INTERNATIONAL MONETARY FUND

# GRENADA

## STAFF REPORT FOR THE 2018 ARTICLE IV CONSULTATION—DEBT SUSTAINABILITY ANALYSIS

July 5, 2018

Approved By
**Mary Goodman (IMF) and Paloma Anos Casero (IDA)**

Prepared by the staff of the International Monetary Fund in consultation with the International Development Association Staff.

***External Debt Risk Rating: In Debt Distress***

*This annex provides a Debt Sustainability Analysis (LIC-DSA) of Grenada's public and publicly guaranteed (PPG) external and total debt. The macro-framework incorporates all previous debt restructurings, including the November 2017 haircut on commercial debt. Total public debt has declined from 108 percent of GDP in 2013 to below 71 percent of GDP in 2017 with external public debt declining to 48 percent of GDP. This reduction was made possible through a comprehensive restructuring of Grenada's public debt, fiscal consolidation, and robust economic growth. Nevertheless, with some US$15.7 million (1.4 percent of GDP) in unresolved arrears to official bilateral creditors, Grenada's external debt risk rating remains "in debt distress".[1] Going forward full regularization of arrears and continued fiscal discipline will be needed to keep the debt on a downward path and withstand the existing vulnerabilities to external shocks and natural disasters.*

[1] The CPIA ranks Grenada as a medium performer, with the average CPIA rating of 3.53 for 2014–16.

# BACKGROUND

**1. Debt regularization has progressed but arrears remain with a few bilateral creditors**. Over 2013-17, the Government of Grenada undertook a comprehensive and collaborative debt restructuring in the context of the concurrent ECF-supported program. The restructuring took the form of face value reduction (50 percent) where applicable, interest rate adjustments, and maturity extensions. The restructuring contributed to a significant reduction of public debt, from 108 percent of GDP in 2013 to 70.8 percent of GDP in 2017.[2] In PV terms, public debt to GDP declined from 104 in 2013 to around 63 percent in 2017. In 2017, further progress on debt restructurings was made, including the completion of the restructuring with Russia and United Kingdom. However, official debt of US$15.7 million owed to non-Paris Club official bilateral creditors including Trinidad and Tobago, Algeria and Libya remain to be regularized.[3] The authorities are making payments on overdue membership fees in line with the revised schedule published in mid-2017. And in late-2017, Grenada received a 25 percent haircut on two international bonds. Domestic debt refinancing has included a conversion of short-term T-bills into longer-term bonds.

**2. The composition of Grenada's debt is now relatively favorable.** There was a slight shift towards domestic debt financing in 2017 compared to 2016. The share of external debt in central government debt has declined to below 70 percent while the share of domestic debt has increased to over 30 percent (Text Figures 1-3). As expected and because of the successful restructuring, the shares of multilateral and bilateral debt increased during 2017, while the share of commercial debt has declined. The impact of restructuring has also impacted the composition of domestic debt with a significant shift towards longer maturity bonds away from short term treasury bills. Central government guaranteed debt has declined significantly during the last few years; it accounts for about 2.5 percent of total external debt. Overdue payments of membership fees to international organizations were also reduced last year, while payments have been regularly made in accordance with the schedule published in the sixth review of the ECF arrangement of May 2017.

**3. Debt management, SOE data coverage, and the borrowing strategy need to be further upgraded.** The Fiscal Responsibility Law's (FRL) medium-term public debt target of 55 percent of GDP is a key fiscal anchor that is supported by the FRL's operational targets on the primary balance and spending growth, as well as ongoing institutional reforms. The authorities' debt management capacity would benefit from further reform efforts, including in data management and IT system enhancements. The MoF is monitoring non-guaranteed debt of SOEs, which is important in the context of meeting FRL's debt target. Such monitoring and the quality of information need to be further enhanced, formalized, and reported publicly. The government's medium-term debt management strategy targets the proportions of external (up to 35 percent) and domestic debt in new issuances. The strategy could be reviewed in light of increased availability of highly

[2] Public debt in this DSA is defined as the sum of central government debt, government-guaranteed debt, overdue membership fees, and interest arrears.

[3] Additionally, there is overdue debt to a private creditor of around USD 2 million at end-2017, some of which is pending court judgment. The authorities made significant (but partial) payments to this creditor in late-2017.

concessional external financing, including the US$30 million program loan from the World Bank that was approved in June 2018. Such financing and substantial receipts under the Citizenship-by-Investment (CBI) program have put into sharper relief the need to enhance efficiency of asset management and capacity for asset/liability operations. The authorities would also have to undertake a payment to 2025 bond holders, due in 2018, of a portion of CBI receipts, since the latter are estimated to have overperformed the key US$25 million threshold.

# MACROECONOMIC ASSUMPTIONS

**4. The macroeconomic environment and outlook have improved since the last Article IV Consultation in 2016 and the 6th review of the ECF arrangement in 2017.** Real GDP growth projections for 2018-23 are higher by about ½ percentage point due to vibrant construction and good tourism performance, but long-term growth is projected to remain at 2¾ percent as previously assessed. Compliance with the FRL has strengthened the credibility of the fiscal framework. Going forward, primary surpluses are expected to continue to overperform the FRL's 3.5 percent of GDP floor through 2020. Thereafter, the FRL would allow for lower primary surpluses. A switch to the IMF's Balance of Payments Manual version 6 (BPM6) led to a 10 percent of GDP reduction in the current account deficit, thereby invalidating historical comparisons of the current account deficit (the new data are only available from 2014). The current account deficit would average around 7 percent of GDP in the medium term (through 2023), but would rise longer-term, in part reflecting higher public investment.

**DSA Update: Macroeconomic Assumptions**
(In percent of GDP, unless otherwise specified)

| | Historical Average | Projections 2018-23 | | | 2024-36 [1] | | |
|---|---|---|---|---|---|---|---|
| | | 2016 Article IV | 6th Review | 2018 Article IV | 2016 Article IV | 6th Review | 2018 Article IV |
| Non-interest external current account balance [2] | -18.7 | -14.0 | -13.6 | -5.2 | 14.2 | -14.0 | -9.2 |
| Real GDP growth (in percent) | 2.7 | 2.7 | 2.5 | 3.0 | 2.7 | 2.7 | 2.7 |
| Growth of exports of G & S (USD terms, in percent) | 6.3 | 5.6 | 5.5 | 5.2 | 5.8 | 5.4 | 4.5 |
| Current official transfer | -3.1 | -2.3 | -2.2 | 1.2 | -1.9 | -1.8 | 1.5 |
| Net FDI | -8.3 | -8.6 | -9.1 | -9.0 | -8.7 | -9.2 | -9.0 |
| Primary balance | -0.9 | 2.8 | 3.1 | 3.9 | -1.0 | -1.0 | -0.9 |
| Revenue and grants | 23.6 | 25.5 | 25.5 | 25.1 | 25.5 | 24.5 | 23.9 |
| of which: grants | 3.0 | 3.1 | 3.0 | 2.7 | 3.1 | 2.0 | 1.7 |
| Primary (non-interest) expenditure | 24.9 | 22.8 | 22.4 | 21.1 | 26.5 | 25.5 | 24.8 |
| Inflation rate (GDP deflator, in percent) | 1.6 | 2.4 | 2.1 | 2.3 | 2.3 | 2.1 | 2.2 |
| *Memorandum item* | | 2016 Article IV | 6th Review | 2018 Article IV | | | |
| 2017 Nominal GDP (in million USD) | | 1048.4 | 1091.9 | 1113.3 | | | |

Source: Grenadian authorities and IMF staff projections
[1] 2018 Article IV average includes 2024-2038.
[2] 2018 Article IV current account figures include revisions from BPM5 to BPM6.

# PUBLIC AND EXTERNAL DSA

**5. The total (external plus domestic) PPG trajectory is on track to reach the 55 percent threshold in about 3 years.** As noted, total public debt declined to below 71 percent of GDP at the end of 2017—a reduction of about 11 percentage points compared to 2016. A little less than one-half of the decline reflected principal reductions from successful debt restructuring. The primary drivers of the projected decline in PPG debt-to-GDP over the medium term are projected to be improvements in primary balances and GDP growth as reflected in the updated macroeconomic assumptions. The contribution of the average effective interest rate to the reduction in the debt to GDP ratio is also projected to moderate steadily over the medium term (Table 2). The projections assume continuing positive residuals in PPG debt dynamics, which have been observed historically. These residuals partly reflect broader coverage of public debt than that required to finance central government operations, and includes contraction of debt for on-lending to SOEs as well as government-guaranteed debt of SOEs. The projection is conservative in the medium term in that the residuals are expected to be higher than the historical average, which would be consistent with more ambitious SOE-related investment plans, if these are implemented.

**6. External PPG debt is also projected to trace a downward path and is lower than in previous DSA assessments.** The thresholds for the present value of PPG debt-to-GDP and the debt-to-exports ratio under the baseline scenario are no longer breached, in contrast to the DSA published under the 2016 Article IV Consultation.[4] Nevertheless, due to the remaining unresolved arrears to official bilateral creditors, Grenada's DSA rating stands unchanged at "in debt distress" from the last assessment of May 2017.

**7. Though risks to external debt sustainability have declined, they remain substantial.** Grenada's debt sustainability is subject to downside risks. Mainly a tourism-based economy, Grenada is susceptible to external macroeconomic shocks. Potential declines in major tourist source markets in the United States, Canada or the United Kingdom will significantly impact Grenada's growth prospects. Shocks to oil prices are an added risk to the medium-term outlook. Domestically, higher-than-expected pension and health care-related liabilities can put an additional stress on public finances and natural disasters are an ever-present risk. Continued strong commitment to the FRL is needed to manage those risks. Efforts are ongoing to improve external statistics, which would permit a better assessment of risks emanating from private external debt.

**8. The results of the shock scenarios indicate Grenada's vulnerability to exports (tourism sector) and natural disasters.** All shock scenarios indicate a higher vulnerability to export/tourism industry shocks. The breaches under stress tests for the present value of debt-to-GDP and debt service-to-revenue ratio thresholds are similar to those of the previous DSA, while for debt service-to-exports the performance is better, partly reflecting higher measured exports under the BPM6 methodology. A natural disaster shock was calibrated based on the estimated growth effects that the 2017 hurricane Maria had on Dominica (the total damage from Maria in terms of country GDP is similar to those of hurricane Ivan for Grenada in 2004). The fiscal response assumes an increase of expenditures by a total of 5 percent in the two years following a hurricane or 2.5 percentage points in each year 2018-2019 to cover reconstruction costs.

[4] Given that there is no breach of threshold for PPG external debt to GDP under baseline conditions, on technical grounds the 'probability approach' has been applied to risk assessment (Figure 2). This method points to "high risk" of external debt distress, though the breach of threshold for debt/GDP is not large.

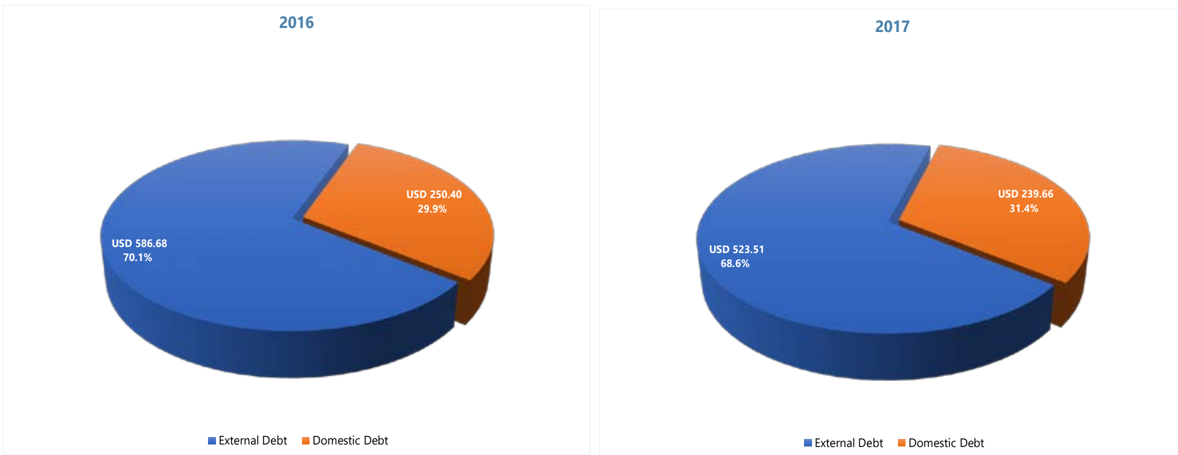
**9. Portfolio risks are also present.** The interest rate is subject to a moderate risk with an average time to re-fixing of 7.8 years in which 24.1 percent of the portfolio is subject to a change in interest rates in one year. This risk resides predominantly in the domestic portfolio in which 35.9 percent of this debt is subject to re-fixing in one year due to substantial short-term treasury bills in the portfolio. The refinancing risk profile of the portfolio has an average time to maturity of 8.2 years which slightly exceeds the set target of greater than 8 years. The current portfolio is subject to only a moderate foreign exchange risk as most of foreign currency debt is denominated in US dollars to which the EC dollar is pegged.

# CONCLUSION

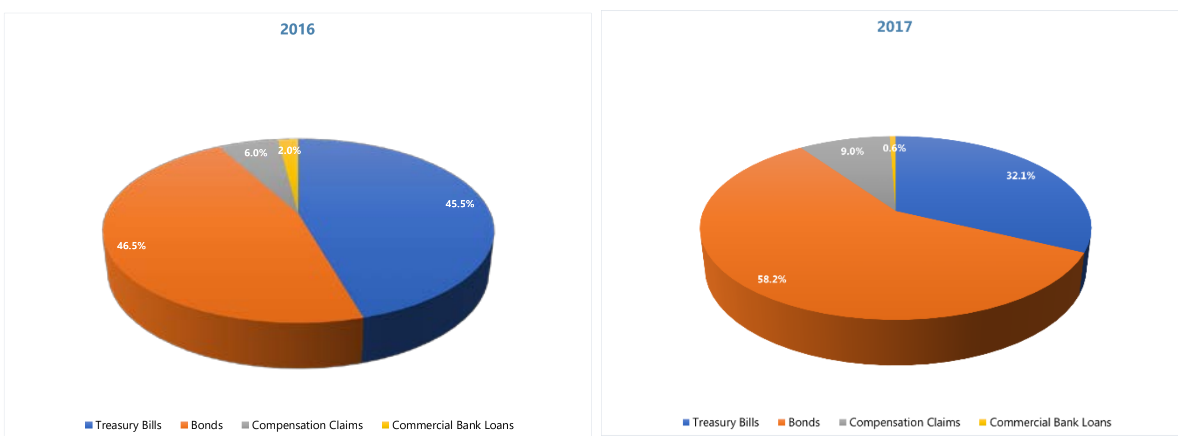
**10. Grenada's debt sustainability outlook has continued to improve, but the external risk rating remains "in debt distress."** Fully regularizing external arrears would help tangibly improve the country's DSA rating. Further progress in public debt reduction would also be essential, including through maintaining the FRL's rules-based framework and pursuing structural fiscal reforms, including further improving debt management capacity.

**11. The authorities agreed that gross public debt would remain on a downward trajectory.** They underscored their commitment to the FRL and indicated that risks arising from new fiscal initiatives, including on pensions and health care, would be managed within the envelope defined by the FRL's parameters. In the context of the "debt distress" rating, they indicated that they were actively working to regularize arrears with the three remaining bilateral creditors, but were encountering difficulties, including being unable to establish sustained communication with one of the creditor countries due to political circumstances. They were committed to fully honoring their rescheduled debt obligations and exploring options for more active asset/liability operations and other steps to further improve their debt management capacity.

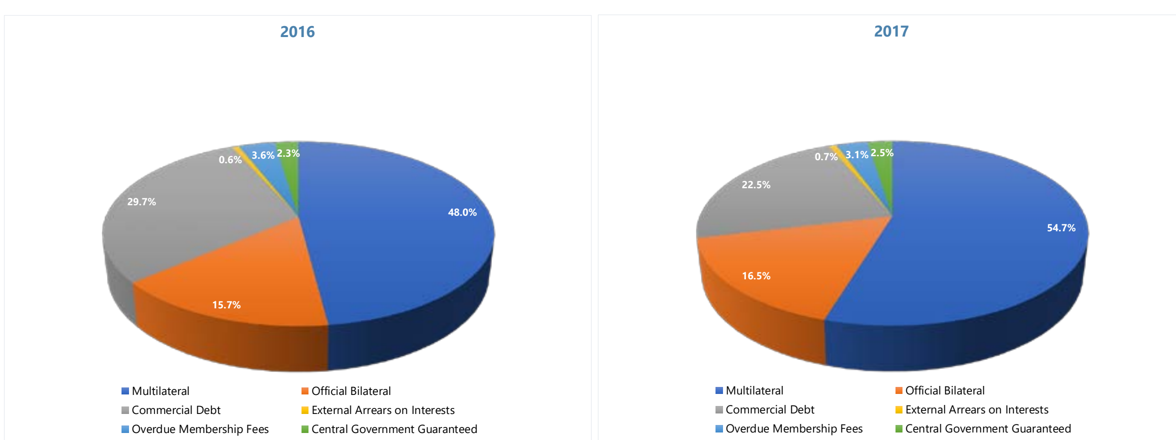
## Figure 1. Composition of Central Government Debt




## Figure 2. Domestic Debt by Instrument Type




## Figure 3. Foreign Debt by Creditor Category



## Table 1. Grenada: External Debt Sustainability Framework, Baseline Scenario, 2015–2038 1/

(In percent of GDP, unless otherwise indicated)

| | Actual | | | Historical Average 7/ | Standard Deviation 7/ | Projections | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2015 | 2016 | 2017 | | | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2018-2023 Average | 2028 | 2038 | 2024-2038 Average |
| **External debt (nominal) 1/** | **133.2** | **126.3** | **116.4** | | | **108.4** | **107.2** | **100.8** | **98.9** | **97.4** | **95.9** | | **85.2** | **63.2** | |
| *of which: public and publicly guaranteed (PPG)* | 61.4 | 56.9 | 48.0 | | | 47.1 | 43.8 | 39.2 | 38.9 | 39.0 | 39.2 | | 35.8 | 33.1 | |
| Change in external debt | -9.8 | -6.9 | -9.8 | | | -8.1 | -1.2 | -6.4 | -1.9 | -1.5 | -1.5 | | -1.9 | -1.9 | |
| Identified net debt-creating flows | -17.3 | -12.8 | -8.3 | | | -5.1 | -5.3 | -5.5 | -5.3 | -5.0 | -5.0 | | -2.5 | 2.0 | |
| **Non-interest current account deficit 2/** | **1.4** | **0.9** | **4.5** | **11.8** | **10.3** | **5.8** | **6.1** | **5.4** | **5.3** | **5.6** | **5.6** | | **8.0** | **11.1** | 8.9 |
| Deficit in balance of goods and services | -1.3 | -3.7 | -0.1 | | | 0.3 | 0.4 | -0.4 | -0.5 | -0.3 | -0.4 | | 1.7 | 4.5 | |
| Exports | 58.0 | 56.1 | 56.3 | | | 56.3 | 56.2 | 56.0 | 55.9 | 55.9 | 55.8 | | 54.4 | 52.3 | |
| Imports | 56.7 | 52.4 | 56.2 | | | 56.6 | 56.6 | 55.6 | 55.4 | 55.6 | 55.3 | | 56.1 | 56.8 | |
| Net current transfers (negative = inflow) | -0.7 | 1.2 | 1.0 | -1.7 | 2.3 | 1.3 | 1.3 | 1.2 | 1.2 | 1.1 | 1.2 | | 1.4 | 1.4 | 1.5 |
| *of which: official* | 0.8 | 1.4 | 1.2 | | | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | | 1.5 | 1.5 | |
| Other current account flows (negative = net inflow) | 3.4 | 3.5 | 3.6 | | | 4.2 | 4.5 | 4.6 | 4.6 | 4.7 | 4.8 | | 4.9 | 5.1 | |
| **Net FDI (negative = inflow)** | **-8.9** | **-8.6** | **-8.5** | **-8.6** | **3.4** | **-8.6** | **-9.1** | **-9.1** | **-9.1** | **-9.1** | **-9.1** | | **-9.1** | **-8.2** | -9.0 |
| **Endogenous debt dynamics 3/** | **-9.8** | **-5.2** | **-4.3** | | | **-2.3** | **-2.3** | **-1.8** | **-1.5** | **-1.5** | **-1.5** | | **-1.4** | **-0.9** | |
| Contribution from nominal interest rate | 2.5 | 2.3 | 2.2 | | | 1.6 | 1.3 | 1.2 | 1.2 | 1.0 | 1.0 | | 0.9 | 0.8 | |
| Contribution from real GDP growth | -8.4 | -4.6 | -5.4 | | | -3.9 | -3.7 | -3.0 | -2.6 | -2.6 | -2.5 | | -2.3 | -1.7 | |
| Contribution from price and exchange rate changes | -3.8 | -2.8 | -1.1 | | | ... | ... | ... | ... | ... | ... | | ... | ... | |
| **Residual (3-4) 4/** | **7.5** | **5.9** | **-1.5** | | | **-3.0** | **4.1** | **-0.9** | **3.4** | **3.5** | **3.5** | | **0.6** | **-3.9** | |
| *of which: exceptional financing* | -3.1 | -1.5 | -1.1 | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| PV of external debt 5/ | ... | ... | 108.6 | | | 99.1 | 98.0 | 92.8 | 90.7 | 88.9 | 87.2 | | 77.0 | 55.3 | |
| In percent of exports | ... | ... | 192.7 | | | 175.9 | 174.4 | 165.6 | 162.2 | 159.1 | 156.4 | | 141.5 | 105.8 | |
| **PV of PPG external debt** | **...** | **...** | **40.1** | | | **37.8** | **34.7** | **31.1** | **30.6** | **30.5** | **30.4** | | **27.5** | **25.3** | |
| **In percent of exports** | **...** | **...** | **71.3** | | | **67.0** | **61.6** | **55.6** | **54.8** | **54.6** | **54.6** | | **50.6** | **48.3** | |
| **In percent of government revenues** | **...** | **...** | **172.3** | | | **165.0** | **154.9** | **139.2** | **137.4** | **137.0** | **137.2** | | **123.9** | **113.4** | |
| **Debt service-to-exports ratio (in percent)** | **7.8** | **9.7** | **10.6** | | | **8.1** | **7.1** | **6.5** | **6.3** | **6.2** | **6.4** | | **5.4** | **5.0** | |
| **PPG debt service-to-exports ratio (in percent)** | **7.4** | **9.4** | **10.3** | | | **7.8** | **6.8** | **6.2** | **6.0** | **5.9** | **6.1** | | **5.2** | **4.9** | |
| **PPG debt service-to-revenue ratio (in percent)** | **20.3** | **23.0** | **24.8** | | | **19.1** | **17.0** | **15.5** | **15.0** | **14.9** | **15.3** | | **12.8** | **11.4** | |
| Total gross financing need (Millions of U.S. dollars) | -30.0 | -23.3 | 21.9 | | | 21.3 | 13.1 | -0.5 | -4.3 | 0.1 | 0.5 | | 35.6 | 175.7 | |
| Non-interest current account deficit that stabilizes debt ratio | 11.2 | 7.9 | 14.4 | | | 13.9 | 7.3 | 11.8 | 7.2 | 7.1 | 7.1 | | 9.8 | 13.0 | |
| **Key macroeconomic assumptions** | | | | | | | | | | | | | | | |
| Real GDP growth (in percent) | 6.4 | 3.7 | 4.5 | 2.9 | 3.1 | 3.6 | 3.6 | 2.9 | 2.7 | 2.7 | 2.7 | 3.0 | 2.7 | 2.7 | 2.7 |
| GDP deflator in US dollar terms (change in percent) | 2.8 | 2.2 | 0.9 | 1.8 | 1.4 | 2.7 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.3 | 2.2 | 2.2 | 2.2 |
| Effective interest rate (percent) 6/ | 1.9 | 1.8 | 1.8 | 1.6 | 0.2 | 1.5 | 1.3 | 1.2 | 1.2 | 1.1 | 1.1 | 1.2 | 1.1 | 1.3 | 1.1 |
| Growth of exports of G&S (US dollar terms, in percent) | 5.5 | 2.5 | 5.8 | 23.2 | 46.5 | 6.4 | 5.7 | 4.8 | 4.8 | 5.0 | 4.7 | 5.2 | 4.5 | 4.7 | 4.6 |
| Growth of imports of G&S (US dollar terms, in percent) | 5.3 | -2.2 | 13.2 | 8.5 | 9.5 | 7.2 | 5.9 | 3.2 | 4.6 | 5.5 | 4.5 | 5.1 | 5.1 | 5.1 | 5.2 |
| Grant element of new public sector borrowing (in percent) | ... | ... | ... | ... | ... | 34.0 | 49.8 | 22.8 | 28.2 | 27.4 | 27.0 | 31.5 | 27.3 | 25.8 | 27.0 |
| Government revenues (excluding grants, in percent of GDP) | 21.2 | 22.8 | 23.3 | | | 22.9 | 22.4 | 22.4 | 22.3 | 22.3 | 22.2 | | 22.2 | 22.3 | 22.2 |
| Aid flows (in Millions of US dollars) 8/ | 32.3 | 37.0 | 28.9 | | | 64.4 | 54.1 | 35.7 | 43.8 | 44.3 | 44.8 | | 43.6 | 48.7 | |
| *of which: Grants* | 32.3 | 37.0 | 28.9 | | | 34.4 | 35.1 | 35.7 | 36.2 | 36.7 | 37.2 | | 36.0 | 41.0 | |
| *of which: Concessional loans* | 0.0 | 0.0 | 0.0 | | | 30.0 | 19.0 | 0.0 | 7.6 | 7.6 | 7.6 | | 7.6 | 7.6 | |
| Grant-equivalent financing (in percent of GDP) 9/ | ... | ... | ... | | | 5.7 | 3.8 | 2.7 | 3.7 | 3.7 | 3.7 | | 2.8 | 2.1 | 2.5 |
| Grant-equivalent financing (in percent of external financing) 9/ | ... | ... | ... | | | 51.3 | 78.9 | 100.0 | 56.8 | 53.7 | 52.5 | | 53.2 | 47.9 | 52.1 |
| *Memorandum items:* | | | | | | | | | | | | | | | |
| Nominal GDP (Millions of US dollars) | 997.0 | 1056.2 | 1113.3 | | | 1185.0 | 1254.3 | 1319.1 | 1385.6 | 1454.8 | 1527.3 | | 1948.7 | 3173.0 | |
| Nominal dollar GDP growth | 9.4 | 5.9 | 5.4 | | | 6.4 | 5.8 | 5.2 | 5.0 | 5.0 | 5.0 | 5.4 | 5.0 | 5.0 | 5.0 |
| PV of PPG external debt (in Millions of US dollars) | | | 446.9 | | | 447.3 | 434.7 | 410.6 | 424.2 | 444.0 | 464.9 | | 536.7 | 802.0 | |
| (PVt-PVt-1)/GDPt-1 (in percent) | | | | | | 0.0 | -1.1 | -1.9 | 1.0 | 1.4 | 1.4 | 0.2 | 1.0 | 1.0 | 1.0 |
| Gross workers' remittances (Millions of US dollars) | 28.8 | 29.0 | 30.3 | | | 31.8 | 36.1 | 40.2 | 44.5 | 48.9 | 50.8 | | 61.2 | 88.8 | |
| PV of PPG external debt (in percent of GDP + remittances) | ... | ... | 39.1 | | | 36.8 | 33.7 | 30.2 | 29.7 | 29.5 | 29.5 | | 26.7 | 24.6 | |
| PV of PPG external debt (in percent of exports + remittances) | ... | ... | 68.0 | | | 64.0 | 58.6 | 52.7 | 51.8 | 51.5 | 51.5 | | 47.9 | 45.9 | |
| Debt service of PPG external debt (in percent of exports + remittances) | ... | ... | 9.8 | | | 7.4 | 6.4 | 5.9 | 5.6 | 5.6 | 5.7 | | 4.9 | 4.6 | |

Sources: Country authorities; and staff estimates and projections.

1/ Includes both public and private sector external debt.
2/ The significant decline in projections for the non-interest CA balance relative to the previous DSA (Annex II, ECF Sixth Review, May 2017), is a result of the transition from BPM5 to BPM6 methodology.
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/ Historical averages and standard deviations are generally derived over the past 10 years, subject to data availability.
8/ Defined as grants, concessional loans, and debt relief.
9/ 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. Grenada: Public Sector Debt Sustainability Framework, Baseline Scenario, 2015–2038
(In percent of GDP, unless otherwise indicated)

| | | | | | | | | | | | | | | hide | hide | hide | hide | hide | hide | hide | hide | hide | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Actual | | | | Estimate | | | | | | | | | | Projections | | | | | | | | |
| | 2015 | 2016 | 2017 | Average 5/ | Standard Deviation 5/ | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2018-23 Average | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2024-38 Average |
| **Public sector debt 1/** | 90.1 | 82.0 | 70.8 | | | 65.0 | 59.6 | 52.9 | 51.3 | 50.7 | 50.3 | | 50.2 | 50.5 | 50.7 | 50.9 | 51.1 | 51.3 | 51.1 | 52.5 | 52.5 | 52.4 | 52.4 | |
| *of which: foreign-currency denominated* | 61.4 | 56.9 | 48.0 | | | 47.1 | 43.8 | 39.2 | 38.9 | 39.0 | 39.2 | | 35.8 | 35.4 | 34.9 | 34.5 | 34.1 | 33.7 | 33.2 | 34.2 | 33.8 | 33.5 | 33.1 | |
| Change in public sector debt | -11.7 | -8.1 | -11.2 | | | -5.8 | -5.4 | -6.7 | -1.6 | -0.6 | -0.4 | | 0.3 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | -0.1 | 1.4 | 0.0 | 0.0 | 0.0 | |
| Identified debt-creating flows | -13.2 | -8.9 | -12.4 | | | -8.3 | -7.2 | -7.0 | -4.7 | -3.3 | -2.8 | | -0.1 | 0.0 | 0.0 | -0.1 | -0.1 | -0.1 | -0.4 | -0.3 | -0.4 | -0.4 | -0.4 | |
| Primary deficit | -2.1 | -5.2 | -5.7 | 0.2 | 3.6 | -5.6 | -5.3 | -5.5 | -3.6 | -2.1 | -1.6 | -4.0 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.9 |
| Revenue and grants | 24.5 | 26.4 | 25.9 | | | 25.8 | 25.2 | 25.1 | 24.9 | 24.8 | 24.6 | | 24.1 | 24.0 | 24.0 | 23.9 | 23.8 | 23.8 | 23.8 | 23.7 | 23.7 | 23.6 | 23.6 | |
| *of which: grants* | 3.2 | 3.5 | 2.6 | | | 2.9 | 2.8 | 2.7 | 2.6 | 2.5 | 2.4 | | 1.8 | 1.8 | 1.7 | 1.7 | 1.6 | 1.5 | 1.5 | 1.4 | 1.4 | 1.3 | 1.3 | |
| Primary (noninterest) expenditure | 22.3 | 21.2 | 20.1 | | | 20.2 | 19.9 | 19.6 | 21.3 | 22.7 | 23.0 | | 25.2 | 25.1 | 25.1 | 25.0 | 24.9 | 24.9 | 24.5 | 24.5 | 24.4 | 24.4 | 24.3 | |
| Automatic debt dynamics | -5.4 | -2.2 | -1.5 | | | -2.2 | -1.9 | -1.5 | -1.1 | -1.2 | -1.2 | | -1.2 | -1.2 | -1.1 | -1.2 | -1.2 | -1.2 | -1.1 | -1.1 | -1.2 | -1.2 | -1.2 | |
| Contribution from interest rate/growth differential | -4.3 | -1.6 | -2.0 | | | -2.0 | -2.2 | -1.4 | -1.1 | -1.2 | -1.2 | | -0.4 | -0.4 | -0.4 | -0.4 | -0.4 | -0.4 | -0.4 | -0.4 | -0.4 | -0.5 | -0.5 | |
| *of which: contribution from average real interest rate* | 1.8 | 1.6 | 1.5 | | | 0.4 | 0.1 | 0.3 | 0.3 | 0.2 | 0.2 | | 0.9 | 0.9 | 1.0 | 0.9 | 0.9 | 0.9 | 1.0 | 1.0 | 1.0 | 0.9 | 0.9 | |
| *of which: contribution from real GDP growth* | -6.2 | -3.2 | -3.5 | | | -2.5 | -2.2 | -1.7 | -1.4 | -1.4 | -1.3 | | -1.3 | -1.3 | -1.3 | -1.3 | -1.4 | -1.4 | -1.4 | -1.4 | -1.4 | -1.4 | -1.4 | |
| Contribution from real exchange rate depreciation | -1.1 | -0.5 | 0.5 | | | -0.1 | 0.3 | -0.1 | -0.1 | 0.0 | 0.0 | | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | |
| Other identified debt-creating flows | -5.7 | -1.6 | -5.2 | | | -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 | 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 | |
| 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 | |
| Debt relief (HIPC and other) | -5.7 | -1.0 | -5.2 | | | -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 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Other (specify, e.g. bank recapitalization) | 0.0 | -0.6 | 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 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Residual, including asset changes | 1.6 | 0.8 | 1.2 | | | 2.5 | 1.8 | 0.3 | 3.1 | 2.7 | 2.4 | | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 1.7 | 0.3 | 0.4 | 0.4 | |
| **Other Sustainability Indicators** | | | | | | | | | | | | | | | | | | | | | | | | |
| **PV of public sector debt** | ... | ... | 62.9 | | | 55.7 | 50.5 | 44.9 | 43.0 | 42.2 | 41.6 | | 41.9 | 42.2 | 42.5 | 42.8 | 43.1 | 43.4 | 43.3 | 44.4 | 44.5 | 44.5 | 44.6 | |
| *of which: foreign-currency denominated* | ... | ... | 40.1 | | | 37.8 | 34.7 | 31.1 | 30.6 | 30.5 | 30.4 | | 27.5 | 27.1 | 26.7 | 26.4 | 26.1 | 25.9 | 25.4 | 26.2 | 25.8 | 25.6 | 25.3 | |
| *of which: external* | ... | ... | 40.1 | | | 37.8 | 34.7 | 31.1 | 30.6 | 30.5 | 30.4 | | 27.5 | 27.1 | 26.7 | 26.4 | 26.1 | 25.9 | 25.4 | 26.2 | 25.8 | 25.6 | 25.3 | |
| PV of contingent liabilities (not included in public sector debt) | ... | ... | ... | | | ... | ... | ... | ... | ... | ... | | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | |
| Gross financing need 2/ | 17.0 | 15.5 | 7.8 | | | 6.0 | 6.5 | 5.5 | 7.0 | 8.1 | 8.3 | | 9.3 | 9.1 | 8.6 | 8.1 | 8.0 | 7.8 | 7.4 | 7.3 | 7.2 | 7.0 | 6.9 | |
| PV of public sector debt-to-revenue and grants ratio (in percent) | ... | ... | 242.9 | | | 216.0 | 200.4 | 179.0 | 172.9 | 170.2 | 168.7 | | 174.2 | 175.7 | 177.3 | 179.1 | 180.7 | 182.2 | 182.5 | 187.4 | 188.0 | 188.5 | 189.0 | |
| PV of public sector debt-to-revenue ratio (in percent) | ... | ... | 269.9 | | | 243.4 | 225.5 | 200.6 | 193.2 | 189.4 | 187.3 | | 188.7 | 189.8 | 191.0 | 192.4 | 193.7 | 194.9 | 194.7 | 199.5 | 199.7 | 199.9 | 200.0 | |
| *of which: external 3/* | ... | ... | 172.3 | | | 165.0 | 154.9 | 139.2 | 137.4 | 137.0 | 137.2 | | 123.9 | 121.9 | 120.2 | 118.8 | 117.5 | 116.2 | 114.3 | 117.5 | 116.0 | 114.7 | 113.4 | |
| Debt service-to-revenue and grants ratio (in percent) 4/ | 78.5 | 78.6 | 52.1 | | | 45.1 | 46.8 | 43.8 | 42.6 | 41.1 | 40.4 | | 33.7 | 33.2 | 31.4 | 29.4 | 28.9 | 28.4 | 28.0 | 27.5 | 27.0 | 26.5 | 26.0 | |
| Debt service-to-revenue ratio (in percent) 4/ | 90.4 | 90.7 | 58.0 | | | 50.8 | 52.7 | 49.1 | 47.5 | 45.8 | 44.8 | | 36.5 | 35.9 | 33.8 | 31.6 | 30.9 | 30.4 | 29.9 | 29.3 | 28.6 | 28.1 | 27.5 | |
| Primary deficit that stabilizes the debt-to-GDP ratio | 9.5 | 2.9 | 5.5 | | | 0.1 | 0.1 | 1.2 | -2.0 | -1.5 | -1.2 | | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | -0.6 | 0.8 | 0.8 | 0.8 | |
| **Key macroeconomic and fiscal assumptions** | | | | | | | | | | | | | | | | | | | | | | | | |
| Real GDP growth (in percent) | 6.4 | 3.7 | 4.5 | 2.9 | 3.1 | 3.6 | 3.6 | 2.9 | 2.7 | 2.7 | 2.7 | 3.0 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 |
| Average nominal interest rate on forex debt (in percent) | 3.7 | 3.6 | 3.7 | 2.9 | 0.8 | 3.1 | 2.5 | 2.4 | 2.6 | 2.4 | 2.3 | 2.6 | 2.2 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.4 | 2.5 | 2.3 | 2.3 | 2.3 | 2.3 |
| Average real interest rate on domestic debt (in percent) | 0.6 | 0.8 | 2.1 | 2.2 | 1.4 | 0.5 | 1.0 | 1.0 | 0.9 | 0.9 | 0.9 | 0.8 | 1.0 | 1.0 | 1.0 | 1.0 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 | 1.0 |
| Real exchange rate depreciation (in percent, + indicates depreciation) | -1.6 | -0.9 | 0.9 | -0.2 | 1.4 | -0.3 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Inflation rate (GDP deflator, in percent) | 2.8 | 2.2 | 0.9 | 1.8 | 1.4 | 2.7 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.3 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 |
| Growth of real primary spending (deflated by GDP deflator, in percent) | -7.3 | -1.7 | -0.5 | -1.2 | 2.5 | 3.6 | 2.1 | 1.3 | 12.0 | 9.4 | 4.1 | 5.4 | 4.0 | 2.4 | 2.4 | 2.4 | 2.5 | 2.5 | 1.3 | 2.5 | 2.6 | 2.6 | 2.5 | 3.1 |
| Grant element of new external borrowing (in percent) | ... | ... | ... | ... | ... | 34.0 | 49.8 | 22.8 | 28.2 | 27.4 | 27.0 | 31.5 | 27.3 | 27.1 | 27.2 | 27.4 | 27.1 | 26.8 | 26.8 | 25.3 | 26.2 | 26.0 | 25.8 | 27.0 |

Sources: Country authorities; and staff estimates and projections.

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

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

3/ Revenues excluding grants.

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

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

## Table 3. Grenada: Sensitivity Analysis for Key Indicators of Publicly Guaranteed External Debt, 2018–2038

(In percent)

| | Projections | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | **2028** | 2038 |
| **PV of debt-to GDP ratio** | | | | | | | | |
| **Baseline** | 38 | 35 | 31 | 31 | 31 | 30 | **28** | 25 |
| **A. Alternative Scenarios** | | | | | | | | |
| A1. Key variables at their historical averages in 2018-2038 1/ | 38 | 40 | 41 | 46 | 51 | 56 | **67** | 58 |
| A2. New public sector loans on less favorable terms in 2018-2038 2 | 38 | 35 | 32 | 32 | 33 | 34 | **34** | 38 |
| A3. Alternative Scenario: Natural Disaster | 38 | 41 | 35 | 35 | 35 | 35 | **31** | 29 |
| **B. Bound Tests** | | | | | | | | |
| B1. Real GDP growth at historical average minus one standard deviation in 2019-2020 | 38 | 36 | 33 | 33 | 33 | 33 | **29** | 27 |
| B2. Export value growth at historical average minus one standard deviation in 2019-2020 3/ | 38 | 46 | 62 | 61 | 61 | 61 | **49** | 32 |
| B3. US dollar GDP deflator at historical average minus one standard deviation in 2019-2020 | 38 | 35 | 32 | 32 | 32 | 32 | **29** | 26 |
| B4. Net non-debt creating flows at historical average minus one standard deviation in 2019-2020 4/ | 38 | 37 | 36 | 35 | 35 | 35 | **31** | 26 |
| B5. Combination of B1-B4 using one-half standard deviation shocks | 38 | 39 | 41 | 40 | 40 | 40 | **35** | 28 |
| B6. One-time 30 percent nominal depreciation relative to the baseline in 2019 5/ | 38 | 49 | 44 | 43 | 43 | 43 | **39** | 36 |
| **PV of debt-to-exports ratio** | | | | | | | | |
| **Baseline** | 67 | 62 | 56 | 55 | 55 | 55 | **51** | 48 |
| **A. Alternative Scenarios** | | | | | | | | |
| A1. Key variables at their historical averages in 2018-2038 1/ | 67 | 70 | 74 | 82 | 91 | 100 | **124** | 111 |
| A2. New public sector loans on less favorable terms in 2018-2038 2 | 67 | 63 | 57 | 57 | 59 | 61 | **63** | 73 |
| A3. Alternative Scenario: Natural Disaster | 67 | 73 | 62 | 62 | 62 | 63 | **57** | 55 |
| **B. Bound Tests** | | | | | | | | |
| B1. Real GDP growth at historical average minus one standard deviation in 2019-2020 | 67 | 62 | 56 | 55 | 55 | 55 | **51** | 48 |
| B2. Export value growth at historical average minus one standard deviation in 2019-2020 3/ | 67 | 113 | 208 | 206 | 205 | 204 | **170** | 115 |
| B3. US dollar GDP deflator at historical average minus one standard deviation in 2019-2020 | 67 | 62 | 56 | 55 | 55 | 55 | **51** | 48 |
| B4. Net non-debt creating flows at historical average minus one standard deviation in 2019-2020 4/ | 67 | 66 | 64 | 64 | 63 | 63 | **57** | 50 |
| B5. Combination of B1-B4 using one-half standard deviation shocks | 67 | 70 | 76 | 75 | 75 | 75 | **67** | 57 |
| B6. One-time 30 percent nominal depreciation relative to the baseline in 2019 5/ | 67 | 62 | 56 | 55 | 55 | 55 | **51** | 48 |
| **PV of debt-to-revenue ratio** | | | | | | | | |
| **Baseline** | 165 | 155 | 139 | 137 | 137 | 137 | **124** | 113 |
| **A. Alternative Scenarios** | | | | | | | | |
| A1. Key variables at their historical averages in 2018-2038 1/ | 165 | 177 | 185 | 207 | 228 | 251 | **303** | 261 |
| A2. New public sector loans on less favorable terms in 2018-2038 2 | 165 | 158 | 142 | 144 | 148 | 152 | **155** | 172 |
| A3. Alternative Scenario: Natural Disaster | 165 | 184 | 155 | 155 | 157 | 159 | **140** | 129 |
| **B. Bound Tests** | | | | | | | | |
| B1. Real GDP growth at historical average minus one standard deviation in 2019-2020 | 165 | 161 | 149 | 147 | 147 | 147 | **133** | 121 |
| B2. Export value growth at historical average minus one standard deviation in 2019-2020 3/ | 165 | 206 | 277 | 275 | 273 | 273 | **222** | 143 |
| B3. US dollar GDP deflator at historical average minus one standard deviation in 2019-2020 | 165 | 158 | 144 | 142 | 142 | 142 | **128** | 117 |
| B4. Net non-debt creating flows at historical average minus one standard deviation in 2019-2020 4/ | 165 | 166 | 161 | 159 | 159 | 159 | **139** | 118 |
| B5. Combination of B1-B4 using one-half standard deviation shocks | 165 | 173 | 183 | 181 | 180 | 180 | **156** | 128 |
| B6. One-time 30 percent nominal depreciation relative to the baseline in 2019 5/ | 165 | 219 | 197 | 195 | 194 | 194 | **175** | 161 |

## Table 3. Grenada: Sensitivity Analysis for Key Indicators of Publicly Guaranteed External Debt, 2018–2038 (concluded)

(In percent)

**Debt service-to-exports ratio**

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Baseline** | 8 | 7 | 6 | 6 | 6 | 6 | **5** | 5 |
| **A. Alternative Scenarios** | | | | | | | | |
| A1. Key variables at their historical averages in 2018-2038 1/ | 8 | 7 | 7 | 7 | 7 | 7 | **10** | 12 |
| A2. New public sector loans on less favorable terms in 2018-2038 2 | 8 | 7 | 6 | 6 | 6 | 6 | **6** | 6 |
| A3. Alternative Scenario: Natural Disaster | 8 | 8 | 7 | 7 | 7 | 7 | **6** | 5 |
| **B. Bound Tests** | | | | | | | | |
| B1. Real GDP growth at historical average minus one standard deviation in 2019-2020 | 8 | 7 | 6 | 6 | 6 | 6 | **5** | 5 |
| B2. Export value growth at historical average minus one standard deviation in 2019-2020 3/ | 8 | 9 | 13 | 14 | 14 | 14 | **18** | 14 |
| B3. US dollar GDP deflator at historical average minus one standard deviation in 2019-2020 | 8 | 7 | 6 | 6 | 6 | 6 | **5** | 5 |
| B4. Net non-debt creating flows at historical average minus one standard deviation in 2019-2020 4/ | 8 | 7 | 6 | 6 | 6 | 6 | **6** | 5 |
| B5. Combination of B1-B4 using one-half standard deviation shocks | 8 | 7 | 7 | 7 | 7 | 7 | **7** | 6 |
| B6. One-time 30 percent nominal depreciation relative to the baseline in 2019 5/ | 8 | 7 | 6 | 6 | 6 | 6 | **5** | 5 |

**Debt service-to-revenue ratio**

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Baseline** | 19 | 17 | 16 | 15 | 15 | 15 | **13** | 11 |
| **A. Alternative Scenarios** | | | | | | | | |
| A1. Key variables at their historical averages in 2018-2038 1/ | 19 | 17 | 16 | 16 | 17 | 18 | **24** | 28 |
| A2. New public sector loans on less favorable terms in 2018-2038 2 | 19 | 17 | 15 | 14 | 14 | 14 | **14** | 15 |
| A3. Alternative Scenario: Natural Disaster | 19 | 20 | 17 | 17 | 17 | 18 | **15** | 13 |
| **B. Bound Tests** | | | | | | | | |
| B1. Real GDP growth at historical average minus one standard deviation in 2019-2020 | 19 | 18 | 17 | 16 | 16 | 16 | **14** | 12 |
| B2. Export value growth at historical average minus one standard deviation in 2019-2020 3/ | 19 | 17 | 17 | 19 | 19 | 19 | **23** | 18 |
| B3. US dollar GDP deflator at historical average minus one standard deviation in 2019-2020 | 19 | 17 | 16 | 15 | 15 | 16 | **13** | 12 |
| B4. Net non-debt creating flows at historical average minus one standard deviation in 2019-2020 4/ | 19 | 17 | 16 | 16 | 15 | 16 | **14** | 12 |
| B5. Combination of B1-B4 using one-half standard deviation shocks | 19 | 18 | 17 | 17 | 17 | 17 | **16** | 14 |
| B6. One-time 30 percent nominal depreciation relative to the baseline in 2019 5/ | 19 | 24 | 22 | 21 | 21 | 22 | **18** | 16 |
| *Memorandum item:* | | | | | | | | |
| Grant element assumed on residual financing (i.e., financing required above baseline) 6/ | 26 | 26 | 26 | 26 | 26 | 26 | **26** | 26 |

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.

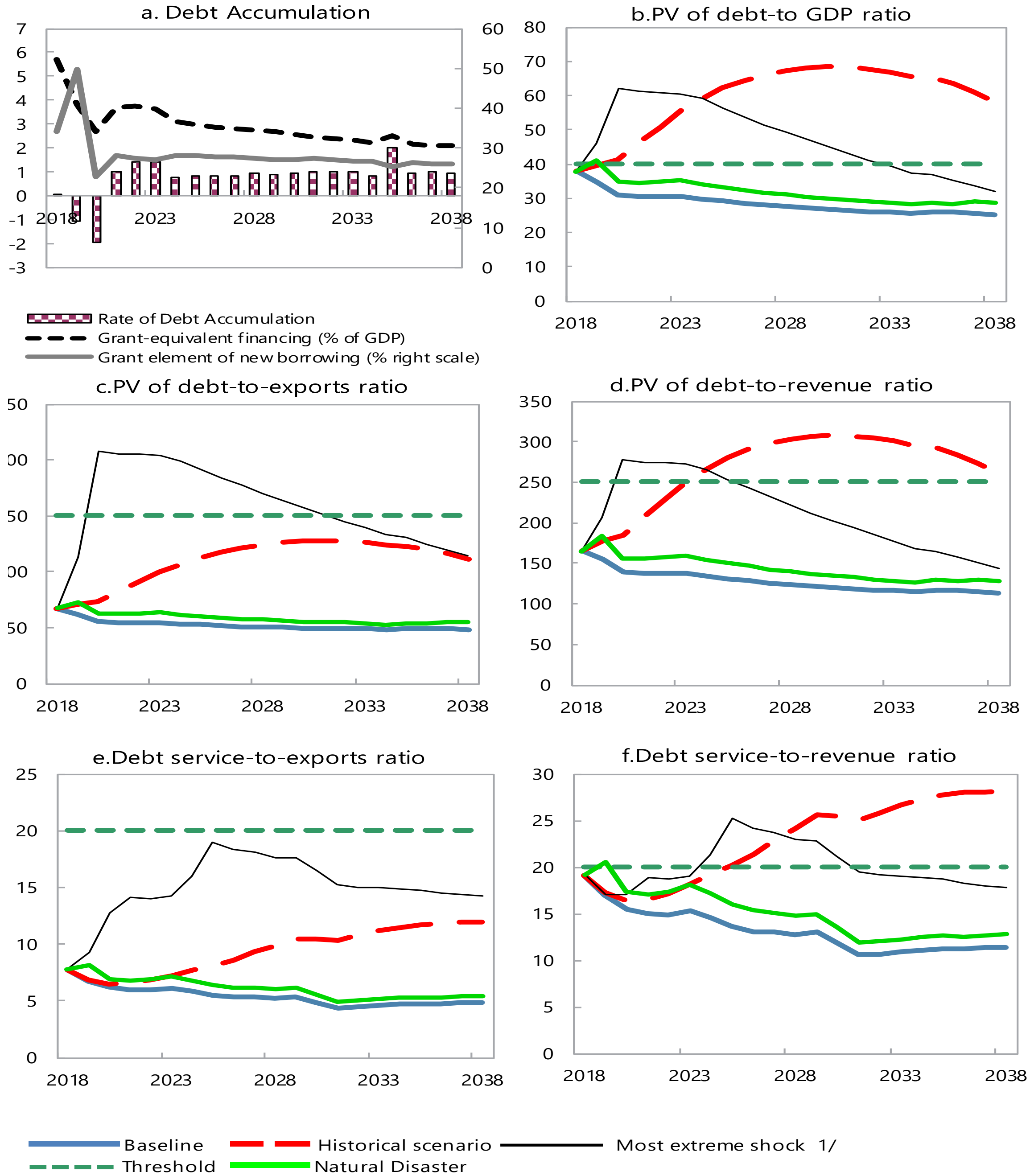
6/ Applies to all stress scenarios except for A2 (less favorable financing) in which the terms on all new financing are as specified in footnote 2.

## Table 4. Grenada: Sensitivity Analysis for Key Indicators of Public Debt 2018–2038

| | Projections | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2028 | 2038 |
| **PV of Debt-to-GDP Ratio** | | | | | | | | |
| **Baseline** | 56 | 50 | 45 | 43 | 42 | 42 | 42 | 45 |
| **A. Alternative scenarios** | | | | | | | | |
| A1. Real GDP growth and primary balance are at historical averages | 56 | 55 | 53 | 54 | 55 | 55 | 52 | 46 |
| A2. Primary balance is unchanged from 2018 | 56 | 50 | 45 | 41 | 38 | 34 | 12 | -26 |
| A3. Permanently lower GDP growth 1/ | 56 | 51 | 46 | 45 | 44 | 45 | 51 | 74 |
| **B. Bound tests** | | | | | | | | |
| B1. Real GDP growth is at historical average minus one standard deviations in 2019-2020 | 56 | 53 | 50 | 49 | 49 | 50 | 55 | 67 |
| B2. Primary balance is at historical average minus one standard deviations in 2019-2020 | 56 | 57 | 58 | 56 | 55 | 55 | 54 | 54 |
| B3. Combination of B1-B2 using one half standard deviation shocks | 56 | 57 | 58 | 56 | 56 | 56 | 58 | 64 |
| B4. One-time 30 percent real depreciation in 2019 | 56 | 66 | 60 | 57 | 56 | 54 | 52 | 53 |
| B5. 10 percent of GDP increase in other debt-creating flows in 2019 | 56 | 58 | 52 | 50 | 49 | 49 | 48 | 50 |
| **PV of Debt-to-Revenue Ratio 2/** | | | | | | | | |
| **Baseline** | 216 | 200 | 179 | 173 | 170 | 169 | 174 | 189 |
| **A. Alternative scenarios** | | | | | | | | |
| A1. Real GDP growth and primary balance are at historical averages | 216 | 218 | 213 | 217 | 221 | 224 | 214 | 195 |
| A2. Primary balance is unchanged from 2018 | 216 | 200 | 178 | 166 | 152 | 139 | 48 | -110 |
| A3. Permanently lower GDP growth 1/ | 216 | 202 | 182 | 179 | 179 | 181 | 210 | 310 |
| **B. Bound tests** | | | | | | | | |
| B1. Real GDP growth is at historical average minus one standard deviations in 2019-2020 | 216 | 210 | 197 | 195 | 197 | 200 | 229 | 283 |
| B2. Primary balance is at historical average minus one standard deviations in 2019-2020 | 216 | 227 | 233 | 227 | 223 | 222 | 224 | 229 |
| B3. Combination of B1-B2 using one half standard deviation shocks | 216 | 226 | 229 | 225 | 225 | 226 | 241 | 269 |
| B4. One-time 30 percent real depreciation in 2019 | 216 | 263 | 240 | 231 | 225 | 221 | 218 | 225 |
| B5. 10 percent of GDP increase in other debt-creating flows in 2019 | 216 | 230 | 208 | 202 | 199 | 197 | 201 | 210 |
| **Debt Service-to-Revenue Ratio 2/** | | | | | | | | |
| **Baseline** | 45 | 47 | 44 | 43 | 41 | 40 | 34 | 26 |
| **A. Alternative scenarios** | | | | | | | | |
| A1. Real GDP growth and primary balance are at historical averages | 45 | 47 | 45 | 44 | 43 | 42 | 37 | 28 |
| A2. Primary balance is unchanged from 2018 | 45 | 47 | 44 | 43 | 41 | 40 | 29 | 7 |
| A3. Permanently lower GDP growth 1/ | 45 | 47 | 44 | 43 | 42 | 42 | 37 | 35 |
| **B. Bound tests** | | | | | | | | |
| B1. Real GDP growth is at historical average minus one standard deviations in 2019-2020 | 45 | 48 | 47 | 45 | 44 | 43 | 38 | 33 |
| B2. Primary balance is at historical average minus one standard deviations in 2019-2020 | 45 | 47 | 45 | 44 | 43 | 42 | 38 | 30 |
| B3. Combination of B1-B2 using one half standard deviation shocks | 45 | 48 | 46 | 46 | 44 | 43 | 39 | 33 |
| B4. One-time 30 percent real depreciation in 2019 | 45 | 50 | 50 | 49 | 47 | 47 | 41 | 35 |
| B5. 10 percent of GDP increase in other debt-creating flows in 2019 | 45 | 47 | 45 | 44 | 42 | 41 | 36 | 28 |

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.

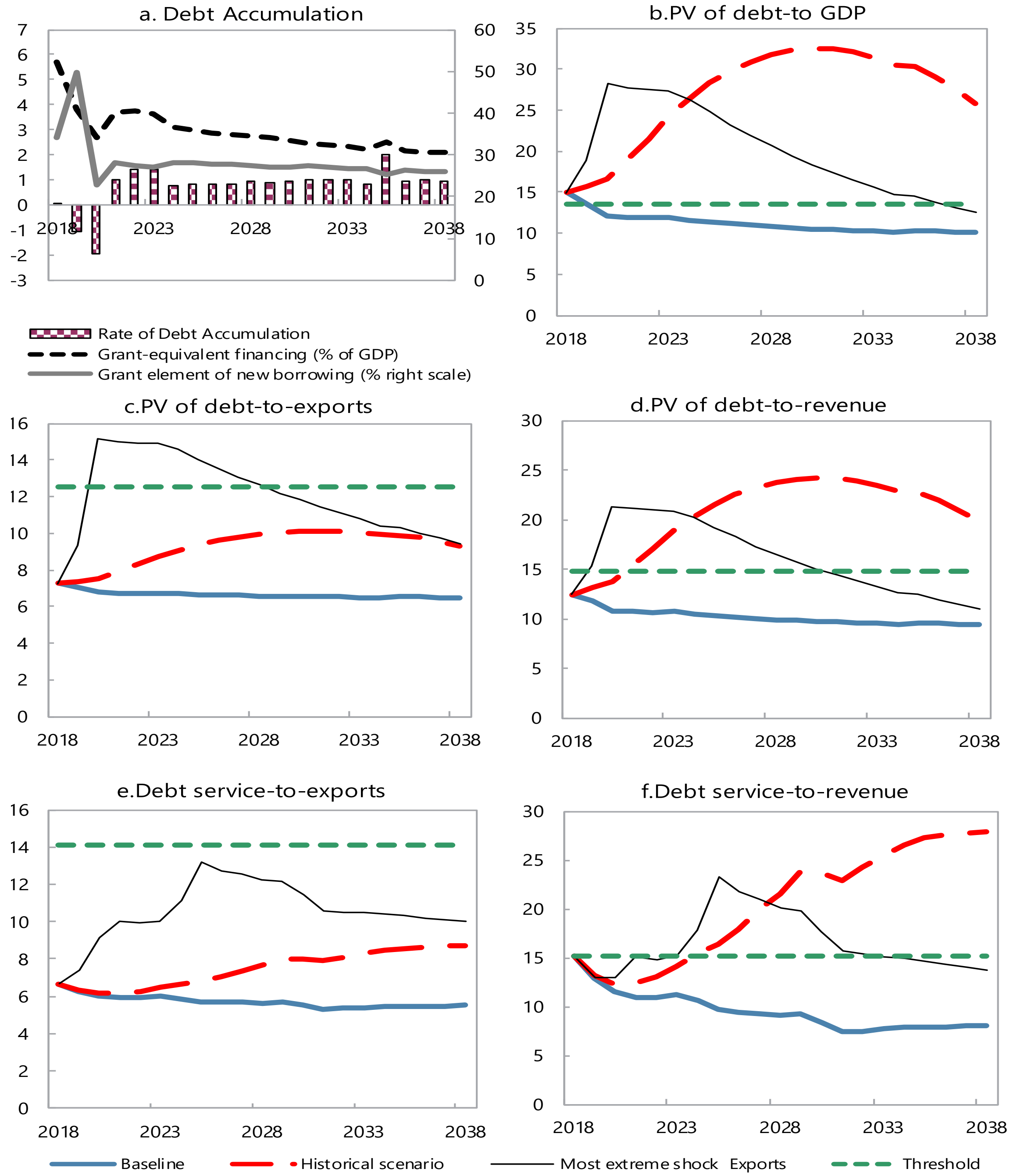
## Figure 1. Grenada: Indicators of Public and Publicly Guaranteed External Debt Under Alternatives Scenarios, 2018–2038 1/




Sources: Country authorities; and staff estimates and projections.

1/ The most extreme stress test is the test that yields the highest ratio on or before 2028. In figure b. it corresponds to a Exports shock; in c. to a Exports shock; in d. to a Exports shock; in e. to a Exports shock and in figure f. to a Exports shock

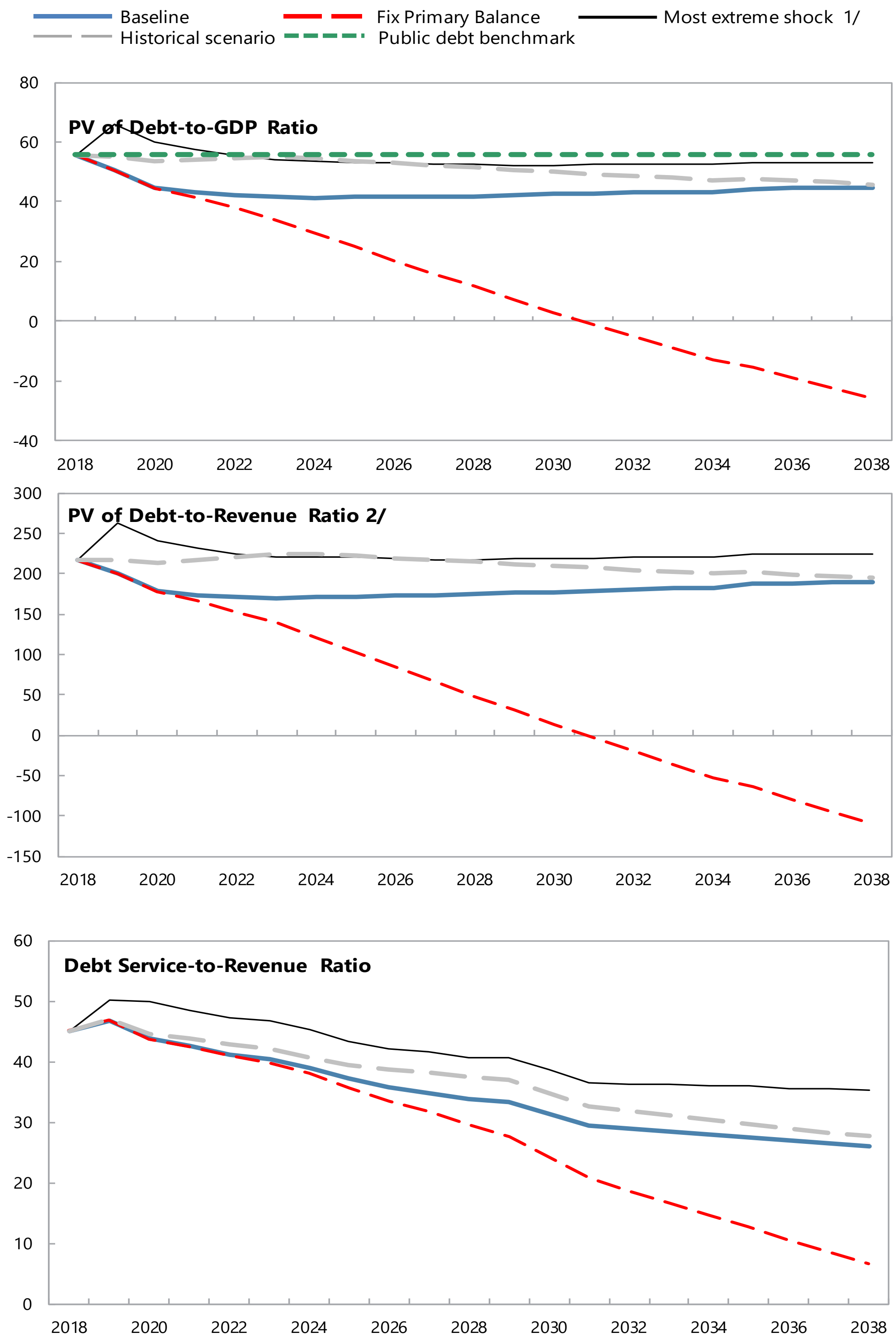
**Figure 2. Grenada: Probability of Debt Distress of Public and Publicly Guaranteed External Debt Under Alternatives Scenarios, 2018–2038 1/**




Sources: Country authorities; and staff estimates and projections.

1/ The most extreme stress test is the test that yields the highest ratio on or before 2028. In figure b. it corresponds to a Exports shock; in c. to a Exports shock; in d. to a Exports shock; in e. to a Exports shock and in figure f. to a Exports shock

**Figure 3. Grenada: Indicators of Public Debt Under Alternative Scenarios, 2018–2038 1/**




Sources: Country authorities; and staff estimates and projections.
1/ The most extreme stress test is the test that yields the highest ratio on or before 2028.
2/ Revenues are defined inclusive of grants.