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Strengthening the Debt Sustainability Framework for Caribbean Small States

Cyrus Rustomjee

Key Points

- Since 2005, two debt sustainability frameworks (DSFs) and country-level debt sustainability analyses (DSAs) designed by the International Monetary Fund (IMF) and World Bank have provided standardized tools to measure and assess debt sustainability.
- While they have a number of advantages, the utility of these tools for small states is limited by several factors, including insufficient treatment of exogenous shocks, limitations in the tools used to assess debt sustainability and a narrow definition of debt sustainability.
- This has reduced their reliability in assessing debt sustainability and as a mechanism to help inform both countries' debt management policies and donor, lender and investor decision making. Several practical modifications can strengthen these tools and improve their utility for small states.

Introduction

Small states, defined as countries with a population of less than 1.5 million, suffer from a host of economic, environmental and social vulnerabilities. Compared to other developing countries, they are disproportionately vulnerable to natural disasters, climate change and other external shocks. Many have accumulated large, unsustainable levels of debt; in particular, several Caribbean countries are now among the most highly indebted in the world.

Since 2005, a standardized methodology, designed by the IMF and World Bank, has been used to assess countries' debt sustainability and offer policy recommendations to both debtor countries and creditors. Comprising two DSFs, for low-income countries (LIC-DSF) and separately for market access countries (MAC-DSF),¹ together with annual country-specific DSAs, they estimate the present value of future debt levels using five standardized debt ratios, and use a series of standardized, policy-dependent debt sustainability thresholds to determine whether current and projected debt levels are likely to lead to future difficulties in servicing debt (IMF 2005; IMF 2013). Both DSFs define debt levels to be sustainable if a country is able to meet its current and future external debt obligations in full, without the need for debt rescheduling or the accumulation of arrears and without compromising growth,

¹ The latter was initially developed as a DSF for middle-income countries, and revised and relaunched in 2011 as a DSF for market access countries.

About the Author

Cyrus Rustomjee is a CIGI senior fellow with the Global Economy Program. At CIGI, Cyrus is looking for solutions to small states' debt challenges and exploring the benefits of the blue economy. His research looks into how small countries in the Pacific, the Caribbean and elsewhere can benefit from greater reliance on the use and reuse of locally available resources, including those from maritime environments.

and both develop their assessments on the basis of a baseline scenario, constituting the country's most likely debt path based on macroeconomic projections that reflect the government's current policies. All 50 small states utilize the DSF/DSA approach.² Among small states, 27 use the LIC-DSF and 23 use the MAC-DSF methodology when preparing DSAs. Most small states are located in the Caribbean (13), Pacific (11) and Sub-Saharan Africa (14). Among these, 29 use the LIC-DSF and nine use the MAC-DSF (see the Annex).

DSFs and DSAs serve many purposes beyond assessing risks to debt sustainability: they play a crucial role in determining the nature and scale of resource flows to debtor countries. They influence countries' access to concessional financing, with DSA outcomes used by the World Bank's International Development Association (IDA) and other donors to determine their grant/loan mix in concessional lending; guide the IMF's lending decisions and program conditionality; influence access to non-concessional financing; and contribute to the graduation criteria used by the IMF and World Bank. DSA risk assessments give a strong signal of country creditworthiness, providing investors with a basis for country risk evaluation, including assessing countries' debt servicing capacity and other risks, and influencing debtor and creditor decisions during debt restructuring negotiations. For these reasons, there is great reliance on the accuracy of DSAs and policy recommendations accompanying them.

Key Limitations for Small States

While allowing for an extensive assessment of country-specific risks to debt sustainability, for small states the DSF/DSA approach also presents several challenges, including inadequate treatment of shocks; limitations in several of the tools, indicators and thresholds used when compiling DSAs; and in the approach to debt and debt sustainability itself. Individually, these

² There are 50 members of the Small States Forum (SSF), an association of small countries with populations less than 1.5 million. The SSF was launched by the Commonwealth and World Bank in 2000 and is convened on an annual basis by the World Bank.

chip away at the accuracy of the approach in assessing debt sustainability. Collectively, they suggest that DSAs can yield incomplete and unrealistic assessments of the risks to debt sustainability, adversely influencing countries' adjustment policies, debt composition including grant allocations and the balance of concessional and non-concessional debt, the scale and nature of access to financial resources, creditworthiness and, in turn, debt sustainability itself.

Dealing with Shocks

Both DSFs assess the impact to debt sustainability of shocks and other deviations from the expected path of debt. But, in both, assessments based on the baseline scenarios — the primary cue for various creditors in determining the mix and scale of grant, concessional and non-concessional lending — focus only on economic and financial shocks, including institutional and governance-related performance indicators to determine debt sustainability thresholds (LIC-DSF) and an assessment of the impact of shocks from five sources — real GDP growth, primary balances, real interest rates, exchange rates and contingent liabilities (MAC-DSF). Both exclude vulnerabilities to exogenous shocks, including natural disasters and weather-related events, relegating consideration of these to alternative and stress test scenarios. Their exclusion ignores evidence of the frequency, scale and escalating cost of these shocks in small states, with these countries having experienced 460 disasters between 1950 and 2014, representing an average of seven disasters per year among all small states. By contrast, eight countries with roughly similar overall land area have experienced only 66 disasters over the same period, or just one-seventh of the frequency experienced by small states.

For small states, the costs have also been far greater — about four times the cost as a share of GDP compared to larger states — and these have increased over time, growing from an average cost of 1.2 percent of GDP per disaster between 1950 and 1990 to 1.8 percent since 1990. Additionally, small states are nine times more likely to experience large-scale disasters, involving damage of more than 30 percent of GDP, compared to larger states. Costs may also be underestimated, due to under-reporting, with damages for Caribbean countries potentially 1.6–3.6 times larger than reported (IMF 2016b). The Caribbean region is disproportionately vulnerable to natural disasters, weather-related

shocks and environmental vulnerabilities, having suffered over 250 such events in the past 40 years. St. Vincent and the Grenadines, for example, experienced 10 natural disasters between 1970 and 2014 — aggregating an average of 5.5 percent of GDP per disaster — including three since 2008 (IMF 2016d). These vulnerabilities have no correlation with income classification, a measure used to determine concessional lending: among 47 small states for which data is available, 18 high income and upper-middle-income countries are ranked as either extremely or highly environmentally vulnerable, including seven Caribbean small states (see Table 1).

Excluding these shocks from the baseline scenario can encourage over-optimistic outlooks for debt sustainability and through the signalling function performed by DSAs, can reduce countries' access to scarce concessional lending and discourage more concerted international mobilization of additional resources for development. And differentials between baseline scenarios that exclude natural disasters and alternative scenarios that do are large. In Grenada, for example, including this impact in alternative scenarios increases debt levels by more than 10 percent, compared to the baseline (IMF 2016a), while in St. Kitts and Nevis a combined natural disaster and sudden stop to the country's citizenship by investment scheme leaves the debt ratio about 18 percentage points above the baseline (IMF 2016c).

Ignoring the greater frequency and scale of natural disasters in small states also introduces a further limitation in DSA assessments of these countries' vulnerability to debt distress. DSAs seek to determine whether debt is sustainable with a "high probability." But this measure differs among countries, and excluding consideration of the country-specific differences in the relative impact of these shocks means that DSAs fail to recognize that the probability with which debt default is tolerated should be larger for small states, as they experience a larger variance in these shocks in comparison with larger countries. In turn, where debt restructuring is needed, DSAs fail to recognize that these countries are likely to require proportionately greater relief to restore debt sustainability with high probability. Ignoring the increasing frequency and scale of shocks also casts doubt on the accuracy and reliability of future projections for debt and GDP, as these are based on historical data, all of which ignore these factors.

Table 1: Environmental Vulnerability and Income Classification of Small States

	Extremely Vulnerable	Highly Vulnerable	Vulnerable	At Risk	Resilient
High-income	Barbados Malta Nauru Trinidad and Tobago	Bahrain Seychelles St. Kitts and Nevis	Antigua and Barbuda Brunei-Darussalam Cyprus Estonia Iceland San Marino	Bahamas Qatar	
Upper-middle Income	Jamaica Maldives Marshall Islands St. Lucia Tuvalu	Grenada Fiji Mauritius Palau St. Vincent and Grenadines		Belize Equatorial Guinea	Botswana Gabon Guyana Namibia Suriname
Lower-middle Income	Kiribati Micronesia Tonga	Samoa	Cabo Verde Lesotho Solomon Islands Vanuatu	Bhutan São Tomé and Príncipe Swaziland	Djibouti
Low Income			Comoros Gambia Guinea-Bissau		

Sources: Country income classification, World Bank list of economies, <https://datahelpdesk.worldbank.org/knowledgebase/articles/906519>; environmental vulnerability index, www.vulnerabilityindex.net/wp-content/uploads/2015/05/EVI%20Country%20Classification.pdf.

Note: Environmental vulnerability index data for Dominica, Montenegro and Timor-Leste is not available.

Debt Sustainability Thresholds

The LIC-DSF uses empirically based thresholds for each of the five measures of debt to determine the probability that a country will experience debt distress, identifying an optimal risk of debt distress through a loss function that seeks to minimize the number of missed debt crises and false alarms and assigning one of four categories of country-level risk of debt distress. Again, these risk ratings determine the World Bank’s grant-loan mix, with higher risk ratings automatically triggering shifts in World Bank lending from a mix of loans and grants toward solely grant funding, and limit permissible debt accumulation in IMF programs. Both responses curb countries’ access to borrowing. However, the threshold-based approach has been widely criticized. Debt

thresholds are calculated using an LIC-average growth rate and, consequently, take limited account of country-specific factors influencing risks to debt distress. Moreover, a review of 60 recent LIC-DSAs identifies limitations in the process of aggregating risk among the five measures, including unnecessary pessimism and reliance on aggregated LIC historical growth and the World Bank’s Country Policy and Institutional Assessment (CPIA) index scores to measure risk in the threshold approach. Instead, addressing these limitations and making better use of available country-specific information and data can result in lower risk ratings for many countries (Berg et al. 2014).

CPIA Indicators

In the LIC-DSF, external public debt is projected over 20 years and compared against several indicative thresholds, to assess the risk of debt distress. Thresholds for each debt burden indicator vary depending on each country's policy and institutional capacity — measured by the World Bank's CPIA index, with countries categorized as having “weak,” “medium” or “strong” policies and institutions — and, when breached, signal risks to debt sustainability. CPIA scores are used to determine the grant-loan mix provided by the IDA, and the aid decisions of multilateral development banks and other bilateral donors, in turn determining countries' debt-carrying capacity and the mix of concessional and non-concessional external lending provided. However, small states view these as unrealistic mechanical tools that generate unreliable scores, exclude key vulnerabilities and risks that are beyond small states' capacity to influence through policy and institutional strengthening, and lack transparency, with independent researchers having no access to CPIA data (Panizza 2015). Instead, more appropriate measures of risk to debt distress may include the capacity to manage public resources, reflected, for example, by greater use of reports on observance of standards and codes, debt management and project management performance assessments (Chauvin and Golitin 2010).

Definitions and Approach to Sustainability

DSAs apply a narrow definition of debt sustainability and limit analysis of country debt dynamics to the impact of inflation, interest rates, growth and exchange rate changes on debt and debt-servicing capacity. For small states, this mutes analysis in DSAs of the potential contribution to growth from debt-financed public investment, and sidesteps consideration of the nexus between sustainable debt levels and countries' ability to promote sustained economic growth and sustainable development, a link explicitly acknowledged by the United Nations in setting out basic principles, including the principle of sustainability, when guiding sovereign debt restructuring processes (Li 2015; United Nations 2015). Several alternative approaches to debt sustainability can be introduced in DSAs to address these limitations, including a human development approach, with human development

taking precedence over debt payments and with debt sustainability redefined as the level at which debt service no longer crowds out priority public spending (Caliari 2006), and alternatives that define debt levels that are on a non-increasing trend to be sustainable and that determine the level of primary balance needed to stabilize debt (Nissanke 2013). Similarly, several recent studies illustrate how the UN principles and these alternate approaches can also be applied to countries facing debt crises and requiring sovereign debt restructuring, including, for example, several Caribbean small states (Bohoslavksy 2016; Guzman and Stiglitz 2016).

Arbitrariness and Compliance

For small states, the LIC-MAC distinction is arbitrary: collectively, they use both DSFs, yet there is no minimum threshold to be categorized as an MAC, and categorization based on per capita income has little relevance to the analysis of small states. More relevant are similarities in their economic, environmental and structural vulnerabilities, all with similar impacts on the drivers of debt accumulation and servicing. And despite their similar economic characteristics, small states' DSAs, which are prepared using two separate LIC and MAC methodologies, are consequently assessed on the basis of separate risk ratings. The LIC-DSF assesses the risk of public debt distress using four ratings, including low, moderate and high risk, and countries already in debt distress. The MAC-DSF uses a risk-based approach, comparing a baseline with alternative scenarios, using differing debt sustainability thresholds, widely diverging data projection periods — with the LIC-DSF using 20-year forward projections and the MAC using five-year forward projections — and with separate DSA analyses and presentation of risks to debt sustainability, including summary comparisons of baseline and active scenarios (LIC-DSF) and the use of heat maps that assess the relative impact of potential shocks and fan charts that describe the possible evolution of the debt-to-GDP ratio over the medium term (MAC-DSF). The dual approach also limits comparisons across small states, while data requirements are high and demanding, notwithstanding these countries' acute institutional and human resource constraints.

Key Actions

Several practical steps can help strengthen the design, content and utility of DSFs and DSAs for small states. More realistic expectations of the frequency, magnitude and impact of external shocks from natural disasters and weather-related events can be integrated into DSA baseline scenarios, using increasingly available evidence from the International Disaster Database of the Centre for Research on the Epidemiology of Natural Disasters, and objective measures such as the United Nation’s Environmental Vulnerability Index, to develop a “shock-inclusive” baseline scenario in all DSAs. All data used to determine country CPIA scores can be made publicly available, allowing for independent evaluation and critique of the DSF/DSA approach, and CPIA indicators can be replaced, or included in DSAs with equally weighted alternative indicators, including as the Economic Vulnerability Index and Human Asset Index, both used by the United Nations as criteria in identifying least-developed countries. The IMF can introduce a more streamlined, simpler and common set of debt sustainability thresholds, data projection periods and risk assessment tools across all small states.

Conclusion

For small states, the absence of a more centralized focus on exogenous shocks and their impact on sustainability, limitations in indicators, thresholds and in the approach to debt and debt sustainability itself, have eroded the utility of the DSF/DSA framework. Several practical steps can address these limitations, providing clearer analyses of the scale of underlying risks to debt, in turn providing a more accurate basis to guide debtor and creditor responses to DSAs.

Annex: Small States' Use of LIC-DSF and MAC-DSF (2015-2016)

	LIC-DSF	Mac-DSF	Risk of Debt Distress (LIC-DSF)
Caribbean Small States			
Antigua and Barbuda		✓	
Bahamas		✓	
Barbados		✓	
Belize		✓	
Dominica	✓		High
Grenada	✓		In debt distress
Guyana	✓		Moderate
Jamaica		✓	
St. Kitts and Nevis		✓	
St. Lucia	✓		Moderate
St. Vincent and the Grenadines	✓		High
Suriname		✓	
Trinidad and Tobago		✓	
Total Caribbean	5	8	
Pacific Small States			
Fiji	✓		
Kiribati	✓		High
Marshall Islands	✓		High
Micronesia	✓		High
Nauru	✓		
Palau	✓		
Samoa	✓		Moderate
Solomon Islands	✓		Moderate
Tonga	✓		
Tuvalu	✓		High
Vanuatu	✓		Moderate
Total Pacific	11	0	
African Small States			
Botswana	✓		Low
Cabo Verde	✓		High
Comores	✓		Moderate
Djibouti	✓		High
Equatorial Guinea		✓	
Gabon		✓	
Gambia	✓		Moderate
Guinea-Bissau	✓		Moderate
Lesotho	✓		Moderate
Mauritius		✓	
Namibia		✓	
Sao Tome and Principe	✓		High
Seychelles		✓	
Swaziland		✓	
Total African	8	6	
Other Small States			
Bahrain		✓	
Bhutan	✓		Moderate
Brunei-Darussalam		✓	
Cyprus		✓	
Estonia		✓	
Iceland		✓	
Maldives	✓		High
Malta		✓	
Montenegro		✓	
Qatar		✓	
San Marino		✓	
Timor-Leste	✓		Moderate
Total Other Small States	3	9	
Total Small States	27	23	

Source: Various small states DSAs (2014–2016), IMF and World Bank.

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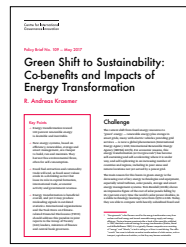
Advancing Policy Ideas and Debate



A Sustainable Ocean Economy, Innovation and Growth: A G20 Initiative

CIGI Policy Brief No. 113
R. Andreas Kraemer

The Group of Twenty should initiate a global ocean governance process and call for dialogues, strategies and regional cooperation to ensure that investment and growth in ocean use become sustainable and reach their full potential. The ocean is the largest and most critical ecosystem on Earth, and potentially the largest provider of food, materials, energy and ecosystem services. However, past and current uses of the ocean continue to be unsustainable, with increasing demand contributing to the ocean's decline. Better governance, appreciation of the economic value of the ocean and "blue economy" strategies can reduce conflicts among uses, ensure financial sustainability, ecosystem integrity and prosperity, and promote long-term national growth and employment in maritime industries.



Green Shift to Sustainability: Co-benefits and Impacts of Energy Transformation

CIGI Policy Brief No. 109
R. Andreas Kraemer

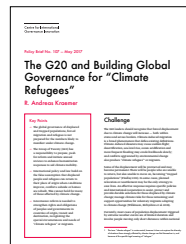
Energy transformation toward 100 percent renewable energy is desirable and inevitable. New energy systems, based on efficiency, renewables, storage and smart management, are cheaper to build, run and maintain. Energy transformation is beneficial overall, and yet it may produce misleading signals in outdated statistics. International organizations and the Task Force on Climate-related Financial Disclosures should address this paradox in joint reports to the G20 leaders, ministers of finance and central bank governors.



Issues in Bringing Canadian Fintech to the International Stage

CIGI Policy Brief No. 111
James W. Hinton, Domenico Lombardi and Joanna Wajda

The aim of this policy brief is to provide a general description of the fintech industry in Canada, and to describe and draw attention to two complementary aspects of developing a fintech strategy for Canada: first, encouraging domestic fintech innovation — through open data and payment systems — and second, encouraging international expansion — through international agreements among regulators and comprehensive intellectual property strategies.



The G20 and Building Global Governance for "Climate Refugees"

CIGI Policy Brief No. 107
R. Andreas Kraemer

The global governance of displaced and trapped populations, forced migration and refugees is not prepared for the numbers likely to manifest under climate change. The G20 has a responsibility to prepare, push for reform and initiate annual reviews to enhance humanitarian responses to aid climate mobility. Governance reform is needed to strengthen rights and obligations of peoples and governments in countries of origin, transit and destination, recognizing the special circumstances and needs of "climate refugees" or migrants.



Can Canada Step into the Breach? Addressing Climate-related Financial Risk and Growing Green Finance

CIGI Policy Brief No. 110
Céline Bak

There was no consensus on climate-related financial risk at the G20 meeting of central bankers and finance ministers in March 2017, and the final communiqué did not mention climate change or the Paris Agreement. President Trump has since announced his intention to withdraw from the Paris Agreement. G20 finance ministers must therefore assure governance of this agenda through interconnected national high-level expert groups. Canada's financial institutions have the capacity to move swiftly to contribute to a platform for international collaboration on climate-related financial risk and green finance opportunities.



Toward a Comprehensive Approach to Climate Policy, Sustainable Infrastructure and Finance

CIGI Policy Brief No. 106
Céline Bak, Amar Bhattacharya, Ottmar Edenhofer and Brigitte Knopf

The Paris Agreement and countries' nationally determined contributions represent important commitments to climate action; however, a collective plan to keep the global temperature increase to well below 2°C has not been reached and the world risks being caught in a cycle of low and uneven growth. This policy brief proposes a comprehensive approach that links inclusive growth, sustainable development and the climate goals.

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