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Caribbean development report

A perusal of public debt in the Caribbean and its impact on economic growth

Sheldon McLean
Don Charles

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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, and Don Charles, Economic Research Assistant.

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Abstract

This paper examines the genesis and evolution of debt and debt overhang in the Caribbean with individual case studies, to extract lessons and make broad recommendations with regard to appropriate mechanisms and policy measures that can be implemented to reduce the debt burden of the subregion. The econometric model utilized in the paper has shown that a one percent increase on debt to GDP ratio causes a 0.015decline in real GDP growth for the countries in the Caribbean panel, suggesting that debt has a pernicious effect on growth on Caribbean economies. What is even more worrisome was that Caribbean economies did not demonstrate the traditional non-linear (bell-shaped) effect of debt on growth, where there is a range in which a positive relation between debt and growth exists. Traditionally, as debt increases, so does economic growth, up to a point. After this maximum point is passed, the relationship turns negative, where increases in debt cause a decrease in economic growth. In contrast, using the Caribbean countries selected in the panel over the period 2000-2015, it was empirically found that, at all levels, increases in debt resulted in a decline in economic growth for Caribbean economies. It was also shown that the financial crisis negatively affected growth in the Caribbean, lending credence to the view that Caribbean economies are exceedingly vulnerable to exogenous economic shocks.

More importantly, the employment of measures such as debt restructuring, debt swaps and fiscal consolidation intended to reduce expenditure and increase tax income, while having some measure of success in a few economies, has thus far failed to address effectively the Caribbean's high debt-low growth conundrum. This may be so because the region's debt burden, as well as its growth trajectory is heavily influenced by the undiversified structure of its economies and their vulnerability to climate related natural disasters. In view of the foregoing, it is important to address the Caribbean's debt dilemma in a sustainable manner while fostering structural change and economic diversification. In this regard, the ECLAC approach offers a solution in providing debt relief to the Caribbean. It builds on the traditional debt for climate swap concept, but completely avoids entry into the secondary market. More importantly it incorporates a resilience building component which has been visibly absent in other debt reduction mechanisms proposed for Caribbean SIDS. Ultimately, the results of the empirical analyses, as well as the essential elements of ECLAC's proposed debt reduction strategy, are designed to encourage the international community, including international financial institutions and development partners alike, to rethink and recalibrate, as it were, their current approach to financing the development of Caribbean economies.

Introduction

This study examines the genesis and evolution of Caribbean debt. It will explore individual case studies with a view to extracting lessons and making broad recommendations that can be utilized by Caribbean economies, International Development Partners (IDPs) and International Financial Institutions (IFIs) in reducing the subregion's debt burden. The debt was assessed, and where possible, debt sustainability analyses were conducted. Interviews were also conducted with key stakeholders in selected member States to elicit more detail on debt reduction initiatives undertaken in Caribbean countries.

In addition, an econometric model will be developed to empirically determine how debt influences economic growth in the Caribbean using panel data for selected countries including Antigua and Barbuda, Belize, Dominica, Grenada, Guyana, Jamaica, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Suriname, and Trinidad and Tobago[1]. The variables considered in the model are economic growth, the public debt, dummy variable for financial crises, per capita income, inflation, and the fiscal balance.

The lessons learnt from the case studies and empirical analyses are utilized to provide solutions to the subregion's debt dilemma. Notwithstanding The study is mindful however, that given the differing debt profiles amongst Caribbean countries, a one-size-fits-all approach may not be appropriate.

The remainder of the paper is structured as follows: chapter I explores issues such as public debt and growth and economic vulnerability and public debt in the Caribbean, as well as provide and brief analysis of the Caribbean debt. Chapter II examines efforts of some Caribbean policy makers at debt reduction. Chapter III contains an empirical analysis of the relationship between growth and public debt; and concluding discussions and recommendations for the way forward will be set out in Chapter IV.

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[1]   Smaller panels with a debt to GDP ratio less than 100% of GDP over the 2000 to 2015 period were also considered. However, in both fixed effects, random effect model, the debt to GDP ratio and the squared debt to GDP ratio were statistically insignificant. Since the public debt was the key variable of interest, the smaller panels were dropped.

I.   An examination of Caribbean debt

A.   Public debt and its relation to growth: conceptual issues

Caribbean governments have commonly employed deficit financing to support their fiscal objectives. Such an approach to fiscal-policy setting is often based on the presumption that the level of aggregate demand is not balanced with aggregate supply, and there is need for government intervention via expansionary fiscal policy, and fiscal deficits to sustain the aggregate demand (Sawyer 2009). Such tools (fiscal deficits and public debt) allow for the redistribution of the burden of providing public goods and infrastructure over time (Alesina et al 1990). Borrowing to finance public expenditure is also predicated on the view that public investment creates assets that would be used by future generations. Subsequently, future generations should pay for such investment (Tanzi 2011).

This fiscal approach, which is consistent with functional finance school of thought, finds its moorings in observations of substantial unemployment as the 'norm' in market economies, and the invisible hand of market forces to push the economy towards full employment being weak or non-existent (Sawyer 2009). Therefore, government intervention is required to correct the market failure. i.e. a fiscal deficit is thought necessary to correct a deficiency of aggregate demand. Moreover, there is a school of thought that which suggests that there may be a requirement for a long-term budget deficit, and associated rising debt in order to develop a country with aggregate demand as well as capital limitations (Sawyer 2009). This however, may not work in open developing economies with high marginal propensities to consume.

Indeed a 'reasonable' level of borrowing can enhance the economic growth of a developing country, through the accumulation of capital and improvement in productivity (Pattillo et al. 2004). The intuition is that developing countries with limited stocks of capital can even generate rates of return higher than advanced economies from investment opportunities. As long as the developing economies use the borrowed funds for productive investment and they do not experience macroeconomic instability, they will experience economic growth and will be able to repay their debt.

This notwithstanding, the experience of so many countries in the Caribbean, as well as Latin American and Europe (e.g. Argentina, Greece) has been one where high levels of debt have been associated with lower economic growth. In this regard, Siddique et al. (2015) assert that external debt is an important source of funds, which may be used to finance the development needs of a country.

External debt is usually incurred by a country suffering from shortfalls in foreign exchange and domestic savings. However, Siddique et al. (2015) caution that if the external debt is not used in income-generating activities, the ability of the debtor country to repay its debt will be reduced.

Unfortunately, many countries, including some in the Caribbean, fail to use external debt prudently. While the causal factors may differ across the two decades, over the 1970s and 1980s, the external debt levels of the highly indebted poor countries (HIPC)[2] rose to unsustainable levels, sparking a debt crisis. Such debt was eventually addressed with the HIPC initiative.

According to Were (2001), neither high indebtedness nor external indebtedness is automatically harmful for a country. A country may possess a high level of debt but it can generate sufficient funds to service its debt and meet its domestic objectives. In that circumstance, the large public debt is not a problem. The challenge only arises for many economies when they cannot service their debt obligations. Debt overhang[3] also has adverse consequences for investment and economic growth because investors expect the government to increase current and future taxes. Thus, as the fear of increased taxes discourages investment, it also causes a decline in output (Elbadawi et al. 1997).

There are several channels where high debt could adversely impact medium and long-term growth. They include: 1) higher long-term interest rates; 2) higher future distortionary taxation; 3) inflation; and 4) greater uncertainty about prospects and policies. In more extreme cases high debt can trigger a banking or currency crisis. High debt is also likely to constrain the scope for counter cyclical fiscal policies, which in turn may cause higher volatility and further restrict growth (Kumar and Woo, 2010).

In some instances, Caribbean economies have used public debt to finance fiscal deficits which have been conditioned by disproportionate spending on subsidies and transfers, public sector wages and make-work programmes (e.g. Trinidad and Tobago, Suriname). Moreover, the employment of measures such as fiscal consolidation aimed at expenditure reduction and tax increases while having some measure of success in a few economies (e.g. Grenada, Saint Kitts and Nevis, Antigua and Barbuda, Jamaica) have thus far been unable to solve the Caribbean's high debt-low growth conundrum.

In this regard, over the past 5 years (2012-2016) growth in the Caribbean has averaged 1.5 per cent while the debt burden has averaged 71.7 per cent of GDP. This may be so because the region's debt burden, as well as its growth, is closely intertwined with climate related natural disasters. Accordingly the next subsections will succinctly explore the twin issues of economic vulnerability and public debt in the Caribbean; as well as analyse Caribbean debt.

B. Economic vulnerability and public debt in the Caribbean

The prevailing view of ECLAC considers that the Caribbean's high debt dilemma was not principally driven by policy missteps, or the international financial crisis of the last eight years. Rather, it finds its roots in external shocks, compounded by the inherent structural weaknesses and vulnerabilities confronting Caribbean SIDS and their limited capacity to respond[4]. A major factor has been the underperformance of the export sector, partly due to a decline in competitiveness and a slowdown in

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[2]   The International Monetary Fund (IMF) launched the HIPC initiative in 1996 in an attempt to reduce the external debt burden to sustainable levels of low - income countries. Most of the HIPCs were poor, high dependent on the exports of primary commodities, and their export earnings were insufficient to finance their import bill. They borrowed heavily in the 1970s to finance their industrial and infrastructure development. Additionally, they implemented import substitution policies with the view to achieve economic development. The import substitution based industrialization failed, and commodity prices declined in the 1980s, resulting in the countries bearing high unsustainable debt. The HIPC I was considered as insufficient to bring the debt to the HIPCs to sustainable levels. It was too slow and stringent on its qualifying criteria. This resulted in the HIPC II initiative in 1999. HIPC II, which is still in effect today, has three objectives: 1) To ensure debt sustainability and a permanent exit from debt rescheduling. This is achieved by decreasing the debt service obligations of the debtor country, so it can increase its export incomes. It eliminates the need for future rescheduling, defensive lending, and provides debt forgiveness. 2) To ensure an increasing long - term growth rate by removing over hung debts. 3) To reduce poverty rate by freeing up resources in the debtor country (Isar 2012; Siddique et al. 2015).

[3]   "is based on the premise that if debt will exceed the country's repaymentability with some probability in the future, expected debt service is likely to be an increasing function of the country's output level. Thus some of the returns from investing in the domestic economy are effectively 'taxed' away by existing foreign creditors and investment by domestic and new foreign investors are discouraged." (Claessens et al.1996, 17).

[4]   A number of structural factors have helped to elevate the debt (Alleyne and Edwards, 2013).

economic activity especially among the tourism-dependent economies[5] arising from low external demand.

Many Caribbean countries have also accumulated debt as a consequence of increased expenditures to address the impact of extreme events and climate change attendant challenges. Most Caribbean countries are located in the hurricane belt and are also prone to earthquakes and other hazards. Indeed, a disaster resulting in damage and losses in excess of 5 per cent of GDP can be expected to hit any Caribbean country every few years. Moreover, over the period 2000-2014, it is estimated that the economic cost of natural disasters[6] in Caribbean countries was in excess of US$30.7 billion. The recent spate of hurricanes (2017) which have devastated many Caribbean islands have reemphasised the vulnerabilities of the region and will undoubtedly place further upward pressures on the region's debt, particularly since early estimates suggest that damage and losses are in the region of hundreds of millions of dollars (Unites States).

What is also important is that Caribbean economies have had limited access to concessional external finance, given their classification as middle income developing countries. This has constrained the availability of finance for growth and development. Evidence also shows that Official Development Assistance (ODA) to the region has been in decline since the early 2000s. The decision to concentrate international cooperation on poverty and to target lower-income countries assumes that as incomes grow, countries have more resources to combat poverty and finance their development. However poverty and inequality are both a cause and effect of development (ECLAC, 2012).

It is noteworthy that although the public debt burden is of varying severity among Caribbean countries, the debt problem is sufficiently common to make it a serious regional issue which needs to be urgently addressed. This situation has been aggravated by a decline in foreign direct investment (FDI) relative to pre-crisis period (2008), high levels of unemployment, especially among young people and low levels of economic growth.

Regional policy makers have been making bold efforts to address the debt problem through fiscal consolidation programs that are either home grown or through the International Monetary Fund (IMF) with support from other donors (Charles Amo-Yartey et al 2012). At least four countries between 2009 and 2013 addressed fiscal difficulties under IMF programs, two of which, Jamaica and Grenada, have had to return to the IMF for additional support[7]. Many of those programs were aimed at instituting structural reforms including improvements to the business environment and encouraging the search for new markets and activities. On the fiscal side, there have been attempts at rationalizing expenditure, raising taxation, and in one case, introducing fiscal rules to address excessive spending. The efforts of Caribbean countries at debt reduction will be examined in more detailed in a later section of this paper.

High debt burdens, which on average increased in the wake of the global financial crisis, and as further exacerbated by natural disasters, also affected sovereign credit ratings and led to higher sovereign risk premiums in international capital markets, resulting in higher borrowing costs for Caribbean small island developing states (SIDS). Highly indebted Caribbean countries are also exposed to currency instability, financial fragility, and lower levels of investment and growth. More importantly, the

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[5] It is important to bear in mind that Caribbean economies are relatively open, with many Member States having trade openness indices   in excess of 100 per cent. A perusal of the trade concentration index shows that Caribbean countries are far more specialized in fewer products compared to the world average or even to that of the Small Islands Developing States (SIDS). Given the peculiarities of Caribbean production and trade, merely expanding exports would be insufficient to strengthen the resilience of subregional economies.

[6] EM-DAT database is compiled by the Centre for Research on the Epidemiology of Disasters (CRED, 2004).

[7] Five countries used this approach in the 2000s. For example, Suriname successfully restructured a number of its external loans in 2000. In 2004, Dominica restructured its public debt, within the context of an IMF program, reducing its interest rates to 3.5 percent from 8 percent. Also, Grenada restructured its debt in 2004/05, amidst extensive infrastructure destruction caused by hurricane Ivan. In 2007, Belize restructured its external debt, which provided front loaded interest payment relief, and postponed amortization payments until 2019. In 2010, Antigua/Barbuda received debt relief from its Paris Club creditors, which agreed (under the baseline accord) to suspend accumulating penalties interest charges and postpone amortization until 2017. Also in 2010, Jamaica launched a comprehensive debt Exchange to address its looming debt problem. The objective of the debt Exchange was to enable the government to reduce its interest bill and expand the maturity profile of the debt stock. Jamaica returned to the Fund in 2013 (IMF 2012).

governments' role is increasingly broadened, to include *inter alia* employer of first resort, from its basic function of providing public goods and services.

C.   A closer look at Caribbean debt

This subsection takes a look at the magnitude, structure and composition of Caribbean debt. Issues such as debt service costs are also discussed. High debt ratios as well as high debt servicing commitments limited the ability many Caribbean economies in employing countercyclical fiscal policies, instituting a broad agenda of economic and productive diversification, or strengthening social safety nets. All of these policy prescriptions are crucial for improving growth prospects and mitigating the pernicious effects of negative external economic shocks. Indeed, there exists the real possibility that future growth and development can be impaired by debt overhang.

Is the debt burden of the CARICOM member states unsustainable? This is a common question asked in respect of the debt levels of Caribbean economies. In this regard, the debt to GDP ratio is frequently considered as the preferred metric to access and compare the debt burden across economies. The international benchmark for high or unsustainable debt in a developed country is 60 per cent of the GDP. For a developing country, the benchmark is 40 per cent of GDP (Chowdhury and Islam 2010). Table 1presents the trends recoded in the Caribbean since 2000.

Even if the 60 per cent of the GDP benchmark were to be applied to Caribbean economies, as can be seen in Table 1, the regional average for the debt to GDP ratio was 70.7 per cent in 2016. The goods exporting economies[8] were 58.9 per cent, close to the benchmark for developed countries. The service based economies held an even large debt to GDP ratio of 74.9 per cent in 2016. Eleven (11) out of fifteen (15) countries had a debt to GDP ratio in excess of 60 per cent of GDP in 2016. Two countries, Barbados and Jamaica, held debt to GDP in excess of 100 per cent of GDP in 2016.

Table 1
Debt to GDP ratios of Caribbean countries (2000-2015)

	2000	2005	2010	2011	2012	2013	2014	2015	2016
Anguilla	10.4	17.8	32.5	29.1	30.9	30.4	26.4	24.6	45.6
Antigua and Barbuda	102.7	104.4	85.2	93.2	86.5	99.9	98.5	84.4	80.3
Bahamas	71.9	71.9	71.9	71.9	71.9	71.9	71.9	71.9	74.1
Barbados	108.5	108.5	108.5	108.5	108.5	108.5	108.5	108.5	103.3
Belize	61.3	96.2	85.3	81.3	76.8	78.4	76.5	80.3	86.2
Dominica	88.9	90.8	69.2	67.4	77.6	76.7	75.8	78.3	78.5
Grenada	49.5	83.9	93.5	98.7	101.4	102.4	95.6	86.8	94.6
Guyana	167.4	188.3	68.0	66.8	63.7	57.8	51.9	48.4	47.1
Jamaica	48.4	116.4	132.7	130.9	131.7	132.0	129.8	126.2	124.0
Montserrat	27.5	10.8	5.8	4.6	4.4	4.3	3.9	5.7	4.9
Saint Kitts and Nevis	94.9	151.7	147.8	144.9	137.4	99.4	75.4	65.5	62.1
Saint Lucia	41.3	62.6	63.1	68.1	74.4	77.4	77.3	77.8	79.0

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[8]   The goods exporting economies in this study are: Belize; Guyana; Suriname; and Trinidad and Tobago.

Table 1 (concluded)

	2000	2005	2010	2011	2012	2013	2014	2015	2016
Saint Vincent and the Grenadines	59.1	65.9	67.2	69.9	72.8	75.8	80.2	78.5	77.9
Suriname	52.2	29.2	18.6	20.1	21.6	29.8	26.6	42.8	39.0
Trinidad and Tobago	52.6	34.3	32.1	29.7	38.8	38.3	41.9	51.2	63.3
Caribbean	**57.9**	**82.2**	**72.1**	**72.3**	**73.2**	**72.2**	**69.3**	**68.7**	**70.7**
Goods	**41.5**	**87.0**	**51.0**	**49.5**	**50.2**	**51.1**	**49.2**	**55.7**	**58.9**
Service Producers	**63.9**	**80.4**	**79.8**	**80.7**	**81.6**	**79.9**	**76.7**	**73.5**	**74.9**

Source: ECLAC database.

Over the 2000 to 2012 period, the service providing economies increased their debt stock from 63.9 per cent of GDP to 81.6 per cent of GDP. Over the aforementioned period, Saint Kitts and Nevis, Barbados, and Antigua and Barbuda held the highest debt in the region. A review of table 1 indicates that some effort was made by almost all the CARICOM member states to reduce its relative debt over the 2012 to 2015 period. However, the marginal rise in debt in 2016 relative to the previous year was largely due to the increase in debt of the goods exporting economies[9].

Trinidad and Tobago was able to reduce its debt over the 2000 to 2008 period, largely due to windfall revenues earned from the boom in its energy industry. However, as oil prices began to decline the debt to GDP ratio gradually increased as the government ran persistent fiscal deficits and increasingly relied upon deficit financing. Guyana managed to reduce its debt over the 2000 to 2015 period mainly as a result of the Highly Indebted Poor Country (HIPC) initiative (IMF 2004; Caldentey 2007)[10]. Guyana's debt can be expected to fall further post 2016 as the country prepares to embark on the commercialization of its oil reserves it recently discovered in the Stabroek block.

The level and composition of public debt is heterogeneous among Caribbean SIDS, which increased the challenge of finding a regional solution. For instance, in 2015, the level of the total public debt stock ranged from 6 percent of GDP for Montserrat to 127 per cent of GDP for Jamaica. Given the broad range in the levels of total public debt, Caribbean SIDS can be subdivided into three categories of indebtedness: highly indebted (>80 per cent of GDP), which includes Jamaica, Barbados, Grenada, Antigua and Barbuda, The Bahamas and Belize; moderately indebted (40 – 80 per cent of GDP) – Saint Vincent and the Grenadines, Dominica, Saint Lucia, Saint Kitts and Nevis, Suriname, Trinidad and Tobago and Guyana; and less indebted (40 per cent of GDP or less) i.e. Anguilla and Montserrat.

Shifting to consideration of the composition of the debt of Caribbean economies, table 2 presents the average domestic and external debt to GDP ratios for the Caribbean for the 2003 to 2015 period.

Over this period, the average domestic debt for the CARICOM member states decreased from 26.25 per cent of GDP to 14.37 per cent of GDP. This decrease was a relative one since in absolute terms, the regional debt average increased from US $994.4 million in 2003 to US $1,954.2 million by 2015.

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[9] Over the mid 2014 to 2016 period, oil and many other commodity prices were bearish in global markets. This resulting in reduced revenue streams for the commodity exporting economies. The governments of the respective CARICOM commodity based economies utilized debt financing to keep their economies afloat.

[10] In 1996, the World Bank, the International Monetary Fund (IMF) and other multilateral, bilateral and commercial creditors created the Heavily Indebted Poor Country (HIPC) Initiative. The HIPC initiative was a programme that aspired to ensure that the poorest countries in the world are not overwhelmed by unsustainable debt burdens. It offers debt relief to countries that meet its debt criteria (World Bank 2014).

Table 2
Domestic and external debt / GDP ratio for CARICOM
(Percentage)

Domestic / GDP ratio	2003	2005	2010	2011	2012	2013	2014	2015	2016
Goods producers	14.87	22.73	17.50	16.02	17.27	18.62	16.79	23.36	24.25
Service providers	30.39	33.24	38.73	40.04	41.87	39.68	38.39	35.81	10.78
CARICOM regional average	26.25	30.44	33.07	33.63	35.31	34.07	32.63	32.49	14.37
External debt/ GDP ratio for CARICOM									
	2003	2005	2010	2011	2012	2013	2014	2015	2016
Goods producers	28.4	64.3	33.5	33.4	33.0	32.5	32.4	35.1	
Service providers	41.5	36.8	38.8	39.5	39.3	41.4	41.2	41.0	
CARICOM regional average	37.7	44.7	37.3	37.8	37.5	38.8	38.7	39.3	

Source: ECLAC database.

As regards the average regional external debt, this marginally increased from 37.7 per cent of GDP in 2003 to 39.3 per cent of GDP in 2015. The service providing economies seemed to be more reliant upon external financing than the goods economies as their external debt to GDP ratio have been higher than their goods producing counterparts for almost the entire 2000 to 2015 period. There are also exchange rate risks arising from a high external debt especially for countries with variable change rates such as Jamaica.

In order to further analyse the debt burden of the CARICOM region, it would be useful to examine the issue of debt servicing costs. Debt servicing costs have remained high across the Caribbean, averaging around 7 per cent of GDP, 27 per cent of government revenue and 9 per cent of exports of goods and services over the period 20012-2016. Further, debt service payments also continue to absorb a significant portion of government revenue, averaging almost 30 per cent in 2016. Figure 1 refers. This has reduced fiscal space and ability of Caribbean economies to invest in modernizing key economic infrastructure, properly address the SDGs particularly through investment in social and economic development programmes.
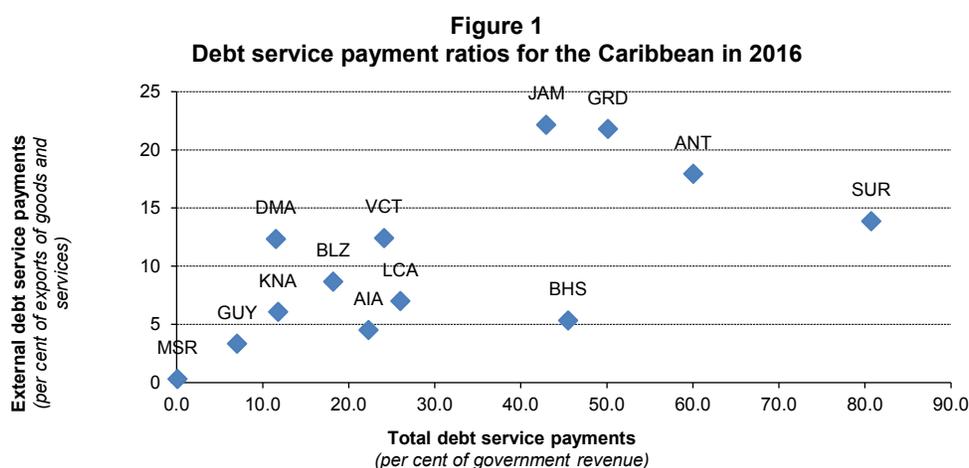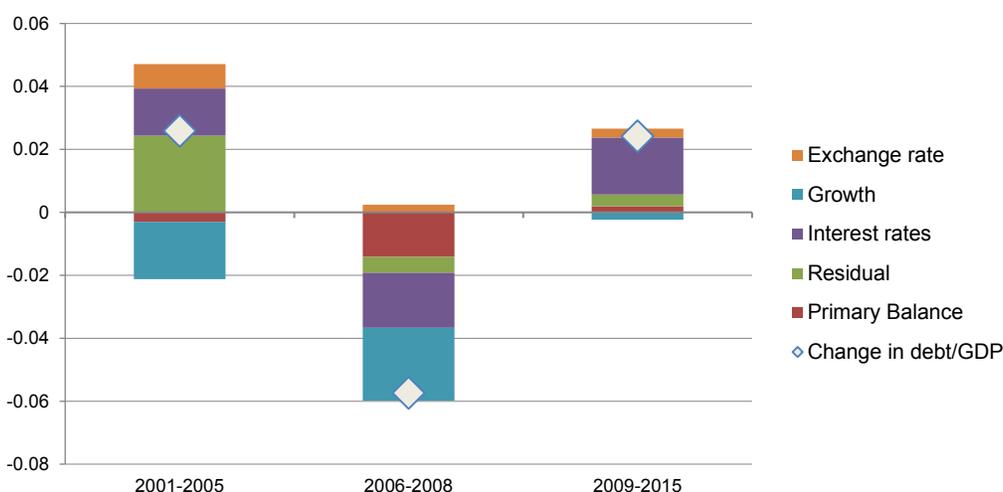
Figure 1
Debt service payment ratios for the Caribbean in 2016

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official data.

Further, a debt decomposition analysis[11] undertaken to determine the largest contributors to the changing debt burden suggests that the interest rate effects, combined with low growth and unanticipated shocks were the largest drivers of the region's debt. Furthermore, debt sustainability exercises undertaken by the IMF on Caribbean countries reveal that most of these economies show high debt sustainability risk levels, and are vulnerable to real interest rate and exchange rate shocks.

The Caribbean experienced three distinct period of debt accumulation over the period 2001 to 2015: from 2000-2005 average Caribbean central government debt increased from 63.4 per cent to 76.3 per cent of GDP; debt then fell to 59.1 per cent of GDP by 2008; and over the 2009-2015 period debt grew to 71.9 per cent of GDP. The accumulation was decomposed over these three periods[12] and the results are illustrated in Figure 2.

Figure 2
Caribbean average contribution to debt accumulation, 2001-2015
(Per cent of GDP)

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official data.

All components above the zero line caused an increase in the debt ratio; conversely, all components below the zero line caused a decrease in the debt ratio[13]. During the period 2001-2005, the increase in the debt to GDP ratio was due to the real interest rate effect and a very large residual, which were not offset by the subregion's economic growth. The large residual reflected the impact of unanticipated shocks in a number of countries including contingent liabilities. In the second period, the Caribbean managed to achieve a decrease in average central government debt due mainly to the contribution of strong growth and reduced real interest rates. In this period the global financial crisis also took place, but its effect was really felt from 2009.

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[11] Breaks down the change in the public debt ratio over time into its individual components.
[12] An overview of the methodological approach can be found in Annex I.
[13] The first component of the change in debt-to-GDP is the primary balance. When governments spend more than they collect in revenue (excluding interest payments) they increase the debt ratio. The interest rate effect is the second component of the debt decomposition. The decomposition uses real interest payments, which subtracts the effect of nominal GDP increases, due to inflation or real GDP growth, from nominal interest payments. The next component is the growth effect: Any change in GDP will affect the debt-to-GDP ratio by definition. The real exchange rate effect can bring about a change in the debt-to-GDP ratio without any new borrowing if a change in the exchange rate changes the value of the debt. Countries with fixed exchange rates will have zero exchange rate effects. The final component of the debt decomposition is the residual. This results from debt obligations from public enterprises and private enterprises that have been assumed by the government. It also includes accounting errors and omissions, as well as discrepancies between accrued amounts and cash flows.

Further, in the post-crisis period, 2009-2015, the debt to GDP ratio increased as Caribbean growth stalled. Although real interest rates continued to fall, the absence of growth meant that the real interest rate effect was positive; actually increasing the debt ratio. Notably, throughout all three periods, the exchange rate effect was consistently small and positive. Ultimately, the net balance effect of all three periods was negative, as the Caribbean countries primarily produced surpluses that were not large enough to meaningfully reduce the debt burden.

II. An overview of Caribbean efforts at debt reduction

Over the past twenty years a number of Caribbean economies have adopted varying strategies in an attempt to reduce their debt burden to a sustainable level. This subsection reviews the efforts adopted by Antigua and Barbuda, Barbados, Belize, Dominica, Grenada, Guyana, Jamaica, and Saint Kitts and Nevis.

A. Antigua and Barbuda

In 2010 the Government of Antigua and Barbuda approached the International Monetary Fund (IMF) for technical support for fiscal adjustment under a structural adjustment programme. The Government of Antigua and Barbuda was also able to negotiate a debt restructuring agreement with its Paris Club creditors for its external debt[14].

While the agreement with the Paris club creditors did not involve a haircut, it led to a restructuring of US $144 million, of which, US $101 million was in arrears. The Government of Antigua and Barbuda was required to pay 10.0 per cent over the 2012 to 2016 period, while the remaining 90 per cent is scheduled to be repaid over the 2017 to 2024 period (Government of Antigua and Barbuda 2011).

With regard to its domestic debt, the Government of Antigua and Barbuda signed a memorandum of understanding (MOU) with the Social Security Board and the Medical Benefits Scheme to compensate for its years of missed payment. The new bonds that were offered had a maturity of 30 years and increased the coupon from 1 per cent to 6 per cent (Government of Antigua and Barbuda 2011). In addition, the Government also attempted to restructure its debt held by domestic commercial banks. That approach included the extension of maturities from 15 to 20 years and a reduction in the coupon to 8 per cent (Government of Antigua and Barbuda 2011). Concomitantly the country adopted a programme of

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[14]   These creditors for the Antigua and Barbuda case were Brazil, France, Japan, the Netherlands, the United Kingdom and the United States (Government of Antigua and Barbuda 2011).

fiscal consolidation. Accordingly, the government has been able to reduce the country's debt to GDP ratio from 99.9 per cent in 2013 to 80.3 per cent at the end of 2016. Moreover, in 2015 the Government of Antigua and Barbuda engaged in debt-for-equity swaps involving two statutory corporations – the Antigua and Barbuda Medical Benefits Scheme and the Antigua and Barbuda Social Security Board – as well as an EC$62.1 million payment on the longstanding liability to HMB Holdings Ltd. for the Half Moon Bay property. In addition, scheduled amortized payments led to a 6.1 percent decrease in the total debt stock of public corporations to EC$511.1 million.

B. Barbados

Barbados is one of the most indebted countries of the Caribbean Community (CARICOM). While debt has been high since the early 2000s, the country was hard hit by the 2008-2009 global economic recession. This precipitated a significant decline in its tourism receipts and remittances.

The Government of Barbados responded by increasing public expenditure, with the objective to curb job loss and shield vulnerable demographic groups. That led to an expansion of its fiscal deficit and increased its public debt by more than 20 per cent of GDP over the 2008 to 2011 period (Amo-Yartey et al. 2012). Due to the bearish economic outlook, and the slow progress of the country towards fiscal consolidation, Moody downgrade the sovereign bond ranking of the country from an 'A' rating in 2009 to Caa1 in 2016.

In light of deteriorating public finances, the Government of Barbados implemented a Medium-Term Fiscal Strategy (MTFS) in 2010 to curtail the fiscal deficit, balance the budget and lower the debt to GDP ratio. The government fiscal consolidation efforts began with revenue enhancing measures. The authorities increased the VAT charged on goods from 15 per cent to 17.5 per cent for 18 months, and excise taxes on gasoline by 50 per cent. Allowances for travel and entertainment were eradicated, and bus fares were increased (Amo-Yartey et al. 2012).

The government also enumerated a number of expenditure reduction measures including: i) the reduction of transfers to state owned organizations and statutory boards; ii) the reduction of spending on goods through improved procurement; and iii) the curbing of its public sector wage bill by the retrenchment of approximately 3000 public servants in 2014 (Amo-Yartey et al. 2012; Williams 2014). As a consequence of the retrenchment of the 3000 public sector workers during the first quarter of 2014, expenditures on public sector wages and salaries fell by 8.0 per cent in fiscal year 20152015 compared to 2013/2014. Transfers and subsidies also contracted by 14.0 percent. These were the major contributors to the BD$326 million in fiscal savings recorded during the fiscal year 2014/2015 (ECLAC 2015).

By 2015, the external economic environment grew favourable for Barbados. The economic recovery of the US led to double digit growth in tourism arrivals in Barbados. Additionally, low international fuel prices improved Barbados' external position by the reduction in the country's import bill. This contained inflation and eased pressure on its stock of foreign reserves and exchange rate. Notwithstanding the 5.2 percentage point, year-on-year, contraction in Barbados' public sector debt to 103.3 percent of GDP in 2016, the country's debt burden remains unsustainably high. Moreover, the decline in debt to GDP ratio was essentially a consequence of increased debt purchases by the Central Bank of Barbados and the National Insurance Scheme in 2016. The debt situation may be improved by greater expenditure reduction measures geared at reducing the fiscal deficit in the short to medium term (ECLAC 2017). Since there is limited room for additional increases in taxes, a viable option for Barbados would be to contain wage spending and reduce transfers to public enterprises.

From an examination of these case studies, it is clear that despite considerable efforts at debt reduction, Caribbean economies have largely been unable to bring their debt down to sustainable levels. The intuition has been that the considerable debt burden has stymied growth and countries' ability to finance the requisite structural transformation and economic diversification. In the following section, an econometric model is used to examine the influence of debt on growth in Caribbean economies as a means of testing the validity of this intuition.

C. Belize

The Government of Belize adopted expansionary fiscal policies in the late 1990s and early 2000s which resulted in serious fiscal imbalances in their economy. This fiscal imbalance was increased even further after the tropical depressions of 2000 to 2002 forced the government to rebuild its infrastructure. The Government of Belize utilized external debt financing, which saw its debt to GDP ratio exceed 100 per cent of GDP in the early 2000s. Furthermore, the country's liquidity position deteriorated, and by the end of 2005, reserves fell below one month of import coverage (Asonuma et al. 2014).

The maturity structure of Belize's external public debt by June 2006 was characterized by a large share of short and medium-term debt. In that regard, an estimated 13 per cent of liabilities were due to mature within 1 year, while 25 per cent of maturities were due to mature in 1–5 years, which led to frequent efforts at refinancing. Since the refinancing was achieved via external markets at high interest rates, debt servicing costs increased. The high debt overhang forced the Government of Belize to institute its own fiscal consolidation programme. That resulted in the decline in its overall government deficit from 8.6 per cent of GDP in fiscal year 2004/2005 to 3.3 per cent of GDP in 2005/2006 fiscal year (Asonuma et al. 2014).

Even with the large fiscal adjustment, Belize's debt was still unsustainably high. After discussions with the IMF about its debt, the Government preemptively restructured its debt in 2006. The Government exchanged its various external debt instruments, including loans and bonds, into a single US dollar denominated bond. This swap, which was offered with no haircut, extended the maturity to 2029, and lowered the interest rate on the debt to 2.1 per cent (Asonuma et al. 2014).

The first restructuring, however, did not address solvency challenges. Therefore, six years later, the Government facing rising interest rates and renewed solvency challenges, opted for another pre-emptive debt exchange. The absence of a haircut resulted in the debt to GDP ratio remaining relatively high post the 2006 debt restructuring.[15] Moreover, the global economic recession of 2008/2009 increased poverty, and caused a surge in crime in the country. Indeed, the slowdown in economic activity weakened the government's ability to engage in more aggressive fiscal consolidation measures. Additionally, the Government of Belize nationalized two public utility companies, and was required to pay the former owners financial compensation. Since debt was being used to finance those ventures, there was an increase in the government's overall coupon structure from 4.25 per cent in 2007 to 8.5 per cent by 2012.

In the second debt restructuring exercise, the Government of Belize again used a super bond. After negotiation with its external creditors, the Government was able to push back its bond maturity to 2038, pay a 5 per cent coupon between 2013 and 2017, and 6.767 per cent thereafter, with a 3 per cent haircut (Asonuma et al. 2014). Although successive debt restructuring initiatives allowed Belize to reduce its debt burden from 92.6 per cent of GDP in 2005 to 76.5 per cent of GDP in 2014 its total public debt has steadily increased to 86.2 per cent in 2016. This has primarily been due to an increase in domestic borrowings to finance its fiscal deficit, since its low credit rating limited the country's access to the external market. A leading feature of the borrowing on the domestic market was the issuing of BZ$270.0 million in new securities in order to offset contingent liabilities associated with the nationalization of Belize Telemedia Limited (BTL).

D. Dominica

In the aftermath of a domestic fiscal crisis in the 2001 to 2002 period, which was brought about by profligate fiscal policies and external shocks, the Government of Dominica under took effort to restore fiscal sustainability through fiscal adjustment, and pre-emptive debt restructuring[16] in 2004 (IMF 2011).

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[15] In 2007, the debt to GDP ratio was 86 per cent of GDP. By 2012, this figure declined to only 77 per cent of GDP (Asonuma et al. 2014).

[16] Pre-emptive debt restructuring refers to restructuring activities that occurs before the debtor defaults. The restructuring is aimed at addressing the liquidity issues of the debtor (Erce 2013).

The debt restructuring programme included: i) debt forgiveness; ii) debt swap, and extension in maturity period; iii) reduction in interest rates; and iv) debt consolidation.

Debt swap bondholders were offered three categories of bonds at a 3.5 per cent coupon as follows: i) Short bond (10 year maturity) with a 30.0 per cent haircut; ii) Intermediate bond (20 year maturity) and 20.0 per cent haircut; and iii) Long bond (30 year maturity) with no haircut.

The Government of Dominica was also supported by two IMF programs over the period 2002 to 2006. Consequently, their debt to GDP ratio declined from 88.9 per cent of GDP in 2000 to 69.2 per cent of GDP by 2010. At that time the articulated objective was set at achieving fiscal consolidation, amounting to approximately 0.5 per cent of GDP over the medium term, utilizing a compression in infrastructure spending. Notwithstanding, the debt burden has steadily increased standing at 78.5 per cent of GDP in 2016.

E. Grenada

In 2004, Grenada's debt to GDP ratio stood at 95 per cent of GDP. Hurricanes Ivan and Emily caused significant damage upon the country.[17] Furthermore, in the aftermath of the hurricanes, exports declined by 24.8 per cent. In light of the unfortunate economic circumstances, the Government of Grenada restructured its commercial debt in 2005. The debt restructuring involved debt rescheduling as the maturity date of its bonds was pushed back to 2025 (Moore 2014).

Following the restructuring of half of its debt, Grenada approached the Paris Club for debt relief in 2006. Then approval of the request resulted in a rescheduling of its obligations to some of its bilateral creditors, notably: Belgium; France; the United Kingdom; and the United States. The restructuring efforts of 2005 and 2006 resulted in a significant reduction in the debt service payments for the Government of Grenada (Government of Grenada 2016).

Grenada later engaged the IMF in 2006 and entered into the Poverty Reduction and Growth Facility (PRGF). The PRGF was a structural adjustment programme, whose objective was to transform the economy of Grenada and foster economic growth. The programme was completed in 2010, and allowed the Government of Grenada to acquire a US$13.3 million loan.

In 2013, the Government of Grenada announced its difficulty in repaying its debt due to the adverse of effect the 2008-2009 global economic recession had upon its economy. As the government was unable to pay the coupon due March 15, 2013, on its U.S. dollar and Eastern Caribbean dollar bonds due in 2025, the government defaulted on its debt. That resulted in the immediate downgrade in Grenada's sovereign credit rating from CCC+ to C (Government of Grenada 2016).

After negotiation, in 2015, bondholders agreed to a debt swap, whereby the old bonds which were scheduled to mature in 2025 would be exchanged for new bonds at 50 per cent haircut. The new bonds that will be issued by the Government of Grenada will have a maturity in 2030, and carry a coupon of 7 per cent with equal semi-annual principal amortizations commencing from May 2016 (The Jamaica Gleaner 2015). The Government of Grenada also agreed to pay the bond holders a portion of the revenues that the government will receive under the country's Citizen by Investment (CBI) program (Cui 2015; The Jamaica Gleaner 2015). Thus, all holders of Grenada's bonds maturing in 2025 and denominated in East Caribbean dollars, and 93.8 per cent of holders of Grenada's bonds denominated US dollars and maturing 2025, agreed to swap their bonds for new bonds with a 2030 maturity date and a 7 per cent coupon (Cui 2015).

The Government of Grenada also included a 'natural disaster clause' in the issuance of the new debt. Such clause will enable the government to capitalize interest payments and defer principal maturity dates on the bonds in the event that the country is negatively affected by tropical cyclones, hurricanes, earthquakes, or other natural disasters (The Jamaica Gleaner 2015).

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[17] The damage caused by Ivan to Grenada was estimated to be approximately US $900 million or 200 per cent of GDP.

The Government of Grenada aims to reduce its public debt to 81 per cent of GDP by 2017 (Kilby 2015). Subsequently, in 2014, the Government of Grenada entered into a 3 year US$21.9 million agreement with the IMF to finance an "ambitious programme" to address the country's fiscal imbalances and generate growth for its economy. The debt restructuring was intended to reduce Grenada's debt-to-GDP ratio by 19 per cent; a much-needed reprieve taking into consideration that the country's total public debt was in excess of 100 per cent of GDP in 2013 (The Jamaica Gleaner 2015).

Also, under the three-year Home Grown Structural Adjustment Programme, which commenced in 2014, Grenada passed several legislative reforms in 2016 – including the Fiscal Responsibility, Public Debt Management Acts – to strengthen its fiscal policy framework and improve public finance management. In addition, expenditures were kept in check. Under the IMF programme the country's debt burden fell from 102.4 per cent of GDP in 2013 to 86.8 per cent of GDP in 2016. Grenada accelerated the pace of its debt restructuring in 2016, with the result that its total outstanding public sector debt fell further to 83.4 per cent of GDP and it is forecasted to fall further to 72 per cent of GDP by end-2017. While Grenada's total public debt has been declining, the IMF (2017) has noted that public debt is still high and the outlook remains vulnerable to shocks.

F. Guyana

Guyana has long struggled with a high public debt, which served as one of the main impediments to its poverty reduction and economic growth. The IMF and the World Bank, recognizing the challenge facing the Guyana economy, in 1997 approved Guyana's eligibility for debt relief under the Highly Indebted Poor Countries (HIPC) Initiative[18].

Under the HIPC initiative, all creditors were mandated to provide debt relief to the debtor country based on an equitable burden sharing approach[19]. Possibly even more important than the debt relief, was the requirement for the debtor country benefiting from the HIPC programme to implement economic and social reforms, which were supposed to assist in the economic recovery of the debtor country (Saxegaard 2014).

After the implementation of the economic structural reforms, Guyana reached the completion point of the Initiative in May 1999, which allowed for the delivery of US $256 million (U.S.) in debt relief from its creditors. Guyana qualified for additional debt relief under the enhanced HIPC initiative in November 2000. Within that context, Guyana reached its completion point by December 2003, after the implementation of additional economic, structural and institutional reforms[20].

In order to reach the completion point under the enhanced HIPC initiative, Guyana was required to develop a Poverty Reduction Strategy Paper (PRSP), which was a policy framework created from a wide consultation with the civil society, to identify key priorities for the country and detail a clear path about to reach its poverty alleviation goals. The PRSP focused upon a number of strategic pillars: (i) broad-based growth; (ii) stronger institutions; (iii) investment in human and physical capital; (iv) better targeting of poverty measures; and (v) environmental protection (IMF 2003).

Some of the economic reform measures, which Guyana implemented included: the passing of a new procurement act in 2003; the privatization of the Guyana National Commercial Bank; restructuring of its sugar company GUYSUCO; and the computerization of the public service payroll and pension system (IMF 2003).

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[18]   The HIPC initiative is a framework that was developed by the IMF and the World Bank to provide debt relief to the world's poorest and most heavily indebted countries from all creditors (IMF 2003).
     In December 1997, the IMF and the World Bank judged Guyana's debt, whose net present value (NPV) of external debt to central government revenue was more than 450 per cent of GDP in 1996, as unsustainable (Saxegaard 2014).

[19]   The HIPC initiative is based on a proportional sharing to the burden sharing. The debt relief which is delivered by the creditors is done based upon their share of the outstanding debt. It is important to note that such approach is consistent with the practice of the Paris Club, which requires debtor countries to pursue debt relief from all non-participating creditors on terms that are at least comparable to those offered by the Paris Club (Saxegaard 2014).

[20]   The debt relief under the enhanced HIPC initiative amounted to US $334.5 million (IMF 2003).

Ultimately, Guyana's completion point under the enhanced HIPC initiative allowed the country to receive debt relief amounting to US $358 million from its multilateral and bilateral Paris Club creditors. It is noteworthy that the debt relief offered to Guyana from its Paris Club creditors was in excess of the amount of debt relief they were required to grant as part of the HIPC initiative by US $24 million. That effectively meant the writing off of nearly all its debt with its bilateral creditors in the Organization for Economic Co-operation and Development (OECD) (Saxegaard 2014).

The Government of Guyana also received additional debt relief from the IDB in 2004. That resulted in the sharp reduction in the country's overall debt to GDP ratio from over 100 per cent of GDP in the pre-2005 period, to below 70 per cent of GDP in the post 2005 period. At the end of 2016, Guyana's debt to GDP ratio stood at 47.1 per cent.

G. Jamaica

Jamaica has long struggled with the twin challenges of high public debt and low economic growth. In 2008-2009 world economic recession adversely affected the economy of Jamaica. The IMF reported that Jamaica experienced a 15 per cent decline in its tourism receipts and remittances, and a 30 per cent decline in bauxite exports in 2009 (Grigorian et al. 2012). That down turn in economic activity forced the Government of Jamaica to increase its borrowing and debt burden.

Struggling with high public debt, in fiscal year 2009, the Government of Jamaica adopted fiscal consolidation measures which included: (i) a freeze on most public servant salaries; (ii) a reduction in capital expenditure; (iii) an increase in the gasoline tax; and (iv) a broadening of the VAT base. Notwithstanding those policy measures were relatively unsuccessful in improving the fiscal position.

In Jamaica, a large proportion of the public debt was domestic debt held by the domestic financial institutions. Defaulting on such debt would have triggered a financial crisis, and possibly a run on the currency in the country[21]. Given the high financial risks, and negative impact a default would have had on Jamaica's future borrowing ability, the Government of Jamaica in January 2010, opted for a voluntary debt swap[22]. This debt swap was a move to better align the debt service with the government's ability to pay.

In the debt swap, the old bonds that were targeted included bonds in the local currency (fixed, variable and US dollar indexed), as well as bonds in US currency. The total value of the bonds was US$7.8 billion, or 65 per cent of GDP. The local currency bonds had a 19 per cent coupon, while the US currency bonds held a 9 per cent coupon. In the swap, while there were allocation rules, investors were allowed to select from a menu of fixed, floating, and inflation- and US$-indexed securities. The new local currency bonds had a 12.5 per cent coupon, while the new US denominated bonds had a 7 per cent coupon. Both currency bonds had longer maturities (Grigorian et al. 2012).

Indeed, the 2010 debt swap in Jamaica was favoured by it shrewd operational design and implementation. The design of the exchange was influenced, to a large extent, on the analysis of critical issues, such as: (i) the stress testing of the debt swap to assess the risks of the domestic financial system; (ii) studying the demand of the bond holders, as it influenced the portfolio mix that would be offered to the investors; and (iii) considering potential litigation implications from a holdout and consequently offering a voluntary debt swap.

The good public relations and communication strategy also augured well with the general population (Grigorian et al. 2012). The debt swap was presented as part of a macroeconomic reform strategy rather than a stand-alone operation. There was a perception that the burden of the debt swap was

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[21]   The Bank of Jamaica conducted stress test of the Jamaica financial system and revealed that domestic banks are highly likely to be able to withstand losses from a debt restructuring, the capital adequacy would have been adversely affected if the credit rating on government was set at selective default. Moreover, any significant loss of confidence in the financial sector would have resulted in capital flight (Grigorian et al. 2012).

[22]   The debt swap was offered voluntarily to creditors to prevent any litigation from a holdout.

being shared across the society. This was critical in preventing holdouts, and making fiscal consolidation efforts acceptable to the general populace.

Additionally, the debt swap was also assisted by the bond holders' perception of a potential IMF Stand-By Arrangement. After the implementation of the debt swap, the IMF Executive Board approved the 24-month US$1.27 billion Stand-By Arrangement with Jamaica. Soon after receiving IMF support, the World Bank, the Inter-American Development Bank (IDB), and Caribbean Development Bank (CDG) assembled a loan package for the Government of Jamaica totalling 20 per cent of GDP (Grigorian et al. 2012).

Currently, Jamaica's medium-term macroeconomic programme and policies are supported by a three-year stand-by arrangement with IMF. The arrangement replaced the extended fund facility that was to conclude in March 2017. IMF funding under the stand-by arrangement is being treated as precautionary, but it affords the country access to approximately 1.1953 billion of the Fund's special drawing rights (SDR), or 312 per cent of Jamaica's quota in IMF, equivalent to US$ 1.6 billion, under certain conditions.

The first assessment under the stand-by arrangement for the December 2016 quarter was completed in April 2017, with the economy receiving positive marks. On successful completion of this review, IMF will make approximately SDR 126.0 million (US$ 170.0 million) available to Jamaica. The remaining funds will become accessible in six tranches upon successful completion of subsequent reviews.

The public debt overhang remains a significant challenge to the performance of the economy. At end-December 2016, Jamaica's stock of debt was J$ 2.15 trillion, or 128.0 per cent of GDP, lower than the 131.0 per cent of GDP at the end of 2011. The decline has been slow because of the staggering size of the debt in the context of low growth. In fiscal year 2016/17, the external debt was projected at 75.6 per cent of GDP, but the foreign- exchange component of the overall debt was more than 50 per cent of GDP. The fact that the external debt is denominated in foreign exchange creates an additional burden with each devaluation of the currency. With respect to debt service, interest payments are projected at 8.3 per cent of GDP, so that total debt service, including interest and amortization, represent a sizeable portion of the budget.

H. Saint Kitts and Nevis

The 2008-2009 global economic recession negatively impacted the economy of Saint Kitts and Nevis. Over the 2009 to 2011 period, the decline in economic activity in Saint Kitts and Nevis resulted in the deterioration of the fiscal balance. As such, in an effort to confront the fiscal challenges the Government embarked upon a home-grown economic recovery programme.

A critical element of the economic recovery programme was the restructuring and sustainable management of the public sector debt. As previously shown in Table 1, the debt to GDP ratio of Saint Kitts and Nevis stood at 144.9 per cent in 2011[23]. However, the Medium-Term Debt Management Strategy (MTDS) of the economic recovery programme set an objective of a 57.3 per cent debt to GDP ratio by 2017. In fact, the MTDS envisioned that the country's public debt could be reduced through restructuring. Accordingly, former Prime Minister of Saint Kitts and Nevis, Dr. Denzil Douglas, piloted the Saint Kitts-Nevis-Anguilla National Bank Limited (Vesting of Certain Lands) Bill of 2012. Such bill resulted in the Debt-for-Land-Swap which allowed for the vesting of 1,200 acres of state land in the Saint Kitts-Nevis-Anguilla National Bank for settlement of 23 per cent [24] of the state's public debt with the bank (Caribbean News Now 2016). As a result of the debt-for-land-swap, Saint Kitts and Nevis debt to GDP ratio declined from 137.4 per cent in 2012 to 65.5 per cent by 2015.

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[23] The Former Prime Minister of St. Kitts and Nevis, Dr.Denzil Douglas, reported that St. Kitts and Nevis debt in 2011 was EC $3 billion (US $1.11 billion) (Richards 2016). However, the Government of St. Kitts and Nevis (2014) reported that by 2013 the debt-for-land swap in St. Kitts resulted in a reduction of $565 million or 20.9% in the debt stock.

[24] The amount of debt that was settled was $700 million. However, the initial total debt outstanding was $3 billion. Thus, 23 per cent of the debt was settled with the debt-for-land-swap (Richards 2016).

The government of St. Kitts and Nevis[25] also implemented additional reforms to reduce its public debt stock. Those reforms included:

- Renegotiation its loans with the United States Agency for International Development (USAID), to receive more favourable terms through an extended maturity profile, lower interest rate and a grace period.

- Repaid the $46.1 million to the International Monetary Fund (IMF), which was borrowed to establish a Banking Sector Reserve Fund, utilizing proceeds from its Citizens by Investment (CBI) Programme.

- Implemented phase 2 of the debt-for-land-swap in St. Kitts, which resulted in a reduction of $203.1million (7.51 per cent) of the debt stock of the original debt stock.

- Revised the interest rates paid on its treasury bills, from 6.75 percent to 5.00 percent on the 365-day instrument; 6.65 percent to 4.85 percent on the 182-day Bill; and 6.50 percent to 4.75 percent on the 91-day Bill.

- Implementing phase 1 of the debt-for-land-swap in Nevis, and a reducing the debt stock by $29 million (Government of St. Kitts and Nevis 2014).

It is important to recall that the Monetary Council of the Eastern Caribbean Central Bank (ECCB) proposed that all Eastern Caribbean Currency Union (ECCU) countries should seek to lower their debt to GDP ratio to 60 per cent by 2030. To that end the ECCB has been engaging in financial planning and conducting debt sustainability analyses to monitor the progress being made by countries in achieving this target. As a result, preliminary projections suggest that Saint Kitts and Nevis is on track to achieve this goal of sub 60 per cent GDP to debt ratio by 2017, in view of its revenue-side performance. At the end of 2016, the country's debt to GDP ratio had declined to 62.1 per cent.

The broad examination of the strategies pursued by Caribbean economies in addressing their high debt burden suggests that the employ of remedial policy measures such as fiscal consolidation; prudent management of fiscal debt; and structural reforms aimed at improving economic growth, 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. This maybe so because the region's debt burden, *as well as its growth*, is closely intertwined with the open and undiversified nature of Caribbean economies - which make them vulnerable to external economic shocks - as well as climate related natural disasters.

In addition, in attempting to reduce their debt to sustainable levels, while building economic resilience, Caribbean economies have found themselves mired, as it were, in a middle-income trap. Caribbean economies therefore have limited access to concessional external finance to alleviate the high debt burden as well as to redress its growth and development retarding effects. More pointedly, since the 1990s there has been a steady decline in ODA to the Caribbean, resulting in an increasing need to access private bond markets for development finance.

As such, in an effort to find a meaningful solution to the region's debt situation, the following section will empirically examine the influence of debt on growth in the Caribbean.

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[25]   Dr.Denzil Douglas administration.

III. Empirical examination of influence of debt on growth in select Caribbean economies

The objective of this section is to empirically determine, using econometric techniques, how debt can influence economic growth performance in the Caribbean, using panel data. The full panel includes Antigua and Barbuda, Belize, Dominica, Grenada, Guyana, Jamaica, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Suriname, and Trinidad and Tobago[26].

The variables considered for the model were real economic growth, the public debt, a dummy for financial crises, real per capita income, inflation, and the fiscal balance. Economic growth was specified as the dependent variable, and the other variables were specified as explanatory variables.

All data was sought over the 2000 to 2015 period, as it produced the most observations for most countries and variables in the sample. Thus, a balanced panel in which there were 176 observations per variable was employed. The total debt to GDP ratio was used as the measure of public debt. These data were obtained from ECLAC's database. The real GDP growth was used as the measure of economic growth. These data were also collected from ECLAC's database. The consumer price index (CPI) was used as the measure of inflation. Data in this regard were elicited from the World Bank database. The overall primary fiscal balance to GDP ratio was used as the measure of the fiscal balance. Such data was collected from ECLAC's database. A dummy variable was used to capture the effect of the recent financial crisis and economic recession. It took the value of 1 for the years 2007, 2008, and 2009, but held the value of 0 otherwise. The squared debt-to-GDP variable was considered to study the inverted U-shape and non-linear effect of government debt on growth.

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[26] Smaller panels with a debt to GDP ratio less than 100 per cent of GDP over the 2000 to 2015 period were also considered. However, in both fixed effects, random effect model, the debt to GDP ratio and the squared debt to GDP ratio were statistically insignificant. Since the public debt was the key variable of interest, the smaller panels were dropped.

A.   Methodology - pretesting

Before model specification is performed, pretesting must be carried out. The data used in the model must be first tested for stationarity. Given that panel data[27] is being used, the tests deployed were the Levin-Lin-Chu (LLC) test, the Im-Pesaran-Shin (IPC) test, and the Fisher test.

Next, if some of the variables are found to be I(1), the data will be tested for cointegration. This is due to the possibility of I(0) and I(1) variables being cointegrated in the multiple variable (more than 3 variables) case. It is necessary that a block cointegration test be employed to test for joint cointegration in the entire system. However, since there were insufficient observations, Eviews9 was unable to perform a block cointegration test. Subsequently, bivariate cointegration tests were deployed between the economic growth variable, and other variables in the model. The Pedroni Residual Cointegration Test was used.

B.   Estimation methodology

In the event that cointegration is found between variables, the Fully Modified Ordinary Least Squares (FMOLS) Model is utilized.[28] Panel data models often suffer from endogenity. Endogeneity occurs when an explanatory variable is correlated with the error term. Endogeneity can also arise due to: i) a measurement error; ii) autoregression with autocorrelated errors; iii) simultaneous causality; and iv) omitted variables. As such, the Generalised Methods of Moments (GMM) methodology is also used for regression. GMM is a method that uses information about the moment conditions to estimate unknown parameters. It takes an equation and attempts to find parameter estimates that bring the moment conditions as close to zero as possible. Also, GMM estimators are, known to be consistent, asymptotically normal, and efficient. GMM models are ideal for use when there is endogenity and the form of the distribution is unknown.

To assess model authenticity, the J-statistic is used. The J-statistic, introduced in Hansen (1982) is the GMM objective function. The J-statistic is analogous to the F-statistic[29]. The J−statistic is similar to a chi-square with the degrees of freedom equal to the number of over identifying restrictions. If the model is misspecified and or some of the moment conditions do not hold, then the J−statistic will be large relative to a chi-square random variable with $K-L$ degrees of freedom.

The null hypothesis of the test with the J-statistic is '*the model has been correctly specified*'. A non-rejection the null hypothesis of the J-statistic means the model was specified correctly. A rejection of the null hypothesis for the J-statistic means that instruments do not satisfy the orthogonality conditions required for its use.

C.   Results

Pre-testing

Table 3
Stationarity test results

	LLC	IPS	ADF-Fisher	PP-Fisher	Decision
Growth	0.0000	0.0863	0.0006	0.0000	I(0)
Growth (1st difference)	0.0000	0.0000	0.0000	0.0000	
Debt (level)	0.0842	0.1361	0.2036	0.0987	I(0)
Debt (1st difference)	0.0055	0.0040	0.0061	0.0000	

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[27]   Panel data refers to multi-dimensional data involving measurements over time and cross sections.
[28]   Note: The Dynamic OLS model was considered also. However, the results were not displayed since all the variables were statistical significant.
[29]   The F-statistic is the ratio of 2 chi-squares. It is used to simultaneously test the null hypothesis if all the coefficients in a linear regression model is simultaneously equal to 0.

Table 3 (concluded)

	LLC	IPS	ADF-Fisher	PP-Fisher	Decision
CPI (level)	0.3549	0.9987	0.9950	0.9849	I(1)
CPI (1st difference)	0.0233	0.0120	0.0137	0.0000	
Fiscal balance/GDP (level)	0.6672	0.4474	0.4764	0.0104	I(1)
Fiscal balance/GDP (1st diff)	0.0808	0.0002	0.0006	0.0000	
Financial crisis (level)	0.3010	0.1223	0.1858	0.0029	I(1)
Financial crisis (1st difference)	0.0028	0.0000	0.0000	0.0000	
Log Per capita income (level)	0.0000	0.0174	0.0060	0.1364	I(0)
Log Per capita income (1st diff)	0.0000	0.000	0.0000	0.0000	

Source: Computed by ECLAC.

A review of the results presented in table 3, reveals that the following variables are stationary: economic growth, and the debt to GDP ratio. Based on the results of the stationary tests, the other variables were considered as integrated of order one (non-stationary).

Next, the data are tested for cointegration. It is important to note, the block cointegration test is commonly used to investigate the joint cointegration of all the variables in the equation. However, due to the limited number of observations, the block cointegration test could not be performed in Eviews9. This was a limitation. Subsequently, bivariate cointegration tests were performed between real economic growth and each of the other explanatory variables. All the pairs were found to be cointegrated.

Given the cointegration results, the FMOLS model is deployed.

Estimation

Table 4
Fully modified ordinary least squares (FMOLS) results

	Model 1 (FMOLS)	Model 2 (FMOLS)	Model 3 (FMOLS)	Model 4 (FMOLS)
Debt/GDP	-0.012131 (0.2844)	0.072139 (0.2016)	0.055910 (0.3992)	-0.029454 (0.0263)
Debt/GDP^2		-0.000348 (0.1261)	-0.000360 (0.1880)	
Fiscal Balance/GDP	0.207418 (0.0003)	0.237615 (0.0001)	0.239736 (0.0010)	0.238590 (0.0011)
Financial Crisis	-1.626608 (0.0037)	-1.528090 (0.0074)	-2.086093 (0.0028)	-2.217271 (0.0014)
Log Per capita GDP	2.944286 (0.3505)	4.116094 (0.2118)		
CPI	-0.045230 (0.0022)	-0.051744 (0.0008)	-0.061715 (0.0001)	-0.063327 (0.0000)
R squared	0.230394	0.248394	0.273264	0.270001
F-statistic	0.0911	0.2812	0.1702	0.0009

Source: Computed by ECLAC.

In table 4, the name of the explanatory variable is displayed in the 1st column. Each subsequent column shows the respective different models each with combination of different variables, the estimated coefficients, and the probability of their t-statistic in brackets. The penultimate row displays the results of the coefficient of determination (i.e. R-squared).

Model 4, displayed in table 4 was the best model, as it had the most statistically significant variables, and the probability of the F-statistic would suggest the simultaneous rejection of the null hypothesis of all the variables being jointly statistically insignificant.

As can be seen in table 4, the debt to GDP ratio is only statistically significant in Model 4. Its coefficient is negative, suggesting a negative impact of public debt on real economic growth for the countries in the panel. Its marginal effect was -0.029, suggesting that a one percent increase in the debt to GDP ratio causes a 0.029 percent decline in real GDP growth for the countries in the Caribbean panel.

The squared debt to GDP ratio (D2) was found to be statistically insignificant for every scenario in which it was included in the regression. This suggests the absence of the inverted U-shape relation between public debt and growth for the Caribbean panel[30]. Since the inverted U-shape is statistically insignificant, but the coefficient of the debt to GDP ratio was negative and statistically significant, it meant that the data in the model followed a linear relationship. In other words, the results found that increases in debt causes decreases in economic growth for the countries in the panel.

The effect of the financial crisis on the GDP growth of the Caribbean countries (i.e. the financial crisis dummy) in the panel is negative and statistically significant. This suggests that the 2007-2009 financial crisis had a negative impact on growth for the countries in the panel. Further, a positive relation is found between the fiscal balance and the GDP growth. In model 4, a 1 per cent increase in the fiscal balance causes a 0.239 per cent increase in the GDP growth.

The inflation variable was also found to be negative and statistically significant. A 1 per cent increase in inflation causes a 0.06 per cent decrease in GDP growth. This suggests that inflation had a negative effect on growth in the panel.

However, the log of per capita GDP was found to be statistically insignificant in every scenario. Such result may occur as a consequence of potential model misspecification, or endogenity in the model. Subsequently, the panel GMM model is deployed.

Table 5
Panel GMM[31]

Variable	Model 5 (PGMM)	Model 6 (PGMM)	Model 7(PGMM)[32]	Model 8(PGMM)	Model 9(PGMM)
DBT	1.620782(0.230)	-0.015233(0.0469)	-0.001233(0.8043)	-0.001241 (0.6368)	-0.015233(0.0469)
DBT2	-0.008585(0.1986)				
FC		-1.272264(0.7217)	-1.552844(0.0279)		0.027447 (0.9178)	-1.552844(0.0279)
FBG	0.616529(0.1904)	0.189532(0.0042)	0.043608(0.3579)		0.189532(0.0042)
D(FBG)				0.040484 (0.7594)	
LPCG	-4.462485(0.3051)	1.027780 (0.0000)			1.027780 (0.0000)
D(LPCG)			91.22483(0.0000)		
CPI	-0.210647(0.1435)	-0.050097(0.0004)	-0.001210(0.9200)	0.007765 (0.0196)	-0.050097(0.0004)
C			1.409764(0.4214)		

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[30] The inverted U-shape is a non-linear effect of debt on growth. In other words, there is a range where there is a positive relation between debt and growth. As debt increases, so does economic growth. However, after a maximum point is passed, the relationship turns to a negative one, where increases in debt cause a decrease in economic growth.

[31] Note, the instrument specification: debt to GDP (dbt), debt to GDP squared (dbt2), financial crisis (fc), fiscal balance to GDP ratio (fbg), log per capita GDP (lpcg), and consumer price index (cpi).

[32] The instrument specification was: dbt dbt2 fc fbglpcgcpi.

Table 5 (concluded)

Variable	Model 5 (PGMM)	Model 6 (PGMM)	Model 7(PGMM)[32]	Model 8(PGMM)	Model 9(PGMM)
ECM			-0.406360(0.3352)	-0.410999 (0.4756)	
R squared	-20.376861	0.167962	0.896509	0.900250	0.167962
Prob J-statistic	0.027898	0.000000	0.021910	0.007784	0.135490

Source: Computed by ECLAC.

In the GMM models real GDP growth was used as the dependent variable (table 5 shows the results). However, multiple combinations of the explanatory variables were considered. The first column in table 5 indicates the name of the explanatory variable. . Each subsequent column shows the respective different models each with combination of different variables, the estimated coefficients, and the probability of their t-statistic in brackets. The penultimate row displays the results of the coefficient of determination (i.e. R-squared).

A perusal of table 5 reveals that models 5 and 6 were unsatisfactory because they rejected the null hypothesis of the J-statistic test. Thus, the combination of variables in models 5 and 6 produced misspecifed models.

Models 7 and 8 attempted to integrate cointegration within the panel GMM, by using an Engle Granger type method. A panel GMM model with the corresponding variables is deployed, and the error term is obtained. Such error term is reused as an error correction mechanism in the panel GMM cointegration model. Also, the first difference of the log of per capita GDP was used included in both models 7 and 8. In model 8, the first difference of the log of the fiscal balance was included.

Model 7 produced a J-statistic, whose probability of 0.02191 fell in the 10 per cent and 5 per cent rejection area. Thus, the null hypothesis of a correctly specified model was rejected. The J-statistic also produced unsatisfactory results for Model 8.

Model 9 produced the best results. The probability of the J-statistic fell in the non-rejection area, leading to the non-rejection of the null hypothesis that the model is correctly specified. Although the coefficient of determination was only 0.16, the results of the J-statistic was more important.

The coefficient of the debt variable was negative and statistically significant. **Its marginal effect of -0.015 suggested that a 1 percent increase in public debt (i.e. debt to GDP ratio) would cause a 0.015 percent per cent decline in real GDP growth.** Note such coefficient was consistent with the literature. For instance, Kim et al. (2016) found that the marginal effect of debt -0.03. In fact, in all their models, the debt coefficient was found to be less than 0.11.

The dummy variable for the financial crisis was negative and statistically significant. Thus, the results suggested the 2007-2009 financial crisis had a negative impact upon economic growth for the countries in the panel. The fiscal balance was found to be positive and statistically significant. Such results indicated a positive marginal effect of 0.1895 of the fiscal balance on growth**. As such, a 1 percent increase in the fiscal balance will result in a 0.1895 percent increase in real economic growth.**

The log of per capita GDP was found to have a statistical significant and almost unitary effect on economic growth. Such result may occur from a general dependence between real GDP growth, and real per capita GDP. However, such endogenity provided additional justification for the use of the GMM model. In other words, the panel GMM model was used to address such endogenity.

The consumer price index was found to have a negative and statistically significant effect upon real economic growth on the countries in the panel. **The marginal effect was -0.05, suggesting a 1 percent increase in inflation would result in a 0.05 per cent decline in real economic growth for the countries in the panel.**

IV. Conclusion and way forward

Given that the debt profile of Caribbean economies can be disaggregated into the most heavily indebted, moderately indebted and least indebted, policy advice and solutions must reflect individual country needs and circumstances in order to be helpful. Conventional wisdom, lessons learnt from the case studies and economic theory suggest that public debt in developing countries becomes difficult to manage when the debt to GDP ratio exceeds 40 per cent of GDP. Accordingly, it goes without saying that Caribbean economies with debt to GDP ratios in excess of 80 per cent of GDP need to take urgent action through to adjust spending in order to prevent additional increases in their public debt. They can consider voluntary restructuring their debt with debt swaps. Large haircuts may be difficult to negotiate with creditors in the current environment of sluggish global economic growth, as such debtor governments may need to offer creditors higher coupons but longer repayment periods to accept such deals.

Consideration could also be given to debt restructuring as part of a comprehensive plan designed to address fiscal imbalances in moderately to highly indebted Caribbean economies. Indeed, while the Jamaica case demonstrates the positive effect of a comprehensive study of debt, creditor demands, and the preparation of a reform program could have in reducing the public debt levels of a small developing economy, their experience has also shown that in case of Caribbean economies this just is sufficient. It can also be argued that by offering voluntary debt swaps, the debtor country can offer investors choices of new bond instruments for exchange. For example, as in the Dominica case, investors were offered 3 categories of bonds in the debt swap. Investors participating in the swap would in turn choose the fixed income security that best fit their preferences. That too, while having it merits, has not been enough to prevent the country's debt to GDP ratio from hovering just below 80 per cent. The devastating effect of hurricane Irma of Dominica will definitely impact negatively on its debt burden if the country secures further debt to finance the requisite reconstruction.

Regrettably, Caribbean SIDS operate in an international climate that uses GDP per capita as the principal measure of their level of development, and hence they are classified as middle-income countries. The use of per capita income to assess the level of development demonstrates a one-dimensional view of development. Consequently, Caribbean economies have limited access to concessional external financing to alleviate the high debt burden as well as to redress its growth and development retarding effects.

Moreover, the econometric model utilized in this study showed that a 1 per cent increase in the debt to GDP ratio (i.e. public debt) caused a 0.015 per cent decline in the GDP growth for the countries in the panel, suggesting that debt had a decidedly pernicious effect on growth on Caribbean economies. What was even more worrisome was that Caribbean economies did not demonstrate the traditional non-linear effect of debt on growth, where there is a range in which a positive relation between debt and growth[33] exists. In contrast, using the Caribbean countries selected in the panel over the period 2000-2015, it was emprically found that debt had a negative and linear effect on economic growth. In this, linear relationship, at all levels, increases in debt resulted in a decline in economic growth for Caribbean economies.

The fact that it has been shown that the financial crisis negatively affected growth in the Caribbean lends credence to the view that Caribbean economies are exceedingly vulnerable to exogenous economic shocks. Additionally, in view of the fact that a 1 per cent increase in the fiscal balance causes a 0.1895 per cent increase in the GDP growth, ECLAC's efforts to build the capacity of public finance officers in the Caribbean to conduct public expenditure reviews is timely. In considering the foregoing, it is exceedingly important to address the Caribbean's debt dilemma in a sustainable manner while fostering structural change and economic diversification. To do so ECLAC proposes a shift to a modality that not only addresses the issue of high debt but also focuses on the development of areas that will enhance growth rather than achieve mere stabilization.

The employment of such measures such as, debt restructuring, debt swaps and fiscal consolidation aimed at expenditure reduction and tax increases, while having some measure of success in a few economies have thus far been unable to solve the Caribbean's high debt-low growth conundrum. This may be so because the region's debt burden economic growth, are closely intertwined with the undiversified structure of their economies and their vulnerability to the impact of climate related natural disasters. As such a new approach may be needed; this simultaneously addresses the challenges of high debt, climate change vulnerability and diversification. The answer may lie in Debt-for-climate swaps, and more so in ECLAC's specific variation of the concept.

A. ECLAC's Debt Reduction Strategy: debt for climate adaptation swap

The idea of a debt-for-climate adaptation swap is loosely based upon the debt-for-nature swap concept. Debt-for-nature swaps are supposed to reduce the debt of the debtor country and be followed by an increased commitment towards conservation effort. In exchange for some degree of debt forgiveness or write-off, the debtor country agrees allocates to finances towards environmental conservation projects.

Generally, there are two types of debt-for-nature swaps: bilateral, and trilateral. In bilateral debt-for-nature swaps, the creditor country or financial institution forgives a percentage of the debt owed. The debtor country in turn agrees to allocate finances towards environmental projects. Typically, the monies allocated for environmental projects are held in a fund, which is managed by a mutually agreed body. A trilateral debt-for-nature swap typically involves at least three parties: the debtor country government; the creditor country government, or creditor financial institution; and an International Non-Governmental Organization (INGO).

The INGO considered is typically one that has an interest in the environmental conservation effort. It may purchase the debt in a secondary market, to facilitate the debt swap process. Usually, the INGO would have an arrangement with a domestic Non-Governmental Organization (NGO) to facilitate the administration and implementation of the environmental projects.

In order to implement a debt-for-nature swap, a number of steps must be followed. The first step involves the sponsoring of the INGO. This is where funds are transferred from the donor agency to the INGO for the implementation of environmental projects. The INGO may even engage in discussion with the debtor country at this stage to signal its intensions, and clarify the needs of the debtor country. In the

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[33] Traditionally, as debt increases, so does economic growth, up to a point. After a maximum point is passed, the relationship turns to a negative one, where increases in debt cause a decrease in economic growth.

second stage, the INGO purchases the external public debt on the secondary market. It is typically bought at a discount or haircut. In the third stage, the INGO engages the domestic NGO. The debtor country government allocates finance towards a fund for environmental projects. The Domestic NGO, works alongside the INGO and the debtor country government to ensure that the environmental projects are implemented.

The ECLAC approach to providing debt relief to the Caribbean, however, builds on this concept, but completely avoids entry into the secondary market and more importantly incorporates a resilience building component that seeks to build new productive capacity in green industries, which has been visibly absent in other debt reduction mechanisms proposed for Caribbean SIDS.

The approach to debt relief proposed by ECLAC has two leading dimensions: (i) for countries with high debt from official creditors, the Green Climate Fund (GCF) will be approached to write-off 100 per cent of multilateral and bilateral debt at a negotiated discount; and (ii) for countries with high debt from private creditors, Debt buyback scheme, as well as debt-for-equity swaps will be utilized.

The ECLAC approach therefore recognizes that Caribbean debt is heterogeneous; member states carry varying combinations of multilateral, bilateral and private debt. It also identifies a mechanism that at once addresses the debt overhang while sourcing climate change funds for adaptation projects and investment in green industries, to be administered through a Caribbean Resilience Fund (CRF). ECLAC envisages that the CRF will also will also be capitalized by the amount which represents the haircut arising from total multilateral concessional and bilateral debt, a 100 percent of which will be written down using GCF resources; as well as contributions from bilateral donors; and funds raised through PPPs given the credibility of the CRF.   The GRF would be expected to provide financing for a balanced mix of private and public private partnership (PPP) green industry projects (e.g. covering production, marketing, regulation and R&D etc.), that meet the exacting standards of the GCF, and geared towards developing a green industrial value chain.

Another defining feature of the ECLAC proposal is the requirement for member states that elect to participate in the scheme The ECLAC approach therefore recognizes that Caribbean debt is heterogeneous; member states carry varying combinations of multilateral, bilateral and private debt. It also identifies a mechanism that at once addresses the debt overhang while sourcing climate change funds for adaptation projects and investment in green industries, to be administered through a Caribbean Resilience Fund (CRF). ECLAC envisages that the CRF will also will also be capitalized by the amount which represents the haircut arising from total multilateral concessional and bilateral debt, 100 percent of which will be written down using GCF resources; as well as contributions from bilateral donors; and funds raised through PPPs given the credibility of the CRF.

Within this context, debt relief would be contingent on obligations on the part of member states to pursue sustainable fiscal consolidation programs, as well as the conduct of public expenditure reviews (PERs) will be based on agreements between creditors and debtors. ECLAC is also clear that countries must demonstrate a desire to undertake sound fiscal management to avoid future debt challenges.

The recommendations posited in this study do not provide a panacea for the current Caribbean debt dilemma. However, it is hoped that the results of the empirical analyses, as well as the essential elements of ECLAC's proposed debt reduction strategy, would force the international community, including international financial institutions and development partners alike, to rethink and recalibrate, as it were, their current approach to financing the development of Caribbean economies. What is urgently needed is a meaningful modality which simultaneously addresses the nexus of challenges associated the region's high debt, constrained fiscal space and low growth.

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