THE CARIBBEAN EXPERIENCE WITH THE GLOBAL CRISIS

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I. INTRODUCTION

1. **Caribbean economies have been hit hard by the global crisis.**[2] Growth, tourist arrivals, and FDI have declined, fiscal positions have deteriorated, and the levels of debt and nonperforming loans (NPLs) have increased. Nonetheless, there were large differences across countries in the severity of the crisis and policy response. The paper seeks to understand these divergent experiences.

2. **The global crisis affected the Caribbean mostly through the services exports and FDI channels, while the generally high debt levels were the main constraint for countries to adopt expansionary fiscal policies.** This reflects these countries' high dependence on tourism and their strong links to advanced economies, which in contrast to past global economic crises, were hardest hit. The Caribbean countries that were more severely affected tended to experience larger fiscal deteriorations. The data indicate that fiscal stimulus had positive but moderate impact on growth in the Caribbean.

3. **The paper is organized as follows.** Section II summarizes the impact of the crisis on the region and discusses the near-term prospects. Section III seeks to explain the cross-country differences in the output impact of the crisis, and section IV the differences in authorities' policy responses, focusing on fiscal policy. Section V examines the effectiveness of fiscal stimulus. Section VI summarizes the results and provides policy recommendations.

II. THE IMPACT OF THE GLOBAL CRISIS AND PROSPECTS

4. **The negative impact of the global crisis on Caribbean countries continues despite the nascent global economic recovery**. World output growth declined from an average of around 4 percent during 2007-08 to a contraction of 0.6 percent in 2009.[3] Extraordinary levels of monetary and fiscal stimulus and inventory accumulation have helped support the

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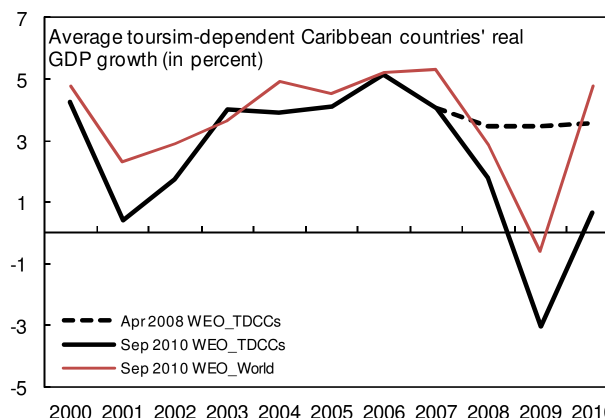
[1] We thank David J. Robinson for very helpful comments, Lulu Shui and Genevieve Lindow for excellent research assistance, and Garth Nicholls, Sumiko Ogawa, Roberto Perrelli, Ben Sutton, and Arina Viseth, for their help with country-specific questions. All errors are our own.

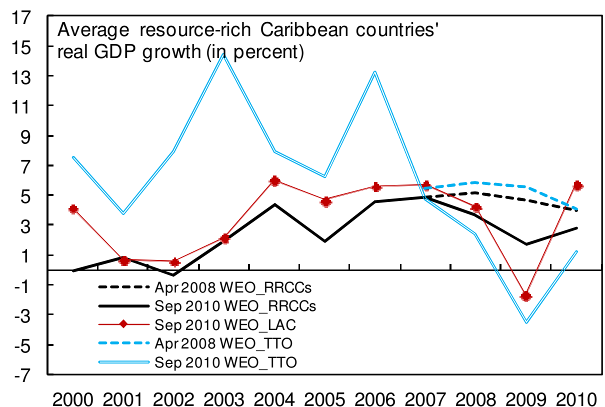
[2] The countries examined include The Bahamas (BHS), Barbados (BRB), Belize (BLZ), Guyana (GUY), Jamaica (JAM), Suriname (SUR), Trinidad and Tobago (TTO), and the countries of the Eastern Caribbean Currency Union: Antigua and Barbuda (ATG), Dominica (DMA), Grenada (GRD), St. Kitts and Nevis (KNA), St. Lucia (LCA), St. Vincent and the Grenadines (VCT).

[3] IMF (2010a).

global recovery, but the pace is uneven across advanced and emerging market economies. In most advanced economies, consumption and investment remain weak, and unemployment remains elevated as inventories return to normal levels and the fiscal stimulus is being slowly withdrawn. Growth in emerging economies has been spurred by the sharp turnaround in global trade, and some countries have benefited from the recovery in global commodity prices. Meanwhile, global financial conditions have largely stabilized but risks remain.



5. **Tourism-dependent Caribbean countries (TDCCs), which are particularly affected by advanced economy developments, have on average experienced the largest contraction in output.**[4] The average 2009 GDP growth for TDCCs is around 7½ percentage points lower than projected before the crisis in to the IMF's April 2008 World Economic Outlook (WEO). Tourist arrivals, which are highly dependent on employment conditions in the home country, declined by around 10 percent in 2009 relative to 2008. Romeu (forthcoming) estimates that a one percentage point increase in the home country's unemployment rate leads to a decline of approximately 4 percent in tourist arrivals from these countries. The fall in tourist arrivals has stabilized in the first half of 2010 for many of the TDCCs, and the October 2010 WEO projects growth to remain broadly flat for 2010.



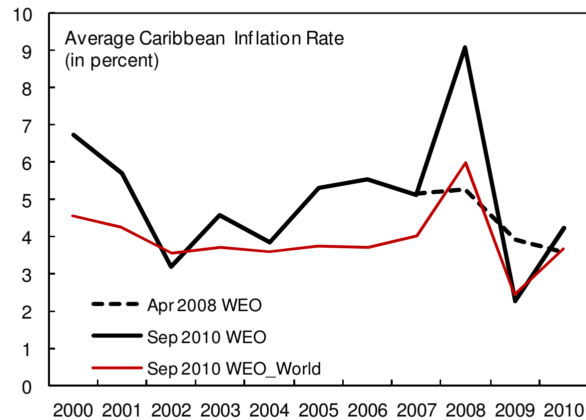
6. **The impact of the global crisis differed across resource-rich Caribbean countries (RRCCs).**[5] For these countries, the growth impact was somewhat smaller with average 2009 real GDP growth around 4½ percentage points lower than the pre-crisis projection.[6] Within the group of RRCCs, Trinidad and Tobago experienced the most dramatic contraction in output, due to its greater dependence on energy, and

[4] For the purposes of the analysis below, the tourism-dependent Caribbean countries are: The Bahamas, Barbados, Belize, Jamaica, and ECCU countries.

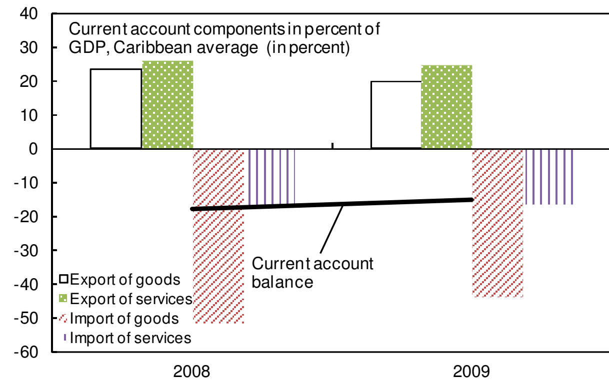
[5] For the purposes of the analysis below, the resource-rich Caribbean countries are: Guyana, Suriname, and Trinidad and Tobago.

growth in 2009 was 9 percentage points lower than the pre-crisis projection. Guyana and Suriname are recovering well on the back of higher commodity prices, but real GDP growth is expected to remain below trend in 2010. On the other hand, despite improvements in energy prices in 2010, the recovery in Trinidad and Tobago remains very weak, in particular in the non-energy sector.

7. **Inflation fell following the temporary spike in 2008.** The sharp rise in global commodity and food prices drove up inflation for the Caribbean region to over 9 percent in 2008, and inflation has receded quickly in 2009 owing to lower commodity prices and the severe contraction in the region's economic output. Inflation is expected to return in 2010 to the average of the past decade for most countries.



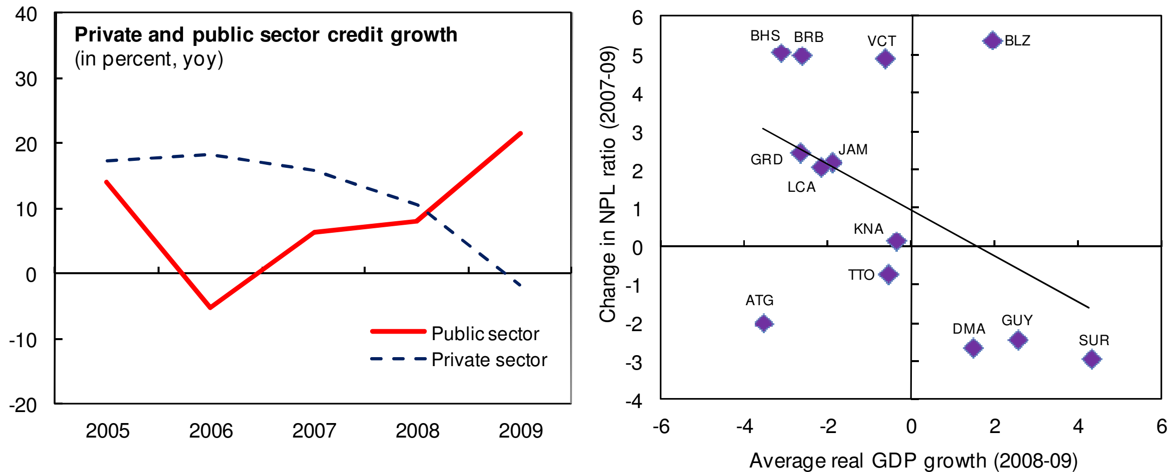
8. **The external current account deficit narrowed in most Caribbean countries as a result of the global crisis.** All Caribbean countries except Jamaica have relatively inflexible exchange rates which limited the scope for monetary stimulus. Exports contracted as the result of lower external demand, but the decline in imports, owing to weak domestic activity and lower oil prices, more than offset the fall in exports helping to narrow the simple average current account deficit by an average of 2½ percentage points (4½ percentage points excluding Trinidad and Tobago). Net foreign direct investment (FDI) to the region, traditionally the largest source of external financing, declined from an average of US$5.1 billion over 2007-2008 to US$2.9 billion in 2009, with particularly large contractions in Trinidad and Tobago, Barbados, and Jamaica. However, the region's total net international reserve position (excluding Trinidad and Tobago) remained stable at around US$14 billion (4.3 months of imports) helped by governments' external borrowing and the one-off Special Drawing Rights allocation by the IMF.[7] The region's current account deficit as a share of GDP for 2010 is expected to remain broadly the same as the 2009 level.



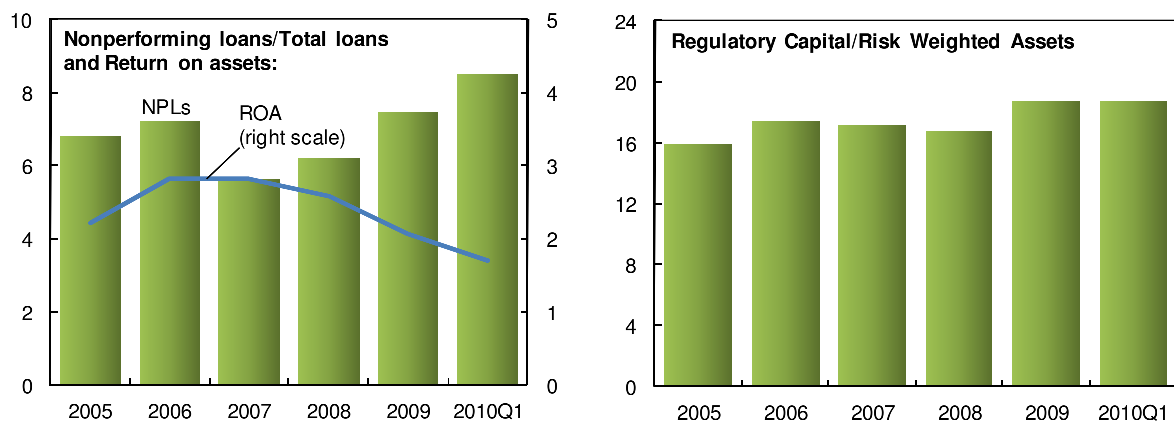
9. **As the crisis took hold, private sector credit growth stalled, and credit quality deteriorated.** After a number of years of rapid expansion, private sector credit growth came to a standstill while governments stepped up borrowing to help finance fiscal deficits. The

[7] Trinidad and Tobago's international reserves declined by around US$700 million owing to foreign exchange intervention by the Central Bank; Jamaica's international reserves also declined dramatically between the mid-2008 to mid-2009, but have since recovered somewhat.

region's economic contraction has led to significant increases in NPLs, and the degree of deterioration can be linked to the country's economic performance during the crisis (text chart). Heightened risks and the need to repair banks' balance sheets could be a drag on private sector credit in the near term and hinder the economic recovery.



10. **The banking system is stabilizing, but risks remain elevated.** The most recent data indicate that NPLs have continued to rise in 2010, albeit at a slower rate, with the Caribbean-wide simple average reaching around 8½ percent of total loans in the first quarter of 2010. NPLs have been concentrated in weaker indigenous banks. At the end of 2009, the average NPL ratio was around 9¼ percent for indigenous banks versus the average for all banks of around 7¾ percent. The rise in NPLs has led to declining bank profitability as banks write off and provision for bad loans, but profits from fees remain robust and helped sustain positive overall profit. Despite declining profits, the capital to risk-adjusted-assets ratio remains high at around 19 percent in 2010Q1. The robust level of capital is in part due to the banks' unwillingness to extend more credit to the private sector, while holding more domestic government securities, which have a zero risk rating.



11. **The collapse of the CL Financial Group and the Stanford Group, based in Trinidad and Tobago and Antigua and Barbuda respectively, compounded the impact of global economic crisis on the region.** CL Financial's assets (in 2007) were equivalent to 30 percent of the Caribbean region's GDP and its collapse has had spillover effects to all

13 Caribbean countries except for Jamaica. The immediate effect was the illiquidity of the Colonial Life Insurance Company (CLICO), British American Insurance (BAICO), and CLICO Investment Bank.[8] Rapid intervention by the Government of Trinidad and Tobago in January 2009 avoided contagion to the rest of the financial system.[9] Nonetheless, the collapse contributed to the decline in disposable income, weak private sector credit growth and the increase in NPLs, although the extent is difficult to quantify, while the ongoing delays in resolving the insurance liabilities increased uncertainty and further damaged consumer confidence. The resolution of the insurance companies will have substantial fiscal costs, ranging from 0.2 percent of GDP in Belize to as high as 11 percent in Trinidad and Tobago[10] and 17 percent in the ECCU.[11] The analysis in Section III indicates that exposure to CLICO/BAICO is positively correlated to decline in growth. The collapse of the Stanford Group affected only Antigua and Barbuda where it had a disproportionately larger economic impact.

12. **The region's rising debt is a concern.** While there are important disparities in the level of government debt across the region, ranging from St. Kitts and Nevis with more than 180 percent of GDP to Suriname at around 20 percent, the pace of the increase during the crisis, average of around 10 percent between 2007 and 2009, remains a key concern. Rating agencies, which have increased vigilance in the light of heightened global sovereign risks, have raised concerns about possible unfavorable debt dynamics for the region. A recent Moody's report noted that rating downgrades could result for some Caribbean countries if there is additional deterioration in government debt indicators as a result of poor growth prospects or of the inability to undertake substantive fiscal adjustments.[12]

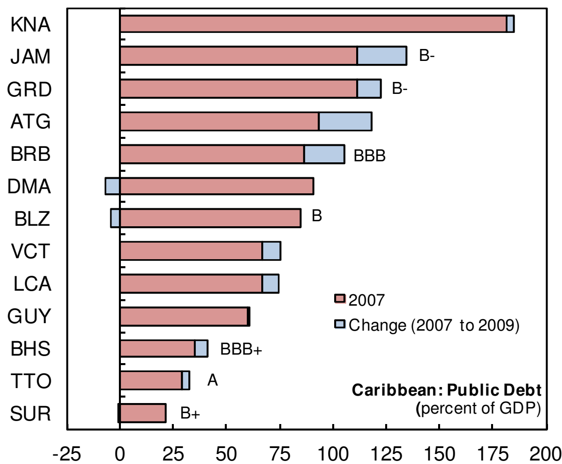
[8] CL Financial's insurance subsidiaries offered deposit-like annuity products with interest rates that were substantially higher than the market rates, which financed related party projects and real estate developments.

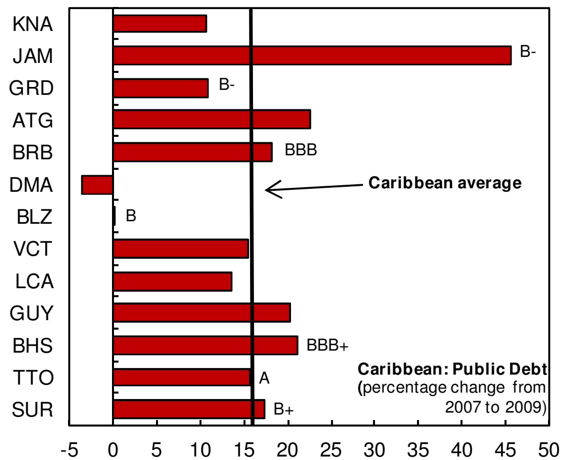
[9] The Trinidad and Tobago government has since injected a total of TT$5 billion into CLICO (Trinidad), TT$100 million into BAICO (Trinidad), and TT$1.9 billion to CLICO Investment Bank (totaling 5.4 percent of 2009/10 GDP). The government also entered into a Memorandum of Understanding with CL Financial in January 2009 to "protect the interest of depositors, policy holders, and creditors." The government recently announced a rescheduling plan on the remaining CLICO/BAICO liabilities.

[10] The Trinidad and Tobago authorities intend to cover part of these costs through returns from an investment scheme.

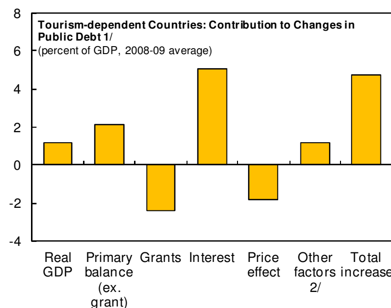
[11] This figure represents total liabilities.

[12] Moody's (2010).

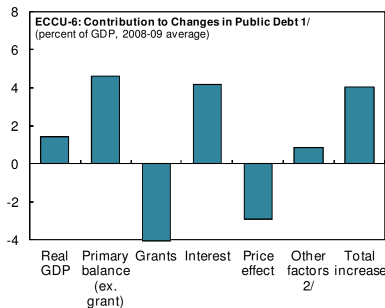




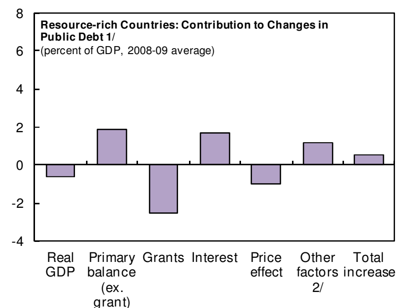
13. **High primary fiscal deficits and interest costs are key drivers of recent debt dynamics.** Among the Caribbean countries, the TDCCs (including the ECCU countries) have experienced the largest increase in government debt over the crisis period (2008-2009) at an average of over 4 percentage points of GDP per year. The charts below decomposes the recent increases in debt using information from the country's fiscal accounts. While the contraction in the countries' real GDP reduced the denominator of the debt-to-GDP ratio, the contribution of this factor is around 1½ percent of GDP. Meanwhile, the recession-induced primary fiscal deficits contributed by over 2 percent of GDP for non-ECCU TDCCs and nearly 5 percent for ECCU countries. Above all, the large interest costs as the result of the existing debt stock contributed the most at around 4-6 percent of GDP. The average increase in debt for RRCCs is only around ½ percent of GDP. However, the average masks important cross-country differences. On the one hand, the primary fiscal deficit for Guyana and Suriname was largely offset by grants. In the case of Trinidad and Tobago, the sharp deterioation in the fiscal performance from declines in energy prices and government bailout of CLICO and CLICO Investment Bank together with a large decline in the nominal GDP resulted in a sizable increase in the debt-to-GDP ratio in 2009.[13]



1/ Tourism-dependent countries include Antigua & Barbuda, Bahamas, Barbados, Belize, Dominica, Grenada, Jamaica, St. Kitts & Nevis, St. Lucia, and St. Vincent & the Grenadines.
2/ Events include those that do not appear in the fiscal accounts but modify the public debt.



1/ ECCU-6 includes: Antigua & Barbuda, Dominica, Grenada, St. Kitts & Nevis, St. Lucia, and St. Vincent & the Grenadines.
2/ Events include those that do not appear in the fiscal accounts but modify the public debt.



1/ Resource-rich countries include Guyana, Suriname, and Trinidad & Tobago.
2/ Events include those that do not appear in the fiscal accounts but modify the public debt.

[13]Nominal GDP declined by 27 percent in 2009 as a result of a sharp decline in the GDP deflator.

III. Explaining Cross-Country Differences in the Output Impact

14. **Like in the rest of the world, there were large cross-country differences in the crisis' impact on Caribbean countries' output.** We use the difference between 2009 growth as projected before the outbreak of the crisis in the April 2008 WEO, and the actual growth as the measure of the output impact of the crisis. Similar measures have been used in other studies of the output impact of the crisis (e.g., Berkmen et al, 2009). An alternative measure of the impact of the global crisis on an economy is the decline in real fiscal revenue from 2008 to 2009. Figure 3.1 illustrates the positive correlation of these two measures, which is estimated to be 0.6. Actual growth rates are lower than forecasts for all the Caribbean countries (Table 3.1). As expected, there are large cross-country variations between actual and forecast growth, our proxy for the output impact of the crisis. In particular, the output impact ranges from less than three percent for Guyana, Belize, and Suriname (the only countries with positive 2009 growth) to more than ten percent for Grenada and Antigua and Barbuda. On average, actual 2009 growth is 7 percent lower than projected in April 2008.

Figure 3.1: Estimated Output Impact and Revenue Decline

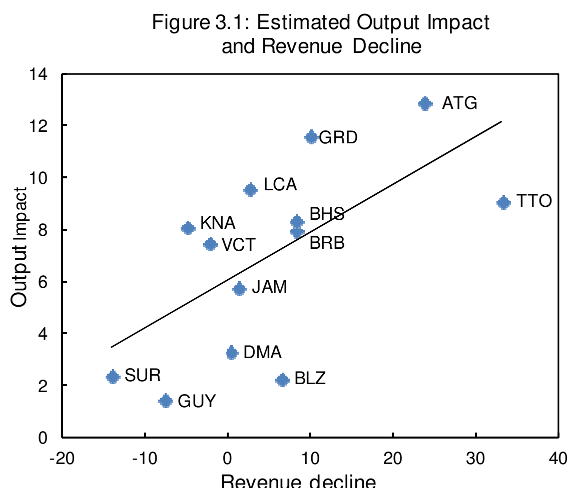
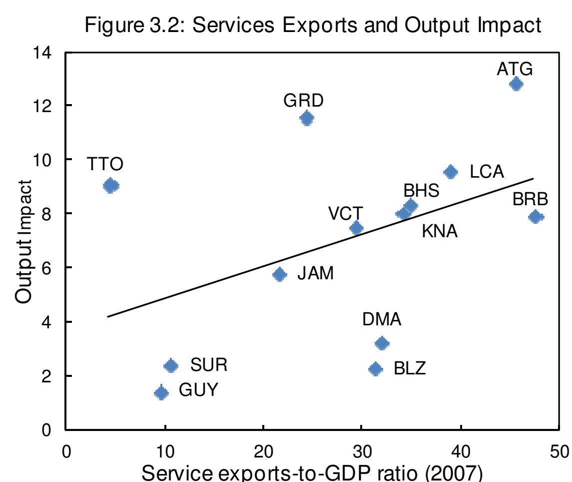


Table 3.1 Forecast and actual 2009 GDP growth

	Forecasts	Actual	Difference
Antigua and Barbuda	4.0	-8.9	12.9
Grenada	4.0	-7.7	11.7
Barbados	2.5	-5.5	8.0
St. Kitts and Nevis	2.7	-5.5	8.1
St. Lucia	4.4	-5.2	9.6
Bahamas. The	3.8	-4.6	8.4
Trinidad and Tobago	5.6	-3.5	9.1
Jamaica	2.8	-3.0	5.8
St. Vincent and the Grenadines	4.9	-2.7	7.5
Dominica	3.0	-0.3	3.3
Belize	2.3	0.0	2.3
Guyana	4.5	3.0	1.5
Suriname	5.5	3.1	2.4

15. **The services exports-to-GDP ratio is a significant factor explaining the differences in output impact across the region.** Countries with higher services export-to-GDP ratio before the crisis (2007) also had a larger negative output impact in 2009 (Figure 3.2). This ratio ranges from less than ten percent for the three commodity producers to more than 40 percent for Antigua and Barbuda and Barbados, with a median value of about 30 percent. Excluding Trinidad and Tobago, which also has the lowest ratio (4 percent) and accounted for 40 percent of the region's total 2007-09 GDP, the ratio could by itself explain 40 percent of the variation in the output impact (Table 3.2). This is not surprising given that the tourism sector was severely hit by the global crisis. The

Figure 3.2: Services Exports and Output Impact



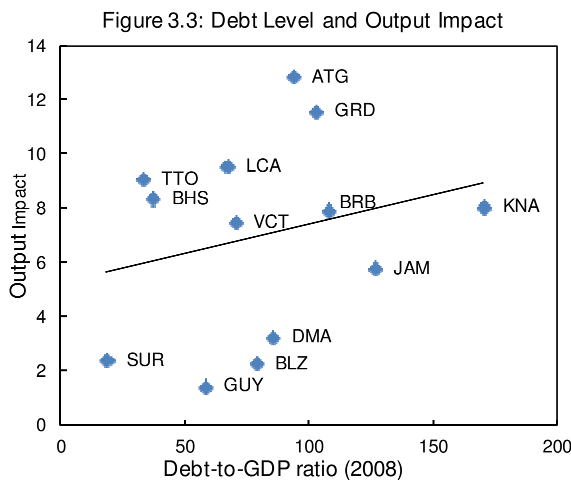
finding here is also consistent with a recent study by the IMF (2010b) which found that falling tourist arrivals from the OECD contributed 2-2½ percentage points of the roughly 4 percent output decline observed in 2009 among tourism-dependent Caribbean countries. On the other hand, reliance on goods exports, which is small in most countries, is not positively correlated with the growth impact.

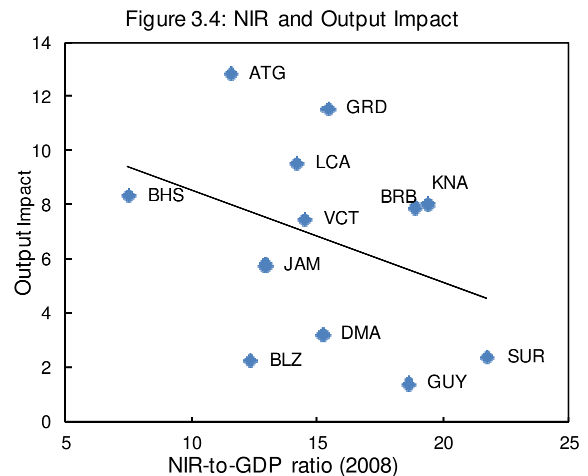
Table 3.2. Services Exports and Output Impact

Dep. Variable: Output Impact (2009)	(1)	(2)
Sample	w/ Trinidad	w/o Trinidad
Services exports/GDP (2007)	11.910	19.969***
	(7.982)	(5.347)
R-squared	0.19	0.40
No. of obs.	13	12

Note. *, **, and *** represent significance at 10, 5, and 1% respectively.

16. **There is some evidence that the output impact tends to be larger for countries with higher debt-to-GDP ratios and lower net international reserves.** As the next section shows, countries with lower debt ratios had more space to implement fiscal stimulus (or less need of fiscal adjustment), thus mitigating the growth impact of the global crisis. The correlation between the debt-to-GDP ratio in 2008 and the output impact however is low at only 0.25 (Figure 3.3). There is also some evidence that countries with a large ratio of net international reserves (NIR) in 2008 also had a smaller output impact when excluding Trinidad and Tobago, which has a substantially higher NIR-to-GDP ratio in part due to its mineral wealth fund but a sharp drop in output. The correlation is however also low at 0.36 (Figure 3.4).





17. **Countries with a heavy reliance on FDI were hit harder.** Caribbean countries have attracted large FDI, with FDI-to-GDP ratio averaging 15 percent during 2007/2008 (Table 3.3). The literature generally finds FDI to be a more desirable form of capital inflows. For example, Frankel and Rose (1996) found that a low ratio of FDI to debt is consistently associated with a high likelihood of a currency crash. This is because FDI inflows are less volatile (due to its high fixed costs) compared with other capital inflows, thus reducing the likelihood of a large reversal of capital flows during adverse economic situations, which could help trigger or deepen a currency crisis. However, as Figure 3.5 shows that during the global crisis the Caribbean countries that more heavily relied on FDI inflows before the crisis also experienced larger growth decline, reflecting the difficult economic conditions in the FDI source countries (advanced economies) and reduced expectations for tourism-related projects.[14] Excluding Trinidad and Tobago, the reliance on FDI and service exports could explain two-thirds of the variations in output impact (Table 3.4). In contrast, portfolio inflows, which averaged only 0.5 percent of GDP over 2007-08, are not an important factor.

Table 3.3 FDI-to-GDP ratio (average over 2007/08)

Country	FDI-to-GDP ratio
Suriname	5.7
Barbados	6.0
Trinidad and Tobago	7.1
Jamaica	9.0
Guyana	9.1
Bahamas, The	10.5
Belize	12.5
Dominica	16.0
St. Vincent and the Grenadines	21.1
St. Lucia	21.8
Antigua and Barbuda	21.8
Grenada	23.0
St. Kitts and Nevis	28.7

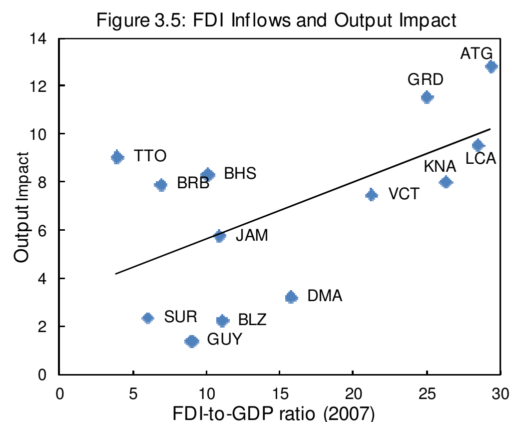


Table 3.4. FDI Inflows and Output Impact

Dep. Variable: Growth Impact (2009)	(1)	(2)	(3)
Sample	w/ Trinidad	w/o Trinidad	w/o Trinidad
FDI/GDP (2007)	23.635**	30.886***	23.712**
	(9.543)	(8.679)	(8.861)
Service exports/GDP (2007)			12.529**
			(5.347)
R-squared	0.35	0.53	0.66
No. of obs.	13	12	12

Note. *, **, and *** represent significance at 10, 5, and 1% respectively.

[14] In addition, there has been a greater reliance on villa projects in which sunk costs are lower than in hotel projects.

18. **The impact of financial conditions on output loss is mixed.** Countries with higher exposure to CLICO and BAICO also had larger output impact (Figure 3.6), with a correlation of 0.45.[15] One channel that CLICO/BAICO exposure could affect output is through wealth: policyholders may expect some loss on their CLICO/BAICO deposit and thus reduce consumption. The CLICO/BAICO exposure could also be a proxy on some other variables that directly affect growth (e.g., the strength of financial sector supervision). Other financial sector indicators, however, do not seem to have been an important factor in explaining the severity of the growth impact. Although both leverage in the banking sector (measured by the credit-to-deposit ratio) and the (real) credit growth before the outbreak of the crisis are positively correlated with the growth impact (Figures 3.7 and 3.8), the correlations are low, at 0.2 and 0.1, respectively. The NPL ratio before the crisis is negatively related to the subsequent output impact of the crisis.

Figure 3.6: Exposure to CLICO/BAICO and Output Impact

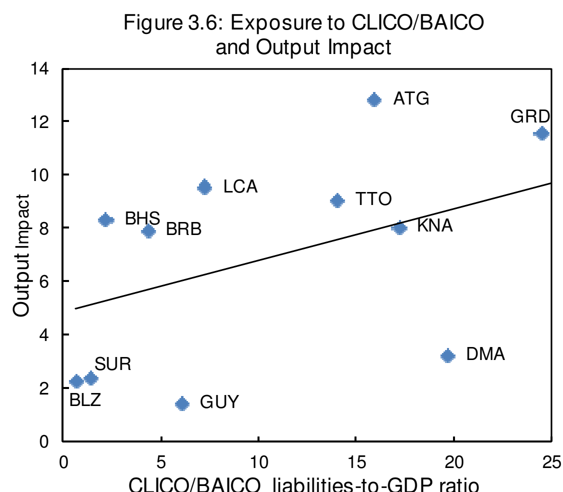


Figure 3.7: Leverage and Output Impact

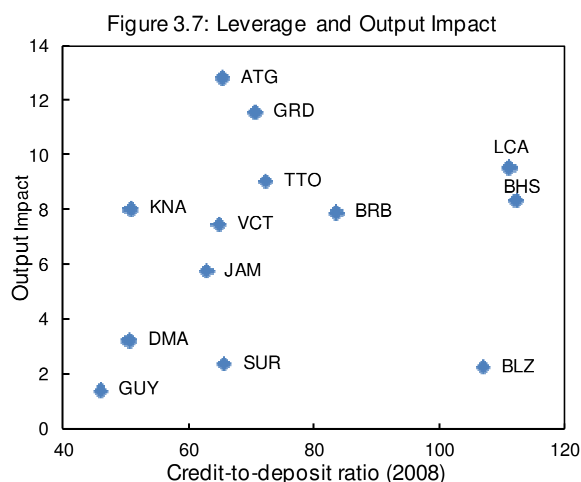
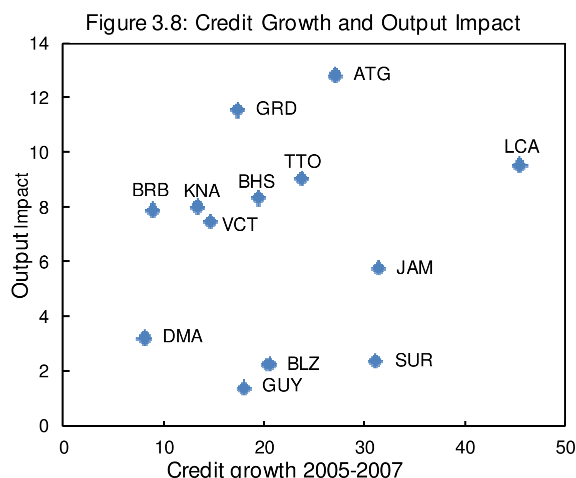


Figure 3.8: Credit Growth and Output Impact

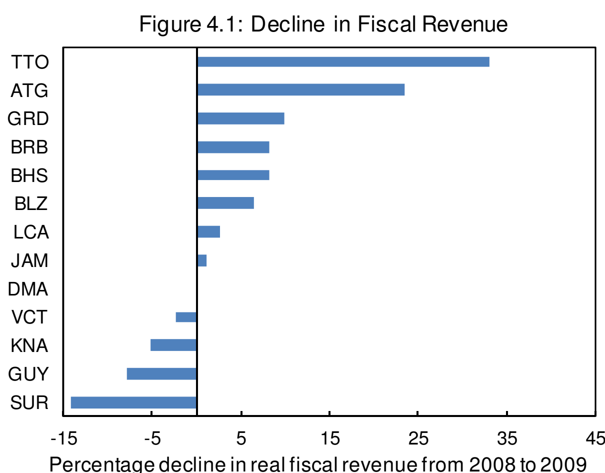


[15] CLICO/BAICO liabilities-to-GDP ratio data are from 2008 for Trinidad and Tobago and the ECCU countries (except for Dominica where the data are from March 2010) and 2009 for other countries. For Barbados, the data include only exposure of residents.

IV. Explaining Cross-Country Differences In Policy Responses

19. **Most countries in the region had limited scope for countercyclical macroeconomic policies in response to the global economic downturn due to high debt levels.** We focus on fiscal policy because the relatively inflexible exchange rates in most Caribbean countries constrained monetary policy options. However, the high debt levels and generally narrow reserve buffers in most countries present constraints to expansionary fiscal policies. Debt-to-GDP ratios averaged 80 percent in 2008, with the ratio for most countries above 60 percent. Even in cases where an expansionary policy would not jeopardize debt sustainability, a deterioration in fiscal revenue could require a tightening of macroeconomic policies in order to sustain the exchange rate—especially given external financing constraints. As Figure 4.1 indicates, most countries had revenue declines in 2009.[16]

Figure 4.1: Decline in Fiscal Revenue



20. **Nearly all countries experienced a weakening in their fiscal balance, but only some were in a position to apply fiscal stimulus.** Fiscal balances deteriorated by 3¾ percent of GDP on average for the region in 2009 (Table 4.1), but the decline is largely on account of a cyclical reduction in revenue. We measures the fiscal impulse as the increase in the cyclically-adjusted primary deficit in percent of GDP from 2008 to 2009, where revenue is adjusted for the output gap and commodity revenue is adjusted for commodity producing countries.[17]

Table 4.1. Central Government Balance
(In percent of GDP)

	2006	2007	2008	2009
Antigua and Barbuda	-8.5	-6.4	-6.1	-19.6
Bahamas, The	-1.5	-2.4	-2.0	-4.9
Barbados	-2.8	-5.1	-5.5	-7.4
Belize	-3.9	-0.7	0.7	-1.7
Dominica	3.7	2.3	0.9	0.9
Grenada	0.0	0.0	0.0	0.0
Guyana	-14.4	-7.7	-8.0	-7.8
Jamaica	-4.5	-4.0	-6.5	-10.1
St. Kitts and Nevis	-5.0	-4.8	-5.0	-3.1
St. Lucia	-6.2	-0.8	-1.1	-6.1
St. Vincent and the Grenadines	-3.9	-4.0	-1.7	-3.6
Suriname	-1.1	2.2	2.0	-1.6
Trinidad and Tobago	6.7	3.9	7.1	-7.3
Caribbean average	**-3.1**	**-2.0**	**-1.8**	**-5.8**

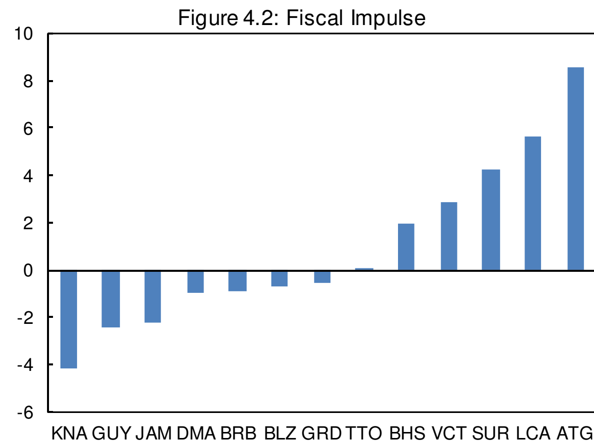
Sources: National authorities; and Fund staff calculations.

21. **There was little fiscal stimulus in most Caribbean countries.** The fiscal impulse averaged only 0.9 percent of GDP in 2009, and there was a fiscal consolidation in about half of the Caribbean countries (Figure 4.2). There are large cross-country variations. For example, using our measure, fiscal stimulus ranged from minus 4 percent of GDP for St. Kitts and Nevis to 8½ percent of GDP for Antigua and Barbuda. The large stimulus in

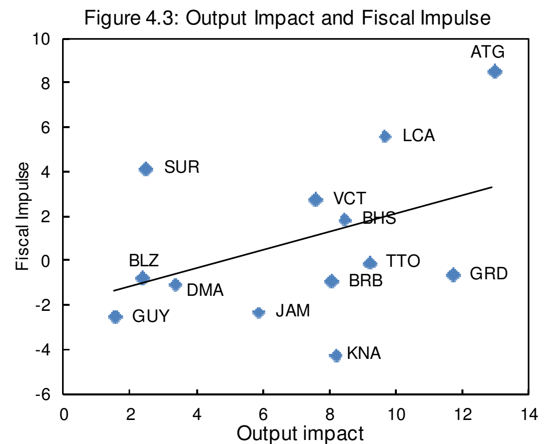
[16] The large increase in revenue in Suriname in 2009 partly reflects a delayed 2008 dividend payment from the state oil company and a one-off transfer of central bank profits.

[17] We essentially assume that all changes of commodity revenue from 2008 to 2009 are due to cyclical price or output movements.

Antigua and Barbuda was partly the result of election-related expenditures and lower revenue following the collapse of the Stanford Financial Group. The large increase in expenditure in Suriname was partly driven by large public sector wage increases (wage expenditure increased by 28 percent) that were part of the public sector wage reforms that would likely have been implemented without the outbreak of the crisis. While the high negative stimulus in St. Kitts and Nevis was partly the result of some one-off revenue measures (as well as delayed 2008 revenue and higher grants) that were not intended as policy responses to the global crisis.



22. There is some evidence that harder hit countries implemented larger fiscal impulse (or smaller consolidation). In particular, the size of impulse is positively correlated with the size of the growth impact (Figure 4.3) with a correlation 0.4. The correlation is 0.58 if we exclude Suriname. Because the size of the growth impact also depends on the size of impulse, there is an endogeneity problem. This however is essentially a problem of measurement error in the growth impact, as the proper measure would be the growth impact without any fiscal policy responses. Since measurement errors in explanatory variables will bias coefficients toward zero (so-called "attenuation"), the finding of a positive and significant coefficient on output impact provides valid evidence that harder hit countries responded more forcefully.



23. As might be expected, countries with lower debt-to-GDP ratios implemented greater fiscal stimulus or smaller consolidation (Figure 4.4). Debt-to-GDP ratios in 2008 explain about 20 percent of the variation of our measures of fiscal impulse (Table 4.1). Debt ratios together with growth impact could explain half of the variations of the size of our measure of fiscal stimulus.

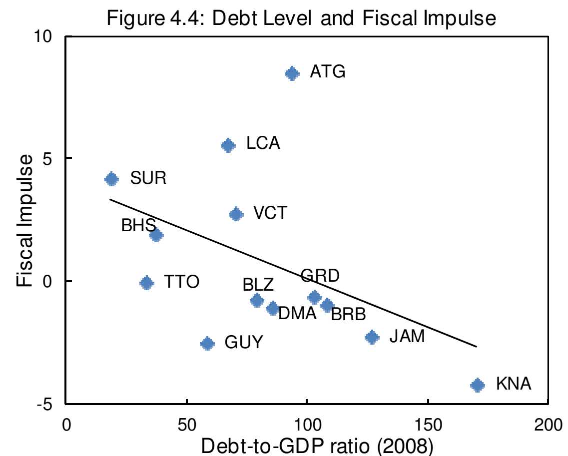


Table 4.2 Determinants of Fiscal Impulse

Dep. Variable: fiscal impulse (2009)	(1)	(2)
Debt/GDP (2008)	-0.039**	-0.052**
	(0.014)	(0.019)
Growth Impact		0.553*
		(0.284)
R-squared	0.20	0.50
No. of obs.	13	13

Note. #, *, and ** represent significance at 15, 10, and 5% respectively.

24. **Other variables studied do not seem to have an impact on the magnitude of fiscal stimulus as one might expect.** These include net international reserves (correlation -0.2) and NPL ratio (correlation 0.4).

V. How Effective was Fiscal Stimulus?

25. **The impact of fiscal stimulus on growth is likely to be small for Caribbean economies which are small and highly open.** Ilzetzki et al (2009) find that a 1 percent increase in government expenditure will increase GDP by 0.79% in developing countries on average (cumulative long-run impact), but the impact is much smaller for very open economies—the impact peaked around 0.3 percent in one year but is close to zero in the long run. They also find that in highly-indebted countries, the output response to increases in government spending is short-lived and much less persistent than in countries with a low debt-to-GDP ratio.[18] Given the high degree of openness and indebtedness of most of Caribbean countries, the multiplier is expected to be small.

26. **We used historical data to calculate the impact of fiscal stimulus.** The preferred method would be estimate the hypothetical output without the policy responses, and compare

[18] Ilzetzki et al. (2009) also find that the multiplier is larger for countries with fixed exchange rate.

it with the actual output to derive the effect of policy responses.[19] However, this is not feasible without a general equilibrium model of the economy. Instead, we use data over the past decade (1999-2008) to analyze how effective recent fiscal stimulus has been. We use the growth of real government expenditure, where real expenditure is calculated using nominal expenditure deflated by inflation, as a proxy for fiscal stimulus. We estimate a panel VAR using annual data of growth of real GDP and real government expenditure, and controlling for the U.S. unemployment rate which we use as a measure of global economic conditions.[20] IMF (2010b) finds that tourist arrivals in the Caribbean are highly driven by unemployment in advanced economies, particularly in the United States. As a robustness check, we also used weighted unemployment of the United States, Canada, and Euro area (weights from Romeu and Wolfe (2010)), and the results are broadly similar.

27. **The results show that fiscal stimulus has a positive but small impact on growth.** As a calculation of the impulse response function show (Figure 5.1, bottom chart on the left), a 10.5 percent increase in real government expenditure leads to an accumulated increase of output by 3.7 percent, although most of the impact happens in the first year. In other words, a 1 percent increase in government expenditure leads to an accumulated 0.35 percent increase in output, including 0.24 percent increase in the current year.[21] As a robustness check, we conduct the same exercise but only for tourism-dependent Caribbean countries (excluding Guyana, Suriname, and Trinidad and Tobago). The results are similar (Figure 5.2) but the effect is smaller and only significant in the current year. In particular, a 1 percent increase in government expenditure will only lead to an accumulated output increase of 0.14 percent (0.23 percent in the first year). Note that the three commodity producers are also among the Caribbean countries with the lowest debt-to-GDP ratio. The finding here that they have larger fiscal multiplier is consistent with the finding of Ilzetzki et al. (2009).

[19] Blinder and Zandi (2010) use this method to estimate the effect of U.S. fiscal stimulus during the crisis.

[20] Quarterly data are not available for many sample countries.

[21] The order of VAR is output growth and real expenditure growth. Arguably government expenditure (which is usually budgeted in the year before) will have a contemporaneous effect on growth but not vice versa.

Figure 5.1. Accumulated Response to Cholesky One S.D. Innovations ± 2 S.E.

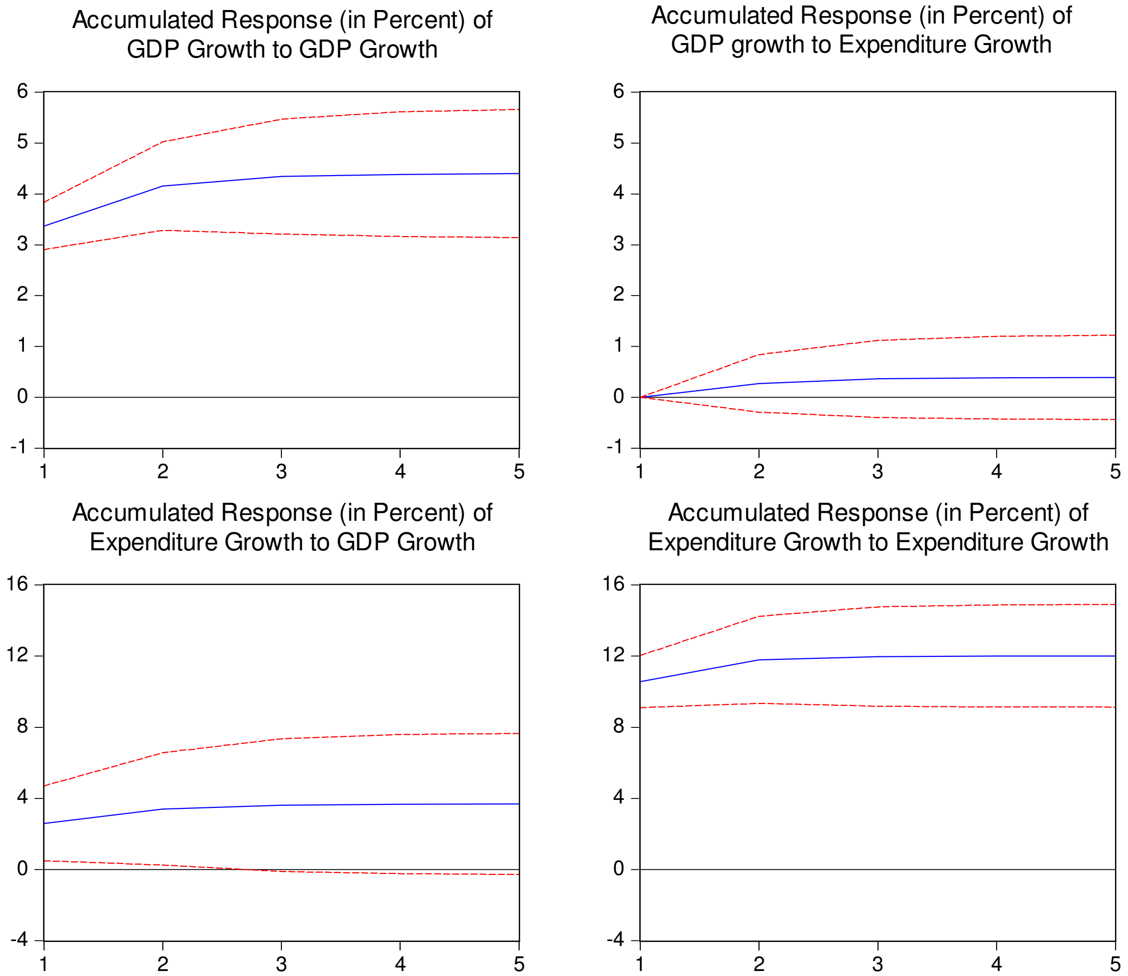
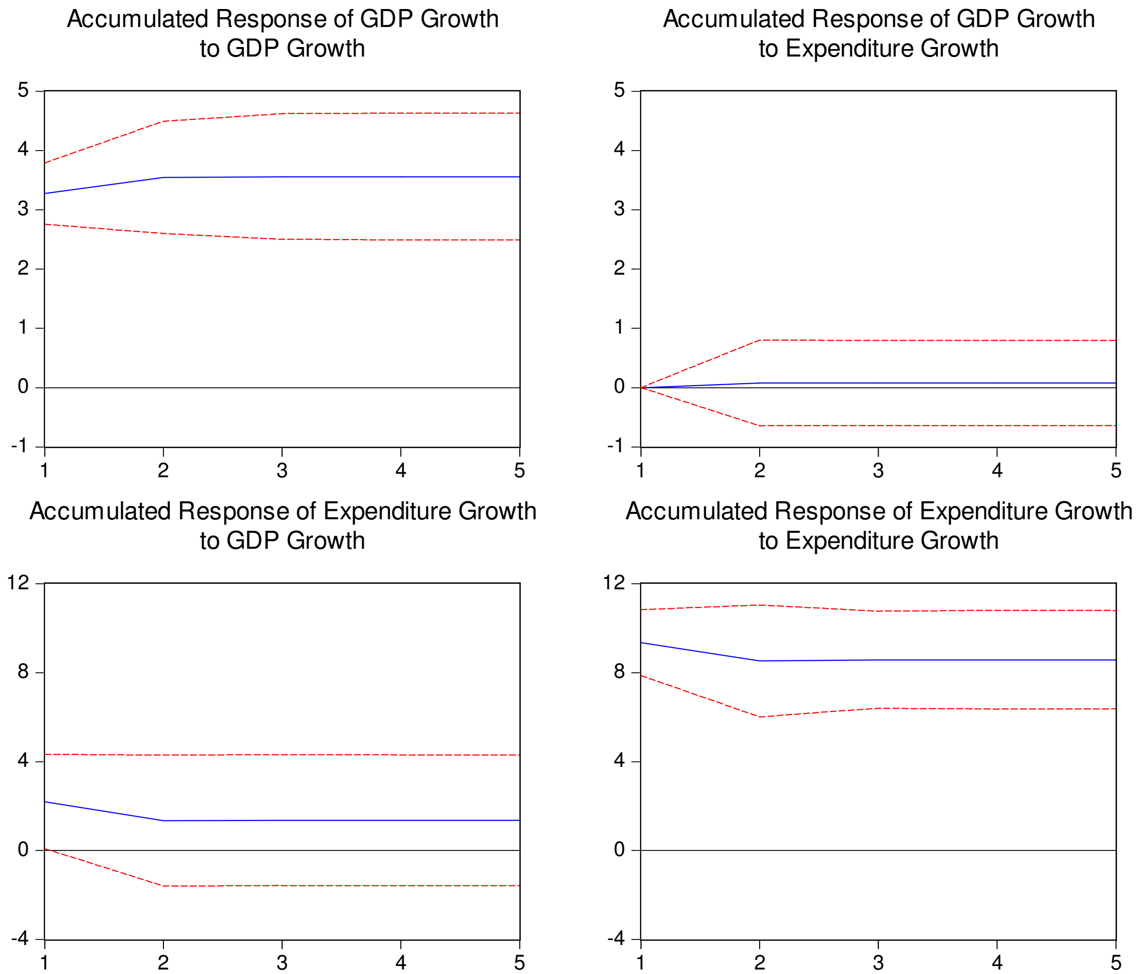
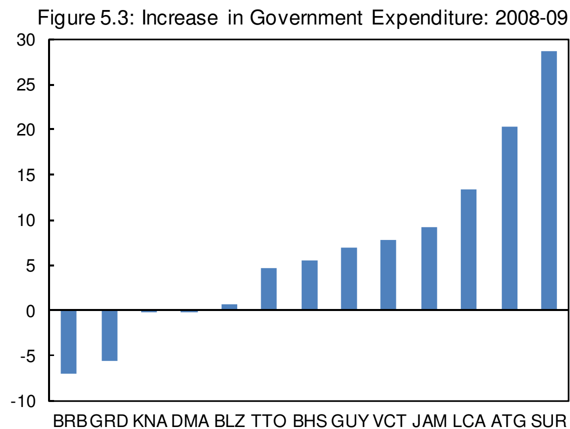
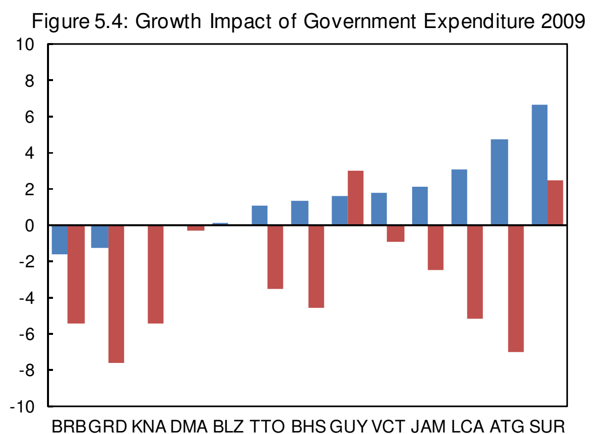


Figure 5.2. Accumulated Response to Cholesky One S.D. Innovations ± 2 S.E. (TDCCs)



28. **The fiscal response of most Caribbean countries moderately supported growth in 2009.** All but two countries had an increase in real government expenditure in 2009 (Figure 5.3) although there were large cross-country variations in the size of the expenditure increase. Using a first-year impact multiplier of 0.23, Figure 5.4 illustrates the output impact of the expenditure increase. The impact averaged 1.5 percent with a median value of 1.3 percent (left bar, right bar represents actual 2009 growth). Of course the results should be treated with many caveats.





VI. Concluding Remarks

29. **Examining why some Caribbean countries were harder hit by the global crisis than others is valuable for understanding this difficult experience and in drawing policy lessons.** It has been seen that differences in the output impact, as proxied by the difference between the outturn for growth and the April 2008 WEO projection, can to a large degree be attributed to higher shares of services exports in GDP, higher debt ratios, lower international reserves, a heavy reliance on FDI, and exposure to CLICO. By contrast, pre-crisis banking sector conditions, and in particular NPL ratios, do not appear to have much explanatory power, while the output decline does help explain the increase in NPLs during the crisis. An important caveat is that the small sample size limits the ability to identify economic causality.

30. **The burden of the policy response to the crisis fell on fiscal rather than monetary policy, in light of relatively inflexible exchange rates in much of the region.** However, fiscal policy itself was constrained by high debt levels and large revenue declines and less than half of the countries put in place some fiscal stimulus. There is some evidence that harder hit countries put in place a stronger stimulus or undertook less fiscal consolidation in response to a fall in revenues. Official reserves and NPL ratios do not have much explanatory power.

31. **It was found that fiscal stimulus, had a positive but small impact on growth.** The three commodity exporters had larger fiscal multipliers. Both findings are in line with the theoretical prediction that fiscal stimulus is less effective in open economies.

32. **These findings underscore the key policy challenges facing regional authorities.** In the near term, the emphasis in most countries should appropriately be on supporting recovery to the extent possible: growth is projected to be weaker in countries with higher debt burdens.

33. **Risks to the region are on the downside.** In addition to the risks of policy, the region is highly exposed to advanced country labor conditions, which could falter. With no space to adopt countercyclical policies, the region would have to adjust to a more negative scenario by utilizing any fiscal space to protect the poorest households. Placing and

maintaining public debt on a firmly declining path in the medium term is critical to breaking from the current low-growth, high-debt trap.

34. **Credit in the Caribbean region has been slow to recover, due to weak credit demand, though in some cases damaged bank balance sheets have been a factor.** In addition, in some countries large government financing needs may be crowding out credit to the private sector (The Bahamas, Barbados, and Jamaica) once the recovery is underway. Moreover, an increase in NPLs resulting from the downturn, coupled with weak oversight and low provisioning ratios could pose additional risks to the system. Supervisory authorities need to keep close oversight and stand ready to intervene if needed.

35. **Financial systems remain vulnerable to contagion shocks by cross-border financial conglomerates.** Contingent liabilities associated with the collapse of the Trinidad and Tobago-based CL Financial Group remain a key fiscal risk. The experience exposed weaknesses in non-bank supervision particularly on capital requirements, related-party exposures, and statutory fund requirements that the region's authorities are seeking to address now. Legislative proposals to strengthen and harmonize supervision and regulation across regional partners must be immediately adopted to improve oversight and mitigate fiscal risks. Consideration should be given to the establishment of a single regulatory umbrella that brings all nonbank financial institutions under one domain as well as greater cross-border regional supervisory cooperation.

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