 3/ | 32 | 30 | 36 | 35 | 34 | 33 | 32 | 29 | 26 | 24 | **22** | 9 |
| B3. US dollar GDP deflator at historical average minus one standard deviation in 2009-2010 | 32 | 33 | 35 | 34 | 33 | 33 | 31 | 28 | 26 | 23 | **21** | 9 |
| B4. Net non-debt creating flows at historical average minus one standard deviation in 2009-2010 4/ | 32 | 33 | 40 | 39 | 38 | 37 | 36 | 32 | 29 | 26 | **24** | 9 |
| B5. Combination of B1-B4 using one-half standard deviation shocks | 32 | 30 | 31 | 30 | 29 | 28 | 27 | 25 | 23 | 21 | **19** | 8 |
| B6. One-time 30 percent nominal depreciation relative to the baseline in 2009 5/ | 32 | 45 | 53 | 52 | 50 | 49 | 47 | 43 | 39 | 35 | **32** | 13 |
| **PV of debt-to-exports ratio** | | | | | | | | | | | | |
| **Baseline** | 123 | 142 | 146 | 144 | 142 | 141 | 132 | 123 | 114 | 106 | **100** | 55 |
| **A. Alternative Scenarios** | | | | | | | | | | | | |
| A1. Key variables at their historical averages in 2008-2028 1/ | 123 | 147 | 138 | 140 | 144 | 152 | 148 | 149 | 147 | 146 | **144** | 45 |
| A2. New public sector loans on less favorable terms in 2008-2028 2 | 123 | 147 | 146 | 142 | 139 | 141 | 136 | 129 | 122 | 116 | **112** | 80 |
| **B. Bound Tests** | | | | | | | | | | | | |
| B1. Real GDP growth at historical average minus one standard deviation in 2009-2010 | 123 | 142 | 146 | 144 | 142 | 141 | 132 | 123 | 114 | 106 | **100** | 55 |
| B2. Export value growth at historical average minus one standard deviation in 2009-2010 3/ | 123 | 125 | 139 | 137 | 135 | 134 | 126 | 118 | 109 | 102 | **97** | 55 |
| B3. US dollar GDP deflator at historical average minus one standard deviation in 2009-2010 | 123 | 142 | 146 | 144 | 142 | 141 | 132 | 123 | 114 | 106 | **100** | 55 |
| B4. Net non-debt creating flows at historical average minus one standard deviation in 2009-2010 4/ | 123 | 147 | 157 | 155 | 153 | 151 | 142 | 132 | 122 | 113 | **106** | 56 |
| B5. Combination of B1-B4 using one-half standard deviation shocks | 123 | 121 | 124 | 123 | 121 | 120 | 112 | 105 | 98 | 92 | **87** | 51 |
| B6. One-time 30 percent nominal depreciation relative to the baseline in 2009 5/ | 123 | 142 | 146 | 144 | 142 | 141 | 132 | 123 | 114 | 106 | **100** | 55 |
| **PV of debt-to-revenue ratio** | | | | | | | | | | | | |
| **Baseline** | 223 | 215 | 244 | 227 | 216 | 207 | 194 | 168 | 150 | 127 | **131** | 48 |
| **A. Alternative Scenarios** | | | | | | | | | | | | |
| A1. Key variables at their historical averages in 2008-2028 1/ | 223 | 222 | 229 | 220 | 218 | 223 | 217 | 204 | 193 | 174 | **188** | 38 |
| A2. New public sector loans on less favorable terms in 2008-2028 2 | 223 | 222 | 244 | 223 | 211 | 207 | 199 | 176 | 160 | 139 | **147** | 69 |
| **Debt service-to-exports ratio** | | | | | | | | | | | | |
| **Baseline** | 13 | 15 | 13 | 14 | 17 | 15 | 16 | 15 | 16 | 14 | **12** | 7 |
| **A. Alternative Scenarios** | | | | | | | | | | | | |
| A1. Key variables at their historical averages in 2008-2028 1/ | 13 | 15 | 11 | 12 | 15 | 13 | 14 | 15 | 17 | 16 | **16** | 11 |
| A2. New public sector loans on less favorable terms in 2008-2028 2 | 13 | 15 | 13 | 14 | 17 | 15 | 16 | 15 | 16 | 14 | **12** | 7 |
| A3. Alternative Scenario :[Costumize, enter title] | 13 | 15 | 10 | 11 | 13 | 11 | 11 | 10 | 9 | 6 | **3** | -12 |
| **B. Bound Tests** | | | | | | | | | | | | |
| B1. Real GDP growth at historical average minus one standard deviation in 2009-2010 | 13 | 15 | 13 | 14 | 17 | 15 | 16 | 15 | 16 | 14 | **12** | 7 |
| B2. Export value growth at historical average minus one standard deviation in 2009-2010 3/ | 13 | 14 | 12 | 14 | 17 | 14 | 15 | 15 | 15 | 13 | **11** | 7 |
| B3. US dollar GDP deflator at historical average minus one standard deviation in 2009-2010 | 13 | 15 | 13 | 14 | 17 | 15 | 16 | 15 | 16 | 14 | **12** | 7 |
| B4. Net non-debt creating flows at historical average minus one standard deviation in 2009-2010 4/ | 13 | 15 | 13 | 14 | 17 | 15 | 16 | 16 | 17 | 15 | **13** | 7 |
| B5. Combination of B1-B4 using one-half standard deviation shocks | 13 | 14 | 12 | 13 | 15 | 13 | 14 | 13 | 13 | 12 | **10** | 6 |
| B6. One-time 30 percent nominal depreciation relative to the baseline in 2009 5/ | 13 | 15 | 13 | 14 | 17 | 15 | 16 | 15 | 16 | 14 | **12** | 7 |
| **Debt service-to-revenue ratio** | | | | | | | | | | | | |
| **Baseline** | 24 | 23 | 21 | 22 | 26 | 21 | 23 | 21 | 21 | 17 | **16** | 6 |
| **A. Alternative Scenarios** | | | | | | | | | | | | |
| A1. Key variables at their historical averages in 2008-2028 1/ | 24 | 22 | 18 | 19 | 22 | 19 | 21 | 21 | 22 | 20 | **21** | 10 |
| A2. New public sector loans on less favorable terms in 2008-2028 2 | 24 | 23 | 21 | 23 | 26 | 19 | 16 | 14 | 13 | 11 | **11** | 4 |
| A3. Alternative Scenario :[Costumize, enter title] | 24 | 22 | 17 | 17 | 20 | 16 | 16 | 14 | 12 | 7 | **4** | -10 |
| **B. Bound Tests** | | | | | | | | | | | | |
| B1. Real GDP growth at historical average minus one standard deviation in 2009-2010 | 24 | 23 | 22 | 23 | 26 | 22 | 23 | 22 | 21 | 17 | **16** | 6 |
| B2. Export value growth at historical average minus one standard deviation in 2009-2010 3/ | 24 | 23 | 21 | 22 | 25 | 21 | 22 | 20 | 20 | 16 | **15** | 6 |
| B3. US dollar GDP deflator at historical average minus one standard deviation in 2009-2010 | 24 | 24 | 20 | 21 | 24 | 20 | 21 | 20 | 19 | 16 | **15** | 5 |
| B4. Net non-debt creating flows at historical average minus one standard deviation in 2009-2010 4/ | 24 | 23 | 21 | 23 | 26 | 22 | 23 | 22 | 22 | 18 | **17** | 6 |
| B5. Combination of B1-B4 using one-half standard deviation shocks | 24 | 23 | 19 | 19 | 22 | 19 | 20 | 18 | 17 | 14 | **13** | 5 |
| B6. One-time 30 percent nominal depreciation relative to the baseline in 2009 5/ | 24 | 33 | 30 | 31 | 36 | 30 | 32 | 30 | 29 | 24 | **22** | 8 |
| *Memorandum item:* | | | | | | | | | | | | |
| Grant element assumed on residual financing (i.e., financing required above baseline) 6/ | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | **9** | 9 |

Source: Fund staff projections and simulations.

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 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.