INTERNATIONAL MONETARY FUND

# GUYANA

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## STAFF REPORT FOR THE 2016 ARTICLE IV CONSULTATION—DEBT SUSTAINABILITY ANALYSIS


Approved By
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Prepared by the staff of the International Monetary Fund in consultation with the World Bank Staff.



*Guyana's risk of external debt distress remains moderate and debt service manageable. The update of the DSA shows that indicators of the risk of external debt distress remain under the relevant threshold despite some deterioration. The results of the debt sustainability analysis (DSA) suggest that the NPV of external debt to GDP reaches 28 percent of GDP over the medium term while debt service would rise to 6 percent of revenue. Stress tests reveal vulnerability of public debt to extreme shocks.*

# BACKGROUND

1. **Debt relief, PetroCaribe debt write-offs and fiscal consolidation efforts have helped reduce Guyana's external debt burden significantly in recent years.** Total public sector debt has declined from 96 percent of GDP in 2006 to 48.6 percent in 2015. Under the Multilateral Debt Relief Initiative (MDRI), the Fund, the World Bank, and the IDB provided debt relief amounting to US$611 million in 2006–07. Paris Club bilateral creditors and some non-Paris Club creditors granted debt relief as part of the 2004 Paris Club agreement.[1] Negotiations with other non-Paris Club creditors about debt relief are protracted with the debt in question amounting to around 15 percent of total debt or 7 percent of GDP.[2] Meanwhile, part of the debt owed to Venezuela under the PetroCaribe agreement has been written off against Guyana's rice exports to that country. Furthermore, the non-financial public sector (NFPS) deficit declined from 8.6 percent of GDP in 2005 to 0.2 percent of GDP in 2015.

2. **Over the last six years, total gross public debt has declined by about 19 percent of GDP.** The debt-to-GDP ratio declined from 67 percent in 2009 to 48.6 percent in 2015. Over the same period, external debt declined from 46 percent of GDP to 36 percent, and domestic debt declined from 21 percent of GDP to 12 percent. Multilateral institutions—particularly the Inter-American Development Bank, the Caribbean Development Bank and the International Development Association—are the main external creditors. Debt has a long maturity profile and low average interest rates.

3. **Over the years, Venezuela had become an important donor through PetroCaribe's concessional loans to finance Guyana's oil imports, an arrangement that has stopped**. Although these loan disbursements were sizable, a large portion of these funds had been deposited in an account at the Central Bank of Guyana to be used as a 'sinking fund,' which, on a net debt basis, has a smaller impact and lowers debt vulnerabilities as it increases gross reserves available to service external debt. In addition, Guyana had repaid part of its PetroCaribe debt with rice exports and the accumulated savings under the financing arrangement.

4. **Guyana's external debt burden thresholds correspond to the ones associated with a medium policy performance rating.** The three-year average of the CPIA (Country Policy and Institutional Assessment) of Guyana has remained stable at 3.3, corresponding to a medium policy performance rating. This implies the following thresholds: (i) a PV of debt-to-GDP ratio of 40 percent; (ii) a PV of debt-to-exports ratio of 150 percent; (iii) a PV of debt-to-revenue ratio of 250 percent; and (iv) debt service-to-exports and revenue ratios of 20 percent, respectively.

[1] Debt relief under the Heavily Indebted Poor Country (HIPC) Initiative was granted by all multilateral creditors except one, by Paris Club bilateral creditors, and four non-Paris Club creditors (China, India, Venezuela, and Cuba). Debt owed to Brazil and North Korea was paid off without relief.

[2] These creditors include Argentina, Bulgaria, Kuwait, Libya, United Arab Emirates, and Serbia, as well as a loan from an Indian commercial entity (Tata). In addition, the situation of the CARICOM Multilateral Clearing Facility (CMCF) debt has not been resolved yet.

# MACROECONOMIC FRAMEWORK AND BASELINE SCENARIO ASSUMPTIONS

## A. Background

5. **Guyana's economy continues to expand, albeit growth slowed in 2015 due to domestic and external factors.** Real GDP growth decelerated to 3 percent in 2015 but is projected to increase to 4 percent in 2016, lifted by increased output from two large gold mines and accelerated implementation of the public sector investment program. Inflation will remain subdued, averaging 2 percent during the medium term and 3.5 percent on average during the long term. The external current account deficit is expected to widen to about 7percent of GDP on average in 2017–21 and remain approximately at that level in the long term, reflecting higher oil imports and persistent shocks to the prices of Guyana's commodity exports. As a result of this and slightly lower net capital inflows, gross international reserves are projected to fall below the standard threshold (3 months of imports) in the long term without policy adjustment.

6. **The nonfinancial public sector deficit for 2015 was 0.2 percent of GDP and is expected to rise to 5.2 percent of GDP on average during 2016–21.** The lower fiscal deficit in 2015 was mainly due to one-off factors, including election-induced declines in public capital spending. Public debt stood at 48.6 percent of GDP in 2015.

## B. Baseline Scenario: Projections and Assumptions

7. **Medium term growth outlook remains positive but could be constrained by financing and low productivity barring far reaching structural reforms.** The authorities' plans for the energy sector and improvements in infrastructure, coupled with robust growth in construction and gold production, will sustain growth of about 3.8 percent on average in 2017–2021 and through the medium term.[3]

8. **Baseline fiscal consolidation is expected to be insufficient to reduce debt ratios more rapidly in the long term.** The overall NFPS deficit is projected to remain high at about 4.7 percent of GDP on average over the projection period, as capital spending associated with infrastructure needs remains high.[4] As a result, gross public debt is projected to increase to 60 percent and 75 percent of GDP by 2021 and 2036, respectively. The concessional nature of the debt helps limit that increase. The baseline scenario does not assume any additional debt reduction through rice exports to Venezuela in 2016 and beyond.

[3] The projection excludes the discovery of oil by Exxon Mobil, which could begin production as early as 2020. However, it is not accounted for as it is currently at an exploratory stage.

[4] Nevertheless, the primary deficit is projected to decline somewhat from 3.8 percent in 2021 to 2.3 percent in 2036.

9. **The current DSA shows some deterioration in long-run debt sustainability relative to the 2013 DSA**, driven by the looser fiscal stance assumed in the baseline. The public debt to GDP ratio in the current DSA reaches 75 percent by 2033 compared to 48.4 percent in the 2013 DSA, even though the initial debt stock is significantly lower (about 10 percentage points of GDP). The 2013 DSA assumed a steep fiscal consolidation that achieved an average surplus of 1 percent during 2013-33. In contrast, the current DSA assumes a continuation of the current fiscal stance, with an average fiscal deficit of 4.8 percent in the long-term.

# ASSESSMENT OF BASELINE SCENARIO: GROSS EXTERNAL DEBT

10. **The analysis suggests that Guyana's external debt remains sustainable under the baseline scenario and the country faces a moderate risk of debt distress, but external debt ratios are vulnerable to shocks (Table 1, Figure 1).** All sustainability indicators remain comfortably below their thresholds. The PV of gross external debt-to-GDP ratio increases gradually to 28 percent in the long term (compared to 30 percent in the previous DSA). Most of the improvement in the PV of gross external debt-to-GDP ratio compared to the 2013 DSA was due to lower projected disbursements in the long term. External debt would remain manageable as long as the government is committed to the policy of borrowing on highly concessional terms. Debt service-to-exports and debt service-to-revenue ratios also remain well below their respective thresholds, reflecting the concessional nature of outstanding debt and new external borrowing in the near-term.

11. **Bound tests and alternative scenarios show that Guyana's external debt is vulnerable to large shocks and a deteriorated economic environment (Table 2, Figure 1).** Guyana remains vulnerable to large terms of trade shocks given its concentration of its exports on a few commodities and dependence on imported oil. The PV of debt-to-GDP ratio breaches the threshold in the event of a one-time 30 percent depreciation (Figure 1 and Table 2, B6). Although stress tests suggest no breach of thresholds for the repayment capacity of Guyana, debt service-to-exports and debt service-to-revenue ratios are higher compared to the previous DSA, underlying increased vulnerability to large shocks. Please note that the declining debt under the Historical scenario is mostly driven by a mechanical extrapolation of past debt forgiveness, which is unlikely to take place in the future.

# ASSESSMENT OF BASELINE SCENARIO: GROSS PUBLIC DEBT

12. **The analysis of total gross public debt shows that the risk of debt distress increases in 2020–21 and beyond (Tables 3 and 4).** The nominal total debt-to-GDP ratio reaches the 60 percent threshold in 2021 and remains on an upward trajectory throughout 2036 absent fiscal consolidation. The PV of the public sector debt-to-GDP ratio is also estimated to increase

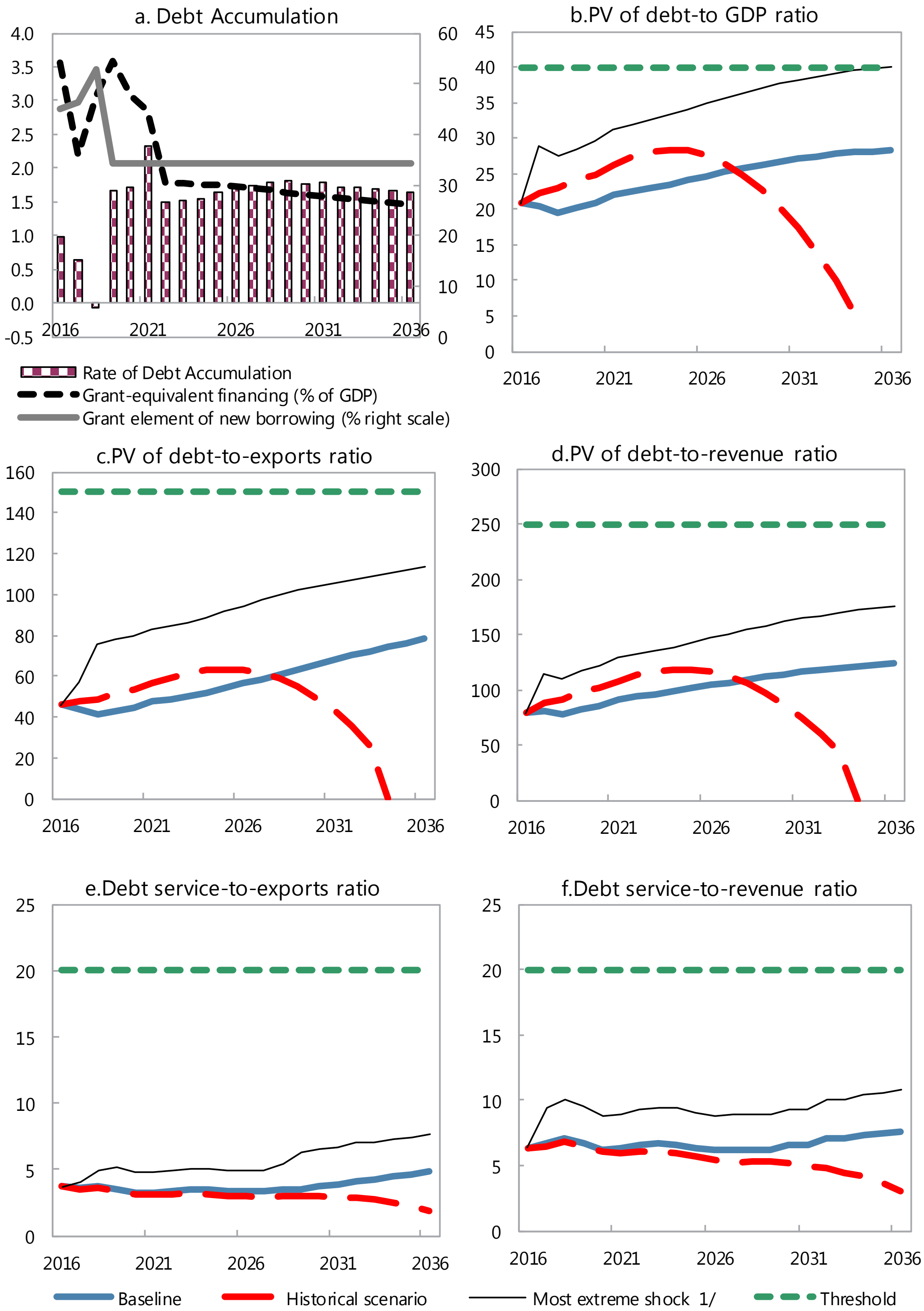
monotonically, reaching 61 percent of GDP in the long term. Given the trajectory, fiscal consolidation is needed to place the debt on a steadily downward path.

13. **Total public debt is vulnerable to standard shocks.** Vulnerability of the public debt to shocks underscores the importance of closer monitoring of the Public Sector Investment Program (PSIP). This is important to ensure that the projects are financially viable and that they increase the economy's productivity (Table 4, Figure 2). The PV of debt-to-GDP ratio is most vulnerable to shocks to GDP growth (Table 4, B1). Assuming a GDP growth is at historical average minus one standard deviation, the PV of debt-to-GDP ratio would increase to 47 percent in the medium term and 68 percent by 2036, which is 6 percentage points higher than the baseline scenario. Debt service payments would remain manageable reflecting the high concessionality of the public debt. Nevertheless, in some scenarios debt service could increase to as much as 20 percent of revenues, which could limit significantly resources for public investment and social spending.

# CONCLUSION

14. **Guyana's risk of debt distress remains moderate, but is rising.** In the baseline scenario, debt indicators remain well below their respective thresholds over the projection period. The PV of external debt-to-GDP ratio increases to around 28 percent in the long run. But Guyana remains vulnerable to large terms of trade shocks given the concentration of its exports on a few commodities, and its dependence on imported oil (which also has large implications for the fiscal sector). Sensitivity analysis and bound tests show high vulnerability of Guyana's debt to shocks, in particular, in the case of new loans on less favorable terms and one-time 30 percent depreciation. Nevertheless, debt service would remain manageable reflecting the high concessionality of public borrowing. However, under some scenarios and bound tests debt service could increase significantly, reducing the amount of resources available to public investment and social spending. In light of the risks associated with plans to significantly increase expenditure, the authorities should proceed with extreme caution (e.g., by ensuring that the projects are financially viable and that they increase the economy's productivity) and improve debt management. A significant increase in non-concessional debt, including domestic borrowing, may be needed to finance persistent deficits. That would bring additional risks which are not captured in this LIC DSA, and warrant close monitoring. The gross public debt to GDP ratio is projected to reach 60 percent of GDP by 2021, a relatively high level which can bring heightened financing risks on the non-concessional component.

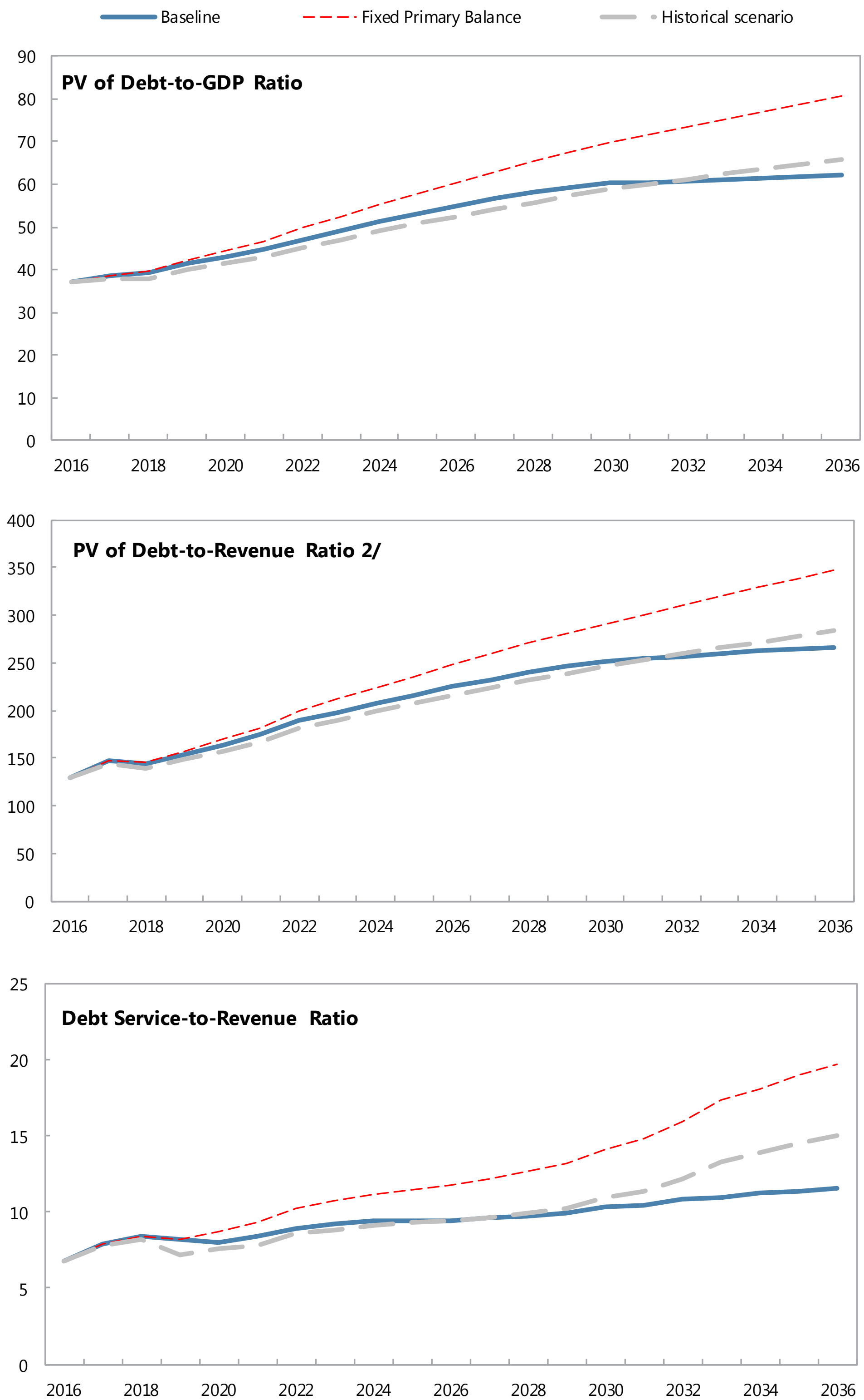
**Figure 1. Guyana: Indicators of Public and Publicly Guaranteed External Debt under Alternative Scenarios, 2013-2033 1/**




Sources: Country authorities and Fund Staff estimates and projections

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

**Figure 2. Guyana: Indicators of Public Debt under Alternative Scenarios, 2013-2033 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 2026.

2/ Revenues are defined inclusive of grants.

**Table 1. External Debt Sustainability Framework, Baseline Scenario, 2010-2033 1/**

(In percent of GDP, unless otherwise indicated)

| | Actual | | | Historical Average 6/ | Standard Deviation 6/ | Projections | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2013 | 2014 | 2015 | | | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2016-2021 Average | 2026 | 2036 | 2022-2036 Average |
| **External debt (nominal) 1/** | **41.8** | **39.5** | **36.1** | | | **36.0** | **35.5** | **34.2** | **35.0** | **35.8** | **37.3** | | **39.6** | **41.8** | |
| *of which: public and publicly guaranteed (PPG)* | 41.8 | 39.5 | 36.1 | | | 36.0 | 35.5 | 34.2 | 35.0 | 35.8 | 37.3 | | 39.6 | 41.8 | |
| Change in external debt | -5.8 | -2.3 | -3.4 | | | -0.1 | -0.5 | -1.3 | 0.8 | 0.7 | 1.5 | | 0.5 | 0.0 | |
| Identified net debt-creating flows | 4.0 | 1.3 | -0.4 | | | -4.5 | -2.9 | -2.4 | -0.9 | 0.3 | -0.5 | | 1.6 | 10.1 | |
| **Non-interest current account deficit** | **12.8** | **10.0** | **3.8** | **10.2** | **2.8** | **1.8** | **4.7** | **5.1** | **6.3** | **7.3** | **6.4** | | **8.8** | **16.6** | 11.4 |
| Deficit in balance of goods and services | 27.0 | 26.5 | 18.6 | | | 17.7 | 19.1 | 19.4 | 20.6 | 21.5 | 20.4 | | 22.5 | 29.0 | |
| Exports | 51.6 | 46.8 | 44.9 | | | 45.4 | 46.7 | 47.2 | 46.7 | 46.5 | 46.4 | | 43.8 | 36.2 | |
| Imports | 78.6 | 73.3 | 63.5 | | | 63.1 | 65.8 | 66.6 | 67.4 | 68.0 | 66.8 | | 66.4 | 65.2 | |
| Net current transfers (negative = inflow) | -12.7 | -14.9 | -13.2 | -16.1 | 2.0 | -14.4 | -13.1 | -13.0 | -13.0 | -12.9 | -12.8 | | -12.4 | 0.0 | -9.0 |
| *of which: official* | -0.9 | 0.0 | 0.0 | | | -1.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Other current account flows (negative = net inflow) | -1.4 | -1.6 | -1.6 | | | -1.5 | -1.3 | -1.3 | -1.3 | -1.3 | -1.3 | | -1.3 | -12.4 | |
| **Net FDI (negative = inflow)** | **-7.2** | **-8.3** | **-3.8** | **-8.1** | **1.8** | **-5.6** | **-6.9** | **-6.7** | **-6.5** | **-6.3** | **-6.1** | | **-6.6** | **-5.8** | -6.6 |
| **Endogenous debt dynamics 2/** | **-1.7** | **-0.4** | **-0.3** | | | **-0.7** | **-0.8** | **-0.8** | **-0.7** | **-0.7** | **-0.7** | | **-0.7** | **-0.7** | |
| Contribution from nominal interest rate | 0.5 | 0.8 | 0.7 | | | 0.7 | 0.5 | 0.5 | 0.5 | 0.5 | 0.6 | | 0.7 | 0.8 | |
| Contribution from real GDP growth | -2.4 | -1.6 | -1.2 | | | -1.4 | -1.3 | -1.3 | -1.2 | -1.3 | -1.3 | | -1.4 | -1.5 | |
| Contribution from price and exchange rate changes | 0.2 | 0.4 | 0.1 | | | ... | ... | ... | ... | ... | ... | | ... | ... | |
| **Residual (3-4) 3/** | **-9.8** | **-3.6** | **-3.1** | | | **4.4** | **2.5** | **1.1** | **1.7** | **0.5** | **2.0** | | **-1.1** | **-10.1** | |
| *of which: exceptional financing* | 0.0 | 0.0 | 0.0 | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | -1.1 | -0.7 | |
| PV of external debt 4/ | ... | ... | 20.9 | | | 20.9 | 20.4 | 19.5 | 20.2 | 20.9 | 22.1 | | 24.7 | 28.3 | |
| In percent of exports | ... | ... | 46.5 | | | 45.9 | 43.8 | 41.2 | 43.1 | 44.8 | 47.5 | | 56.3 | 78.2 | |
| **PV of PPG external debt** | **...** | **...** | **20.9** | | | **20.9** | **20.4** | **19.5** | **20.2** | **20.9** | **22.1** | | **24.7** | **28.3** | |
| **In percent of exports** | **...** | **...** | **46.5** | | | **45.9** | **43.8** | **41.2** | **43.1** | **44.8** | **47.5** | | **56.3** | **78.2** | |
| **In percent of government revenues** | **...** | **...** | **77.0** | | | **79.0** | **80.8** | **77.6** | **82.4** | **85.6** | **91.0** | | **103.8** | **124.1** | |
| **Debt service-to-exports ratio (in percent)** | **3.0** | **4.0** | **7.4** | | | **3.7** | **3.6** | **3.8** | **3.5** | **3.2** | **3.3** | | **3.4** | **4.8** | |
| **PPG debt service-to-exports ratio (in percent)** | **3.0** | **4.0** | **7.4** | | | **3.7** | **3.6** | **3.8** | **3.5** | **3.2** | **3.3** | | **3.4** | **4.8** | |
| **PPG debt service-to-revenue ratio (in percent)** | **6.5** | **8.2** | **12.2** | | | **6.3** | **6.7** | **7.1** | **6.7** | **6.2** | **6.3** | | **6.2** | **7.6** | |
| Total gross financing need (Billions of U.S. dollars) | 0.2 | 0.1 | 0.1 | | | -0.1 | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 | | 0.2 | 1.1 | |
| Non-interest current account deficit that stabilizes debt ratio | 18.7 | 12.3 | 7.2 | | | 1.9 | 5.2 | 6.4 | 5.5 | 6.5 | 4.8 | | 8.3 | 16.5 | |
| **Key macroeconomic assumptions** | | | | | | | | | | | | | | | |
| Real GDP growth (in percent) | 5.2 | 3.8 | 3.0 | 4.4 | 1.4 | 4.0 | 3.9 | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 | 3.7 | 3.8 | 3.8 |
| GDP deflator in US dollar terms (change in percent) | -0.4 | -0.9 | -0.2 | 4.7 | 4.3 | 1.4 | 1.3 | 0.8 | 1.0 | 1.1 | 1.2 | 1.1 | 1.0 | 1.3 | 1.1 |
| Effective interest rate (percent) 5/ | 1.0 | 1.9 | 1.9 | 1.4 | 0.3 | 2.1 | 1.5 | 1.5 | 1.6 | 1.6 | 1.7 | 1.7 | 1.9 | 2.1 | 1.9 |
| Growth of exports of G&S (US dollar terms, in percent) | -7.4 | -6.7 | -1.5 | 7.9 | 11.5 | 6.6 | 8.1 | 5.9 | 3.7 | 4.4 | 4.8 | 5.6 | 3.0 | 3.2 | 3.2 |
| Growth of imports of G&S (US dollar terms, in percent) | -5.1 | -4.0 | -11.0 | 8.2 | 13.4 | 4.7 | 9.6 | 6.0 | 6.0 | 5.9 | 3.3 | 5.9 | 4.7 | 4.6 | 4.7 |
| Grant element of new public sector borrowing (in percent) | ... | ... | ... | ... | ... | 45.1 | 46.4 | 52.9 | 34.4 | 34.4 | 34.4 | 41.3 | 34.4 | 34.4 | 34.4 |
| Government revenues (excluding grants, in percent of GDP) | 23.5 | 22.9 | 27.1 | | | 26.4 | 25.3 | 25.1 | 24.5 | 24.4 | 24.3 | | 23.8 | 22.8 | 23.5 |
| Aid flows (in Billions of US dollars) 7/ | 0.2 | 0.3 | 0.1 | | | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | | 0.0 | 0.0 | |
| *of which: Grants* | 0.0 | 0.0 | 0.0 | | | 0.1 | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 | | 0.0 | 0.0 | |
| *of which: Concessional loans* | 0.2 | 0.3 | 0.0 | | | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Grant-equivalent financing (in percent of GDP) 8/ | ... | ... | ... | | | 3.6 | 2.2 | 3.1 | 3.6 | 3.1 | 2.9 | | 1.7 | 1.4 | 1.6 |
| Grant-equivalent financing (in percent of external financing) 8/ | ... | ... | ... | | | 72.0 | 62.9 | 80.9 | 61.1 | 58.4 | 50.9 | | 46.8 | 42.4 | 45.3 |
| *Memorandum items:* | | | | | | | | | | | | | | | |
| Nominal GDP (Billions of US dollars) | 3.0 | 3.1 | 3.2 | | | 3.3 | 3.5 | 3.7 | 3.8 | 4.0 | 4.2 | | 5.3 | 8.7 | |
| Nominal dollar GDP growth | 4.8 | 2.9 | 2.8 | | | 5.4 | 5.2 | 4.6 | 4.8 | 4.9 | 5.1 | 5.0 | 4.7 | 5.2 | 4.9 |
| PV of PPG external debt (in Billions of US dollars) | | | 0.7 | | | 0.7 | 0.7 | 0.7 | 0.8 | 0.8 | 0.9 | | 1.3 | 2.4 | |
| (PVt-PVt-1)/GDPt-1 (in percent) | | | | | | 1.0 | 0.6 | -0.1 | 1.7 | 1.7 | 2.3 | 1.2 | 1.7 | 1.6 | 1.7 |
| Gross workers' remittances (Billions of US dollars) | 0.4 | 0.5 | 0.4 | | | 0.4 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | | 0.7 | 1.0 | |
| PV of PPG external debt (in percent of GDP + remittances) | ... | ... | 18.5 | | | 18.4 | 18.1 | 17.2 | 17.8 | 18.5 | 19.6 | | 21.9 | 25.5 | |
| PV of PPG external debt (in percent of exports + remittances) | ... | ... | 36.0 | | | 35.6 | 34.2 | 32.3 | 33.7 | 35.1 | 37.3 | | 43.8 | 59.7 | |
| Debt service of PPG external debt (in percent of exports + remittances) | ... | ... | 5.7 | | | 2.9 | 2.8 | 2.9 | 2.7 | 2.5 | 2.6 | | 2.6 | 3.7 | |

Sources: Country authorities; and Fund 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. Guyana: Sensitivity Analysis for Key Indicators of Public and Publicly Guaranteed External Debt, 2016-2036**
(In percent)

| | Projections | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | **2026** | 2034 | 2035 | 2036 |
| **PV of debt-to GDP ratio** | | | | | | | | | | |
| **Baseline** | 21 | 20 | 19 | 20 | 21 | 22 | **25** | 28 | 28 | 28 |
| **A. Alternative Scenarios** | | | | | | | | | | |
| A1. Key variables at their historical averages in 2016-2036 1/ | 21 | 22 | 23 | 24 | 25 | 26 | **28** | 5 | 0 | 0 |
| A2. New public sector loans on less favorable terms in 2016-2036 2/ | 21 | 21 | 21 | 22 | 23 | 25 | **32** | 41 | 42 | 42 |
| **B. Bound Tests** | | | | | | | | | | |
| B1. Real GDP growth at historical average minus one standard deviation in 2017-2018 | 21 | 21 | 20 | 21 | 21 | 23 | **25** | 29 | 29 | 29 |
| B2. Export value growth at historical average minus one standard deviation in 2017-2018 3/ | 21 | 24 | 29 | 29 | 30 | 31 | **33** | 33 | 33 | 33 |
| B3. US dollar GDP deflator at historical average minus one standard deviation in 2017-2018 | 21 | 20 | 19 | 20 | 21 | 22 | **25** | 28 | 28 | 28 |
| B4. Net non-debt creating flows at historical average minus one standard deviation in 2017-2018 4/ | 21 | 20 | 18 | 19 | 20 | 21 | **23** | 27 | 27 | 28 |
| B5. Combination of B1-B4 using one-half standard deviation shocks | 21 | 20 | 19 | 20 | 21 | 22 | **24** | 27 | 27 | 28 |
| B6. One-time 30 percent nominal depreciation relative to the baseline in 2017 5/ | 21 | 29 | 28 | 28 | 29 | 31 | **35** | 39 | 40 | 40 |
| **PV of debt-to-exports ratio** | | | | | | | | | | |
| **Baseline** | 46 | 44 | 41 | 43 | 45 | 48 | **56** | 74 | 76 | 78 |
| **A. Alternative Scenarios** | | | | | | | | | | |
| A1. Key variables at their historical averages in 2016-2036 1/ | 46 | 48 | 49 | 52 | 53 | 56 | **63** | 0 | 0 | 0 |
| A2. New public sector loans on less favorable terms in 2016-2036 2/ | 46 | 45 | 44 | 46 | 50 | 55 | **73** | 108 | 113 | 117 |
| **B. Bound Tests** | | | | | | | | | | |
| B1. Real GDP growth at historical average minus one standard deviation in 2017-2018 | 46 | 44 | 41 | 43 | 45 | 47 | **56** | 74 | 76 | 78 |
| B2. Export value growth at historical average minus one standard deviation in 2017-2018 3/ | 46 | 57 | 76 | 78 | 80 | 83 | **94** | 110 | 112 | 113 |
| B3. US dollar GDP deflator at historical average minus one standard deviation in 2017-2018 | 46 | 44 | 41 | 43 | 45 | 47 | **56** | 74 | 76 | 78 |
| B4. Net non-debt creating flows at historical average minus one standard deviation in 2017-2018 4/ | 46 | 42 | 38 | 40 | 42 | 45 | **53** | 72 | 74 | 76 |
| B5. Combination of B1-B4 using one-half standard deviation shocks | 46 | 46 | 46 | 48 | 50 | 53 | **63** | 82 | 85 | 87 |
| B6. One-time 30 percent nominal depreciation relative to the baseline in 2017 5/ | 46 | 44 | 41 | 43 | 45 | 47 | **56** | 74 | 76 | 78 |
| **PV of debt-to-revenue ratio** | | | | | | | | | | |
| **Baseline** | 79 | 81 | 78 | 82 | 86 | 91 | **104** | 122 | 123 | 124 |
| **A. Alternative Scenarios** | | | | | | | | | | |
| A1. Key variables at their historical averages in 2016-2036 1/ | 79 | 89 | 92 | 99 | 101 | 108 | **116** | 0 | 0 | 0 |
| A2. New public sector loans on less favorable terms in 2016-2036 2/ | 79 | 83 | 82 | 88 | 95 | 105 | **134** | 177 | 181 | 186 |
| **B. Bound Tests** | | | | | | | | | | |
| B1. Real GDP growth at historical average minus one standard deviation in 2017-2018 | 79 | 81 | 79 | 84 | 87 | 93 | **106** | 124 | 125 | 127 |
| B2. Export value growth at historical average minus one standard deviation in 2017-2018 3/ | 79 | 94 | 114 | 120 | 123 | 128 | **140** | 145 | 145 | 144 |
| B3. US dollar GDP deflator at historical average minus one standard deviation in 2017-2018 | 79 | 81 | 77 | 82 | 85 | 91 | **103** | 121 | 122 | 123 |
| B4. Net non-debt creating flows at historical average minus one standard deviation in 2017-2018 4/ | 79 | 78 | 72 | 77 | 80 | 85 | **98** | 118 | 119 | 120 |
| B5. Combination of B1-B4 using one-half standard deviation shocks | 79 | 79 | 77 | 81 | 84 | 89 | **102** | 118 | 119 | 121 |
| B6. One-time 30 percent nominal depreciation relative to the baseline in 2017 5/ | 79 | 114 | 110 | 116 | 121 | 129 | **147** | 172 | 173 | 175 |

**Table 2. Guyana: Sensitivity Analysis for Key Indicators of Public and Publicly Guaranteed External Debt, 2016-2036 (Concluded)**

(In percent)

| | Projections | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | **2023** | 2031 | 2032 | 2033 |
| **Debt service-to-exports ratio** | | | | | | | | | | |
| **Baseline** | 4 | 4 | 4 | 3 | 3 | 3 | **3** | 4 | 5 | 5 |
| **A. Alternative Scenarios** | | | | | | | | | | |
| A1. Key variables at their historical averages in 2016-2036 1/ | 4 | 3 | 4 | 3 | 3 | 3 | **3** | 3 | 2 | 2 |
| A2. New public sector loans on less favorable terms in 2016-2036 2/ | 4 | 4 | 4 | 4 | 3 | 3 | **4** | 7 | 7 | 8 |
| **B. Bound Tests** | | | | | | | | | | |
| B1. Real GDP growth at historical average minus one standard deviation in 2017-2018 | 4 | 4 | 4 | 3 | 3 | 3 | **3** | 4 | 5 | 5 |
| B2. Export value growth at historical average minus one standard deviation in 2017-2018 3/ | 4 | 4 | 5 | 5 | 5 | 5 | **5** | 7 | 7 | 8 |
| B3. US dollar GDP deflator at historical average minus one standard deviation in 2017-2018 | 4 | 4 | 4 | 3 | 3 | 3 | **3** | 4 | 5 | 5 |
| B4. Net non-debt creating flows at historical average minus one standard deviation in 2017-2018 4/ | 4 | 4 | 4 | 3 | 3 | 3 | **3** | 4 | 4 | 5 |
| B5. Combination of B1-B4 using one-half standard deviation shocks | 4 | 4 | 4 | 4 | 4 | 4 | **4** | 5 | 5 | 5 |
| B6. One-time 30 percent nominal depreciation relative to the baseline in 2017 5/ | 4 | 4 | 4 | 3 | 3 | 3 | **3** | 4 | 5 | 5 |
| **Debt service-to-revenue ratio** | | | | | | | | | | |
| **Baseline** | 6 | 7 | 7 | 7 | 6 | 6 | **6** | 7 | 7 | 8 |
| **A. Alternative Scenarios** | | | | | | | | | | |
| A1. Key variables at their historical averages in 2016-2036 1/ | 6 | 6 | 7 | 6 | 6 | 6 | **5** | 4 | 4 | 3 |
| A2. New public sector loans on less favorable terms in 2016-2036 2/ | 6 | 7 | 7 | 7 | 6 | 7 | **7** | 11 | 12 | 12 |
| **B. Bound Tests** | | | | | | | | | | |
| B1. Real GDP growth at historical average minus one standard deviation in 2017-2018 | 6 | 7 | 7 | 7 | 6 | 6 | **6** | 7 | 8 | 8 |
| B2. Export value growth at historical average minus one standard deviation in 2017-2018 3/ | 6 | 7 | 7 | 8 | 7 | 7 | **7** | 10 | 10 | 10 |
| B3. US dollar GDP deflator at historical average minus one standard deviation in 2017-2018 | 6 | 7 | 7 | 7 | 6 | 6 | **6** | 7 | 7 | 8 |
| B4. Net non-debt creating flows at historical average minus one standard deviation in 2017-2018 4/ | 6 | 7 | 7 | 7 | 6 | 6 | **6** | 7 | 7 | 7 |
| B5. Combination of B1-B4 using one-half standard deviation shocks | 6 | 7 | 7 | 7 | 6 | 6 | **6** | 7 | 7 | 7 |
| B6. One-time 30 percent nominal depreciation relative to the baseline in 2017 5/ | 6 | 9 | 10 | 9 | 9 | 9 | **9** | 10 | 11 | 11 |
| *Memorandum item:* | | | | | | | | | | |
| Grant element assumed on residual financing (i.e., financing required above baseline) 6/ | 36 | 36 | 36 | 36 | 36 | 36 | **36** | 36 | 36 | 36 |

Sources: Country authorities; and Fund 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. Debt forgiveness has significantly reduced the value of debt and extrapolating the shock leads to negative values in 2034-36, which were set to zero.

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. Guyana: Public Sector Debt Sustainability Framework, Baseline Scenario, 2013-2036

(In percent of GDP, unless otherwise indicated)

| | Actual | | | | | | | | | | | | | Estimate | | | | | | | Projections | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | Average 5/ | Standard Deviation 5/ | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2016-21 Average | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2022-36 Average |
| **Public sector debt 1/** | 116.8 | 95.7 | 61.2 | 62.9 | 66.9 | 67.9 | 66.7 | 63.7 | 57.9 | 51.9 | 48.6 | | | 52.3 | 53.8 | 53.9 | 56.3 | 57.9 | 59.9 | | 69.8 | 71.4 | 72.7 | 73.7 | 74.6 | 74.7 | 75.0 | 75.2 | 75.3 | 75.4 | 75.5 | |
| *of which: foreign-currency denominated* | 92.7 | 71.8 | 41.5 | 43.7 | 45.8 | 46.0 | 46.7 | 47.7 | 41.8 | 39.5 | 36.1 | | | 36.0 | 35.5 | 34.2 | 35.0 | 35.8 | 37.3 | | 39.6 | 40.0 | 40.4 | 40.8 | 41.1 | 41.3 | 41.5 | 41.7 | 41.8 | 41.8 | 41.8 | |
| Change in public sector debt | ... | -21.1 | -34.5 | 1.7 | 4.0 | 1.0 | -1.2 | -3.0 | -5.8 | -6.1 | -3.3 | | | 3.6 | 1.5 | 0.1 | 2.4 | 1.6 | 2.0 | | 1.7 | 1.6 | 1.3 | 1.0 | 0.9 | 0.1 | 0.2 | 0.2 | 0.1 | 0.1 | 0.1 | |
| Identified debt-creating flows | | -13.9 | -29.8 | 1.1 | 0.8 | -2.4 | -4.0 | -1.8 | 0.7 | 3.9 | -1.2 | | | 3.1 | 2.8 | 2.5 | 2.3 | 2.1 | 2.0 | | 1.7 | 1.6 | 1.3 | 1.0 | 0.9 | 0.1 | 0.2 | 0.2 | 0.1 | 0.1 | 0.1 | |
| Primary deficit | 8.3 | 8.2 | 4.2 | 5.6 | 3.3 | 3.0 | 3.2 | 3.7 | 2.9 | 4.7 | -0.8 | 3.8 | 2.3 | 4.5 | 4.6 | 4.0 | 3.9 | 3.8 | 3.8 | 4.1 | 3.5 | 3.4 | 3.3 | 3.1 | 3.0 | 2.3 | 2.4 | 2.4 | 2.4 | 2.4 | 2.3 | 3.0 |
| Revenue and grants | 27.8 | 29.3 | 27.5 | 25.2 | 28.1 | 25.8 | 24.7 | 25.6 | 24.6 | 23.6 | 28.1 | | | 28.8 | 26.4 | 27.3 | 26.8 | 26.3 | 25.7 | | 24.5 | 24.3 | 24.2 | 24.1 | 23.9 | 23.8 | 23.7 | 23.6 | 23.5 | 23.4 | 23.3 | |
| *of which: grants* | 4.6 | 6.0 | 3.2 | 3.5 | 3.6 | 2.1 | 2.2 | 2.0 | 1.2 | 0.7 | 1.0 | | | 2.4 | 1.1 | 2.3 | 2.4 | 1.9 | 1.4 | | 0.7 | 0.7 | 0.6 | 0.6 | 0.6 | 0.5 | 0.5 | 0.5 | 0.5 | 0.4 | 0.4 | |
| Primary (noninterest) expenditure | 36.1 | 37.5 | 31.7 | 30.8 | 31.3 | 28.9 | 27.8 | 29.3 | 27.5 | 28.3 | 27.3 | | | 33.4 | 31.0 | 31.3 | 30.8 | 30.1 | 29.5 | | 28.0 | 27.8 | 27.5 | 27.2 | 27.0 | 26.2 | 26.1 | 26.0 | 25.9 | 25.8 | 25.6 | |
| Automatic debt dynamics | | -9.2 | -13.9 | -4.6 | -2.4 | -5.4 | -7.2 | -5.5 | -2.1 | -0.9 | -0.4 | | | -1.4 | -1.8 | -1.5 | -1.6 | -1.7 | -1.8 | | -1.8 | -1.9 | -2.0 | -2.1 | -2.2 | -2.3 | -2.1 | -2.2 | -2.3 | -2.3 | -2.2 | |
| Contribution from interest rate/growth differential | ... | -7.1 | -8.7 | -2.3 | -1.5 | -3.2 | -4.7 | -4.0 | -3.1 | -1.7 | -0.9 | | | -1.6 | -2.0 | -1.9 | -1.9 | -2.0 | -2.1 | | -2.2 | -2.3 | -2.3 | -2.4 | -2.5 | -2.6 | -2.4 | -2.5 | -2.5 | -2.6 | -2.5 | |
| *of which: contribution from average real interest rate* | ... | -1.4 | -2.4 | -1.1 | 0.6 | -0.4 | -1.2 | -0.9 | 0.1 | 0.5 | 0.6 | | | 0.2 | -0.1 | 0.1 | 0.1 | 0.1 | 0.1 | | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | |
| *of which: contribution from real GDP growth* | ... | -5.7 | -6.3 | -1.2 | -2.0 | -2.8 | -3.5 | -3.1 | -3.2 | -2.1 | -1.5 | | | -1.9 | -1.9 | -2.0 | -2.0 | -2.0 | -2.1 | | -2.4 | -2.5 | -2.6 | -2.7 | -2.7 | -2.8 | -2.7 | -2.7 | -2.8 | -2.9 | -2.7 | |
| Contribution from real exchange rate depreciation | | -2.0 | -5.2 | -2.3 | -1.0 | -2.2 | -2.5 | -1.5 | 1.0 | 0.8 | 0.4 | | | 0.2 | 0.2 | 0.4 | 0.3 | 0.3 | 0.2 | | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | |
| Other identified debt-creating flows | | -12.9 | -20.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 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 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 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 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 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) | | -12.9 | -20.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 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 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 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 | | -7.3 | -4.7 | 0.6 | 3.2 | 3.3 | 2.8 | -1.2 | -6.5 | -9.9 | -2.0 | | | 0.5 | -1.3 | -2.3 | 0.0 | -0.5 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| **Other Sustainability Indicators** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **PV of public sector debt** | | | ... | ... | ... | ... | ... | ... | ... | ... | 33.4 | | | 37.1 | 38.7 | 39.2 | 41.4 | 43.0 | 44.7 | | 54.9 | 56.6 | 58.0 | 59.2 | 60.2 | 60.5 | 60.8 | 61.2 | 61.5 | 61.8 | 62.0 | |
| *of which: foreign-currency denominated* | | | ... | ... | ... | ... | ... | ... | ... | ... | 20.9 | | | 20.9 | 20.4 | 19.5 | 20.2 | 20.9 | 22.1 | | 24.7 | 25.2 | 25.7 | 26.3 | 26.7 | 27.1 | 27.4 | 27.7 | 28.0 | 28.1 | 28.3 | |
| *of which: external* | | ... | ... | ... | ... | ... | ... | ... | ... | ... | 20.9 | | | 20.9 | 20.4 | 19.5 | 20.2 | 20.9 | 22.1 | | 24.7 | 25.2 | 25.7 | 26.3 | 26.7 | 27.1 | 27.4 | 27.7 | 28.0 | 28.1 | 28.3 | |
| PV of contingent liabilities (not included in public sector debt) | | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | | | ... | ... | ... | ... | ... | ... | | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | |
| Gross financing need 2/ | 37.2 | 33.3 | 26.3 | 25.1 | 23.1 | 24.1 | 24.6 | 23.6 | 19.9 | 22.4 | 14.8 | | | 18.3 | 22.0 | 23.6 | 24.7 | 26.0 | 26.8 | | 33.2 | 34.3 | 35.2 | 35.9 | 36.5 | 36.4 | 36.4 | 36.5 | 36.5 | 36.6 | 36.7 | |
| PV of public sector debt-to-revenue and grants ratio (in percent) | 0.0 | 0.0 | ... | ... | ... | ... | ... | ... | ... | ... | 118.9 | | | 128.7 | 146.9 | 143.4 | 154.3 | 163.7 | 174.2 | | 224.4 | 232.5 | 239.7 | 245.8 | 251.4 | 253.8 | 256.7 | 259.5 | 262.0 | 264.3 | 266.6 | |
| PV of public sector debt-to-revenue ratio (in percent) | 0.0 | 0.0 | ... | ... | ... | ... | ... | ... | ... | ... | 123.1 | | | 140.6 | 153.1 | 156.3 | 169.3 | 176.6 | 184.3 | | 231.0 | 239.1 | 246.2 | 252.1 | 257.6 | 259.7 | 262.4 | 265.0 | 267.3 | 269.4 | 271.5 | |
| *of which: external 3/* | | ... | ... | ... | ... | ... | ... | ... | ... | ... | 77.0 | | | 79.0 | 80.8 | 77.6 | 82.4 | 85.6 | 91.0 | | 103.8 | 106.5 | 109.3 | 111.9 | 114.2 | 116.3 | 118.2 | 120.1 | 121.5 | 122.8 | 124.1 | |
| Debt service-to-revenue and grants ratio (in percent) 4/ | | 11.8 | 8.2 | 7.1 | 5.8 | 8.2 | 9.4 | 7.5 | 7.4 | 9.0 | 12.7 | | | 6.8 | 7.8 | 8.4 | 8.2 | 8.0 | 8.4 | | 9.4 | 9.6 | 9.7 | 9.9 | 10.3 | 10.4 | 10.9 | 10.9 | 11.2 | 11.4 | 11.6 | |
| Debt service-to-revenue ratio (in percent) 4/ | | 14.9 | 9.3 | 8.2 | 6.7 | 8.9 | 10.3 | 8.2 | 7.7 | 9.3 | 13.1 | | | 7.4 | 8.2 | 9.1 | 9.0 | 8.7 | 8.9 | | 9.7 | 9.8 | 10.0 | 10.1 | 10.5 | 10.6 | 11.1 | 11.2 | 11.4 | 11.6 | 11.8 | |
| Primary deficit that stabilizes the debt-to-GDP ratio | | | | | | | | | 8.6 | 10.8 | 2.5 | | | 0.9 | 3.1 | 3.9 | 1.6 | 2.2 | 1.8 | | 1.8 | 1.9 | 2.0 | 2.1 | 2.1 | 2.2 | 2.1 | 2.2 | 2.3 | 2.3 | 2.2 | |
| **Key macroeconomic and fiscal assumptions** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Real GDP growth (in percent) | -1.9 | 5.1 | 7.0 | 2.0 | 3.3 | 4.4 | 5.4 | 4.8 | 5.2 | 3.8 | 3.0 | 4.4 | 1.4 | 4.0 | 3.9 | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 | 3.7 | 3.7 | 3.8 | 3.9 | 3.9 | 4.0 | 3.7 | 3.8 | 3.9 | 3.9 | 3.8 | 3.8 |
| Average nominal interest rate on forex debt (in percent) | | 1.8 | 1.5 | 1.3 | 1.1 | 1.2 | 1.2 | 1.1 | 1.0 | 1.9 | 1.9 | 1.4 | 0.3 | 2.1 | 1.5 | 1.5 | 1.6 | 1.6 | 1.7 | 1.7 | 1.9 | 1.9 | 1.9 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.1 | 2.1 | 1.9 |
| Average real interest rate on domestic debt (in percent) | | -1.7 | -7.3 | -4.3 | 2.2 | -2.0 | -4.0 | -3.1 | 1.7 | 2.0 | 2.3 | -1.4 | 3.4 | 0.5 | 0.2 | 1.1 | 1.0 | 0.9 | 0.7 | 0.7 | 1.0 | 1.0 | 0.9 | 0.9 | 0.8 | 0.8 | 0.7 | 0.7 | 0.7 | 0.7 | 0.6 | 0.9 |
| Real exchange rate depreciation (in percent, + indicates depreciation) | | -2.3 | -7.8 | -5.7 | -2.3 | -5.0 | -5.7 | -3.4 | 2.2 | 2.0 | 1.2 | -2.7 | 3.5 | 0.7 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Inflation rate (GDP deflator, in percent) | 7.8 | 5.9 | 12.7 | 9.0 | 2.1 | 6.7 | 8.4 | 5.7 | 0.2 | -0.4 | -0.2 | 5.0 | 4.4 | 1.9 | 2.3 | 1.8 | 2.0 | 2.1 | 2.2 | 2.0 | 2.0 | 2.0 | 2.0 | 2.1 | 2.2 | 2.2 | 2.2 | 2.3 | 2.3 | 2.3 | 2.4 | 2.1 |
| Growth of real primary spending (deflated by GDP deflator, in percent) | | 0.1 | -0.1 | 0.0 | 0.1 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 0.0 | 0.0 | 0.1 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Grant element of new external borrowing (in percent) | | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 45.1 | 46.4 | 52.9 | 34.4 | 34.4 | 34.4 | 41.3 | 34.4 | 34.4 | 34.4 | 34.4 | 34.4 | 34.4 | 34.4 | 34.4 | 34.4 | 34.4 | 34.4 | ... |

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

1/ Indicates 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. Guyana: Sensitivity Analysis for Key Indicators of Public Debt, 2016-2036**
(In percent)

| | Projections | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2026 | 2036 |
| **PV of Debt-to-GDP Ratio** | | | | | | | | |
| **Baseline** | 37.1 | 38.7 | 39.2 | 41.4 | 43.0 | 44.7 | 54.9 | 62.0 |
| **A. Alternative scenarios** | | | | | | | | |
| A1. Real GDP growth and primary balance are at historical averages | 37 | 38 | 38 | 40 | 41 | 43 | 52 | 66 |
| A2. Primary balance is unchanged from 2016 | 37 | 39 | 40 | 42 | 44 | 47 | 60 | 81 |
| A3. Permanently lower GDP growth 1/ | 37 | 39 | 40 | 42 | 44 | 46 | 60 | 77 |
| **B. Bound tests** | | | | | | | | |
| B1. Real GDP growth is at historical average minus one standard deviations in 2017-2018 | 37 | 39 | 40 | 43 | 45 | 47 | 59 | 68 |
| B2. Primary balance is at historical average minus one standard deviations in 2017-2018 | 37 | 40 | 42 | 44 | 46 | 47 | 57 | 64 |
| B3. Combination of B1-B2 using one half standard deviation shocks | 37 | 39 | 40 | 43 | 44 | 46 | 56 | 64 |
| B4. One-time 30 percent real depreciation in 2017 | 37 | 47 | 47 | 49 | 50 | 51 | 61 | 68 |
| B5. 10 percent of GDP increase in other debt-creating flows in 2017 | 37 | 47 | 47 | 49 | 51 | 52 | 62 | 68 |
| **PV of Debt-to-Revenue Ratio 2/** | | | | | | | | |
| **Baseline** | 129 | 147 | 143 | 154 | 164 | 174 | 224 | 267 |
| **A. Alternative scenarios** | | | | | | | | |
| A1. Real GDP growth and primary balance are at historical averages | 129 | 144 | 139 | 149 | 158 | 167 | 215 | 283 |
| A2. Primary balance is unchanged from 2016 | 129 | 147 | 145 | 158 | 169 | 182 | 247 | 346 |
| A3. Permanently lower GDP growth 1/ | 129 | 148 | 145 | 157 | 168 | 180 | 244 | 332 |
| **B. Bound tests** | | | | | | | | |
| B1. Real GDP growth is at historical average minus one standard deviations in 2017-2018 | 129 | 149 | 147 | 160 | 171 | 182 | 240 | 294 |
| B2. Primary balance is at historical average minus one standard deviations in 2017-2018 | 129 | 151 | 154 | 165 | 174 | 185 | 235 | 276 |
| B3. Combination of B1-B2 using one half standard deviation shocks | 129 | 148 | 148 | 159 | 168 | 179 | 230 | 274 |
| B4. One-time 30 percent real depreciation in 2017 | 129 | 180 | 174 | 183 | 191 | 200 | 247 | 293 |
| B5. 10 percent of GDP increase in other debt-creating flows in 2017 | 129 | 178 | 174 | 183 | 193 | 203 | 254 | 293 |
| **Debt Service-to-Revenue Ratio 2/** | | | | | | | | |
| **Baseline** | 7 | 8 | 8 | 8 | 8 | 8 | 9 | 12 |
| **A. Alternative scenarios** | | | | | | | | |
| A1. Real GDP growth and primary balance are at historical averages | 7 | 8 | 8 | 7 | 8 | 8 | 9 | 15 |
| A2. Primary balance is unchanged from 2016 | 7 | 8 | 8 | 8 | 9 | 9 | 12 | 20 |
| A3. Permanently lower GDP growth 1/ | 7 | 8 | 8 | 8 | 8 | 9 | 11 | 17 |
| **B. Bound tests** | | | | | | | | |
| B1. Real GDP growth is at historical average minus one standard deviations in 2017-2018 | 7 | 8 | 9 | 9 | 9 | 9 | 11 | 14 |
| B2. Primary balance is at historical average minus one standard deviations in 2017-2018 | 7 | 8 | 9 | 10 | 11 | 9 | 10 | 13 |
| B3. Combination of B1-B2 using one half standard deviation shocks | 7 | 8 | 8 | 9 | 9 | 9 | 10 | 12 |
| B4. One-time 30 percent real depreciation in 2017 | 7 | 9 | 11 | 11 | 12 | 12 | 14 | 19 |
| B5. 10 percent of GDP increase in other debt-creating flows in 2017 | 7 | 8 | 10 | 20 | 10 | 13 | 12 | 15 |

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 square root of the length of the projection period.
2/ Revenues are defined inclusive of grants.