ISSN 1728-5445

SERIES

STUDIES AND PERSPECTIVES 89

ECLAC SUBREGIONAL HEADQUARTERS FOR THE CARIBBEAN

Promoting debt sustainability to facilitate financing sustainable development in selected Caribbean countries

A scenario analysis of the ECLAC debt for climate adaptation swap initiative

Sheldon McLean
Hidenobu Tokuda
Nyasha Skerrette
Machel Pantin

UNITED NATIONS

ECLAC

SERIES

STUDIES AND PERSPECTIVES | 89

ECLAC SUBREGIONAL
HEADQUARTERS
FOR THE CARIBBEAN

Promoting debt sustainability to facilitate financing sustainable development in selected Caribbean countries

A scenario analysis of the ECLAC debt for climate adaptation swap initiative

Sheldon McLean
Hidenobu Tokuda
Nyasha Skerrette
Machel Pantin

UNITED NATIONS

ECLAC

This document has been prepared by Sheldon McLean, Coordinator of the Economic Development Unit of the Economic Commission for Latin America and the Caribbean (ECLAC) subregional headquarters for the Caribbean, Hidenobu Tokuda, Associate Economic Affairs Officer; and Nyasha Skerrette and Machel Pantin, Economic Affairs Assistants; with contributions from Dillon Alleyne, Deputy Chief and Maharouf Oyolola, Economic Affairs Officer of the ECLAC subregional headquarters for the Caribbean.

United Nations publication
ISSN: 1728-5445 (electronic version)
ISSN: 1727-9917 (print version)
LC/TS.2020/5
LC/CAR/TS.2019/12
Distribution: L

Printed at United Nations, Santiago
S.19-01211

This publication should be cited as: S. McLean and others, "Promoting debt sustainability to facilitate financing sustainable development in selected Caribbean countries: a scenario analysis of the ECLAC debt for climate adaptation swap initiative", *Studies and Perspectives series-ECLAC Subregional Headquarters for the Caribbean*, No. 89 (LC/TS.2020/5-LC/CAR/TS.2019/12), Santiago, Economic Commission for Latin America and the Caribbean (ECLAC), 2020.

Contents

Tables

Figures

Diagrams

Abstract

In light of the high debt burden impacting Caribbean economies ECLAC has been pursuing an initiative designed to reduce the debt burden and advance sustainable development. The strategy has evolved over time and there is now agreement on an approach designed to bring financial resources to the Caribbean for resilience building while still emphasizing the importance of debt reduction. To address resilience and development financing, ECLAC proposes the establishment of a Caribbean Resilience Facility to be housed at a reputable financial institution. Such a facility would be capitalised by donors, including the GCF, wishing to assist in financing climate projects and other forms of resilience-building activities within the Caribbean.

As part of the workings of the facility, to address the high debt constraint, ECLAC proposes that some donors might be persuaded to contribute to the CRF by purchasing from creditors some portion of the Caribbean external debt at a discount. As part of the agreement, these member states will be required to undertake on an annual basis, preferably in domestic currency, a flow of investment in resilience building projects. Such projects could also be co-financed by resources from the Green Climate Fund using the CRF as the conduit for channelling this project-based financing. The initiative will be moving forward with Phase I, in which the three governments of Antigua and Barbuda, Saint Lucia and Saint Vincent and the Grenadines have agreed to participate.

This study focuses on how the mechanics of the debt swap aspect of the initiative might be elaborated using scenario analysis.

Introduction

A. Overview of the Caribbean's Debt

The ECLAC Debt for Climate Adaptation Swap initiative emerged from growing evidence that the public debt of the Caribbean has reached unsustainable levels that will continue to compromise the economic growth trajectory of the subregion if not specifically addressed. The proposal therefore actively promotes consideration of a strategy to address this debt dilemma of the Caribbean in a sustainable manner while fostering investment in climate adaptation.

At the end of 2018, 13 Caribbean countries had debt-to-GDP ratios that exceeded the accepted sustainability threshold of 60%, and several ranked among the most highly indebted countries in the world. In 2018, the total debt burden of the Caribbean stood at US$56.2 billion; representing over 70.5 % of subregional GDP. The level and composition of public debt among Caribbean SIDS is also highly heterogeneous, with economies such as Jamaica, Antigua and Barbuda, Barbados having high levels of domestic debt.

This heterogeneity of Caribbean debt makes a one-size-fits all solution highly unlikely. The initiative therefore employs a variable geometry across participating countries. Further, in terms of external debt, most Caribbean countries are becoming more heavily indebted to either multilateral institutions or private investors through the global capital market. On the other hand, bilateral creditors, especially traditional western creditors, are becoming less significant.

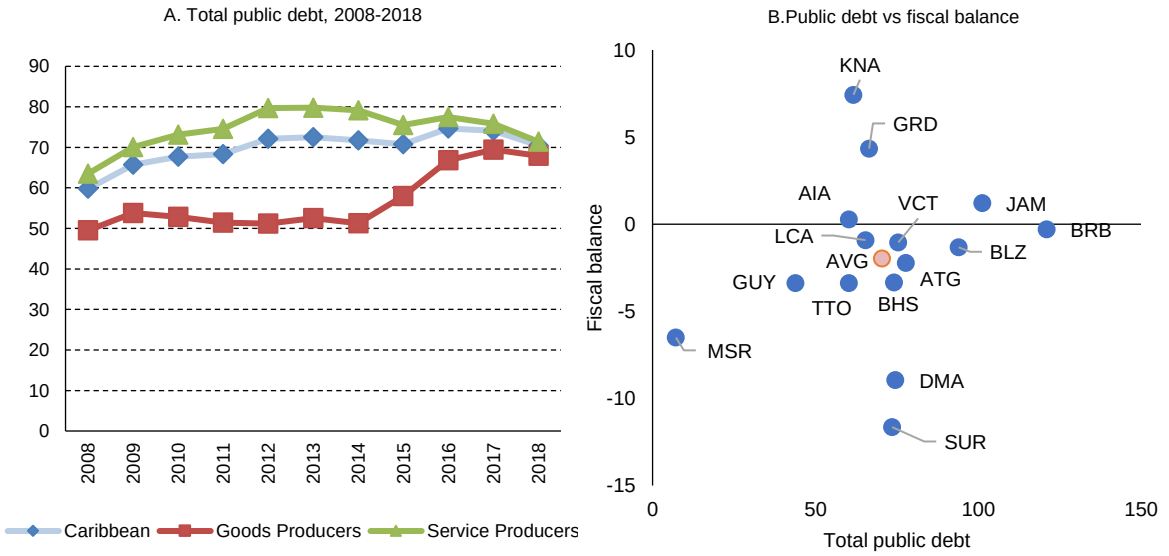
It is to be noted that in light of the debt Caribbean economies have limited fiscal space for investing in modernizing key economic infrastructure, as well as properly addressing the Sustainable Development Goals (SDGs) particularly through investment in social and economic development programmes. Another feature of the debt challenge facing the Caribbean is the high debt servicing costs, which further reduces their fiscal space and ability to achieve the SDGs. Total debt service payments averaged just under 30% of government revenue in 2018. This further reduces governments'

fiscal space and depletes vital foreign exchange earnings. Not surprisingly, the countries tend to sustain large fiscal deficits which on average were 2% of GDP in 2018 (See Figure 1). [1]

This situation has limited governments' capacity to support resilience-building public investment and sustain social protection programmes. Growth, which has remained anaemic since the global economic crisis of 2007-2008, has been further stymied by adjustments to address the debt overhang. Moreover, ECLAC's economic modelling has also revealed that Caribbean economies do not demonstrate the typical non-linear effect of debt on growth; conversely debt has a decidedly negative linear effect on growth in the Caribbean. This means that increases in debt result in a decline in economic growth for Caribbean economies.

With the current debt burden and fiscal constraints, it is almost impossible for Caribbean governments to make the requisite public sector investment, which has resulted in and will invariably continue to lead to incurring increased debt. It has thus become increasingly clear that unless something meaningful is done to assist, the countries of the subregion will not be able to grow their way out of this debt crisis.

Figure 1
Caribbean debt
(Per cent of GDP)



Source: Eastern Caribbean Central Bank and Economic Commission for Latin America and the Caribbean (ECLAC) on the basis of official figures.

B. Direct impact of climate change on debt

The accumulation of debt in the subregion is not due primarily to fiscal imprudence but by far to the repeated destruction of physical and social infrastructure, productive capacity and the retardation of development caused by natural disasters ECLAC has estimated that in 2017 alone, damages and losses to Antigua and Barbuda, The Bahamas, Dominica and Saint Kitts and Nevis due to hurricanes were in

[1] The goods-producing economies in the figure comprise Belize, Guyana, Suriname and Trinidad and Tobago, which specialize mainly in the production and trade in goods, while the service-producing economies are Antigua and Barbuda , The Bahamas, Barbados, Dominica, Grenada, Jamaica, Saint Kitts and Nevis, saint Lucia and Saint Vincent and the Grenadines, which specialize in the production and trade in services.

excess of US$1.7 billion. In fact, due to its geographical location, the Caribbean is the most hazard-prone subregion for disasters (particularly weather related) in the world, with most English-Speaking Caribbean countries located in the hurricane belt. They are also prone to earthquakes and other hazards. Consequently, Caribbean countries have accumulated public debt through increased expenditures to address the impact of extreme events and climate related difficulties. Indeed, a disaster resulting in damage and loss in excess of 5% of GDP can be expected to hit any Caribbean country every few years (ECLAC).

Regular annual disaster losses in the Caribbean are estimated at US$3 billion, with significant impacts on the social and productive sectors. Disaster-related costs are expected to escalate in the Caribbean due to population growth and rapid urbanization of coastal areas where the impact of hydro-climatic events is greatest as well as increased exposure of assets, and climate-change-related phenomena. Core sectors such as tourism and agriculture are especially vulnerable, since disasters, particularly hurricanes, may negatively impact public and private infrastructure and production systems, reversing decades of development. Natural disasters have caused in excess of US$40 billion in damage and loss in the Caribbean over the past 30 years alone. For this reason, from the UN's perspective, sustainable debt reduction cannot be divorced from a long-term adaptation strategy (and an accompanying mechanism for its financing) in the Caribbean.

C. The Case for use of GCF resources in a debt swap initiative

Over the past twenty years a number of Caribbean economies[2] have adopted varying strategies in an attempt to reduce their debt burden to a sustainable level. Many subregional economies have made bold efforts to address high debt through fiscal consolidation programmes and debt restructuring that are either home grown or through the International Monetary Fund (IMF). These, while having some measure of success in a few economies, have thus far been unable to substantively solve the Caribbean's high debt-low growth conundrum.

It is therefore important to consider the question, why have these remedial efforts proved insufficient to substantively reduce the Caribbean's debt? This may be so because **the subregion's debt burden, as well as its growth, is closely linked to the open and undiversified nature of Caribbean economies - which make them vulnerable to external economic shocks as well as to climate related natural disasters**. The intuition is that the considerable debt burden, which in instances has been driven by the impact of natural disasters, has stymied growth and countries' ability to finance the requisite structural transformation, economic diversification, as well as climate change mitigation and adaptation initiatives, which are necessary precursors to growth in small developing economies.

As such, any remedy for this low growth-high debt dilemma facing the Caribbean has to be not only development-centered but also triadic, in that it must simultaneously address high debt, build economic resilience and finance climate adaptation. Therein lies the strength of the ECLAC proposal, since it seeks to address the three most urgent development concerns facing the Caribbean: debt, climate vulnerability and economic resilience. Moreover, when the Caribbean's high debt is juxtaposed against its extreme climate and economic vulnerability, it becomes clear that some measure of special and differential treatment is required when considering modalities for fostering the sustainable development of the subregion.

The initiative will initially proceed with Phase I, which focusses on the three economies of Antigua and Barbuda, Saint Lucia and Saint Vincent and the Grenadines.

---

[2] For example, Antigua and Barbuda, Belize, Dominica, Grenada, Jamaica and Saint Kitts and Nevis.

D. The Role of Caribbean Resilience Fund (CRF)

A defining feature of the proposal is the creation of the Caribbean Resilience Facility (CRF), which is to be housed within a credible subregional financial institution. The CRF is intended to be the primary regional development funding vehicle for financing, inter alia, climate adaptation projects and infrastructure, as well as, resilience-building.

The CRF is conceived as a high-powered vehicle to attract large scale funding to build Caribbean resilience through adaptation- and mitigation-related sustainable infrastructure and other projects. In this way, the CRF is intended to act as an efficient mechanism of donor coordination and consolidation of regional access to climate resilience finance. In light of the challenges of climate change and frequent natural disasters, resilience building is now high on the Caribbean's development agenda as these challenges are likely to affect the subregion's capacity to address the SDGs.

The central logic of the CRF is that long-term climate-resilient economic growth, required by the SDGs, can only be achieved through systematic and broad-based investments in infrastructure assets. There are a variety of initiatives being pursued in the subregion to raise resources for such purposes. While each of these strategies may serve the same purpose, the consolidation of resources can help to incentivise the financing of large-scale subregional projects, which also can reap scale economies both on the administrative side and in terms of economic efficiency.

The ECLAC thinking is that, while the CRF has a single purpose, the sources of the funds could vary considerably, which means that the CRF must be flexible enough to accommodate the various sources of funding. At the moment, it is anticipated that there will likely be five major types of such funding, as follows:

(i) Financial Resources raised from donors and other International Development Partners (IDPs) who are interested in investing in Caribbean resilience, through either regional or national projects. Donors may specify whether these funds are to be used for specific types of projects or any project that can be justified on resilience grounds and have some reasonable rate of return. Such funds may be concessional or may be provided on market terms, depending on the source;

(ii) Creditors may be interested in helping to reduce Caribbean debt while encouraging member states to build resilience. The members states would receive a debt reduction and be asked to use the repayment to fund annual resilience projects through the CRF in local currency. This would effectively be a debt write-off in return for resilience building;

(iii) A variant of (2) which is perhaps more likely is that only a portion of the debt is written down, say 50%, with the beneficiary country having to continue to repay the remaining 50% fully but on different (negotiated) terms. The repayment on the discounted debt could now be funnelled through the CRF for annual project financing aimed at resilience building;

(iv) GCF and or International Financial Institutions (IFI) endorsed bond guarantees to raise financing for resilience building; and

(v) Other guarantees by donors to leverage private funds for resilience building.

(vi) Traditional debt swap instruments.

It is important to note that in all these variants, each project could attract GCF funding, in which case members states either individually or as a group could optimise the use of resources by balancing concessional funds from the GCF with other funding sources. The management and staff of the CRF would have to develop the capacity to help member states to determine what combination of resources may be preferred, given the time line of each project, the currency of interest, its size and the rate of return that may be required if funds have market rate components.

The central point is that the CRF could have a variety of windows each ultimately aimed at resilience building. The next section explores the mechanics of the debt for climate swap initiative which is variant (3) of the options for capitalizing the CRF.

I. Study objectives and procedure

The objectives of the scenario analysis are to:

(i) **Assess the feasibility of the Debt for Climate Adaptation Swap initiative**

(ii) **Create a credible and robust debt reduction and green investment strategy by identifying the most beneficial and practical scenario for the Phase I countries.**

The magnitude of the proposed debt reduction should be sufficiently large to ensure that the initiative has a sizable impact on debt sustainability and economic growth, thereby offering an incentive for the Phase I countries to participate in the initiative. Simultaneously, the required debt reduction should not be too large as to exceed the likely financial contribution that can be offered by the international funding agencies.

The potential size of the financial contributions of the funding agencies will be assessed based on the size of a typical Green Climate Fund (GCF) project. There are, however, several factors that can be explored to determine a credible and robust debt reduction and green investment strategy. **The scenario analysis conducted, took into account several criteria, including:**

(i) **Preferences of the Phase I countries;**

(ii) **Complexity of debt-reduction negotiation;**

(iii) **Impacts on Phase I countries' credit rating of Phase I countries and ability to borrow from the international financial market;**

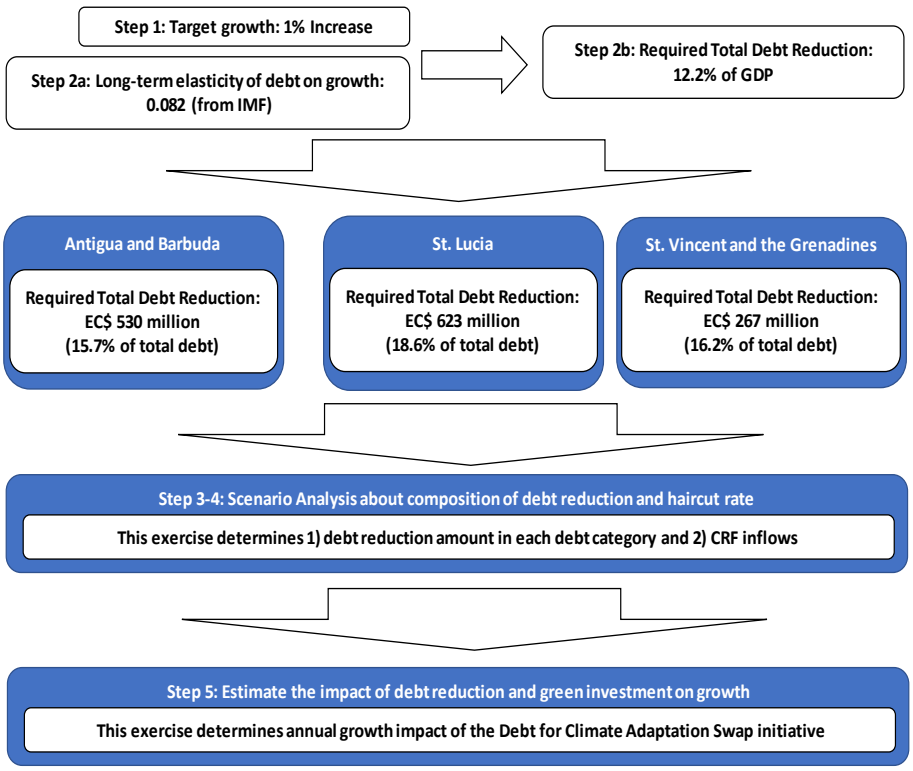
(iv) **The capacity of Phase I countries to execute green projects; and**

(v) **The likely impacts on macroeconomic stability and debt sustainability.**

The following is an outline of the steps taken to achieve the study objectives (see also diagram 1):

- **Step 1: Set a minimum target for an increase in long-term growth from the initiative** (1 %-point)[3];
- **Step 2: Identify the minimum amount of total debt reduction** necessary to achieve the target growth using an econometric model;
- **Step 3: Establish various debt reduction scenarios** for each Phase I country by comparing the total decrease in debt to the debt structure. **Calculate the amount of debt reduction in each category** (domestic, external - multilateral, external – bilateral and external - commercial) for each debt reduction scenario;
- **Step 4: Simulate the financial flows into the CRF[4],** based on the calculated debt reduction in each category along with assumptions on the haircut thus represents the initial capitalization of the CRF;
- **Step 5: Estimate (dynamically) the further boost in growth** due to the investment in green industries (examine two investment patterns).

Diagram 1
Flow chart of debt reduction scenario analysis



Source: Economic Commission for Latin America and the Caribbean (ECLAC).

[3] The econometric models and other computation methods utilized in the scenario analysis have linearity (with some exceptions). Therefore, if target growth rate is set as 2%-point increase, the results of the scenario analysis (amount of debt reduction, financial inflows into the CRF, amount of green investment and dynamic impact of green investment on growth rate) would become 2 times larger.

[4] Financial flows into the CRF are assumed to continue for a ten-year timeframe in the absence of detailed maturity structure information for each Phase I country, given that a typical long-term debt payment period spans ten years.

II. Results for debt reduction scenario analysis

A. Step 1-2: Minimum total debt reduction to achieve target growth increase

Assume a minimum target increase in growth of 1%-point. Average growth rate of the three Phase I countries reached 3.9% in 2018. However, this was lower than both the pre-Global Financial Crisis (GFC) level of 5.1% (see figure 2A) and the average growth rate of 4.8% among developing economies in 2018 (see figure 2B). Therefore, by setting a minimum target growth of 1%-point increase, the aim will be to at least achieve pre-GFC growth levels as well as the average growth level of developing economies.

The minimum amount of total debt reduction to achieve the 1%-point growth target is calculated as 12.2% of GDP. An IMF working paper[5] by Greenidge et al. developed an econometric model which examined the long-run relationship between public debt and economic growth among 12 Caribbean countries. It was determined that a 1%-point increase in debt-to-GDP ratio would result in a 0.082%-point decline in the growth rate, given that the debt-to-GDP ratio is above an estimated threshold of 54.7%. Therefore, to achieve a minimum 1%-point increase in the growth rate would require a 12.2%-point reduction in debt-to-GDP ratio[6].

The scale of the debt reduction required for each Phase I country is a feasible size as it corresponds to the cost of a "medium-sized" project funded by the GCF. The actual minimum amount of total debt reduction approximates to EC$530 million (*US$196 million* or 15.7% of total debt)[7], EC$623 million (*US$231 million* or 18.6% of total debt), EC$267 million (*US$99 million* or 16.2% of total

---

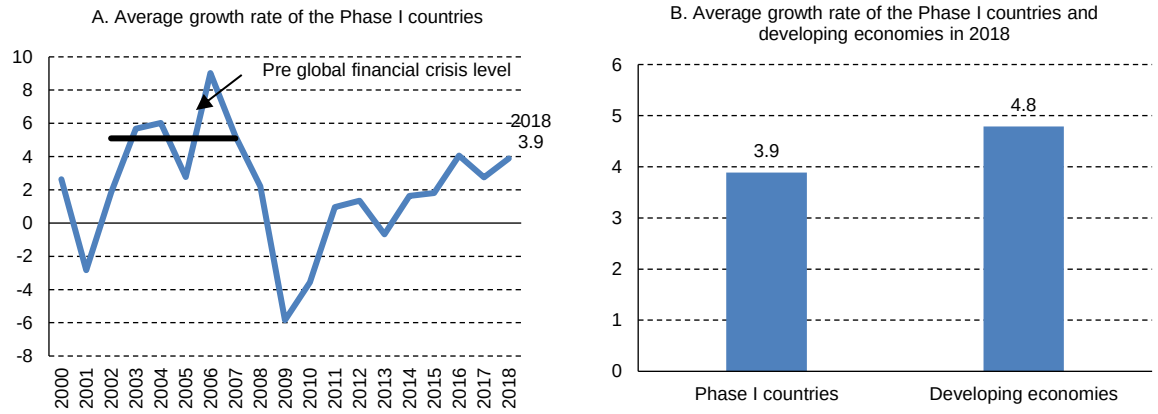
5 Greenidge, Craigwell, Thomas and Drakes (2012) "Threshold Effects of Sovereign Debt: Evidence from the Caribbean," IMF Working Paper No. 12/157.

6 The more elaborate IMF/World Bank DSA when completed will assume dynamic feedback effects. In the DSA, the impact of the Debt for Climate Adaptation Swap initiative on debt sustainability will be assessed, taking into account the different country circumstances such as primary balance and growth-interest rate differential. As a result of the debt sustainability assessment, target growth rate would be adjusted for each country depending on the country's circumstance.

7 Exchange rate for Eastern Caribbean Dollar (EC$) is pegged at US$1 = EC$2.7.

debt), for Antigua and Barbuda, Saint Lucia and Saint Vincent and the Grenadines, respectively, after applying a 12.2% reduction in debt-to-GDP ratio to each Phase I country. The minimum debt reduction for each Phase I country, therefore, falls within the range of US$50 million and US$250 million.

Figure 2
Average growth rate
(Percentage)



Source: Eastern Caribbean Central Bank and International Monetary Fund.

B. Step 3: Scenario analysis on the composition of debt reduction

For the purposes of this study, four scenarios on the composition of debt reduction were examined. These included:

- Scenario 1 Equal percentage debt reduction for all debt categories
- Scenario 2 Only external-multilateral (Saint Vincent and the Grenadines and Saint Lucia) OR external-bilateral debt (Antigua and Barbuda) will be reduced
- Scenario 3 External-multilateral and bilateral debt will be reduced by equal percentages
- Scenario 4 Domestic and official external debt (multilateral or bilateral) will be reduced by equal percentage. Priorities for debt reduction within categories of official external debt will be different for each country depending on debt structure

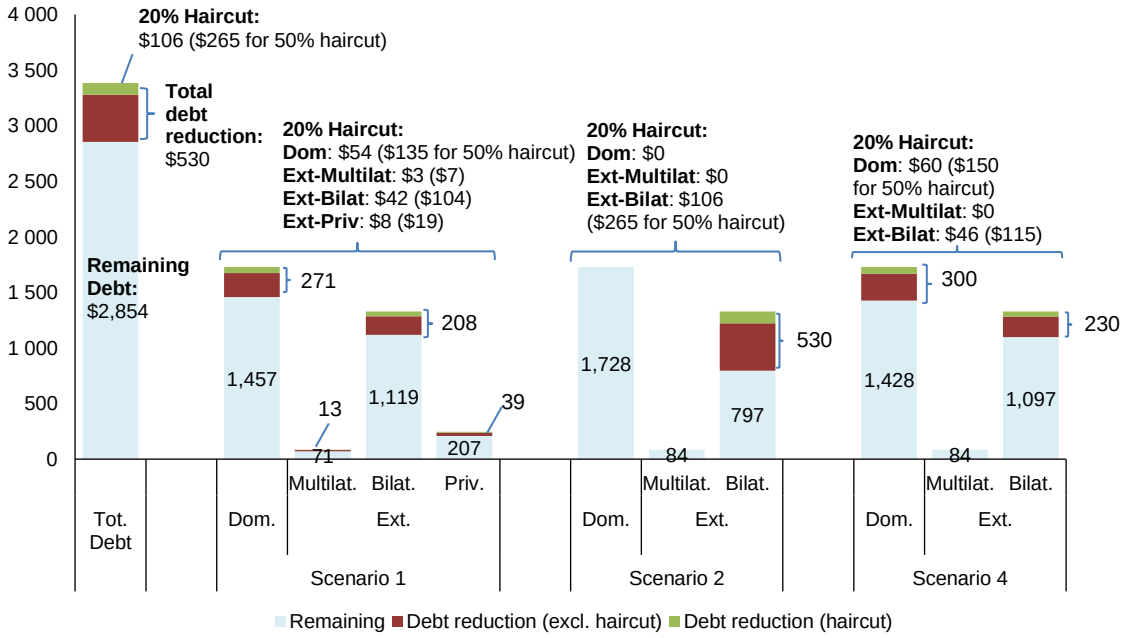
Scenario 2 offers the most favorable debt reduction option because it would require negotiations with the smallest number of creditors (particularly for multilateral debt creditors), and the successful conclusion of such negotiations would send a positive signal to international capital markets, which can motivate further debt reduction initiatives on the part of creditors. The other scenarios offer debt reduction opportunities across a wider range of debt categories. Scenario 3, although involving negotiations with more creditors than scenario 2, allows for debt reduction across official external debt categories. If a country wishes to focus more on domestic debt reduction, Scenario 4 should be prioritized. On the other hand, Scenario 1 while being the least practical option, requires negotiations with the largest number of creditors, and has been included for illustrative purposes.

Most of the scenarios did not involve external-private debt[8] reduction because of the possible negative effect on a country's credit rating which can subsequently limit the country's ability to borrow from the international financial market in the future.

1. Antigua and Barbuda

The required debt reduction for Antigua and Barbuda amounts to EC$530 million which includes a 20-50% haircut ranging from EC$106-265 million. Given that Antigua and Barbuda has limited space for multilateral debt reduction, focus should be given to negotiating for debt reduction with either bilateral creditors only, as offered in Scenario 2 or both domestic and bilateral creditors, as offered in Scenario 4. The amount of multilateral debt (EC$84 million) is much lower than the required debt reduction (EC$530 million), but the country has a large share of bilateral debt (EC$1,327 million, 39.2% of total debt) and domestic debt (EC$1728 million, 51.0% of total debt) – See figure 3[9] . Although bilateral debt can accommodate all of the required debt reduction (Scenario 2), negotiations with several bilateral creditors would require more resources than negotiations with a smaller number of multilateral creditors. Alternatively, they may find Scenario 4 more suitable given that domestic debt represents the largest segment of their debt structure.

Figure 3
Composition of debt reduction required to achieve 1% boost to growth, Antigua and Barbuda
(Millions of EC dollars)



Source: Eastern Caribbean Central Bank and Economic Commission for Latin America and the Caribbean (ECLAC) on the basis of official figures.

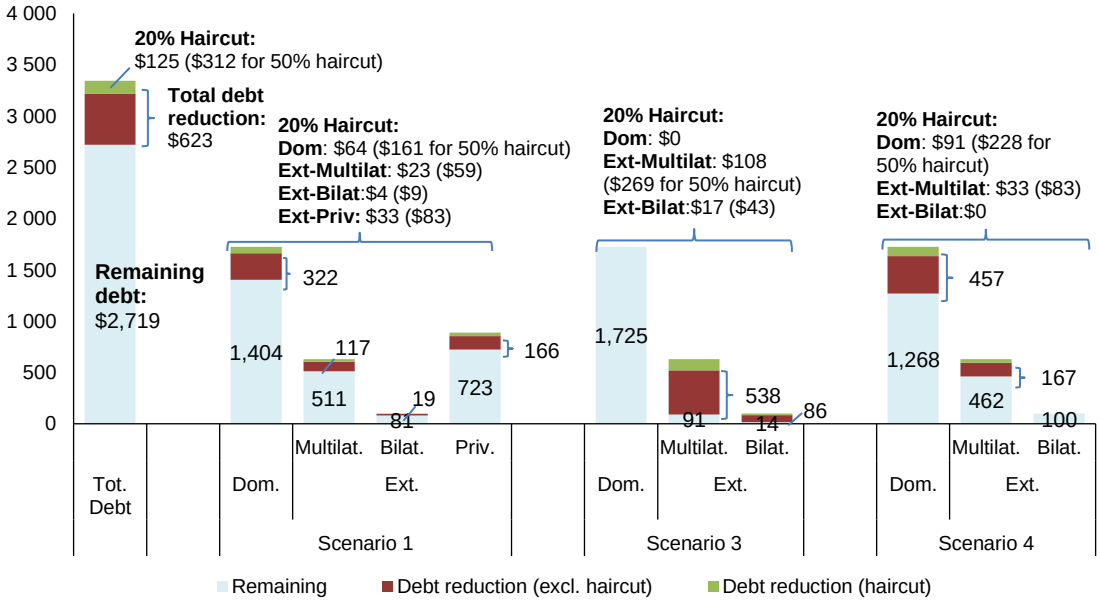
[8] External-private debt is defined as debt owed to the foreign private sector including foreign commercial banks.

[9] As the amount of multilateral debt is so small in Antigua and Barbuda, figure 3 doesn't include scenario 3 (bilateral and multilateral debt reduction).

2. Saint Lucia

The required debt reduction for Saint Lucia amounts to EC$623 million which includes a 20-50% haircut ranging from EC$125-312 million. Domestic debt reduction as offered in Scenario 4 may be most suitable for Saint Lucia given their limited space for official external debt (multilateral and bilateral) reduction. If Saint Lucia considers only reducing their official external debt (Scenario 3 in figure 4)[10], this would reduce their debt in this category by 85.5% given that their official external debt (EC$ 729 million, 21.8% of total debt) is small relative to the other debt categories. A more pragmatic approach would be to consider a combination of domestic and multilateral debt reduction, as offered in Scenario 4. Using the same debt reduction percentage for both categories would mean that most of the debt reduction would occur in the domestic category (EC$457 million) with a smaller amount arising from the multilateral category (EC$167 million).

Figure 4
Composition of debt reduction required to achieve 1% boost to growth, Saint Lucia
(Millions of EC dollars)



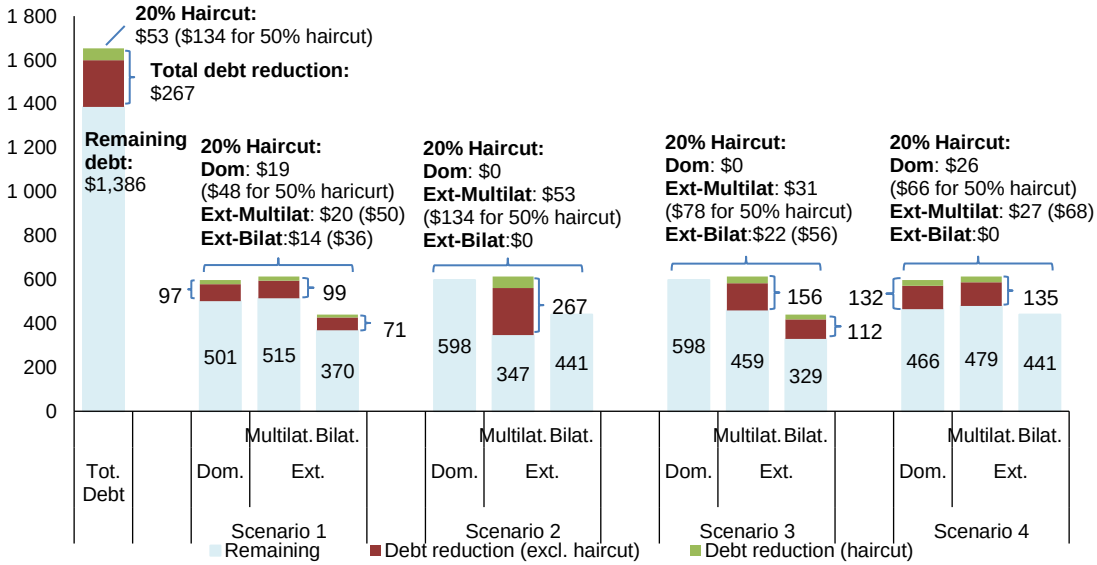
Source: Eastern Caribbean Central Bank and Economic Commission for Latin America and the Caribbean (ECLAC) on the basis of official figures.

3. Saint Vincent and the Grenadines

The required debt reduction for Saint Vincent and the Grenadines amounts to EC$267 million which includes a 20-50% haircut ranging from EC$53-134 million. Saint Vincent and the Grenadines has much more space for external-multilateral debt reduction, but it is also possible to tap into external-bilateral and domestic debt reduction. The country has a large share of multilateral debt (EC$615 million, 37.2% of total debt), which could accommodate all of the debt reduction (EC$267 million, see Figure 5, Scenario 2). However, it is also possible to distribute the required amount of debt reduction across other debt categories (scenarios 3 and 4), depending on the country's preference and the anticipated difficulty with negotiations.

[10] As the amount of multilateral debt (EC$629 million) or bilateral debt (EC$100 million) is small in Saint Lucia, figure 4 doesn't include scenario 2 (only bilateral or multilateral debt reduction).

Figure 5
Composition of debt reduction required to achieve 1% boost to growth, Saint Vincent and the Grenadines
(Millions of EC dollars)



Source: Eastern Caribbean Central Bank and Economic Commission for Latin America and the Caribbean (ECLAC) on the basis of official figures.

C. Step 4: Simulation of CRF inflows by debt reduction scenario

Financial inflows into the CRF vary by the differing debt reduction composition offered in each scenario. This results from differing debt service payments across debt categories[11]. In simulating the CRF inflows by debt reduction scenario, it was determined that official external debt reduction (Scenarios 2 and 3)[12] have lower CRF inflows than broader debt reduction involving domestic debt (Scenario 4), although the difference is small (see Figure 6). This result can be explained by the concessional element to the official external debt, therefore the debt service obligation for external debt would be lower than for domestic debt. Therefore, Phase I countries would contribute a lower debt service payment to the CRF in the case of external debt reduction.

In addition, the rate of haircut also impacts CRF inflows. A higher rate of haircut will increase the initial capitalization of the CRF, but decrease the subsequent inflows stemming from the debt service payments (see Figure 6 for 20% and 50% haircut. Other haircut simulations are reported in the annex).

A 20% haircut can generate a sizeable initial financial inflow into the CRF to commence "medium-sized" green investment projects, based on the country's capacity to implement such projects. For example, with a 20% haircut under scenarios 2 and/or 3, first year inflows[13] will be EC$163 million (3.8% of GDP), EC$169 million (3.3% of GDP), EC$73 million (3.3% of GDP) for Antigua and

[11] Recall that the Phase I countries should pay the debt service payment corresponding to the reduced debt (non-haircut part of debt reduction) into the CRF.

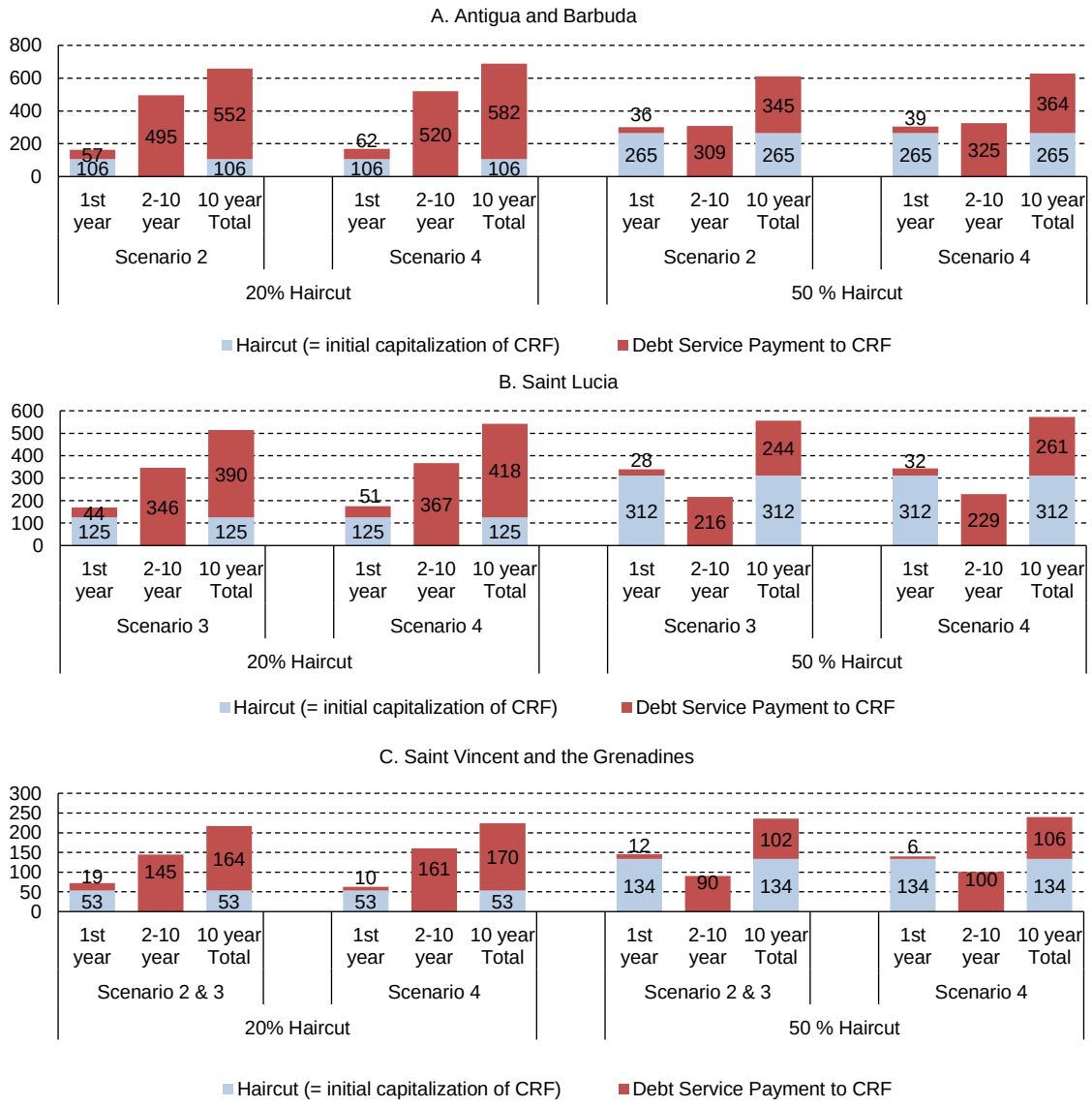
[12] In our simulation, scenarios 2 and 3 result in the same amount of the CRF inflows, due to the limited availability of debt service payment data. Available data for external debt service payment is not disaggregated by type of creditors.

[13] Initial capitalization + first year debt service payment.

Barbuda, Saint Lucia and Saint Vincent and the Grenadines, respectively (see Figure 6). These are large amounts of money for the Phase I countries to utilize quickly.

However, it should also be noted that a higher haircut rate is beneficial for long-term debt sustainability, as it reduces the debt service payments into the CRF for Phase I countries given that the haircut amount would not have to be repaid.

Figure 6
CRF Inflows by debt reduction scenario
(Millions of EC dollars)



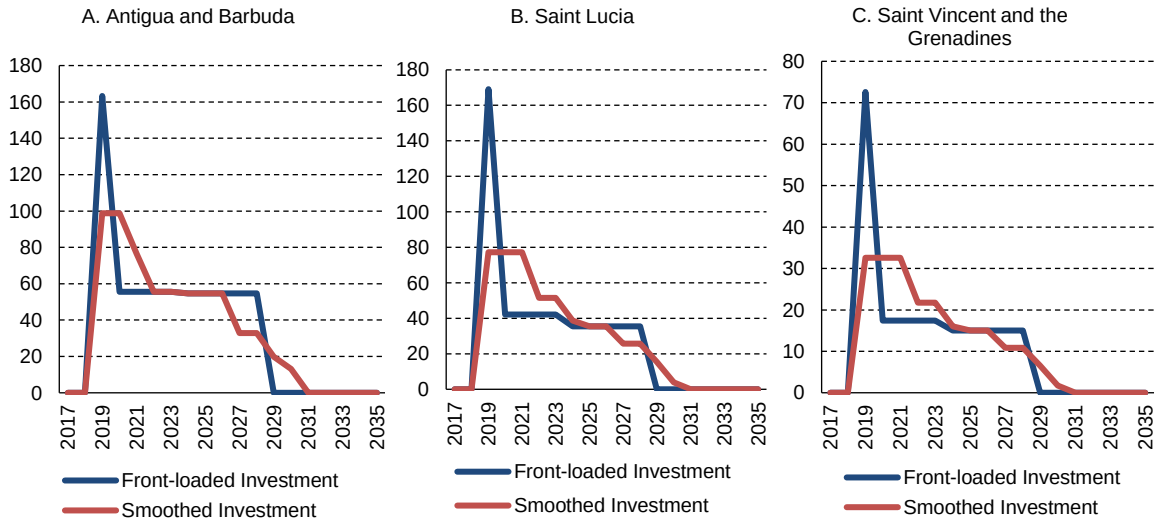
Source: Eastern Caribbean Central Bank and Economic Commission for Latin America and the Caribbean (ECLAC) on the basis of official figures.
Note: In the absence of detailed information on future debt service payment schedule, it is assumed that the debt service payment amount in 2018 will continue in the forecast horizon. For Saint Lucia, the debt service payment in 2017 was used as 2018 data was substantially larger than previous periods.

D. Step 5: Dynamic impact of green investment on growth

The dynamic impact of the Debt for Climate Swap initiative on economic growth was estimated using IMF methodology[14] for two investment patterns: 1) front-loaded investment and 2) smoothed investment. The front-loaded investment pattern assumes that all of the CRF inflows will be utilized within a year of receipt, while the smoothed investment pattern assumes CRF inflows will be utilized over a longer time period particularly across the 1st-3rd year and the 9th-12th year (see Figure 7). This exercise was conducted only for scenario 2 and/or 3, as key findings were similar for other scenarios.

Given the uncertainty of the fiscal multiplier[15], a smoothed investment pattern is recommended to avoid macroeconomic instability. If the fiscal multiplier is high[16], the front-loaded investment pattern creates too much volatility in the economy, even in the case of a low haircut of 20%. In the front-loaded investment pattern for Antigua and Barbuda, growth rate goes up to 10.5% (5.9% for Saint Lucia and 6.2% for Saint Vincent and the Grenadines) in the first year[17] and falls to 3.7% (2.5% for Saint Lucia and 2.1% for Saint Vincent and the Grenadines) in the second year, if the fiscal multiplier is 1.0 (see Figure 8). On the other hand, in the smoothed investment pattern, growth rate moderately increases to 8.5% (3.8% for Saint Lucia and 4.2% for Saint Vincent and the Grenadines) in the first year and decreases smoothly to 5.7% (4.0% for Saint Lucia and 3.6% for Saint Vincent and the Grenadines) in the second year[18].

Figure 7
Assumption on amount of green investment by investment pattern, under scenario 2 and/or 3 with 20% haircut
(Millions of EC dollars)



Source: Eastern Caribbean Central Bank and Economic Commission Latin America and the Caribbean (ECLAC) on the basis of official figures
Note: Green investment is assumed to start from 2019 in this simulation.

[14] The dynamic impact of the initiative on growth includes long-term growth effect, output elasticity of capital effect and fiscal multiplier effect. Baseline growth was based on ECCB forecast until 2019 and recent IMF forecast (DSA or WEO) from 2020. For long-term growth effect, it is assumed that long-term growth target of 1%-point increase will be achieved in 10 years. For output elasticity of capital effect and fiscal multiplier effect, the same methodology as the IMF DSA realism tool was used.

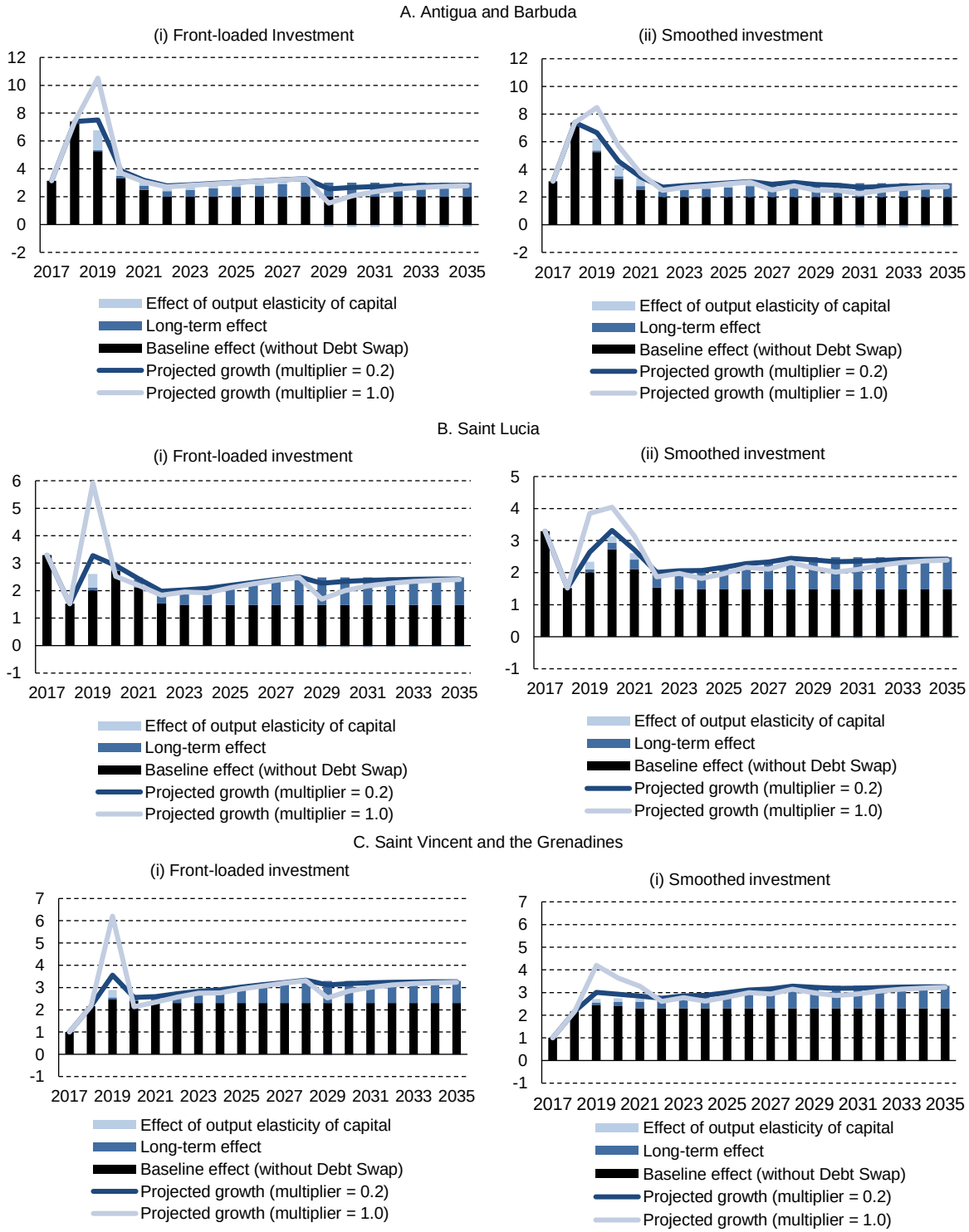
[15] Fiscal multiplier measures the impacts of fiscal policy on the economy in the short-term.

[16] There is a large uncertainty about the size of fiscal multiplier, so results were reported for both low multiplier case (0.2) and high multiplier case (1.0). In the Caribbean, dependence of economic activity on import could reduce multiplier, but dependence on government sector could raise multiplier.

[17] The first year refers to 2019 in this simulation.

[18] For Saint Lucia, the simulated growth rate increased from the first year to the second year due to a larger baseline effect.

Figure 8
Effect of Debt Swap initiative on growth by investment pattern, under scenario 2 and/or 3 with 20% haircut
(Percentage)



Source: Eastern Caribbean Central Bank and Economic Commission for Latin America and the Caribbean (ECLAC) on the basis of official figures.
Note: Green investment is assumed to start from 2019 in this simulation.

For a higher rate of haircut, the front-loaded investment pattern could create much more volatility in the economy, but it could be mitigated by applying the smoothed investment pattern. In the case of a haircut of 40% using the front-loaded investment pattern for Antigua and Barbuda, the growth rate increases to 13.4% (8.5% for Saint Lucia and 8.7% for Saint Vincent and the Grenadines) in the first year and falls to 2.4% (1.4% for Saint Lucia and 1.0% for Saint Vincent and the Grenadines) in the second year, if the fiscal multiplier is 1.0. On the other hand, in the smoothed investment pattern, the growth rate moderately increases to 8.3% (3.9% for Saint Lucia and 4.3% for Saint Vincent and the Grenadines) in the first year and decreases smoothly to 5.6% (4.1% for Saint Lucia and 3.7% for Saint Vincent and the Grenadines) in the second year thus creating less volatility in the economy.

III. Conclusion

A. Debt sustainability analysis

It should be recaled that the objectives of this study are to 1) assess the feasibility of the Debt for Climate Adaptation Swap initiative; and 2) create a robust debt reduction and green investment strategy. ECLAC is also currently conducting comprehensive debt sustainability analyses for the three Phase I counties. These more elaborate IMF/World Bank DSAs when completed will assume dynamic feedback effects and among other things, furnish targeted primary surpluses necessary over the first 10 years of operationalization of the debt swap in order to keep debt at sustainable levels.

Using the DSA, the impact of the Debt for Climate Adaptation Swap initiative on debt sustainability will be assessed, taking into account the varying country circumstances such as primary balance and growth-interest rate differential. As a result of the debt sustainability assessment, the target growth rate would be adjusted for each country depending on the country's circumstance.

B. Key findings of the scenario analysis

Main findings from the scenario analysis can be summarized as follows:

1. Target growth and the required minimum size of debt reduction

- Assume a target increase in growth of 1%-point;
- The minimum amount of total debt reduction to achieve the 1%-point growth target is calculated as 12.2% of GDP;
- The scale of the debt reduction required for each Phase I country is a feasible size as it corresponds to the cost of a "medium-sized" project funded by the GCF.

2. Composition of debt reduction

- Scenario 2 (under which only multilateral or bilateral debt will be reduced) offers the most favorable debt reduction option because it would require negotiations with the smallest number of creditors (particularly for multilateral debt creditors), and a successful outcome of such negotiations could send a favorable signal to the international financial market.
- The required debt reduction for Antigua and Barbuda amounts to EC$530 million which includes a 20-50% haircut ranging from EC$106-265 million. Given that Antigua and Barbuda has limited space for multilateral debt reduction, focus should be given to negotiating for debt reduction with either bilateral creditors only (Scenario 2), or both domestic and bilateral creditors (Scenario 4);
- The required debt reduction for Saint Lucia amounts to EC$623 million which includes a 20-50% haircut ranging from EC$125-312 million. Domestic debt reduction (Scenario 4) may be most suitable for Saint Lucia given their limited space for official external debt (multilateral and bilateral) reduction (Scenario 3);
- The required debt reduction for Saint Vincent and the Grenadines amounts to EC$267 million which includes a 20-50% haircut ranging from EC$53-134 million. Saint Vincent and the Grenadines has much space for external-multilateral debt reduction (Scenario 2), but it is also possible to tap into external-bilateral and domestic debt reduction (Scenarios 3 and 4).

3. Capitalization of the CRF

- Official external debt reduction (Scenarios 2 and 3) has lower CRF inflows than broader debt reduction involving domestic debt (Scenario 4), although the difference is small;
- A higher rate of haircut will increase the initial capitalization of the CRF, but decrease the subsequent inflows stemming from the debt service payments;
- A 20% haircut can generate a sizeable initial financial inflow into the CRF to commence "medium-sized" green investment projects, based on the country's capacity to implement such projects;
- However, it should also be noted that a higher haircut rate is beneficial for long-term debt sustainability.

4. Dynamic impact of the Debt Swap Initiative on growth

- The dynamic impact of the Debt for Climate Swap initiative on economic growth was estimated for two investment patterns: 1) front-loaded investment and 2) smoothed investment;
- Given the uncertainty of the fiscal multiplier, a smoothed investment pattern is recommended to avoid macroeconomic instability. If the fiscal multiplier is high, the front-loaded investment pattern creates too much volatility in the economy, even in the case of a low haircut of 20%;
- For a higher rate of haircut, the front-loaded investment pattern could create much more volatility in the economy, but it could be mitigated by applying the smoothed investment pattern.

C. Feasibility of the initiative and strategy for debt reduction and green investment

The leading findings linked to the prescribed approach to debt reduction and green investment are presented below:

1. Feasibility of the Debt for Climate Adaptation Swap initiative

- **The scale of the debt reduction required for each Phase I country is a feasible size** as it corresponds to the cost of a "medium-sized" project funded by the GCF, which ranges from US$50 to 250 million.
- **The magnitude of the debt reduction was calibrated to increase growth rate by a minimum of 1%-point in the long-run, representing a 12.2%-point decrease in debt to GDP ratio for each Phase I country. This would offer an incentive for the Phase I countries to participate in the initiative**, because 1%-point growth increase would drive the Phase I countries' growth rate to pre-Global Financial Crisis level as well as to developing economies' average level. In addition, the debt to GDP ratio will decrease from 77.8% to 65.6% for Antigua and Barbuda, from 65.4% to 53.2% for Saint Lucia and from 75.5% to 63.3% for Saint Vincent and the Grenadines, further incentivizing the initiative for Phase I countries.

2. Strategy for debt reduction and green investment

- Based on the scenario analysis and given the debt structure of each Phase I country, the **following debt categories should be prioritized for debt reduction negotiations:**
  - **Antigua Barbuda: External-bilateral debt and domestic debt;**
  - **Saint Lucia: External-multilateral debt and domestic debt;**
  - **Saint Vincent and the Grenadines: External-multilateral debt and domestic debt**.
- **A broad range of haircut options should be considered during negotiations**. A 20% haircut rate would generate a sizeable initial inflow into the CRF to commence green investment projects. For each Phase I countries, a 20% haircut represent initial inflows into the CRF of EC$163 million (EC$106 million haircut) for Antigua and Barbuda, EC$169 million (EC$44 million haircut) for Saint Lucia and EC$73 million (EC$53 million haircut) for Saint Vincent and the Grenadines under scenario 2 and/or 3. However, a higher rate of haircut offers these countries improved long-term debt sustainability, as it reduces the debt service obligations to the CRF which, in turn, offers additional fiscal space.
- **Financial resources collected by the CRF for green investment should be distributed evenly over the project horizon to avoid economic volatility**.

D. Way forward

This initiative which focuses on debt reduction, resilience building, and growth addresses the most critical existential challenges facing the countries of the subregion: finding solutions to their unsustainable debt levels and building resilience to their increasing vulnerability to climate change. It is also important to note that this is a proposal addressing a subregional problem, even as it addresses country-specific needs.

The scenarios constructed here, have modeled conditions under which participating countries may meet requirements for a successful debt swap. This will be complemented by comprehensive debt sustainability analyses on the three Phase I countries: Antigua and Barbuda, Saint Lucia and Saint Vincent and the Grenadines. **The intention now is to swiftly move the initiative from a conceptual design phase to a *bankable* proposal which would form the basis of negotiations with the creditors, the GCF and other international development partners**.

It is important to recall that the ECLAC Debt for Climate Adaptation Swap Initiative was among the projects championed by UN Secretary General Antonio Guterres at the Climate Summit held at during the high-level segment of the UNGA in September 2019. ECLAC is therefore advancing its advocacy for the initiative with the very welcome political lift that the Secretary General's endorsement and active support offers.

In moving forward, the creation of the Resilience Facility and the debt swap activity will be parallel processes. As the initiative evolved at the political level there has been increased focus on resilience building through investment to drive growth and reduce debt over time. Country priority, however, remains focused on the debt reduction aspects of the initiative. The debt swap therefore will continue to be a prominent feature in any configuration of the strategy to be adopted, since the lack of fiscal space from debt servicing remains a binding constraint. Moreover, all three Phase One countries share a concern regarding the high cost and short-term maturity structure of domestic debt:

- Saint Lucia suggested that if the ECLAC initiative becomes operational consideration should be given to using donor resources to pay-down domestic debt in order to reduce rollover risk, and then the government will pay the interest amount to the CRF.
- Saint Vincent and the Grenadines recommended use of debt buy back schemes, while
- Antigua and Barbuda suggested that their debt maturity structure could be converted from short to long-term.

With regard to external debt, the countries each identified individual priorities, which were considered to be readily addressed with the assistance of a well-capitalized CRF:

- Antigua and Barbuda indicated an interest in negotiating Paris Club debt but they could not do it alone.
- Saint Lucia's pointed out that its biggest external creditor is the Caribbean Development Bank and there might be opportunities to negotiate with them.
- Saint Vincent and Grenadines suggested that consideration be given to negotiating with PetroCaribe and ALBA for a haircut.

With respect to the crucial issue of establishing the CRF, which is a major anchor of the initiative, the GCF is seen as playing a pivotal role in providing grant funding for climate resilience and green investment projects; a role in keeping with its commitment to support developing countries highly vulnerable to the impacts of climate change. ECLAC will continue to engage the GCF with a view to exploring innovative ways to support the initiative, given the donor community's heightened awareness of the debt issue in the Caribbean; and the possibility that the CRF could be used as the agency employed in negotiating, as well as facilitating, debt reduction for the beneficiary countries of the initiative.

It is envisaged that the CRF could be set up as a trust fund or facility to attract large scale financing from international development partners to support the development of Caribbean adaptation and mitigation related projects. The design of the funding mechanism through the CRF should allow for better access by member states relative to other existing funding sources.

It is important for the CRF to be able to leverage aggregate funds from different agencies for different purposes such as debt reduction, grants, concessional loans, offering guarantees and issuing bonds, including green, blue and resilience bonds. One proposal emerging is the idea that the CRF could be managed by a Board of Governors, which could include nominees from member states, the GCF, UN agencies and multilateral development bank partners. The CRF would also need suitably qualified staff who can competently and actively manage all stages of project preparation.

ECLAC anticipates that with the collaboration of the Phase One countries and with the leadership of the Department of Environment of Antigua and Barbuda preparation of a proposal for earliest submission to the GCF will advance. In this regard, ECLAC will now focus on:

- Preparing a compendium of subregional climate resilience projects,
- refining the debt relief scenarios to reflect each country's priorities,
- conducting standard Debt Sustainability Analysis (DSA) for each of the Phase One countries to show the impact of the debt relief and climate resilience projects on debt sustainability, and
- Encouraging the establishment of the CRF as a global vehicle for attracting global funds for Caribbean resilience building.

It is equally important that the process of political advocacy, in making the case for support for building resilience be advanced, in light of the Caribbean's extreme vulnerability to catastrophichurricanes and the broader impacts of climate change.

While the ECLAC debt swap initiative is by no means a panacea for the subregion's perennial debt problem, it can serve as an important catalyst for bringing debtors and creditors together to address the issues surrounding debt reduction, enhanced debt management and building economic resilience. It also provides an opportunity for member states, to secure the fiscal space to generate much needed investment in green industries, while pursuing adaptation and mitigation strategies. It is also hoped that the initiative may influence the adoption of a region-wide approach to improved fiscal management, designed to help to avoid future debt build-up.

In this way, the timely operationalization of the Initiative will provide the necessary room for Caribbean economies to pursue a path of structural transformation through green-industrialisation, thereby achieving growth rates that are adequate to achieve the goals of the UN's 2030 agenda.

Annexes

Annex 1
Statistical tables for public debt

Table A1
Public debt stock in the Caribbean, 2009 and 2018
(Millions of US Dollars)

Country	2009	2018	Change from 2009 to 2018
Anguilla	52.3	194.5	142.2
Antigua and Barbuda	1,095.3	1,253.5	158.2
Bahamas	3,835.0	9,213.2	5,378.2
Barbados	3,496.9	6,156.3	2,659.4
Belize[a]	1,172.7	1,807.2	634.5
Dominica	317.7	410.2	92.5
Grenada[a]	716.9	777.1	60.2
Guyana	1,359.8	1,695.7	335.9
Jamaica[a]	15,301.0	15,688.5	387.5
Montserrat	3.4	4.5	1.1
Saint Kitts and Nevis[a]	977.2	579.6	-397.6
Saint Lucia	699.0	1,238.0	539.1
Saint Vincent and the Grenadines	436.7	612.2	175.5
Suriname	1,057.3	2,487.9	1,430.6
Trinidad and Tobago	6,544.2	14,093.3	7,549.1
Caribbean total	**37,065.6**	**56,211.7**	**19,146.1**

Source: Economic Commission for Latin America and the Caribbean (ECLAC) on the basis of official figures.
[a] indicates countries which experienced debt restructurings (Belize: 2006-07,2012-13 and 2017, Jamaica: 2010 and 2013, Grenada: 2004-06 and 2013, Saint Kitts and Nevis: 2010-11).

TableA2
Public debt stock and debt to GDP ratio for Phase I countries

	Antigua and Barbuda		Saint Lucia		Saint Vincent and the Grenadines		Total/Average of Phase I countries	
	Public debt (US$)	Debt-to-GDP (Percentage)	Public debt (US$)	Debt-to-GDP (Percentage)	Public debt (US$)	Debt-to-GDP (Percentage)	Total public debt (US$)	Average Debt-to-GDP (Percentage)
2008	1,092.0	79.7	692.1	53.8	409.1	58.8	2,193.3	64.1
2009	1,095.3	89.2	699.0	54.7	436.7	64.7	2,231.0	69.5
2010	967.9	84.3	772.9	55.2	458.1	67.3	2,198.9	68.9
2011	1,053.3	92.6	866.8	60.0	472.6	69.9	2,392.8	74.2
2012	1,052.1	87.7	966.9	67.2	475.7	68.6	2,494.7	74.5
2013	1,194.0	101.1	1,020.2	68.9	514.9	71.4	2,729.1	80.4
2014	1,251.9	100.2	1,072.0	69.5	584.3	80.3	2,908.3	83.3
2015	1,161.9	86.9	1,092.3	66.6	597.7	79.1	2,851.9	77.5
2016	1,176.8	81.9	1,117.4	66.2	635.9	82.1	2,930.1	76.7
2017	1,217.2	82.9	1,178.5	65.3	587.1	74.1	2,982.8	74.1
2018	1,253.5	77.8	1,238.0	65.4	612.2	75.5	3,103.8	72.9
Average (2008-2018)	**1,137.8**	**87.7**	**974.2**	**63.0**	**525.9**	**72.0**	**2,637.9**	**74.2**

Source: Eastern Caribbean Central Bank.

Table A3
Public debt stock composition for Phase I countries

	Antigua and Barbuda			Saint Lucia			Saint Vincent and the Grenadines			Total of Phase I countries		
	Domestic (USD)	External (USD)	Total (USD)	Domestic (USD)	External (USD)	Total (USD)	Domestic (USD)	External (USD)	Total (USD)	Domestic (USD)	External (USD)	Total (USD)
2008	656.2	435.8	1,092.0	325.7	373.3	692.1	173.6	235.6	409.1	1,155.5	1,044.7	2,193.3
2009	690.1	405.2	1,095.3	325.7	373.3	699.0	173.9	262.8	436.7	1,189.7	1,041.4	2,231.0
2010	535.6	432.2	967.9	380.0	393.0	772.9	144.6	313.5	458.1	1,060.2	1,138.7	2,198.9
2011	586.8	466.5	1,053.3	450.3	416.5	866.8	144.5	328.1	472.6	1,181.7	1,211.1	2,392.8
2012	607.0	445.0	1,052.1	532.2	434.8	966.9	146.2	329.4	475.7	1,285.4	1,209.3	2,494.7
2013	617.4	576.7	1,194.0	532.3	488.0	1,020.2	160.6	354.3	514.9	1,310.2	1,419.0	2,729.1
2014	692.2	559.7	1,251.9	545.5	526.5	1,072.0	196.9	387.4	584.3	1,434.7	1,473.6	2,908.3
2015	588.6	573.3	1,161.9	583.6	508.7	1,092.3	198.8	398.9	597.7	1,371.0	1,480.9	2,851.9
2016	615.1	561.7	1,176.8	588.2	529.2	1,117.4	180.9	455.1	635.9	1,384.2	1,546.0	2,930.1
2017	632.8	584.4	1,217.2	580.2	598.3	1,178.5	199.8	387.2	587.1	1,412.9	1,569.9	2,982.8
2018	639.8	613.7	1,253.5	639.0	599.1	1,238.0	221.3	390.9	612.2	1,500.1	1,603.6	3,103.8
Average (2008-2018)	**623.8**	**514.0**	**1,137.8**	**498.4**	**476.4**	**974.2**	**176.5**	**349.4**	**525.9**	**1,298.7**	**1,339.8**	**2,637.9**

Source: Eastern Caribbean Central Bank.

Annex 2
Tabulations for debt reduction scenario analysis

Table A4
Composition of debt reduction required to achieve 1% boost to growth
(Millions of EC Dollars)

Antigua and Barbuda			Initial Debt	Debt Reduction			Remaining Debt
				Total	Haircut part	Non-haircut part	
Antigua and Barbuda							
	Total Debt		3,384.6	530.3	106.1	424.2	2,854.3
Scenario 1	Domestic		1,727.6	270.7	54.1	216.5	1,456.9
	External	Multilateral	83.9	13.1	2.6	10.5	70.7
		Bilateral	1,327.3	208.0	41.6	166.4	1,119.3
		Private	245.8	38.5	7.7	30.8	207.3
Scenario 2	Domestic		1,727.6	-	-	-	1,727.6
	External	Multilateral	83.9	-	-	-	83.9
		Bilateral	1,327.3	530.3	106.1	424.2	797.0
Scenario 4	Domestic		1,727.6	299.9	60.0	239.9	1,427.7
	External	Multilateral	83.9	-	-	-	83.9
		Bilateral	1,327.3	230.4	46.1	184.3	1,096.9
Saint Lucia							
	Total Debt		3,342.7	623.3	124.7	498.6	2,719.5
Scenario 1	Domestic		1,725.3	321.7	64.3	257.4	1,403.6
	External	Multilateral	628.7	117.2	23.4	93.8	511.4
		Bilateral	100.0	18.6	3.7	14.9	81.4
		Private	888.8	165.7	33.1	132.6	723.0
Scenario 3	Domestic		1,725.3	-	-	-	1,725.3
	External	Multilateral	628.7	537.7	107.5	430.2	90.9
		Bilateral	100.0	85.5	17.1	68.4	14.5
Scenario 4	Domestic		1,725.3	456.8	91.4	365.5	1,268.5
	External	Multilateral	628.7	166.5	33.3	133.2	462.2
		Bilateral	100.0	-	-	-	100.0
Saint Vincent and the Grenadines							
	Total Debt		1,652.9	267.1	53.4	213.7	1,385.8
Scenario 1	Domestic		597.5	96.6	19.3	77.3	501.0
	External	Multilateral	614.5	99.3	19.9	79.5	515.2
		Bilateral	440.8	71.2	14.2	57.0	369.6
Scenario 2	Domestic		597.5	-	-	-	597.5
	External	Multilateral	614.5	267.1	53.4	213.7	347.4

Antigua and Barbuda			Initial Debt	Debt Reduction			Remaining Debt
				Total	Haircut part	Non-haircut part	
		Bilateral	440.8	-	-	-	440.8
Scenario 3	Domestic		597.5	-	-	-	597.5
	External	Multilateral	614.5	155.6	31.1	124.4	459.0
		Bilateral	440.8	111.6	22.3	89.3	329.3
Scenario 4	Domestic		597.5	131.7	26.3	105.4	465.9
	External	Multilateral	614.5	135.4	27.1	108.4	479.1
		Bilateral	440.8	-	-	-	440.8

Source: Eastern Caribbean Central Bank and Economic Commission for Latin America and the Caribbean (ECLAC) on the basis of official figures.
Note: The amounts of total debt, domestic debt and external debt are actual 2018 numbers provided by ECCB. Decomposition of external debt into multilateral, bilateral and private debt is based on debt structure information in 2017 (2016 for Saint Vincent and the Grenadines) provided by each Phase I country.

Table A5
CRF inflows by debt reduction scenario
(Millions of EC Dollars)

		20% Haircut		30% Haircut		40% Haircut		50% Haircut	
		Haircut (initial capitalization of CRF)	Debt Service Payment to CRF	Haircut (initial capitalization of CRF)	Debt Service Payment to CRF	Haircut (initial capitalization of CRF)	Debt Service Payment to CRF	Haircut (initial capitalization of CRF)	Debt Service Payment to CRF
					Antigua and Barbuda				
Scenario 1	1st year	106.1	61.7	159.1	54.0	212.1	46.3	265.2	38.5
	2-10 year	-	517.1	-	452.5	-	387.8	-	323.2
	Total	106.1	578.8	159.1	506.4	212.1	434.1	265.2	361.7
Scenario 2	1st year	106.1	57.2	159.1	50.1	212.1	42.9	265.2	35.8
	2-10 year	-	495.1	-	433.2	-	371.3	-	309.4
	Total	106.1	552.3	159.1	483.3	212.1	414.2	265.2	345.2
Scenario 4	1st year	106.1	62.1	159.1	54.4	212.1	46.6	265.2	38.8
	2-10 year	-	519.5	-	454.6	-	389.6	-	324.7
	Total	106.1	581.7	159.1	508.9	212.1	436.2	265.2	363.5
					Saint Lucia				
Scenario 1	1st year	124.7	49.0	187.0	42.8	249.3	36.7	311.6	30.6
	2-10 year	-	360.7	-	315.6	-	270.5	-	225.4
	Total	124.7	409.6	187.0	358.4	249.3	307.2	311.6	256.0
Scenario 3	1st year	124.7	44.5	187.0	38.9	249.3	33.3	311.6	27.8
	2-10 year	-	345.7	-	302.5	-	259.2	-	216.0
	Total	124.7	390.1	187.0	341.4	249.3	292.6	311.6	243.8
Scenario 4	1st year	124.7	50.8	187.0	44.5	249.3	38.1	311.6	31.8
	2-10 year	-	366.9	-	321.1	-	275.2	-	229.3
	Total	124.7	417.8	187.0	365.6	249.3	313.3	311.6	261.1
					Saint Vincent and the Grenadines				
Scenario 1	1st year	53.4	23.2	80.1	20.3	106.9	17.4	133.6	14.5
	2-10 year	-	156.3	-	136.8	-	117.2	-	97.7
	Total	53.4	179.5	80.1	157.1	106.9	134.6	133.6	112.2
Scenario 2 & 3	1st year	53.4	19.2	80.1	16.8	106.9	14.4	133.6	12.0
	2-10 year	-	144.6	-	126.5	-	108.5	-	90.4
	Total	53.4	163.8	80.1	143.3	106.9	122.8	133.6	102.4
Scenario 4	1st year	53.4	9.7	80.1	8.5	106.9	7.3	133.6	6.1
	2-10 year	-	160.6	-	140.5	-	120.4	-	100.3
	Total	53.4	170.3	80.1	149.0	106.9	127.7	133.6	106.4

Source: Eastern Caribbean Central Bank and Economic Commission for Latin America and the Caribbean (ECLAC) on the basis of official figures.

Table A6
Antigua and Barbuda assumption on amount of green investment by investment pattern, under scenario 2 and/or 3 with 20% haircut

Antigua and Barbuda	Scenario 2 (20% Haircut)			
	Front-loaded investment		Smoothed Investment	
	EC$M	% of GDP	EC$M	% of GDP
2017	0.0	0.0	0.0	0.0
2018	0.0	0.0	0.0	0.0
2019	163.3	3.8	98.8	2.3
2020	55.5	1.3	98.8	2.3
2021	55.5	1.3	76.7	1.8
2022	55.5	1.3	55.5	1.3
2023	55.5	1.3	55.5	1.3
2024	54.6	1.3	54.6	1.3
2025	54.6	1.3	54.6	1.3
2026	54.6	1.3	54.6	1.3
2027	54.6	1.3	32.9	0.8
2028	54.6	1.3	32.9	0.8
2029	0.0	0.0	19.8	0.5
2030	0.0	0.0	13.2	0.3
2031	0.0	0.0	0.0	0.0

Source: Eastern Caribbean Central Bank and Economic Commission for Latin America and the Caribbean (ECLAC) on the basis of official figures.
Note: Green investment is assumed to start from 2019 in this simulation.

Table A7
Saint Lucia assumption on amount of green investment by investment pattern, under scenario 2 and/or 3 with 20% haircut

Saint Lucia	Scenario 3 (20% Haircut)			
	Front-loaded investment		Smoothed Investment	
	EC$M	% of GDP	EC$M	% of GDP
2017	0.0	0.0	0.0	0.0
2018	0.0	0.0	0.0	0.0
2019	169.1	3.3	77.2	1.5
2020	42.2	0.8	77.2	1.5
2021	42.2	0.8	77.2	1.5
2022	42.2	0.8	51.5	1.0
2023	42.2	0.8	51.5	1.0
2024	35.4	0.7	38.6	0.8
2025	35.4	0.7	35.4	0.7
2026	35.4	0.7	35.4	0.7
2027	35.4	0.7	25.7	0.5
2028	35.4	0.7	25.7	0.5
2029	0.0	0.0	15.4	0.3
2030	0.0	0.0	3.8	0.1
2031	0.0	0.0	0.0	0.0

Source: Eastern Caribbean Central Bank and Economic Commission for Latin America and the Caribbean (ECLAC) on the basis of official figures.
Note: Green investment is assumed to start from 2019 in this simulation.

Table A8
Saint Vincent and the Grenadines assumption on amount of green investment by investment pattern, under scenario 2 and/or 3 with 20% haircut

Saint Vincent and the Grenadines	Scenario 2 & 3 (20% Haircut)			
	Front-loaded investment		Smoothed Investment	
	EC$M	% of GDP	EC$M	% of GDP
2017	0.0	0.0	0.0	0.0
2018	0.0	0.0	0.0	0.0
2019	72.6	3.3	32.6	1.5
2020	17.4	0.8	32.6	1.5
2021	17.4	0.8	32.6	1.5
2022	17.4	0.8	21.7	1.0
2023	17.4	0.8	21.7	1.0
2024	15.0	0.7	16.0	0.7
2025	15.0	0.7	15.0	0.7
2026	15.0	0.7	15.0	0.7
2027	15.0	0.7	10.9	0.5
2028	15.0	0.7	10.9	0.5
2029	0.0	0.0	6.5	0.3
2030	0.0	0.0	1.8	0.1
2031	0.0	0.0	0.0	0.0

Source: Eastern Caribbean Central Bank and Economic Commission for Latin America and the Caribbean (ECLAC) on the basis of official figures.
Note: Green investment is assumed to start from 2019 in this simulation.

Table A9
Antigua and Barbuda: Effect of Debt Swap initiative on growth by investment pattern, under scenario 2 and/or 3 with 20% haircut
(Percentage)

Antigua and Barbuda	Baseline (without Debt Swap)	Long-term effect of debt reduction	Front-loaded investment					Smoothed Investment				
			Effect of output elasticity of capital	Fiscal multiplier effect		Projected growth		Effect of output elasticity of capital	Fiscal multiplier effect		Projected growth	
				Low multiplier (0.2)	High multiplier (1.0)	Low multiplier (0.2)	High multiplier (1.0)		Low multiplier (0.2)	High multiplier (1.0)	Low multiplier (0.2)	High multiplier (1.0)
2017	3.2	0.0	0.0	0.0	0.0	3.2	3.2	0.0	0.0	0.0	3.2	3.2
2018	7.4	0.0	0.0	0.0	0.0	7.4	7.4	0.0	0.0	0.0	7.4	7.4
2019	5.3	0.1	1.4	0.8	3.8	7.5	10.5	0.8	0.5	2.3	6.7	8.5
2020	3.3	0.2	0.4	0.0	-0.2	3.9	3.7	0.8	0.3	1.4	4.6	5.7
2021	2.5	0.3	0.4	0.0	-0.1	3.2	3.1	0.6	0.1	0.3	3.4	3.7
2022	2.0	0.4	0.4	0.0	-0.1	2.8	2.7	0.4	-0.1	-0.3	2.7	2.5
2023	2.0	0.5	0.4	0.0	0.0	2.9	2.8	0.4	0.0	-0.2	2.8	2.7
2024	2.0	0.6	0.4	0.0	0.0	2.9	2.9	0.4	0.0	-0.1	2.9	2.8
2025	2.0	0.7	0.3	0.0	0.0	3.0	3.0	0.3	0.0	-0.1	3.0	3.0
2026	2.0	0.8	0.3	0.0	0.0	3.1	3.1	0.3	0.0	0.0	3.1	3.1
2027	2.0	0.9	0.3	0.0	0.0	3.2	3.2	0.1	-0.1	-0.5	2.9	2.5
2028	2.0	1.0	0.3	0.0	0.0	3.3	3.3	0.1	-0.1	-0.3	3.1	2.8
2029	2.0	1.0	-0.2	-0.3	-1.3	2.6	1.5	0.0	-0.1	-0.5	2.9	2.5
2030	2.0	1.0	-0.2	-0.2	-0.8	2.7	2.1	-0.1	-0.1	-0.5	2.9	2.5
2031	2.0	1.0	-0.2	-0.1	-0.5	2.7	2.4	-0.2	-0.1	-0.6	2.7	2.2
2032	2.0	1.0	-0.2	-0.1	-0.3	2.8	2.6	-0.2	-0.1	-0.3	2.8	2.5
2033	2.0	1.0	-0.2	0.0	-0.2	2.8	2.7	-0.2	0.0	-0.2	2.8	2.6
2034	2.0	1.0	-0.2	0.0	-0.1	2.8	2.7	-0.2	0.0	-0.1	2.8	2.7
2035	2.0	1.0	-0.2	0.0	-0.1	2.8	2.8	-0.2	0.0	-0.1	2.8	2.8

Source: Eastern Caribbean Central Bank and Economic Commission for Latin America and the Caribbean (ECLAC) on the basis of official figures.
Note: Green investment is assumed to start from 2019 in this simulation.

Table A10
Saint Lucia: Effect of Debt Swap initiative on growth by investment pattern, under scenario 2 and/or 3 with 20% haircut
(Percentage)

			Front-loaded investment					Smoothed Investment				
	Baseline (without Debt Swap)	Long-term effect of debt reduction	Effect of output elasticity of capital	Fiscal multiplier effect		Projected growth		Effect of output elasticity of capital	Fiscal multiplier effect		Projected growth	
				Low multiplier (0.2)	High multiplier (1.0)	Low multiplier (0.2)	High multiplier (1.0)		Low multiplier (0.2)	High multiplier (1.0)	Low multiplier (0.2)	High multiplier (1.0)
2017	3.3	0.0	0.0	0.0	0.0	3.3	3.3	0.0	0.0	0.0	3.3	3.3
2018	1.5	0.0	0.0	0.0	0.0	1.5	1.5	0.0	0.0	0.0	1.5	1.5
2019	2.0	0.1	0.5	0.7	3.3	3.3	5.9	0.2	0.3	1.5	2.6	3.8
2020	2.7	0.2	0.1	-0.1	-0.5	2.9	2.5	0.2	0.2	0.9	3.3	4.0
2021	2.1	0.3	0.1	-0.1	-0.3	2.4	2.2	0.2	0.1	0.5	2.7	3.1
2022	1.5	0.4	0.1	0.0	-0.2	2.0	1.8	0.1	0.0	-0.2	2.0	1.9
2023	1.5	0.5	0.1	0.0	-0.1	2.0	1.9	0.1	0.0	-0.1	2.1	2.0
2024	1.5	0.6	0.0	0.0	-0.2	2.1	1.9	0.1	-0.1	-0.3	2.1	1.8
2025	1.5	0.7	0.0	0.0	-0.1	2.2	2.1	0.0	-0.1	-0.3	2.2	2.0
2026	1.5	0.8	0.0	0.0	-0.1	2.3	2.2	0.0	0.0	-0.2	2.3	2.2
2027	1.5	0.9	0.0	0.0	0.0	2.4	2.4	0.0	-0.1	-0.3	2.3	2.1
2028	1.5	1.0	0.0	0.0	0.0	2.5	2.5	0.0	0.0	-0.2	2.5	2.3
2029	1.5	1.0	-0.1	-0.1	-0.7	2.3	1.7	0.0	-0.1	-0.3	2.4	2.1
2030	1.5	1.0	-0.1	-0.1	-0.4	2.3	2.0	-0.1	-0.1	-0.4	2.3	2.0
2031	1.5	1.0	-0.1	-0.1	-0.3	2.4	2.2	-0.1	-0.1	-0.3	2.4	2.1
2032	1.5	1.0	-0.1	0.0	-0.2	2.4	2.3	-0.1	0.0	-0.2	2.4	2.2
2033	1.5	1.0	0.0	0.0	-0.1	2.4	2.3	-0.1	0.0	-0.1	2.4	2.3
2034	1.5	1.0	0.0	0.0	-0.1	2.4	2.4	0.0	0.0	-0.1	2.4	2.4
2035	1.5	1.0	0.0	0.0	0.0	2.4	2.4	0.0	0.0	0.0	2.4	2.4

Source: Eastern Caribbean Central Bank and Economic Commission for Latin America and the Caribbean (ECLAC) on the basis of official figures.
Note: Green investment is assumed to start from 2019 in this simulation.

Table A11
Saint Vincent and the Grenadines: Effect of Debt Swap initiative on growth by investment pattern, under scenario 2 and/or 3 with 20% haircut
(Percentage)

Saint Vincent and the Grenadines	Baseline (without Debt Swap)	Long-term effect of debt reduction	Front-loaded investment					Smoothed Investment				
			Effect of output elasticity of capital	Fiscal multiplier effect		Projected growth		Effect of output elasticity of capital	Fiscal multiplier effect		Projected growth	
				Low multiplier (0.2)	High multiplier (1.0)	Low multiplier (0.2)	High multiplier (1.0)		Low multiplier (0.2)	High multiplier (1.0)	Low multiplier (0.2)	High multiplier (1.0)
2017	1.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0	0.0	1.0	1.0
2018	2.2	0.0	0.0	0.0	0.0	2.2	2.2	0.0	0.0	0.0	2.2	2.2
2019	2.5	0.1	0.3	0.7	3.3	3.6	6.2	0.2	0.3	1.5	3.0	4.2
2020	2.4	0.2	0.1	-0.1	-0.5	2.6	2.1	0.1	0.2	0.9	2.9	3.6
2021	2.3	0.3	0.1	-0.1	-0.3	2.6	2.3	0.1	0.1	0.5	2.8	3.3
2022	2.3	0.4	0.1	0.0	-0.2	2.7	2.6	0.1	0.0	-0.2	2.7	2.6
2023	2.3	0.5	0.1	0.0	-0.1	2.8	2.7	0.1	0.0	-0.1	2.9	2.8
2024	2.3	0.6	0.0	0.0	-0.2	2.9	2.8	0.0	-0.1	-0.3	2.9	2.6
2025	2.3	0.7	0.0	0.0	-0.1	3.0	2.9	0.0	0.0	-0.2	3.0	2.8
2026	2.3	0.8	0.0	0.0	-0.1	3.1	3.1	0.0	0.0	-0.1	3.1	3.0
2027	2.3	0.9	0.0	0.0	0.0	3.2	3.2	0.0	-0.1	-0.3	3.2	2.9
2028	2.3	1.0	0.0	0.0	0.0	3.3	3.3	0.0	0.0	-0.2	3.3	3.1
2029	2.3	1.0	0.0	-0.1	-0.7	3.1	2.5	0.0	-0.1	-0.3	3.2	3.0
2030	2.3	1.0	0.0	-0.1	-0.4	3.2	2.8	0.0	-0.1	-0.4	3.2	2.9
2031	2.3	1.0	0.0	0.0	-0.2	3.2	3.0	0.0	-0.1	-0.3	3.2	2.9
2032	2.3	1.0	0.0	0.0	-0.1	3.2	3.1	0.0	0.0	-0.2	3.2	3.1
2033	2.3	1.0	0.0	0.0	-0.1	3.2	3.2	0.0	0.0	-0.1	3.2	3.1
2034	2.3	1.0	0.0	0.0	-0.1	3.3	3.2	0.0	0.0	-0.1	3.3	3.2
2035	2.3	1.0	0.0	0.0	0.0	3.3	3.2	0.0	0.0	0.0	3.3	3.2

Source: Eastern Caribbean Central Bank and Economic Commission for Latin America and the Caribbean (ECLAC) on the basis of official figures.
Note: Green investment is assumed to start from 2019 in this simulation.

Table A12
Antigua and Barbuda: Assumption on amount of green investment by investment pattern, under scenario 2 and/or 3 with 30% haircut

Antigua and Barbuda	Scenario 2 (30% Haircut)			
	Front-loaded investment		Smoothed Investment	
	EC$M	% of GDP	EC$M	% of GDP
2017	0.0	0.0	0.0	0.0
2018	0.0	0.0	0.0	0.0
2019	209.2	4.8	96.4	2.2
2020	48.6	1.1	96.4	2.2
2021	48.6	1.1	96.4	2.2
2022	48.6	1.1	64.2	1.5
2023	48.6	1.1	50.0	1.2
2024	47.8	1.1	47.8	1.1
2025	47.8	1.1	47.8	1.1
2026	47.8	1.1	47.8	1.1
2027	47.8	1.1	32.1	0.7
2028	47.8	1.1	32.1	0.7
2029	0.0	0.0	19.3	0.4
2030	0.0	0.0	12.1	0.3
2031	0.0	0.0	0.0	0.0

Source: Eastern Caribbean Central Bank and Economic Commission for Latin America and the Caribbean (ECLAC) on the basis of official figures.
Note: Green investment is assumed to start from 2019 in this simulation.

Table A13
Saint Lucia: Assumption on amount of green investment by investment pattern, under scenario 2 and/or 3 with 30% haircut

Saint Lucia	Scenario 2 (30% Haircut)			
	Front-loaded investment		Smoothed Investment	
	EC$M	% of GDP	EC$M	% of GDP
2017	0.0	0.0	0.0	0.0
2018	0.0	0.0	0.0	0.0
2019	225.9	4.4	79.3	1.6
2020	36.9	0.7	79.3	1.6
2021	36.9	0.7	79.3	1.6
2022	36.9	0.7	52.8	1.0
2023	36.9	0.7	52.8	1.0
2024	31.0	0.6	52.8	1.0
2025	31.0	0.6	39.2	0.8
2026	31.0	0.6	31.0	0.6
2027	31.0	0.6	26.4	0.5
2028	31.0	0.6	26.4	0.5
2029	0.0	0.0	9.1	0.2
2030	0.0	0.0	0.0	0.0

Source: Eastern Caribbean Central Bank and Economic Commission for Latin America and the Caribbean (ECLAC) on the basis of official figures.
Note: Green investment is assumed to start from 2019 in this simulation.

Table A14
Saint Vincent and the Grenadines: Assumption on amount of green investment by investment pattern, under scenario 2 and/or 3 with 30% haircut

Saint Vincent and the Grenadines	Scenario 2 (30% Haircut)			
	Front-loaded investment		Smoothed Investment	
	EC$M	% of GDP	EC$M	% of GDP
2017	0.0	0.0	0.0	0.0
2018	0.0	0.0	0.0	0.0
2019	96.9	4.4	33.5	1.5
2020	15.2	0.7	33.5	1.5
2021	15.2	0.7	33.5	1.5
2022	15.2	0.7	22.3	1.0
2023	15.2	0.7	22.3	1.0
2024	13.1	0.6	22.3	1.0
2025	13.1	0.6	16.5	0.8
2026	13.1	0.6	13.1	0.6
2027	13.1	0.6	11.2	0.5
2028	13.1	0.6	11.2	0.5
2029	0.0	0.0	3.9	0.2
2030	0.0	0.0	0.0	0.0

Source: Eastern Caribbean Central Bank and Economic Commission for Latin America and the Caribbean (ECLAC) on the basis of official figures.
Note: Green investment is assumed to start from 2019 in this simulation.

Table A15
Antigua and Barbuda: Effect of Debt Swap initiative on growth by investment pattern, under scenario 2 and/or 3 with 30% haircut
(Percentage)

Antigua and Barbuda	Baseline (without Debt Swap)	Long-term effect of debt reduction	Front-loaded investment					Smoothed Investment				
			Effect of output elasticity of capital	Fiscal multiplier effect		Projected growth		Effect of output elasticity of capital	Fiscal multiplier effect		Projected growth	
				Low multiplier (0.2)	High multiplier (1.0)	Low multiplier (0.2)	High multiplier (1.0)		Low multiplier (0.2)	High multiplier (1.0)	Low multiplier (0.2)	High multiplier (1.0)
2017	3.2	0.0	0.0	0.0	0.0	3.2	3.2	0.0	0.0	0.0	3.2	3.2
2018	7.4	0.0	0.0	0.0	0.0	7.4	7.4	0.0	0.0	0.0	7.4	7.4
2019	5.3	0.1	1.8	1.0	4.8	8.1	12.0	0.8	0.4	2.2	6.6	8.4
2020	3.3	0.2	0.3	-0.2	-0.8	3.7	3.0	0.8	0.3	1.3	4.6	5.6
2021	2.5	0.3	0.3	-0.1	-0.5	3.0	2.6	0.8	0.2	0.8	3.7	4.4
2022	2.0	0.4	0.3	-0.1	-0.3	2.7	2.4	0.4	-0.1	-0.3	2.8	2.6
2023	2.0	0.5	0.3	0.0	-0.2	2.8	2.6	0.3	-0.1	-0.5	2.7	2.3
2024	2.0	0.6	0.3	0.0	-0.1	2.9	2.8	0.3	-0.1	-0.3	2.8	2.5
2025	2.0	0.7	0.3	0.0	-0.1	3.0	2.9	0.3	0.0	-0.2	2.9	2.8
2026	2.0	0.8	0.3	0.0	0.0	3.1	3.0	0.3	0.0	-0.1	3.0	2.9
2027	2.0	0.9	0.3	0.0	0.0	3.2	3.1	0.1	-0.1	-0.4	2.9	2.6
2028	2.0	1.0	0.3	0.0	0.0	3.3	3.2	0.1	-0.1	-0.3	3.1	2.9
2029	2.0	1.0	-0.2	-0.2	-1.1	2.6	1.7	0.0	-0.1	-0.5	2.9	2.5
2030	2.0	1.0	-0.2	-0.1	-0.7	2.7	2.2	-0.1	-0.1	-0.4	2.8	2.5
2031	2.0	1.0	-0.2	-0.1	-0.4	2.7	2.4	-0.2	-0.1	-0.5	2.7	2.3
2032	2.0	1.0	-0.2	0.0	-0.2	2.8	2.6	-0.2	-0.1	-0.3	2.8	2.5
2033	2.0	1.0	-0.2	0.0	-0.1	2.8	2.7	-0.2	0.0	-0.2	2.8	2.6
2034	2.0	1.0	-0.2	0.0	-0.1	2.8	2.8	-0.2	0.0	-0.1	2.8	2.7
2035	2.0	1.0	-0.2	0.0	-0.1	2.8	2.8	-0.2	0.0	-0.1	2.8	2.8

Source: Eastern Caribbean Central Bank and Economic Commission for Latin America and the Caribbean (ECLAC) on the basis of official figures.
Note: Green investment is assumed to start from 2019 in this simulation.

Table A16
Saint Lucia: Effect of Debt Swap initiative on growth by investment pattern, under scenario 2 and/or 3 with 30% haircut
(Percentage)

Saint Lucia	Baseline (without Debt Swap)	Long-term effect of debt reduction	Front-loaded investment					Smoothed Investment				
			Effect of output elasticity of capital	Fiscal multiplier effect		Projected growth		Effect of output elasticity of capital	Fiscal multiplier effect		Projected growth	
				Low multiplier (0.2)	High multiplier (1.0)	Low multiplier (0.2)	High multiplier (1.0)		Low multiplier (0.2)	High multiplier (1.0)	Low multiplier (0.2)	High multiplier (1.0)
2017	3.3	0.0	0.0	0.0	0.0	3.3	3.3	0.0	0.0	0.0	3.3	3.3
2018	1.5	0.0	0.0	0.0	0.0	1.5	1.5	0.0	0.0	0.0	1.5	1.5
2019	2.0	0.1	0.7	0.9	4.4	3.7	7.2	0.2	0.3	1.6	2.7	3.9
2020	2.7	0.2	0.1	-0.2	-1.0	2.8	1.9	0.2	0.2	0.9	3.3	4.1
2021	2.1	0.3	0.1	-0.1	-0.6	2.3	1.8	0.2	0.1	0.6	2.7	3.2
2022	1.5	0.4	0.1	-0.1	-0.4	1.9	1.6	0.1	0.0	-0.2	2.0	1.9
2023	1.5	0.5	0.0	0.0	-0.2	2.0	1.8	0.1	0.0	-0.1	2.1	2.0
2024	1.5	0.6	0.0	-0.1	-0.3	2.1	1.9	0.1	0.0	-0.1	2.2	2.1
2025	1.5	0.7	0.0	0.0	-0.2	2.2	2.1	0.0	-0.1	-0.3	2.2	1.9
2026	1.5	0.8	0.0	0.0	-0.1	2.3	2.2	0.0	-0.1	-0.3	2.2	2.0
2027	1.5	0.9	0.0	0.0	-0.1	2.4	2.3	0.0	-0.1	-0.3	2.3	2.1
2028	1.5	1.0	0.0	0.0	0.0	2.5	2.5	0.0	0.0	-0.2	2.4	2.3
2029	1.5	1.0	-0.1	-0.1	-0.7	2.3	1.8	0.0	-0.1	-0.5	2.3	2.0
2030	1.5	1.0	-0.1	-0.1	-0.4	2.3	2.0	-0.1	-0.1	-0.5	2.3	2.0
2031	1.5	1.0	-0.1	0.0	-0.2	2.4	2.2	-0.1	-0.1	-0.3	2.4	2.1
2032	1.5	1.0	-0.1	0.0	-0.1	2.4	2.3	-0.1	0.0	-0.2	2.4	2.3
2033	1.5	1.0	0.0	0.0	-0.1	2.4	2.3	-0.1	0.0	-0.1	2.4	2.3
2034	1.5	1.0	0.0	0.0	0.0	2.4	2.4	0.0	0.0	-0.1	2.4	2.4
2035	1.5	1.0	0.0	0.0	0.0	2.4	2.4	0.0	0.0	0.0	2.4	2.4

Source: Eastern Caribbean Central Bank and Economic Commission for Latin America and the Caribbean (ECLAC) on the basis of official figures.
Note: Green investment is assumed to start from 2019 in this simulation.

Table A17
Saint Vincent and the Grenadines: Effect of Debt Swap initiative on growth by investment pattern, under scenario 2 and/or 3 with 30% haircut
(Percentage)

Saint Vincent and the Grenadines	Baseline (without Debt Swap)	Long-term effect of debt reduction	Front-loaded investment					Smoothed Investment				
			Effect of output elasticity of capital	Fiscal multiplier effect		Projected growth		Effect of output elasticity of capital	Fiscal multiplier effect		Projected growth	
				Low multiplier (0.2)	High multiplier (1.0)	Low multiplier (0.2)	High multiplier (1.0)		Low multiplier (0.2)	High multiplier (1.0)	Low multiplier (0.2)	High multiplier (1.0)
2017	1.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0	0.0	1.0	1.0
2018	2.2	0.0	0.0	0.0	0.0	2.2	2.2	0.0	0.0	0.0	2.2	2.2
2019	2.5	0.1	0.4	0.9	4.4	3.9	7.4	0.2	0.3	1.5	3.0	4.2
2020	2.4	0.2	0.0	-0.2	-1.1	2.4	1.6	0.1	0.2	0.9	2.9	3.7
2021	2.3	0.3	0.0	-0.1	-0.6	2.5	2.0	0.1	0.1	0.6	2.9	3.3
2022	2.3	0.4	0.0	-0.1	-0.4	2.7	2.4	0.1	0.0	-0.2	2.7	2.6
2023	2.3	0.5	0.0	0.0	-0.2	2.8	2.6	0.1	0.0	-0.1	2.9	2.8
2024	2.3	0.6	0.0	0.0	-0.2	2.9	2.7	0.1	0.0	-0.1	3.0	2.9
2025	2.3	0.7	0.0	0.0	-0.1	3.0	2.9	0.0	-0.1	-0.3	3.0	2.7
2026	2.3	0.8	0.0	0.0	-0.1	3.1	3.0	0.0	-0.1	-0.3	3.1	2.8
2027	2.3	0.9	0.0	0.0	-0.1	3.2	3.2	0.0	-0.1	-0.3	3.2	2.9
2028	2.3	1.0	0.0	0.0	0.0	3.3	3.3	0.0	0.0	-0.2	3.3	3.1
2029	2.3	1.0	0.0	-0.1	-0.6	3.1	2.6	0.0	-0.1	-0.4	3.2	2.8
2030	2.3	1.0	0.0	-0.1	-0.4	3.2	2.9	0.0	-0.1	-0.4	3.2	2.8
2031	2.3	1.0	0.0	0.0	-0.2	3.2	3.0	0.0	-0.1	-0.3	3.2	3.0
2032	2.3	1.0	0.0	0.0	-0.1	3.2	3.1	0.0	0.0	-0.2	3.2	3.1
2033	2.3	1.0	0.0	0.0	-0.1	3.2	3.2	0.0	0.0	-0.1	3.2	3.2
2034	2.3	1.0	0.0	0.0	0.0	3.3	3.2	0.0	0.0	-0.1	3.3	3.2
2035	2.3	1.0	0.0	0.0	0.0	3.3	3.2	0.0	0.0	0.0	3.3	3.2

Source: Eastern Caribbean Central Bank and Economic Commission for Latin America and the Caribbean (ECLAC) on the basis of official figures.
Note: Green investment is assumed to start from 2019 in this simulation.

Table A18
Antigua and Barbuda: Assumption on amount of green investment by investment pattern, under scenario 2 and/or 3 with 40% haircut

Antigua and Barbuda	Scenario 2 (40% Haircut)			
	Front-loaded investment		Smoothed Investment	
	EC$M	% of GDP	EC$M	% of GDP
2017	0.0	0.0	0.0	0.0
2018	0.0	0.0	0.0	0.0
2019	255.0	5.9	94.0	2.2
2020	41.6	1.0	94.0	2.2
2021	41.6	1.0	94.0	2.2
2022	41.6	1.0	62.6	1.4
2023	41.6	1.0	62.6	1.4
2024	41.0	0.9	55.3	1.3
2025	41.0	0.9	41.0	0.9
2026	41.0	0.9	41.0	0.9
2027	41.0	0.9	31.3	0.7
2028	41.0	0.9	31.3	0.7
2029	0.0	0.0	18.8	0.4
2030	0.0	0.0	0.5	0.0
2031	0.0	0.0	0.0	0.0

Source: Eastern Caribbean Central Bank and Economic Commission for Latin America and the Caribbean (ECLAC) on the basis of official figures.
Note: Green investment is assumed to start from 2019 in this simulation.

Table A19
Saint Lucia: Assumption on amount of green investment by investment pattern, under scenario 2 and/or 3 with 40% haircut

Saint Lucia	Scenario 3 (40% Haircut)			
	Front-loaded investment		Smoothed Investment	
	EC$M	% of GDP	EC$M	% of GDP
2017	0.0	0.0	0.0	0.0
2018	0.0	0.0	0.0	0.0
2019	282.7	5.5	81.3	1.6
2020	31.6	0.6	81.3	1.6
2021	31.6	0.6	81.3	1.6
2022	31.6	0.6	54.2	1.1
2023	31.6	0.6	54.2	1.1
2024	26.5	0.5	54.2	1.1
2025	26.5	0.5	54.2	1.1
2026	26.5	0.5	28.2	0.6
2027	26.5	0.5	26.5	0.5
2028	26.5	0.5	26.5	0.5
2029	0.0	0.0	0.0	0.0

Source: Eastern Caribbean Central Bank and Economic Commission for Latin America and the Caribbean (ECLAC) on the basis of official figures.
Note: Green investment is assumed to start from 2019 in this simulation.

Table A20
Saint Vincent and the Grenadines: Assumption on amount of green investment by investment pattern, under scenario 2 and/or 3 with 40% haircut

Saint Vincent and the Grenadines	Scenario 2 & 3 (40% Haircut)			
	Front-loaded investment		Smoothed Investment	
	EC$M	% of GDP	EC$M	% of GDP
2017	0.0	0.0	0.0	0.0
2018	0.0	0.0	0.0	0.0
2019	121.2	5.5	34.5	1.6
2020	13.1	0.6	34.5	1.6
2021	13.1	0.6	34.5	1.6
2022	13.1	0.6	23.0	1.0
2023	13.1	0.6	23.0	1.0
2024	11.2	0.5	23.0	1.0
2025	11.2	0.5	23.0	1.0
2026	11.2	0.5	12.0	0.5
2027	11.2	0.5	11.2	0.5
2028	11.2	0.5	11.2	0.5
2029	0.0	0.0	0.0	0.0

Source: Eastern Caribbean Central Bank and Economic Commission for Latin America and the Caribbean (ECLAC) on the basis of official figures.
Note: Green investment is assumed to start from 2019 in this simulation.

Table A21
Antigua and Barbuda: Effect of Debt Swap initiative on growth by investment pattern, under scenario 2 and/or 3 with 40% haircut
(Percentage)

Antigua and Barbuda	Baseline (without Debt Swap)	Long-term effect of debt reduction	Front-loaded investment					Smoothed Investment				
			Effect of output elasticity of capital	Fiscal multiplier effect		Projected growth		Effect of output elasticity of capital	Fiscal multiplier effect		Projected growth	
				Low multiplier (0.2)	High multiplier (1.0)	Low multiplier (0.2)	High multiplier (1.0)		Low multiplier (0.2)	High multiplier (1.0)	Low multiplier (0.2)	High multiplier (1.0)
2017	3.2	0.0	0.0	0.0	0.0	3.2	3.2	0.0	0.0	0.0	3.2	3.2
2018	7.4	0.0	0.0	0.0	0.0	7.4	7.4	0.0	0.0	0.0	7.4	7.4
2019	5.3	0.1	2.2	1.2	5.9	8.7	13.4	0.8	0.4	2.2	6.6	8.3
2020	3.3	0.2	0.3	-0.3	-1.4	3.5	2.4	0.8	0.3	1.3	4.5	5.6
2021	2.5	0.3	0.3	-0.2	-0.8	2.9	2.2	0.7	0.2	0.8	3.7	4.3
2022	2.0	0.4	0.2	-0.1	-0.5	2.5	2.1	0.4	-0.1	-0.3	2.8	2.6
2023	2.0	0.5	0.2	-0.1	-0.3	2.7	2.4	0.4	0.0	-0.2	2.9	2.8
2024	2.0	0.6	0.2	0.0	-0.2	2.8	2.6	0.3	-0.1	-0.3	2.9	2.7
2025	2.0	0.7	0.2	0.0	-0.1	2.9	2.8	0.2	-0.1	-0.5	2.8	2.4
2026	2.0	0.8	0.2	0.0	-0.1	3.0	2.9	0.2	-0.1	-0.3	2.9	2.7
2027	2.0	0.9	0.2	0.0	0.0	3.1	3.1	0.1	-0.1	-0.4	2.9	2.6
2028	2.0	1.0	0.2	0.0	0.0	3.2	3.2	0.1	0.0	-0.2	3.1	2.9
2029	2.0	1.0	-0.2	-0.2	-1.0	2.6	1.8	0.0	-0.1	-0.4	2.9	2.6
2030	2.0	1.0	-0.2	-0.1	-0.6	2.7	2.3	-0.2	-0.1	-0.7	2.7	2.1
2031	2.0	1.0	-0.2	-0.1	-0.3	2.8	2.5	-0.2	-0.1	-0.4	2.7	2.4
2032	2.0	1.0	-0.2	0.0	-0.2	2.8	2.6	-0.2	-0.1	-0.3	2.8	2.6
2033	2.0	1.0	-0.2	0.0	-0.1	2.8	2.7	-0.2	0.0	-0.2	2.8	2.7
2034	2.0	1.0	-0.2	0.0	-0.1	2.8	2.8	-0.2	0.0	-0.1	2.8	2.8
2035	2.0	1.0	-0.2	0.0	0.0	2.8	2.8	-0.2	0.0	-0.1	2.8	2.8

Source: Eastern Caribbean Central Bank and Economic Commission for Latin America and the Caribbean (ECLAC) on the basis of official figures.
Note: Green investment is assumed to start from 2019 in this simulation.

Table A22
Saint Lucia: Effect of Debt Swap initiative on growth by investment pattern, under scenario 2 and/or 3 with 40% haircut
(Percentage)

Saint Lucia	Baseline (without Debt Swap)	Long-term effect of debt reduction	Front-loaded investment					Smoothed Investment				
			Effect of output elasticity of capital	Fiscal multiplier effect		Projected growth		Effect of output elasticity of capital	Fiscal multiplier effect		Projected growth	
				Low multiplier (0.2)	High multiplier (1.0)	Low multiplier (0.2)	High multiplier (1.0)		Low multiplier (0.2)	High multiplier (1.0)	Low multiplier (0.2)	High multiplier (1.0)
2017	3.3	0.0	0.0	0.0	0.0	3.3	3.3	0.0	0.0	0.0	3.3	3.3
2018	1.5	0.0	0.0	0.0	0.0	1.5	1.5	0.0	0.0	0.0	1.5	1.5
2019	2.0	0.1	0.8	1.1	5.5	4.1	8.5	0.2	0.3	1.6	2.7	3.9
2020	2.7	0.2	0.0	-0.3	-1.6	2.6	1.4	0.2	0.2	1.0	3.3	4.1
2021	2.1	0.3	0.0	-0.2	-1.0	2.2	1.5	0.2	0.1	0.6	2.7	3.2
2022	1.5	0.4	0.0	-0.1	-0.6	1.9	1.4	0.1	0.0	-0.2	2.0	1.9
2023	1.5	0.5	0.0	-0.1	-0.3	1.9	1.7	0.1	0.0	-0.1	2.1	2.0
2024	1.5	0.6	0.0	-0.1	-0.3	2.0	1.8	0.1	0.0	-0.1	2.2	2.1
2025	1.5	0.7	0.0	0.0	-0.2	2.2	2.0	0.1	0.0	0.0	2.3	2.2
2026	1.5	0.8	0.0	0.0	-0.1	2.3	2.2	0.0	-0.1	-0.5	2.2	1.8
2027	1.5	0.9	0.0	0.0	-0.1	2.4	2.3	0.0	-0.1	-0.4	2.3	2.0
2028	1.5	1.0	0.0	0.0	0.0	2.5	2.4	0.0	0.0	-0.2	2.4	2.3
2029	1.5	1.0	-0.1	-0.1	-0.6	2.3	1.8	-0.1	-0.1	-0.7	2.3	1.8
2030	1.5	1.0	-0.1	-0.1	-0.3	2.4	2.1	-0.1	-0.1	-0.4	2.3	2.0
2031	1.5	1.0	-0.1	0.0	-0.2	2.4	2.2	-0.1	0.0	-0.2	2.4	2.2
2032	1.5	1.0	-0.1	0.0	-0.1	2.4	2.3	-0.1	0.0	-0.1	2.4	2.3
2033	1.5	1.0	0.0	0.0	-0.1	2.4	2.4	-0.1	0.0	-0.1	2.4	2.3
2034	1.5	1.0	0.0	0.0	0.0	2.4	2.4	0.0	0.0	0.0	2.4	2.4
2035	1.5	1.0	0.0	0.0	0.0	2.4	2.4	0.0	0.0	0.0	2.4	2.4

Source: Eastern Caribbean Central Bank and Economic Commission for Latin America and the Caribbean (ECLAC) on the basis of official figures.
Note: Green investment is assumed to start from 2019 in this simulation.

Table A23
Saint Vincent and the Grenadines: Effect of Debt Swap initiative on growth by investment pattern, under scenario 2 and/or 3 with 40% haircut
(Percentage)

Saint Vincent and the Grenadines	Baseline (without Debt Swap)	Long-term effect of debt reduction	Front-loaded investment					Smoothed Investment				
			Effect of output elasticity of capital	Fiscal multiplier effect		Projected growth		Effect of output elasticity of capital	Fiscal multiplier effect		Projected growth	
				Low multiplier (0.2)	High multiplier (1.0)	Low multiplier (0.2)	High multiplier (1.0)		Low multiplier (0.2)	High multiplier (1.0)	Low multiplier (0.2)	High multiplier (1.0)
2017	1.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0	0.0	1.0	1.0
2018	2.2	0.0	0.0	0.0	0.0	2.2	2.2	0.0	0.0	0.0	2.2	2.2
2019	2.5	0.1	0.6	1.1	5.5	4.2	8.7	0.2	0.3	1.6	3.0	4.3
2020	2.4	0.2	0.0	-0.3	-1.6	2.3	1.0	0.2	0.2	0.9	2.9	3.7
2021	2.3	0.3	0.0	-0.2	-1.0	2.4	1.7	0.1	0.1	0.6	2.9	3.3
2022	2.3	0.4	0.0	-0.1	-0.6	2.6	2.1	0.1	0.0	-0.2	2.7	2.6
2023	2.3	0.5	0.0	-0.1	-0.3	2.8	2.5	0.1	0.0	-0.1	2.9	2.8
2024	2.3	0.6	0.0	-0.1	-0.3	2.9	2.6	0.1	0.0	-0.1	3.0	2.9
2025	2.3	0.7	0.0	0.0	-0.2	3.0	2.8	0.1	0.0	0.0	3.1	3.0
2026	2.3	0.8	0.0	0.0	-0.1	3.1	3.0	0.0	-0.1	-0.5	3.0	2.6
2027	2.3	0.9	0.0	0.0	-0.1	3.2	3.2	0.0	-0.1	-0.3	3.1	2.9
2028	2.3	1.0	0.0	0.0	0.0	3.3	3.3	0.0	0.0	-0.2	3.3	3.1
2029	2.3	1.0	0.0	-0.1	-0.6	3.1	2.7	0.0	-0.1	-0.6	3.1	2.6
2030	2.3	1.0	0.0	-0.1	-0.3	3.2	2.9	0.0	-0.1	-0.4	3.2	2.9
2031	2.3	1.0	0.0	0.0	-0.2	3.2	3.1	0.0	0.0	-0.2	3.2	3.0
2032	2.3	1.0	0.0	0.0	-0.1	3.2	3.1	0.0	0.0	-0.1	3.2	3.1
2033	2.3	1.0	0.0	0.0	-0.1	3.3	3.2	0.0	0.0	-0.1	3.2	3.2
2034	2.3	1.0	0.0	0.0	0.0	3.3	3.2	0.0	0.0	0.0	3.3	3.2
2035	2.3	1.0	0.0	0.0	0.0	3.3	3.2	0.0	0.0	0.0	3.3	3.2

Source: Eastern Caribbean Central Bank and Economic Commission for Latin America and the Caribbean (ECLAC) on the basis of official figures.
Note: Green investment is assumed to start from 2019 in this simulation.

Annex 3
List of assumptions and computations for the debt reduction scenario analysis

Item		Assumption	Note
		Step 1	
Minimum target growth rate		1%-point increase in growth rate	
Step 2			
Long-term elasticity of debt on growth		0.082 if debt to GDP ratio is above the estimated threshold of 54.7%, according to the IMF working paper (Greenidge et al.)	Other studies reported different numbers for the elasticity (Sheldon and Don reported 0.015 and Boamah and Moore reported 0.398 for their linear model result)
		Step 3	
Initial amount of public debt	Initial amount of total debt, domestic debt and external debt	Amount of debt in these categories in 2018, provided by the ECCB	Debt data provided by the ECCB has larger numbers than the data provided by the Phase I countries and is aligned with IMF's data
	Initial structure of external debt (amount of multilateral, bilateral and private debt)	Share of the multilateral, bilateral and private debt (% of external debt) in 2017, provided by the Phase I countries, multiplied by the initial amount of external debt For Saint Vincent and the Grenadines, share of each external debt category in 2016 was used for the calculation	External debt structure in 2018 is not available For Saint Vincent and the Grenadines, external debt structure in 2017 was substantially different from the previous years
	Initial maturity structure of domestic and external debt (amount of short-term, medium-term and long-term debt)	Share of short-term, medium-term and long-term debt (% of domestic or external debt) in 2017, provided by the Phase I countries, multiplied by the initial amount of domestic or external debt For Saint Vincent and the Grenadines, share of each maturity in 2016 was used for the calculation	Maturity structure in 2018 is not available For Saint Vincent and the Grenadines, maturity structure in 2017 is substantially different from the previous years
Amount of debt reduction	Amount of total debt reduction	Given the minimum target growth rate (1%-point) and the elasticity of debt on growth (0.082), required debt reduction is calculated as 12.2% (1/0.082) of GDP Required debt reduction ratio (12.2% of GDP) multiplied by nominal GDP in 2018 gives the amount of total debt reduction for each Phase I country	
	Amount of debt reduction in each debt category (domestic, external-multilateral, external-bilateral and external-private)	The calculation depends on debt reduction scenario	
		Step 4	
Financial inflows into the CRF	Amount of haircut (initial capitalization of the CRF)	Haircut rate (20, 30, 40 and 50%) multiplied by the amount of total debt reduction	
	Amount of debt service payment corresponding to non-haircut debt reduction (non-haircut inflows into the CRF)	For the 1st year: Percentage of non-haircut debt reduction (% of initial total debt) multiplied by the total amount of debt service payment in 2018 This calculation is done for domestic debt and external debt separately For Saint Lucia, total amount of debt service payment in 2017 was used for the calculation For the 2nd to 5th year:	This is the debt service payment corresponding to the non-haircut debt reduction assuming the same debt service rate as in 2018 (2017 for Saint Lucia) For Saint Lucia, total amount of debt service payment in 2018 was substantially larger than the previous periods

Item		Assumption	Note
		Share of medium-term and long-term debt (% of total debt) multiplied by the debt service payment for the 1st year For the 6th to 10th year: Share of long-term debt (% of total debt) multiplied by the debt service payment for the 1st year	In the absence of detailed debt service data, same debt service rate is assumed across all debt maturity In the absence of detailed debt maturity data, maturity of long-term debt is assumed to be 10 year
		Step 5	
Investment pattern	Front-loaded investment	All of the CRF inflows will be utilized at the year of receipt	
	Smoothed investment	For the 1st to 3rd year: 15% of total CRF inflows will be utilized For the 4th to 8th year: 10% of total CRF inflows will be utilized For the 9th to 10th year: 5% of total CRF inflows will be utilized For the 11th year: 3% of total CRF inflows will be utilized For the 12th year: 2% of total CRF inflows will be utilized For all the years: If the amount of funds in the CRF at the year of investment is smaller than the amount specified above, investment will be limited by this amount	
Baseline growth rate		Until 2019: Forecast by the ECCB From 2020: Forecast by the IMF (the WEO April 2019 for Antigua and Barbuda and Saint Lucia, and the DSA published in February 2019 for Saint Vincent and the Grenadines)	
Long-term effect of debt reduction		1%-point increase in growth rate will be gradually realized in 10 years Each year, growth rate will increase by 0.1%-point	
Effect of output elasticity of capital		The same methodology as the IMF DSA realism tool was used Depreciation was assumed to be 5% and elasticity of capital was 15%	
Fiscal multiplier effect		The same methodology as the IMF DSA realism tool was used Persistence of the multiplier effect was assumed to be 60%	

UNITED NATIONS

ECLAC

Series Studies and Perspectives-The Caribbean

Issues published

A complete list as well as pdf files are available at
www.cepal.org/en/publications

89. Promoting debt sustainability to facilitate financing sustainable development in selected Caribbean countries: a scenario of ECLAC debt for climate adaptation swap initiative, Sheldon McLean, Hidenobu Tokuda, Nyasha Skerrette, Machel Pantin (LC/TS.2020/5, LC/CAR/TS.2019/12), 2020.
88. A preliminary review of policy responses to enhance SME access to trade financing in the Caribbean, Sheldon McLean, Don Charles (LC/TS.2020/4, LC/CAR/TS.2019/11), 2020.
87. Gender mainstreaming in national sustainable development planning in the Caribbean, Gabrielle Hosein, Tricia Basdeo-Gobin, Lydia Rosa Gény (LC/TS.2020/2, LC/CAR/TS.2019/10), 2020.
86. A review of Caribbean national statistical legislation in relation to the United Nations Fundamental Principles of Official Statistics, Amelia Bleeker, Abdullahi Abdulkadri (LC/TS.2020/1, LC/CAR/TS.2019/9), 2020.
85. Industrial upgrading and diversification to address the competitiveness challenges in the Caribbean: the case of tourism, Michael Hendrickson, Nyasha Skerrette (LC/TS.2019/119, LC/CAR/TS.2019/8), 2020.
84. The enhancement of resilience to disasters and climate change in the Caribbean through the modernization of the energy sector, Adrián Flores, Leda Peralta (LC/TS.2019/118, LC/CAR/TS.2019/7), 2020.
83. Synthesis of the Caribbean subregion midterm review report of the Small Island Developing States (SIDS) Accelerated Modalities of Action (SAMOA) Pathway, Artie Dubrie, Elizabeth Thorne, Luciana Fontes de Meira, Omar Bello, Willard Phillips (LC/TS.2019/117, LC/CAR/TS.2019/6), 2019.
82. Economic Survey of the Caribbean 2019, Dillon Alleyne, Michael Hendrickson, Sheldon McLean, Maharouf Oyolola, Machel Pantin, Nyasha Skerrette, Hidenobu Tokuda (LC/TS.2019/116, LC/CAR/TS.2019/5), 2019.
81. Strengthening ICT and knowledge management capacity in support of the sustainable development of multi-island Caribbean SIDS, Amelia Bleeker (LC/TS.2019/115, LC/CAR/TS.2019/4), 2019.
80. Preliminary overview of the economies of the Caribbean 2018–2019: economic restructuring and fiscal consolidation as a platform to increase growth, Sheldon McLean, Dillon Alleyne, Michael Hendrickson, Maharouf Oyolola, Machel Pantin, Nyasha Skerrette, Hidenobu Tokuda (LC/TS.2019/60, LC/CAR/TS.2019/3), 2019.

STUDIES AND PERSPECTIVES

Issues published:

89 Promoting debt sustainability to facilitate financing sustainable development in selected Caribbean countries
A scenario analysis of the ECLAC debt for climate adaptation swap initiative
Sheldon McLean, Hidenobu Tokuda, Nyasha Skerrette and Machel Pantin

88 A preliminary review of policy responses to enhance SME access to trade financing in the Caribbean
Sheldon McLean and Don Charles

87 Gender mainstreaming in national sustainable development planning in the Caribbean
Gabrielle Hosein, Tricia Basdeo-Gobin and Lydia Rosa Gény

ECLAC
Economic Commission for Latin America and the Caribbean (ECLAC)
Comisión Económica para América Latina y el Caribe (CEPAL)
www.eclac.org