Eastern Caribbean Currency Union: Selected Issues

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EASTERN CARIBBEAN CURRENCY UNION (ECCU)

Selected Issues

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Approved by Western Hemisphere Department

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I. GROWTH IN THE ECCU: WHAT WENT WRONG AND CAN IT BE FIXED[1]

A. Introduction

1.   **Growth in the ECCU countries has been on a declining trend since the 1990s, with the current global slowdown exacerbating this trend**. The ECCU region has been buffeted by a series of adverse exogenous shocks over time, including the erosion of trade preferences; the decline in official foreign assistance; recessions in the developed countries, the main source of tourism and FDI for the region; and frequent natural disasters. The recent global slowdown has exacerbated the already declining trend in growth. Growth has declined from an average of 6 percent in the 1980s to just over 2 percent since 2000, with most ECCU countries reporting negative growth in 2008–09. At the same time, the relaxation of the fiscal stance, partly reflecting accommodation to these shocks, has led to a rapid build-up of public debt in the region.

2.   **The objective of this chapter is to analyze the growth performance of the ECCU countries since independence and the policy challenges they face to ensure sustained growth in the period ahead.[2]** Using both a growth accounting framework and regression analysis, we investigate the role tourism has played and the extent to which tourism-led growth remains a viable strategy for future. We also focus on the extent to which high and rising debt levels have hindered growth.

3.   **The chapter is organized as follows.** Section B presents some stylized facts about growth in the ECCU since the 1970s. Section C uses the growth accounting framework to assess the extent to which growth has been driven by factor accumulation versus gains in total factor productivity (TFP). Section D reviews the determinants of long-term growth using regression analysis. In addition to the standard variables considered in the growth literature, we augment an otherwise empirical growth equation by adding tourism proxies to determine its importance in explaining growth. Section E looks at the impact of high debt levels on growth in the ECCU countries. Section F draws some policy conclusions based on the results of the study.

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[1] Prepared by N. Thacker, S. Acevedo, J. Kang, R. Perrelli and M. Tashu.
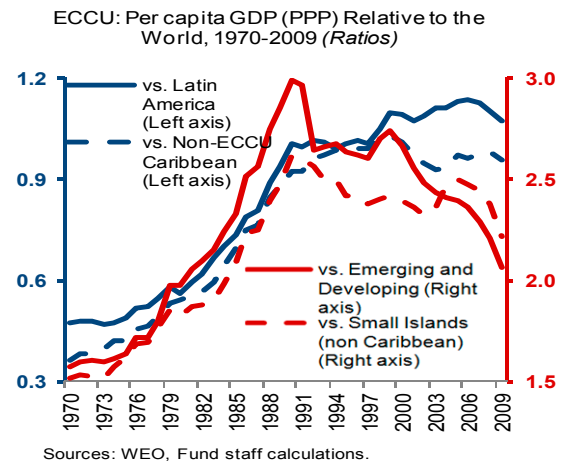
[2] Mostly in the early seventies.

B.   ECCU's Growth Performance in an International Perspective

4.   **After growing faster than the rest of the world in the early years after independence, the ECCU countries have experienced a significant decline in growth since the 1990s**. Growth averaged about 4¼ percent in the ECCU countries during 1970-2009, compared with 3.8 percent for small island (SI) countries and 3.4 percent in the other Caribbean countries in the region.[3] However, there is a marked slowdown since the 1990s, reflecting largely the structural shifts in production caused by the dismantling of trade preferences with Europe (largely for bananas and sugar), a decline in aid inflow and exogenous shocks. At the same time, countries which made an early switch to tourism, for example, Antigua and Barbuda and St. Kitts and Nevis, were able to offset, in part, the impact of the decline in the agriculture sector. In addition, the development of the offshore financial sector in the late 1990s seems to have contributed positively to growth, most notably in St. Kitts and Nevis, Antigua and Barbuda, and St Vincent and the Grenadines. More recently, the global financial and economic crisis has led to a sharp reduction in tourism, remittances and FDI, causing a severe negative effect on growth in the region.

ECCU:Real GDP Growth (PPP),1970-2009
(In percent)

Sources: WEO, Fund staff calculations.
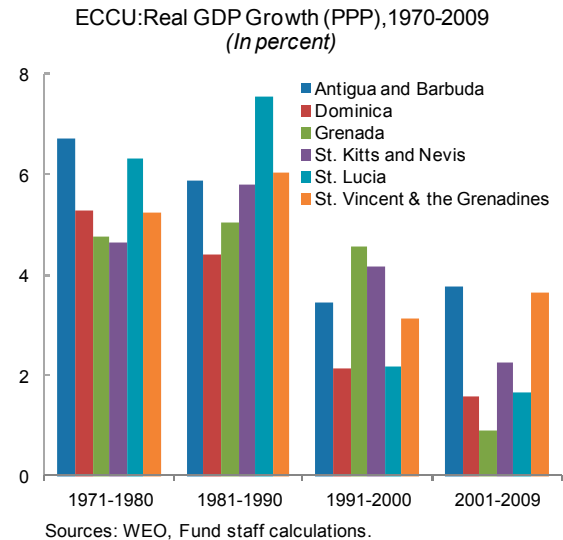
5.   **The pace of growth in real per capita GDP has also slowed since the 1990s, falling below the world average**. While the per capita income level has increased almost four-fold in the ECCU countries, and the average per capita GDP of the ECCU countries is higher than the average for all Small Islands (SI) and above the average for emerging and developing countries, the drop in the growth rate of per capita GDP since the 1990s has been especially sharp compared to developing and emerging market economies. Within the ECCU group, Grenada and Dominica are at the lower end while

ECCU: Per capita GDP (PPP) Relative to the World, 1970-2009 *(Ratios)*

Sources: WEO, Fund staff calculations.

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[3] For the purpose of this chapter, SI economies comprise 23 other small islands in the rest of the world. These are: Bermuda, Cape Verde, Comoros, Cuba, Cyprus, Dominican Republic, Fiji, Haiti, Kiribati, Maldives, Malta, Marshall Islands, Mauritius, Federated States of Micronesia, Palau, Papua New Guinea, Samoa, São Tomé and Príncipe, Seychelles, Solomon Islands, Sri Lanka, Tonga, and Vanuatu. The other Caribbean countries refer to all the Caribbean countries minus the ECCU countries.

Antigua and Barbuda and St. Kitts and Nevis have the highest per capita GDP.

6.   **Volatility of output growth in the ECCU has been considerably lower than for the comparator group of other SI countries and for emerging and developing countries**. This is perhaps surprising because of the openness of their economies and their exposure to natural disasters. The same picture holds irrespective of whether volatility is measured as the standard deviation of GDP growth, or is based on the frequency of growth crashes (events of large drops in activity). With these stylized facts in mind, we analyze in the rest of the chapter the role of productivity and factor accumulation in the growth performance of the region, whether tourism is an activity that has traction for growth and the implications of high indebtedness for growth.

Volatility of GDP Grow th
(Based on real GDP growth rates (PPP) 1971-2009)

Countries	Countries	Average Growth	Average Std. Dev.	Frequency of Growth Crashes 1/
Caribbean (simple average)	13	3.4	4.7	4.5
Caribbean	13	2.2	4.7	4.5
ECCU	6	4.3	4.2	3.0
Antigua and Barbuda	1	5.0	3.7	2.6
Dominica	1	3.2	5.1	5.1
Grenada	1	3.9	4.5	5.1
St. Kitts and Nevis	1	4.3	2.9	2.6
St. Lucia	1	4.4	4.8	2.6
St. Vincent & the Grens.	1	4.4	3.5	0.0
Non ECCU Caribbean 2/	7	2.1	5.0	5.9
Non Caribbean Emerging and Developing Economies	136	5.1	6.8	6.2
Non Caribbean Small Islands	18	4.3	5.6	4.2

Sources: World Economic Outlook; and IMF staff calculations.

1/ Share of years (in percent) with growth lower than -5.1percent (which corresponds to the 5th percentile of all country/years growth).
2/ Bahamas, Barbados, Belize, Guyana, Jamaica, Suriname, Trinidad and Tobago.

C. Explaining the Declining Trend in Growth in the ECCU

7.   **A growth accounting exercise reveals that total factor productivity (TFP) explains the bulk of the variation in economic growth in the ECCU during the last forty years**.[4] Capital accumulation and TFP gains account for 80-90 percent of the growth in ECCU countries (Figure 1 and Table 1 in Appendix 2). TFP growth was the strongest in the 1970s in Dominica, St Kitts and Nevis and St. Lucia. In Dominica, TFP growth has since declined and in recent years, growth in TFP has been negative. Grenada has also experienced declining productivity levels in recent years. As Barro (1998) suggests, negative TFP growth is hard to interpret because it implies "a technical regress", reflecting a drop in the efficiency with which the other factors of production are used either

ECCU: Contibutions to Growth, 1970-2007
(In percent, adjusted for the effect of hurricanes on capital)
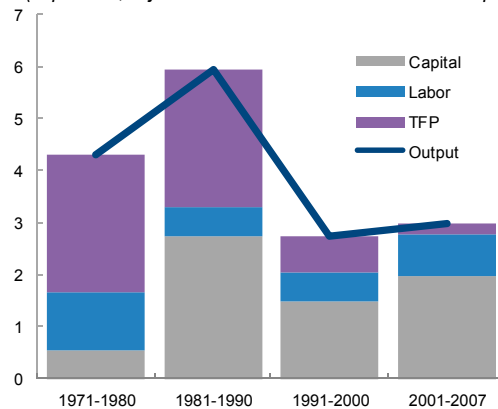
Source: Heston, Summers and Aten (2009). Emergency Disaster Database (EM-DAT), CRED (2010). Fund staff calculations.

Note: The data for St. Lucia omits EM-DAT's entry of US$1 billion damages in 1988, which is erroneous.

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[4] See Appendix 1 on the methodology. To the extent that TFP is a residual, it may reflect measurement errors on capital and labor.

because other complementary factors have changed or due to bad policies and weak institutions. That said, some countries in the ECCU - Antigua and Barbuda, St. Kitts and Nevis and St Vincent and the Grenadines -have been able to reverse the declining trend in productivity, and TFP has risen since 2000. While difficult to pinpoint what explains this improvement in productivity, all three countries have tried to find a niche for their products, mainly in high-end tourism services, which may explain the improvement in productivity (see below).

8.   **Compared to Barbados[5], the ECCU countries have been catching up in terms of output per worker and productivity since the seventies.** As revealed by the figure, output per worker would increase in all the ECCU countries assuming they achieved Barbados productivity level or capital per worker level. Most of the ECCU countries should concentrate on increasing productivity as this would yield a higher output per worker; especially for Grenada and Dominica. The only exception is Antigua and Barbuda, whose productivity was slightly above Barbados in 2007, implying that it could have grown faster than Barbados if it had had the same level of capital accumulation. For the rest of the ECCU countries output would also increase if capital per worker were to reach Barbados levels, although the gains would be lower than if they focused toward raising productivity.

ECCU: Output per worker and its components
(ratios to Barbados), 2007
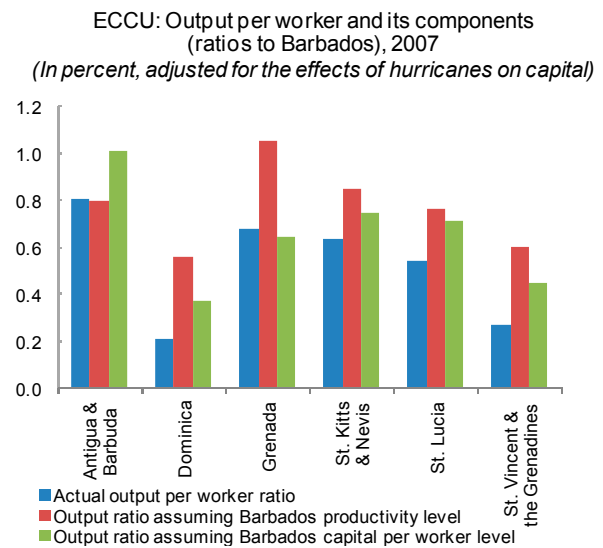*(In percent, adjusted for the effects of hurricanes on capital)*

Source: Heston, Summers and Aten (2009). Emergency Disaster Database (EM-DAT), CRED (2010). Fund staff calculations.

Note: The data for St. Lucia omits EM-DAT's entry of US$1 billion damages in 1988, which is erroneous.

D. Tourism's Contribution to Growth in the ECCU

9.   **This section uses the standard growth model, augmented by various measures of tourism, to investigate if the latter played a statistically significant role in determining growth**. Panel regression using cross-country data from 154 countries covering a period of 29 years is used to investigate the determinants of long-term growth.[6] The basic regression model is specified as follows:

$$\Delta y_{it} = \alpha + \beta_1 y_{it-1} + \beta_2 x_{it} + \beta_3 tourism_{it} + \eta_i + \varepsilon_{it}$$

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[5] Barbados is used as the reference country because, like most ECCU countries, it relies on tourism from different sources as the main driver of growth and it has one of the highest GDP per capita in the region.

[6] Table 5 in the Appendix lists the countries included in the sample.

where, Δy_{it} is the average growth rate of country i's GDP per capita between time $t-1$ and t (five-year averages are used[7]), α is a constant, y_{it-1} is the logarithm of initial GDP per capita, which controls for income convergence, x_{it} is a vector of standard determinant of economic growth, $tourism_{it}$ is a measure of tourism, η_i are unobserved country specific effects, and ε_{it} is a time and country specific disturbance. Following the growth literature (Arezki et al 2009), x_{it}[8] includes human capital measured by primary education, openness of the economy (measured as exports and imports as a ratio of GDP), size of government consumption (the ratio of government spending on goods and services to GDP), the investment-output ratio, the inflation rate, terms of trade, and life expectancy. A set of dummy variables are also used to capture the effect of being a small island.[9]

10.   **The results confirm that tourism has been a positive contributor to economic growth (Appendix 2 Table 3).[10]** An expansion of the tourism sector, or more generally the service sector, can theoretically have a negative impact on growth by crowding out the production of the tradable goods sector through a shift of resources to a less productive sector or increase of relative price of nontradable goods (Dutch disease effect). However, our empirical analysis shows otherwise. As can be seen in Column 2, in which we augmented the standard growth model with tourist arrivals per population, tourism has been a significant factor in long-term economic growth. It implies that a 10 percent increase in tourist arrivals per capita raises economic growth by about 0.2 percent. Column 6 shows that not only the volume of tourism but also the quality and value added of tourism, proxied by receipts per tourist, are significant factors driving economic growth, justifying some Caribbean countries strategy of focusing on high-end tourism demand. Another interesting result is that there seems to be no adverse effect from attracting too many tourists, as reflected by the positive sign of the square of the tourism variable in Column 7.

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[7] The sample used covers 5 five-year periods: 1979–1983, 1984–1988, 1989–1993, 1994–1998, 1999–2003 and one four-year period 2004–2007.

[8] The explanatory variables are included as the averages of the five-year periods.

[9] Unfortunately Antigua and Barbuda, Bermuda, Comoros, Cuba, Fiji, Federated States of Micronesia, Kiribati, Marshall Islands, Palau, São Tomé and Príncipe and Tonga did not have all the data required to be included in the estimations.

[10] To correct for the possible correlation of investment and tourism with the individual effects of each country, we used the Hausman-Taylor estimator, allowing the use of a random effects model that includes time-invariant variables.

11.   **Moreover, tourism has been the most significant contributor of long-term economic growth for the ECCU and helped to more than offset the negative impacts of geography and "being small"**. To quantify the contribution of each factor to economic growth of the ECCU, we calculate the predicted growth rate of the model using the coefficients in Column 7 of Table 3 (see Appendix 2) and the average values of each explanatory variable for the ECCU. We then calculate the contribution of each factor by replacing its value with the average value for the World. The accompanying figure presents the results, where the green arrows represent the variables that contributed positively to long-term growth, while the red arrows indicate the variables that negatively affected long-term growth. It is evident that tourism played the most significant role in the growth of the ECCU over the period 1970-2007. Tourism arrivals to the ECCU countries have been higher than the world average; this has added 5.0 percentage points to growth in the ECCU. At the same time, growth in the ECCU has been lower by 0.3 percentage points and 3.1 percentage points on average because of being "small" (the average size of an ECCU country is 448.5 km^2 compared to the world average of 825,644 km^2) and given the island geographical nature of the ECCU, respectively. The relatively high investment ratios (about 15–20 percent on average) and low inflation in the ECCU have also been positive contributors to growth. But, specialization in tourism has been the most advantageous and indeed has offset some of the limitations that come from being a small island economy (for example, remoteness, higher transportation costs, diseconomies of scale).

ECCU: Relative Performance *vis-à-vis* the World
(In percent)

Sources: Fund staff calculations.
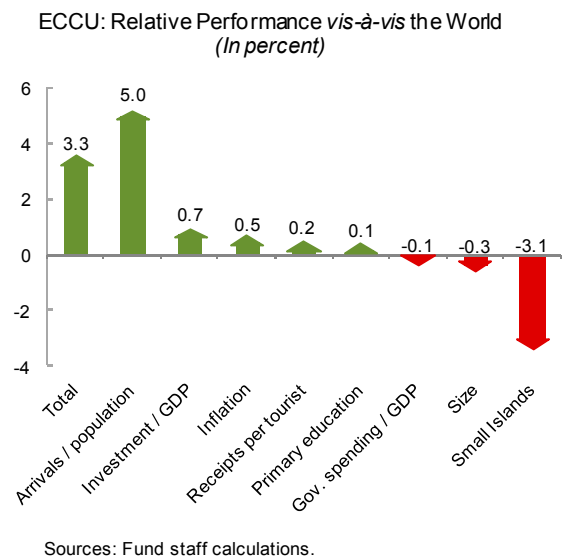
12.   **An early transition to the tourism industry also appears to have contributed to higher long-term economic growth for countries making an early switch from agriculture to tourism.** Figure 2 in Appendix 2 shows that there is a positive relationship between average real GDP growth rate during 1981–2007 and tourism concentration in 1981, where tourism concentration is measured as tourist arrivals or tourism receipts normalized by population or land size. This implies that the tourism sector has on average brought higher economic growth for those countries which developed this industry at an early stage. For example, Antigua and Barbuda and St. Kitts and Nevis, which switched from an agriculture-driven economy to a tourism-based economy early on, have on average grown at about 4½ percent during this period, compared to an average of under 3 percent for Dominica which has remained mostly an agriculture oriented economy

E. Tourism and Growth Volatility

13. **While tourism specialization may bring about higher growth, it could also increase volatility in growth by amplifying the impact of business cycles in source countries on the tourism sector.** The impact of the current global crisis on ECCU countries has brought to the fore the negative side effects of tourism-led growth. However, it is not clear whether this also increases the volatility of growth in the long run. In order to determine this, we try to analyze the s*tandard deviation of growth* (the standard measure of volatility) in terms of the same explanatory variables included in the models of Table 3 in Appendix 2.[11]

14. **Tourism not only raises per capita GDP growth but also helps to reduce its volatility.** Specializing in the supply of tourism services has an unambiguously positive effect for the countries that have adopted this strategy for their economic development. This is particularly so for SI countries. In fact, for these countries, tourism helps to reduce the volatility of growth by counter balancing other factors that would otherwise increase volatility. This is in line with the finding that volatility in the ECCU has not been unusually high relative to other regions, as noted earlier. For example, inflation (by injecting uncertainty in decision making) and the ratio of government spending to GDP (through its impact on long term interest rates among other things) both have a negative impact on growth and increase volatility. Also being a "small island" affects growth negatively and increases volatility. Other variables show some trade-off in their overall impacts on growth. The ratio of investment to GDP contributed positively to growth but at the same time it increases the volatility of growth, implying that any shock to investment is difficult to offset. The estimation results also indicate that countries that started with a lower level of income per capita grew faster but the higher growth was accompanied by greater volatility. Finally, as captured by the coefficient estimates on the *openness* variable, the beneficial effect from an open economy is outweighed by the increased volatility resulting from increased vulnerabilities to external shocks.

F. ECCU Tourism Competitiveness vis-á-vis the Caribbean

15. **The Caribbean countries appear to have lost some market share in tourism arrivals.** The share of stay-over visitor arrivals to the Caribbean (as percent of total visitors to the World) fell from 2.7 percent during 1990-95 to 2.2 percent during 2005–08. ECCU countries share within the Caribbean fell from 5.7 percent to 5.1 percent over the same period because of losses by Antigua and Barbuda and Grenada. The rest of the ECCU countries have either gained by small margins or maintained their shares.

ECCU: Average Market Shares in Stay-over Arrivals *(In percent)*

	1990-95	2005-08	%change
Share to Caribbean total:			
Anguilla	0.30	0.36	19.46
Antigua and Barbuda	1.85	1.33	-28.05
Dominica	0.41	0.42	1.46
Grenada	0.76	0.61	-19.33
St Kitts	0.68	0.70	2.62
St Lucia	1.51	1.56	3.10
St Vincent and the Grenadines	0.45	0.48	5.93
ECCU	*5.66*	*5.09*	*-10.01*
Share to the World:			
ECCU	0.14	0.11	-21.95
Caribbean	*2.67*	*2.24*	*-16.30*

Sources: World Travel and Tourism Council; and Fund staff calculations.

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[11] The results are not presented but they are available on request.

16.   **Simultaneous examination of the changes in shares of tourist arrivals and shares of tourism receipt suggests that some countries may have lost market shares in arrivals because of a shift in strategy.** While loss of market share in arrivals is often interpreted as a loss of competitiveness in tourism, it may also reflect a shift in strategy from mass tourism to upscale tourism, resulting in higher tourism receipts. Hence, changes in market shares in arrivals are assessed in conjunction with changes in shares of tourism receipts from 1990–95 to 2005–08. The results suggest:

- Antigua and Barbuda, and Grenada have seen declines in both arrival and receipt shares—a clear indication of loss in competitiveness.

- St. Kitts and Nevis and St. Lucia have recorded increases in shares of arrivals but declines in shares of receipts, which may reflect a shift towards mass tourism achieved through cost and price cutting, provided that the loss in share of receipts is temporary. Otherwise, it may reflect a loss of competitiveness as the countries are not earning income proportional to the number of visitors they host.

- Anguilla, Dominica, and St. Vincent and the Grenadines have recorded increases in shares of both arrivals and receipts, indicating improvements in competitiveness.

17.   **Higher prices and low quality—instead of limited room supply—seem to be the main reasons for the loss in market share by ECCU countries within the Caribbean.** Between the periods 1990–95 and 2005–08, the ECCU has gained shares in room supply within the Caribbean (Appendix 2 Figure 3). Nevertheless, the price charged per room is relatively high in some ECCU countries, with Antigua and Barbuda having the highest hotel prices in the region. This may explain the loss in the shares in both stay-over arrivals and tourism receipts. On the other hand, St. Kitts and Nevis and St. Lucia have lost shares in tourism receipts, even though they have gained some market share in stay-over arrivals, reflecting perhaps the lower average hotel costs. While difficult to document, anecdotal evidence indicates that enhancing the quality of services and diversifying the kinds of services would give a boost to the tourism sector.

G. Debt and Its Impact on Growth

18.   **High levels of public debt[12] undermine economic performance by crowding out private investment and acting as a tax on future investment projects** (Krugman, 1988; Sachs, 1989). Results from the Fiscal Monitor (FAD 2010) suggest that on average a

10 percent increase in initial debt reduces real per capita GDP growth by 0.2 percent per year. The accompanying figure shows that there is a negative relationship between government debt and economic growth. In a recent study on 44 advanced and emerging countries covering a period of almost 200 years, Reinhart and Rogoff (2010) find that above a threshold of debt to GDP ratio of 90 percent, median growth rates fall 1 percent while average growth falls even more. They also find that emerging markets have a lower threshold of external debt (60 percent) above which growth rates decrease by two percent or more.

World: Debt and Growth, 2000-2007
(In percent)
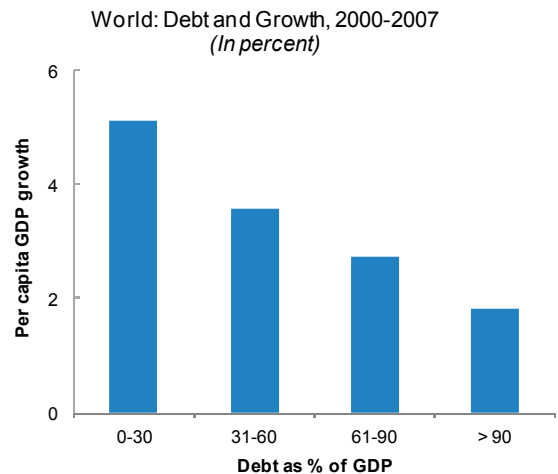
Sources: Heston, Summers and Aten (2009). World Economic Outlook. Fund staff calculations.

19.   **Debt has negatively and significantly affected growth in the ECCU, if one considers the cross country experience as a guide.** Table 4 (in Appendix 2)[13] shows the results from an extended regression model which adds the *debt-to-GDP* ratio to the growth model, including tourism and size, as an explanatory variable. The previous results, particularly those related to the importance of tourism, are largely the same even when controlling for government debt. The evidence shows that for debt-to-GDP ratios above 30 percent, debt reduces growth. The negative impact of debt increases when the debt-to-GDP ratio crosses the 60 percent threshold.[14] Moreover, once debt is considered, investment no longer appears to have a positive impact on growth suggesting that government spending is crowding out private investment (Appendix 2 Table 4).

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[12] See also Chapter II on Public Debt in the ECCU.

[13] The samples used in the debt regressions of Table 4 are smaller due to data unavailability for some countries. Table 5 in the Appendix details the countries included in the different estimations.

[14] Following Kumar and Woo (2010) and Patillo et al. (2002) the approach explores the nonlinearities of the growth-debt relationship by introducing interactions terms between debt and dummies for three ranges of debt-to-GDP; 0 to 30 percent, 30 to 90 percent and 90 percent and above, and by including a quadratic specification for the debt variable.

20. **Empirical evidence suggests that, when public debt is above a certain threshold, debt reduction will help improve the economic performance of a country**. The accompanying figure shows that, in general, when debt is high and countries implement policies directed to reduce its levels, GDP growth is higher than when governments allow the debt to keep growing. This seems to be more important for emerging and developing countries where the growth rate in periods of falling debt was more than 3 times the one in periods of rising debt. For the ECCU in particular the difference between business as usual or targeted policies to reduce debt could entail almost a doubling of the growth rate when government commits to cut debt.

Real per capita GDP Growth During Periods of Rising and Falling Debt *(Initial debt > 60 percent of GDP)*
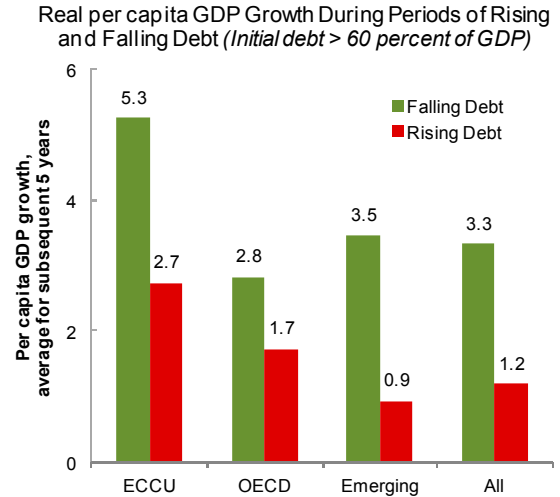
Sources: Heston, Summers and Aten (2009). World Economic Outlook. Fund staff calculations.

H. Conclusions

21. **After an initial strong growth performance following independence, since the early nineties, the growth performance in most ECCU countries has been disappointing.** Although the ECCU countries recorded the best growth performance overall in the Caribbean region, over the last twenty years they have lost ground in terms of per capita GDP to their small island peer countries and the fast-growing emerging and developing countries. Rather than converging toward advanced country levels, income has fallen further behind.

22. **Low productivity growth is principally the reason for the slowdown in growth.** The decline in TFP growth despite high levels of capital accumulation accounts for the relatively poor performance of the ECCU countries in recent years. While difficult to pinpoint the factors behind low productivity, structural reforms that encourage innovation and adoption of productivity-enhancing technology could help to reverse this trend.

23. **Tourism has been a significant contributor to growth and there remains scope for further expansion.** Tourism has been an important contributor to growth and there is significant scope in all of the ECCU countries to boost growth by enhancing the performance of this sector. Moreover, the ECCU has lost competitiveness among the Caribbean countries, indicating the need for structural reform measures to improve the competitiveness of this sector, both in terms of improved product quality and lower costs.

24. **High debt levels have been a major drag on growth.** Therefore, a key issue that needs to be addressed is the rising debt level in the region. To the extent that governments are proactive in reducing debt, growth will improve not just by reducing budgetary interest costs and creating fiscal space but more importantly through their effect on reducing long term interest rates and building confidence and investment.

APPENDIX 1

This appendix details the growth and level accounting framework used to assess the extent to which observed output growth has been driven by factor accumulation or TFP gains.[15] The analysis of the sources of growth dates back to the 1950s with the seminal work of Solow (1957). Solow first decomposed output growth into the growth of labor, capital and a residual—referred to in the literature as the "Solow residual"—and interpreted it as a measure of the contribution of technological change to growth. In the 1960s and 1970s, Denison (1962), Jorgenson and Griliches (1967) and Denison, Jorgenson and Griliches (1972) further extended this work to include both the quantity and quality of labor and capital. More recently, Barro and Lee (1994), Lee (2005) and Loayza, Fajnzylber and Calderon (2005) extended this analysis to a cross-section of countries. However, none of these studies look at the ECCU countries.

Analytical framework. The conventional Cobb-Douglas production function with constant returns to scale is used to calculate the contribution of each factor[16]:

$$Y = AK^{\alpha} L^{1-\alpha} \tag{1}$$

where, Y is aggregate output, A is total factor productivity, K is the physical capital stock, L is unit of labor, and α is the elasticity of output with respect to the physical capital stock. Taking logs and differentiating with respect to time gives[17]

$$\frac{\dot{Y}}{Y} = \frac{\dot{A}}{A} + \alpha \frac{\dot{K}}{K} + (1-\alpha)\frac{\dot{L}}{L} \tag{2}$$

The contribution of each factor is calculated as its growth rate multiplied by its share, with TFP as the residual. The Penn World Tables (PWT 6.3 of Heston et al. (2009)) are used to ensure comparability of data across countries.[18] As in Lee (2005), the working age population, i.e., population between the ages of 15–64, is used as a measure of the size of the labor force. The physical capital stock is constructed using investment data from the PWT and applying the perpetual inventory method. Following the literature in this area, it is

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[15] Growth accounting has some important limitations. First, the TFP component is by definition a residual and therefore picks up measurement errors in the data. Also a failure to account for improvements in the quality and composition of the physical capital and the differences in human capital of the labor force will lead to an overestimation of TFP. Third, it does not provide any insight into why TFP changes from one period to another.

[16] Since the focus of this study are small islands, particularly ECCU countries, which do not have sufficient data to construct educational attainment measured by average years of schooling *à la* Barro and Lee (2001), we use the most basic production function that only includes capital and labor as factor inputs, leaving out the contribution of human capital to growth.

[17] The dots over the variables denote derivatives with respect to time as in most of the growth literature.

[18] Data used is from 1970–2007, as the PWT has data only up to 2007.

assumed that the share of capital is α = 0.35, and that it is constant and equal across countries.[19] Average depreciation is assumed to be about 6 percent per year over the period. However, given that the region suffers from the recurrence of natural disasters that destroy the capital stock, data has been adjusted in years in which there were major hurricanes that inflicted considerable damage to the islands. The impact of hurricanes is obtained from the Emergency Disaster Database (EM-DAT). The current price US dollar estimates from this database are converted to 2005 constant prices to use the same units as investment and the capital stock. This information in then used in the perpetual inventory method to adjust the capital stock in every year where there is a hurricane with recorded damages.[20]

Another way to analyze TFP is by comparing the ratio of output per worker between two countries. For this purpose, we use the level accounting methodology of Hall and Jones (1999) which transforms equation (1) into per worker units of output and capital (denoted by small letters). For a pair of countries i and j, the ratio of output per worker is given by

$$\frac{y_i}{y_j} = \left(\frac{A_i}{A_j}\right) \times \left(\frac{k_i}{k_j}\right)^{\alpha} \tag{3}$$

.

Therefore, the difference in output per worker between countries can be decomposed as the difference between their capital-labor ratios and the TFP ratios. Table 2 in the Appendix and the accompanying figure present the output and capital per worker and the productivity levels of ECCU countries with respect to Barbados-the benchmark country for this exercise.

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[19] The calculated TFP growth did not change much when we assumed α to be higher (0.45) or lower (0.30).

[20] However, the data in EM-DAT is not exhaustive and has some limitations. For example, there are no estimates of damages in some years despite reported hurricanes in those years. Also, it is possible that the recorded damages are over or underestimating the true damages caused by hurricanes. In the case of St. Lucia in 1988 we omit EM-DAT's entry of US$1 billion in damages because it appears erroneous, however it is difficult to know if there are other less conspicuous errors in the data.

APPENDIX 2

Figure 1. ECCU: Contributions to Growth, 1970-2007
(In percent, adjusted for the effect of hurricanes on capital)
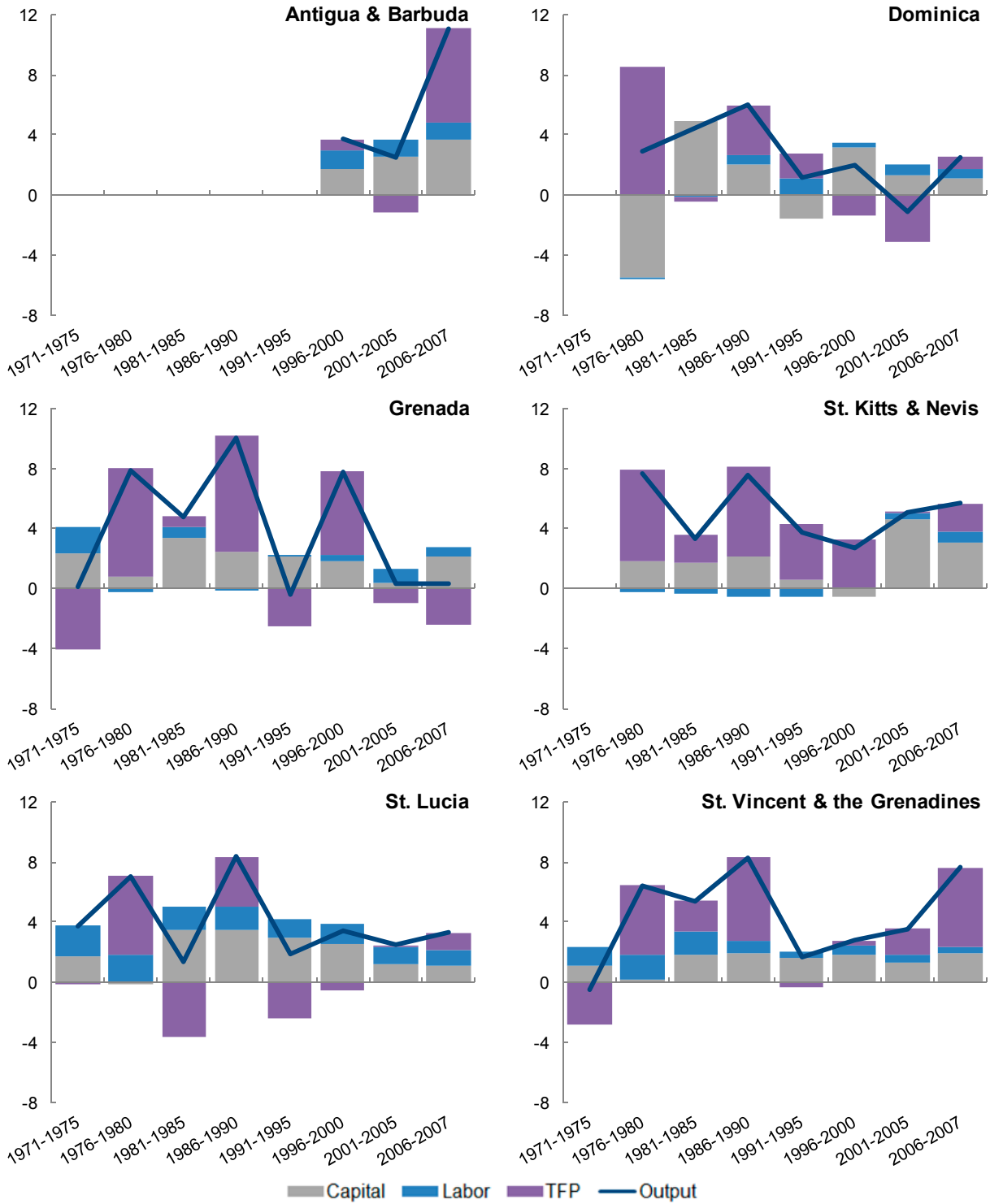
Source: Heston, Summers and Aten (2009). Emergency Disaster Database (EM-DAT), CRED (2010). Fund staff calculations.

Note: The data for St. Lucia omits EM-DAT's entry of US$1 billion damages in 1988, which is erroneous.

Figure 2. Small Islands: Tourism and Growth, 1981–2007
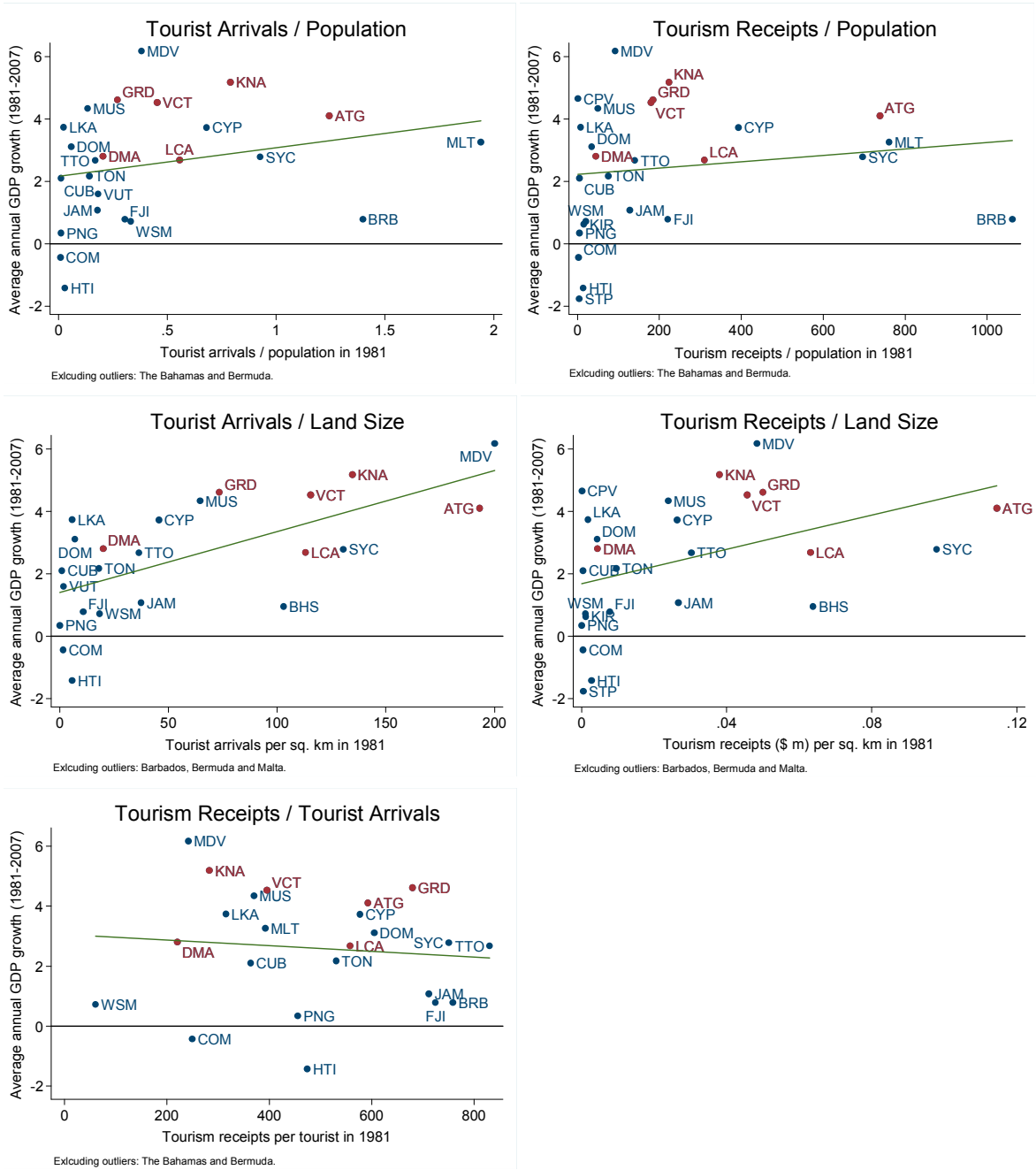
Source: World Bank (2010); IMF; WTO; Heston, Summers and Aten (2009). Fund staff calculations.

Figure 3. Caribbean: Tourism Competitiveness.

CARICOM: Changes in Market Shares, 1990-95 to 2005-08

Change in share of receipts

Shift towards upscale tourism

Dominica
St. Vincent and the Grenadines
Anguilla

Improvement in Competitiveness

Barbados

Grenada

Haiti

St. Kitts and Nevis

The Bahamas

St. Lucia

Loss of Competitiveness

Shift towards mass tourism?

Jamaica

Antigua and Barbuda

Change in share of visitor arrivals

Source: World Travel and Tourism Council; and Fund staff calculations.

CARICOM. Shares in room supply (percent to Caribbean total)

■ 1990-95 ■ 2005-08

Jamaica, Bahamas, ECCU, Barbados, Belize, Trinidad & Tobago, St Lucia, Antigua & Barbuda, St Vincent & Gren., Grenada, Dominica, Anguilla
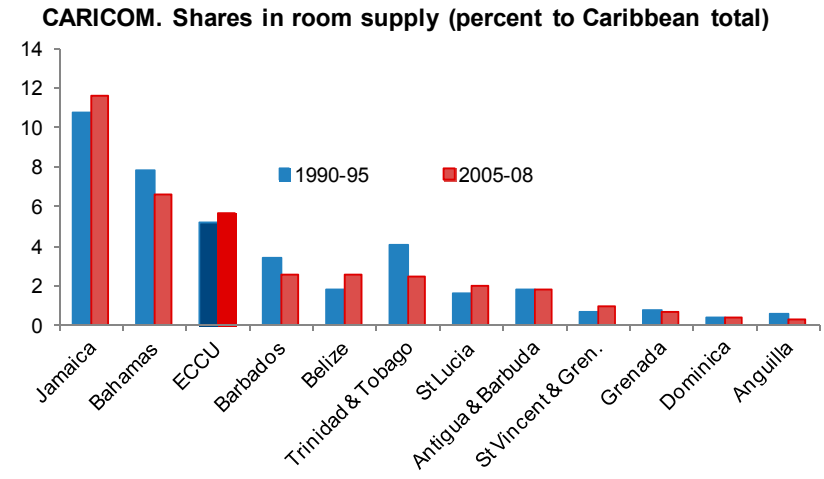
Source: Caribbean Tourism Organization; and Fund staff calculations.

Average Daily Rates in High-end Hotels
(In U.S. dollars)

Antigua and Barbuda, Barbados, St. Vincent & the Grenadines, ECCU average, Anguilla, Caribbean average, The Bahamas, Grenada, Nevis, St. Lucia, St. Kitts
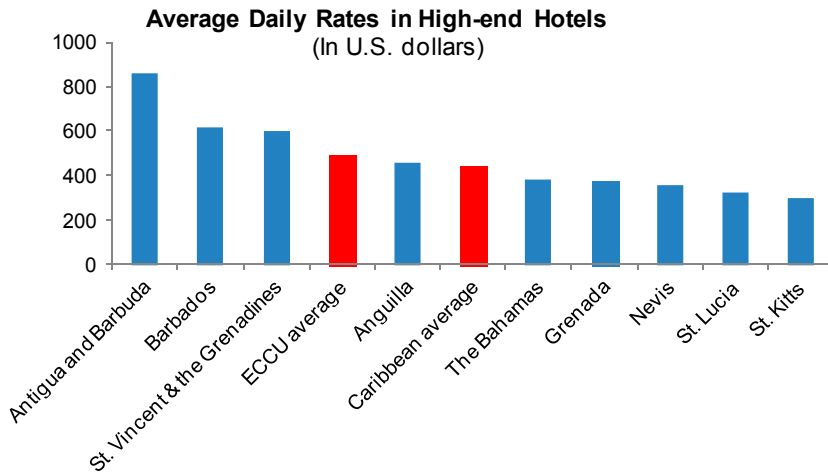
Source: Showker (2009), 100 Best Resorts of the Caribbean, (Guilford, CT: The Global Pequot Press).

Average Daily Hotel Rates
(In U.S. dollars)

Bahamas, Barbados, St. Kitts and Nevis, St. Lucia
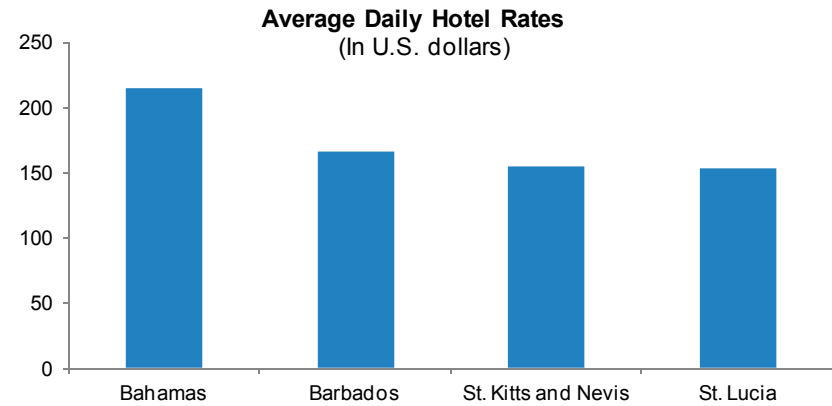
Source: The Hotel Price Index, Hotels.com.

Note: There is no data available for other ECCU countries at Hotels.com.

Table 1. ECCU: Growth Accounting, 1970–2007
(In percent, adjusted for the effects of hurricanes on capital)

	Average annual growth				Contribution to growth (% point)		
	Output	Capital	Labor	TFP	K	L	TFP
Antigua and Barbuda /a	**4.52**	**6.95**	**1.84**	**0.89**	**2.43**	**1.20**	**0.89**
1971–1980							
1981–1990							
1991–2000	3.73	4.90	1.89	0.79	1.72	1.23	0.79
2001–2007	4.97	8.13	1.81	0.95	2.84	1.18	0.95
Dominica /b	**2.55**	**3.32**	**0.74**	**0.91**	**1.16**	**0.48**	**0.91**
1971–1980	2.93	-15.73	-0.20	8.56	-5.50	-0.13	8.56
1981–1990	5.22	9.97	0.38	1.48	3.49	0.25	1.48
1991–2000	1.58	2.23	1.09	0.09	0.78	0.71	0.09
2001–2007	-0.05	3.54	1.14	-2.03	1.24	0.74	-2.03
Grenada	**4.13**	**5.47**	**0.78**	**1.71**	**1.92**	**0.51**	**1.71**
1971–1980	3.98	4.56	1.19	1.61	1.59	0.77	1.61
1981–1990	7.39	8.28	0.43	4.21	2.90	0.28	4.21
1991–2000	3.70	5.65	0.37	1.48	1.98	0.24	1.48
2001–2007	0.32	2.50	1.28	-1.39	0.88	0.83	-1.39
St. Kitts & Nevis /b	**4.88**	**5.14**	**-0.18**	**3.20**	**1.80**	**-0.12**	**3.20**
1971–1980	7.61	5.21	-0.41	6.05	1.82	-0.26	6.05
1981–1990	5.43	5.60	-0.65	3.90	1.96	-0.42	3.90
1991–2000	3.22	-0.05	-0.33	3.45	-0.02	-0.21	3.45
2001–2007	5.28	11.86	0.78	0.62	4.15	0.50	0.62
St. Lucia	**3.99**	**6.12**	**2.28**	**0.37**	**2.14**	**1.48**	**0.37**
1971–1980	5.40	2.44	2.96	2.62	0.85	1.92	2.62
1981–1990	4.85	9.93	2.36	-0.16	3.47	1.53	-0.16
1991–2000	2.62	7.87	2.00	-1.44	2.75	1.30	-1.44
2001–2007	2.72	3.46	1.60	0.47	1.21	1.04	0.47
St. Vincent & Grenadines	**4.15**	**4.09**	**1.43**	**1.79**	**1.43**	**0.93**	**1.79**
1971–1980	2.99	1.76	2.28	0.89	0.62	1.48	0.89
1981–1990	6.85	5.36	1.82	3.80	1.88	1.18	3.80
1991–2000	2.22	4.98	0.77	-0.02	1.74	0.50	-0.02
2001–2007	4.73	4.36	0.63	2.79	1.53	0.41	2.79
Average	**3.99**	**5.00**	**1.12**	**1.52**	**1.75**	**0.73**	**1.52**

a/ Data available only from 1996.
b/ Data available only from 1977.

Source: Heston, Summers and Aten (2009). Emergency Disaster Database (EM-DAT), CRED (20010). Fund staff calculations.

Note: The data for St. Lucia omits EM-DAT's entry of US$1 billion damages in 1988, which is erroneous.
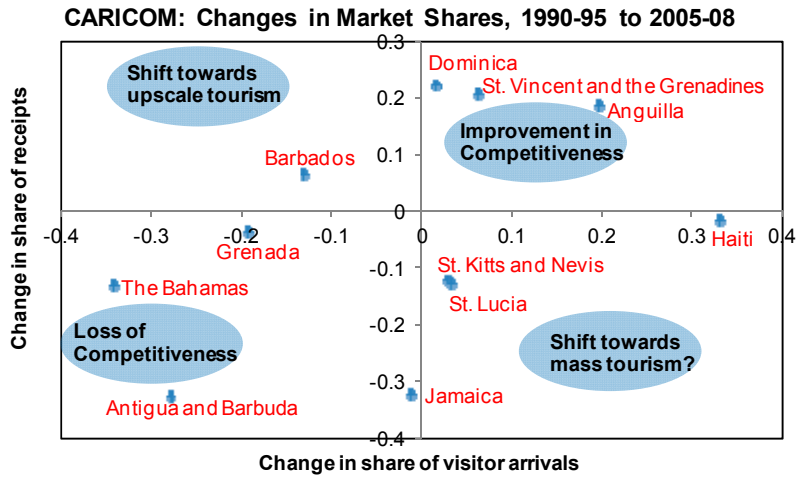
Table 2. ECCU: Output Growth and its Components:
Ratio to Barbados Values, 1970–2007
(In percent, adjusted for the effects of hurricanes on capital)

Country	Year	Output per worker	Capital per worker	Productivity
Antigua and Barbuda	1970			
	1980			
	1990			
	2000	0.70	0.34	1.01
	2007	0.80	0.52	1.01
Dominica	1970			
	1980	0.14	0.06	0.37
	1990	0.24	0.14	0.47
	2000	0.24	0.17	0.46
	2007	0.21	0.19	0.37
Grenada	1970	0.26	0.25	0.43
	1980	0.27	0.29	0.41
	1990	0.57	0.62	0.68
	2000	0.77	1.10	0.75
	2007	0.68	1.17	0.64
St. Kitts & Nevis	1970			
	1980	0.19	0.15	0.36
	1990	0.36	0.28	0.57
	2000	0.50	0.30	0.77
	2007	0.64	0.63	0.75
St. Lucia	1970	0.39	0.14	0.78
	1980	0.38	0.11	0.82
	1990	0.52	0.22	0.88
	2000	0.53	0.41	0.73
	2007	0.54	0.46	0.71
St. Vincent & Grenadines	1970	0.14	0.11	0.29
	1980	0.11	0.09	0.26
	1990	0.19	0.12	0.41
	2000	0.22	0.19	0.39
	2007	0.27	0.24	0.45

Sources: Heston, Summers and Aten (2009). Emergency Disaster Database (EM-DAT), CRED (20010).Fund staff calculations.

Note: The data for St. Lucia omits EM-DAT's entry of US$1 billion damages in 1988, which is erroneous.

Table 3. Tourism and Growth Estimations

Variables	(1) GDP growth	(2) GDP growth	(3) GDP growth	(4) GDP growth	(5) GDP growth	(6) GDP growth	(7) GDP growth
Convergence	-2.055***	-3.582***	-3.692***	-3.617***	-1.911***	-4.019***	-3.888***
	(0.324)	(0.406)	(0.407)	(0.404)	(0.335)	(0.426)	(0.421)
Government spending / GDP	-1.000**	-0.926*	-0.773	-0.935**	-1.163**	-0.551	-0.722
	(0.455)	(0.476)	(0.470)	(0.473)	(0.466)	(0.486)	(0.477)
Primary education	1.985***	1.270*	1.201	1.260*	1.835**	0.805	1.510**
	(0.730)	(0.743)	(0.737)	(0.741)	(0.762)	(0.766)	(0.760)
Openness	1.354***	0.182	0.251	0.203	1.059***	0.036	0.160
	(0.377)	(0.414)	(0.407)	(0.412)	(0.396)	(0.420)	(0.415)
Inflation	-0.522***	-0.534***	-0.518***	-0.525***	-0.591***	-0.497***	-0.506***
	(0.134)	(0.126)	(0.126)	(0.126)	(0.133)	(0.129)	(0.126)
Terms of trade	0.043**	0.081***	0.080***	0.080***	0.045**	0.086***	0.082***
	(0.020)	(0.019)	(0.019)	(0.019)	(0.020)	(0.019)	(0.019)
Life expectancy	7.272***	5.097**	5.083**	5.220**	5.586**	3.874*	5.476**
	(2.390)	(2.272)	(2.267)	(2.269)	(2.342)	(2.243)	(2.283)
Size	0.000*	0.000***	0.000***	0.000***	0.000*	0.000***	0.000***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Investment / GDP	2.824***	1.221***	1.311***	1.302***	2.038***	0.897**	1.364***
	(0.473)	(0.455)	(0.456)	(0.456)	(0.484)	(0.451)	(0.457)
Arrivals / population		1.795***	1.915***	1.875***		2.159***	2.516***
		(0.265)	(0.271)	(0.268)		(0.271)	(0.440)
SI			-2.991***		-1.820**	-3.099***	-3.339***
			(0.906)		(0.825)	(0.971)	(0.949)
Islands				-1.870**			
				(0.756)			
Receipts as % of GDP					0.420**		
					(0.197)		
Receipts per tourist						0.426**	
						(0.212)	
(Arrivals / population)^2							0.096*
							(0.057)
Constant	-29.730***	9.310	10.390	9.477	-17.246*	25.345**	9.665
	(8.740)	(9.917)	(9.919)	(9.910)	(9.025)	(10.648)	(9.943)
Observations	791	760	760	760	772	749	760
Number of countries	154	152	152	152	153	151	152

Note: Random Effects panel regression using the Hausman-Taylor estimator to correct for the possible correlation of Investment and Tourism with the individual effects u_i. Standard errors in parentheses.
*** p-value<0.01, ** p-value<0.05, * p-value<0.1

Table 4. Debt and Growth Estimations

Variables	(1) GDP growth	(2) GDP growth	(3) GDP growth	(4) GDP growth	(5) GDP growth
Convergence	-3.692***	-2.343***	-2.424***	-2.421***	-2.376***
	(0.407)	(0.613)	(0.620)	(0.621)	(0.616)
Government / GDP	-0.773	-1.014	-1.036	-1.016	-1.014
	(0.470)	(0.657)	(0.661)	(0.662)	(0.661)
Primary education	1.201	0.404	0.245	0.220	0.418
	(0.737)	(1.352)	(1.353)	(1.367)	(1.356)
Openness	0.251	0.693	0.621	0.619	0.695
	(0.407)	(0.592)	(0.594)	(0.594)	(0.594)
Inflation	-0.518***	-0.468**	-0.498***	-0.498***	-0.465**
	(0.126)	(0.184)	(0.186)	(0.186)	(0.184)
Terms of trade	0.080***	0.111***	0.110***	0.110***	0.110***
	(0.019)	(0.030)	(0.030)	(0.030)	(0.030)
Life expectancy	5.083**	-3.337	-3.542	-3.499	-3.057
	(2.267)	(3.806)	(3.784)	(3.808)	(3.848)
Investment / GDP	1.311***	1.005	0.933	0.967	1.023
	(0.456)	(0.761)	(0.767)	(0.766)	(0.765)
Arrivals / population	1.915***	1.763***	1.833***	1.830***	1.793***
	(0.271)	(0.405)	(0.404)	(0.404)	(0.405)
Size	0.000***	0.000**	0.000**	0.000**	0.000**
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Small Islands	-2.991***	-2.595**	-2.575**	-2.608**	-2.670**
	(0.906)	(1.263)	(1.278)	(1.275)	(1.276)
Debt / GDP		-0.509**			-0.667*
		(0.230)			(0.373)
(Debt / GDP)*Dummy0-30			-0.270	-0.269	
			(0.335)	(0.330)	
(Debt / GDP)*Dummy30-60			-0.418		
			(0.268)		
(Debt / GDP)*Dummy>60			-0.444*		
			(0.241)		
(Debt / GDP)*Dummy30-90				-0.422*	
				(0.256)	
(Debt / GDP)*Dummy>90				-0.453*	
				(0.240)	
(Debt / GDP)^2			0.026		0.026
			(0.047)		(0.047)
Constant	10.390	38.936**	38.183**	41.364**	38.183**
	(9.919)	(16.455)	(16.585)	(16.272)	(16.585)
Observations	760	467	467	467	467
Number of countries	152	136	136	136	136

Note: Random Effects panel regression using the Hausman-Taylor estimator to correct for the possible correlation of Investment and Tourism with the individual effects u_i. Standard errors in parentheses.
*** p-value<0.01, ** p-value<0.05, * p-value<0.1

Table 5. Countries Included in the Samples

Algeria *	Egypt	Lithuania
Angola *	El Salvador	Macedonia, Republic of
Argentina	Equatorial Guinea §†	Madagascar
Australia	Estonia	Malawi
Austria	Ethiopia	Malaysia
Azerbaijan	Finland	Maldives *
Bahamas, The	France	Mali
Bahrain	Gabon †	Malta
Bangladesh *	Gambia, The	Mauritania
Barbados	Georgia	Mauritius
Belarus	Germany	Mexico
Belgium	Ghana	Moldova §†
Belize	Greece	Mongolia
Benin	Grenada	Morocco
Bhutan	Guatemala	Mozambique
Bolivia	Guinea-Bissau	Namibia
Botswana	Guyana	Nepal *
Brazil	Haiti *	Netherlands
Bulgaria	Honduras	New Zealand
Burkina Faso	Hong Kong SAR	Nicaragua
Burundi	Hungary	Niger
Cambodia	Iceland	Nigeria
Cameroon	India	Norway
Canada	Indonesia	Oman
Cape Verde	Iran, Islamic Republic of	Pakistan
Central African Republic*	Ireland	Panama
Chad	Israel	Papua New Guinea *
Chile	Italy	Paraguay
China	Jamaica	Peru
Colombia	Japan	Philippines
Congo, Dem. Rep. of *	Jordan	Poland
Congo, Rep. of	Kazakhstan	Portugal
Costa Rica	Kenya	Qatar §†
Côte d'Ivoire	Korea, Republic of	República Bolivariana de Venezuela
Croatia	Kuwait	Romania
Cyprus	Kyrgyz Republic	Russian Federation
Czech Republic	Lao People's Democratic Republic	Rwanda
Denmark	Latvia	Samoa*
Dominica	Lebanon	Saudi Arabia
Dominican Republic*	Lesotho	Senegal
Ecuador	Libya	Seychelles

Notes: § Countries not included in some of the regressions of Table 3.
        * Countries not included in any of the regressions of Table 4.
        † Countries not included in some of the regressions of Table 4.

Table 5 (Cont'd) Countries Included in the Samples

Sierra Leone *	Sudan	Turkey
Singapore	Suriname	Uganda
Slovak Republic	Swaziland	Ukraine
Slovenia	Sweden	United Kingdom
Solomon Islands*	Switzerland	United States
South Africa	Syrian Arab Republic	Uruguay
Spain	Tanzania *	Vanuatu *
Sri Lanka	Thailand	Vietnam
St. Kitts and Nevis	Togo	Zambia
St. Lucia	Trinidad and Tobago	
St. Vincent and the Grenadines	Tunisia	

Notes: [§] Countries not included in some of the regressions of Table 3.
[*] Countries not included in any of the regressions of Table 4.
[†] Countries not included in some of the regressions of Table 4.

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II.   PUBLIC DEBT IN ECCU COUNTRIES[1]

A.   Introduction

1.   **ECCU countries have increased public debt in the last 20 years from already high levels**. Total public debt of the six independent ECCU countries[2] has been over 60 percent of the regional GDP since 1990, increasing to more than 100 percent in the wake of the recent global crisis. This contrasts with the generally declining debt ratios in emerging and developing economies[3], and greatly exceeds the average public debt ratios associated with episodes of sovereign debt default in emerging markets over the past 30 years.[4] To provide some insight into the sources of these high debt ratios, this chapter provides some brief background about public debt in the ECCU, then discusses the factors that contributed to the surge in debt, examines how governments were able to continue to borrow, and offers some provisional conclusions.

B.   Overview of Public Debt in ECCU

2.   **ECCU countries are among the world's most highly indebted**. All six independent ECCU countries rank within the 15 most indebted emerging markets and developing countries, of which three (Antigua and Barbuda, Grenada, and St. Kitts and Nevis) have a public debt-to-

Public Sector Debt in Selected Emerging Markets / Developing Countries, end 2009
(In percent of GDP)
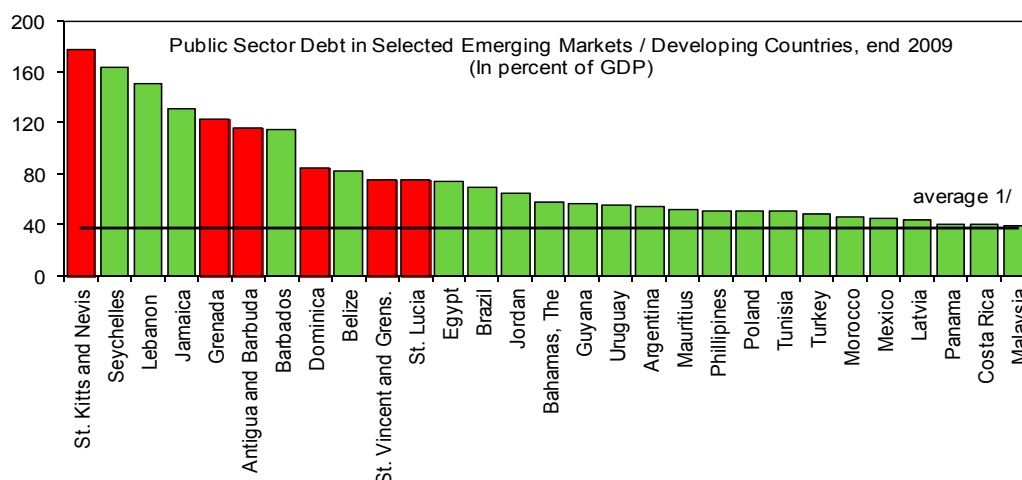
Sources: IMF, World Economic Outlook; and Fund staff calculations.
1/ Selected emerging and developing economies.

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[1] Prepared by Arnold McIntyre and Sumiko Ogawa.

[2] In this note, the ECCU countries refer to the six independent members of the union, Antigua and Barbuda, Dominica, Grenada, St. Kitts and Nevis, St. Lucia and St. Vincent and the Grenadines.
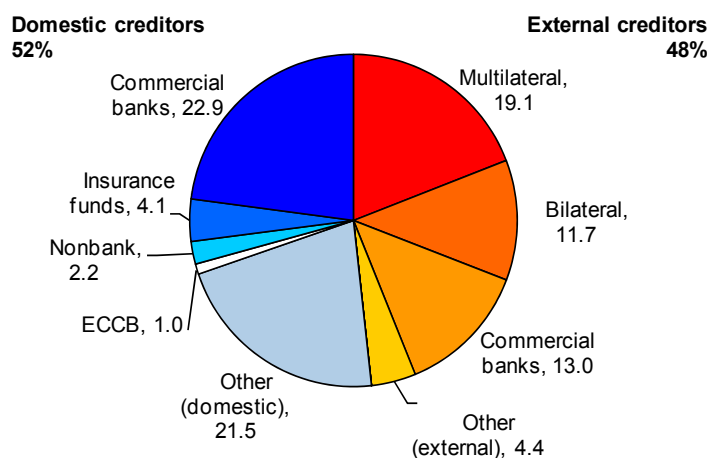
[3] The public debt-to-GDP ratio of emerging and developing countries has declined from around 50 percent in 2000 to 37 percent in 2009 (IMF, 2010).

[4] Public debt was below 60 percent of GDP in 55 percent of the defaults recorded, and less than 40 percent in 35 percent of the cases (IMF, 2003).

GDP ratios of over 100 percent. All six countries exceed the ECCU's target debt-to-GDP ratio of 60 percent.

3.   **About half of the regional debt is owed to domestic creditors**. Reliance on domestic sources is high, particularly in Antigua and Barbuda (63 percent of total public debt) and St. Kitts and Nevis (66 percent). St. Vincent and the Grenadines' share of domestic debt is in line with the regional average of about 50 percent. About 10 percent of the regional debt is in arrears, concentrated in Antigua and Barbuda. Of the external debt, about 19 percent is multilateral.

ECCU 6: Composition of Public Debt
(percent of total, end-2009)

Domestic creditors 52%

External creditors 48%

Commercial banks, 22.9

Insurance funds, 4.1

Nonbank, 2.2

ECCB, 1.0

Other (domestic), 21.5

Multilateral, 19.1

Bilateral, 11.7

Commercial banks, 13.0

Other (external), 4.4

Sources: Country authorities and Fund staff calculations.

Composition of Debt (as of end 2009)

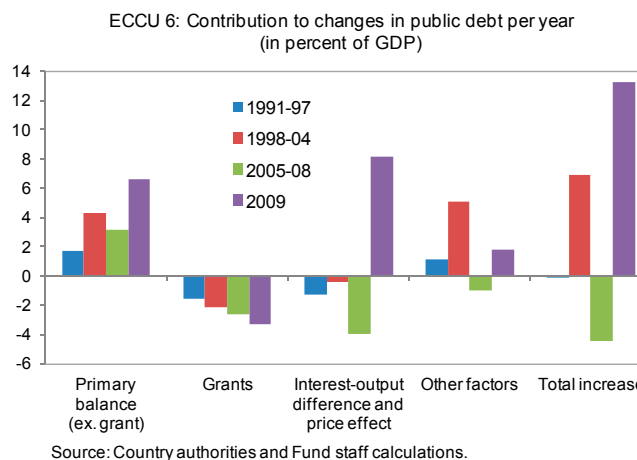|	Antigua and Barbuda	Dominica 1/	Grenada	St. Kitts and Nevis	St. Lucia	St. Vincent and the Grenadines	ECCU-6 2/
	(In percent of GDP)						
Public debt	115.3	84.9	122.3	184.7	74.7	75.0	108.0
Central government	106.9	69.1	106.9	143.4	68.8	57.7	93.3
Public corporations	8.4	15.9	15.4	41.3	5.9	17.3	14.7
	(Share of total)						
External	37.4	69.4	71.6	34.3	51.6	50.3	48.0
of which:							
Multilateral	3.4	45.5	25.5	11.6	32.6	31.7	19.0
Bilateral	21.2	10.2	11.7	6.4	4.1	8.1	11.6
Commercial banks	12.9	11.0	26.5	4.1	14.7	8.5	12.9
Other	0.0	2.6	7.9	10.8	0.0	2.0	4.1
Arrears	0.0	0.0	0.0	1.3	0.0	0.0	0.3
Domestic	62.6	30.6	28.4	65.7	48.4	49.7	52.0
of which:							
by creditor							
ECCB	2.6	0.2	0.2	0.9	0.2	0.0	1.0
Commercial banks	19.1	9.3	8.3	40.5	20.7	31.2	22.9
Nonbank financial institutions	1.2	0.0	3.0	3.0	0.0	6.9	2.2
Insurance funds	0.0	12.6	4.5	9.9	0.0	3.3	4.1
Other	9.0	8.6	9.9	11.4	25.3	8.3	12.2
Arrears	30.5	0.0	2.3	0.0	0.0	0.0	9.3
by instruments							
Loans (excl. overdraft)	21.7	3.7	3.4	40.3	4.7	17.9	18.6
Overdraft	0.0	0.0	2.2	4.2	0.0	7.3	2.0
T-bills	1.8	5.5	4.9	14.2	2.4	5.2	5.8
Medium-long term securities	0.6	15.4	9.4	5.8	30.8	17.6	10.6
Other	7.8	6.1	6.1	1.1	8.4	1.7	5.4
Arrears	30.5	0.0	2.3	0.0	0.0	0.0	9.3
Memorandum items:							
Public debt (in EC$ mn)	3,571	833	2,030	2,779	1,975	1,156	12,344
Nominal GDP (in EC$ mn)	3,097	981	1,660	1,505	2,645	1,542	11,430

Sources: ECCB and Fund staff calculations.
1/ As of end 2008
2/ Aggregate of six countries.

C.   What Contributed to the Debt Accumulation?

4.   **A simple analysis of the sources of debt accumulation shows that both the primary deficit and residual "other factors" have been key, while the differential between real interest rates and growth rates has played a minor role but in 2009**.[5] Central government primary deficits (excluding grants) contributed heavily to the rise in debt ratios in ECCU countries, accounting for over half of the total increase during that period. However, the size of the contributions from "other factors"—despite debt restructuring in Dominica (2004) and Grenada (2005)—suggest that public sector deficits may have been underestimated. This could reflect not only data limitations related to non-government public sector operations (including off-budget operations), but also contingent liabilities such as the granting of debt guarantees to public corporations.

ECCU 6: Contribution to changes in public debt per year
(in percent of GDP)

Source: Country authorities and Fund staff calculations.

5.   **ECCU countries' debt-to-GDP ratios declined from a peak of 112 percent of GDP in 2004 to 95 percent in 2008, but the global financial crisis prompted a sharp reversal**. During 2005–08 the contribution of primary surplus, growth and grants supported an average reduction in the debt ratio of about 4½ percent per year. With the global downturn, however, the public debt ratio increased by about 13 percent of GDP to 108 percent in 2009 and is projected to rise marginally further to 112 percent in 2010, due continued declines in economic activity and the deterioration in fiscal balances. The primary deficit including grants deteriorated to 3.4 percent of GDP in 2009 from a small deficit of 0.5 percent of GDP in 2005–08.

Change in Public Debt and Primary Balance
(in percent of GDP)

Source: Country authorities.

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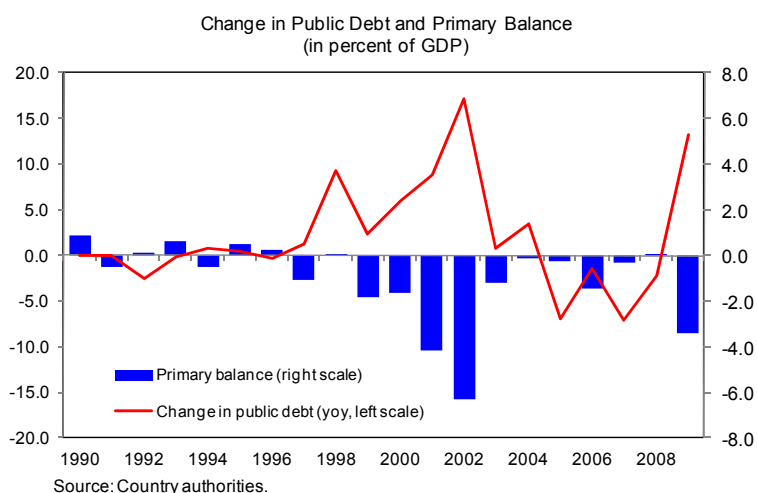
[5] For the methodology, see Sahay (2006). The analysis is conducted for the following four sub-periods to highlight the difference in the debt trajectories and the changes in underlying macro conditions: period of relatively stable debt ratios (1991–97), followed by years of sharp increase (1998–2004), subsequent declines (2005–08), and the recent rise in light of the global financial crisis (2009).

6.   **These findings highlight the importance of fiscal consolidation, but also reveal that the need for complementary measures to place the debt on a firmly downward trajectory**. Given different initial conditions in the ECCU countries, the required fiscal targets would vary by country. Targeted primary surpluses between 2.3 and 3.7 percent of GDP (including grants), envisaged under the current economic programs in Antigua and Barbuda and in Grenada, and as a policy objective in Dominica would put the debt dynamics in these countries on a sustainable path. However, without considerable adjustments in the other ECCU countries, the currency union and peg will be at risk.[6] In the case of St. Vincent and the Grenadines as well as St. Lucia additional fiscal adjustments ranging from about 2 to 3 percent of GDP in comparison to the passive scenarios would be needed to ensure debt sustainability. Reflecting the very large public-debt-to GDP ratio, the adjustment in St Kitts and Nevis will have to be close to 10 percent of GDP. As pursued by Antigua and Barbuda, an accompanying collaborative debt restructuring could support the fiscal adjustment. The debt composition analysis, however, also reveals that additional measures need to be put in place to keep government activities from being transferred to off-budget operations (see Chapter III on public expenditure).

D. How was the High Debt Sustained?

7.   **Captive financial markets have supported the high and growing levels of debt in some countries**. Within the banking sector, the exposures of indigenous banks to the public sector tend to be higher than those of foreign-owned banks. The heavy exposure of publically owned indigenous banks in St. Kitts and Nevis stands out, followed by that in St. Vincent and the Grenadines. The liquidity provided to the banks by the deposits from the national insurance schemes is critical for this arrangement, suggesting that the countries have been relying on captive financial markets.[7] While the national insurance schemes in some countries are in surplus at the moment, changes in investment policy and demographics will likely limit the availability of such funding to banks going forward.

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[6] Implementing strong fiscal reforms simultaneously is paramount since fiscal cross-border spillovers from the weakest member can undermine the confidence in the currency.

[7] The national insurance deposit accounts for 34 percent of total deposit at indigenous banks in St. Kitts and Nevis, compared to around 12 percent on average in other ECCU countries.

Banking Sectors' Exposure to the Public Sector (Dec 2009)

	Antigua and Barbuda	Dominica	Grenada	St. Kitts and Nevis	St. Lucia	St. Vincent and the Grenadines	ECCU 1/
	(Percent)						
Indigenous banks							
Gross government exposure/total assets	29.0	18.8	14.7	45.0	9.9	37.8	23.6
of which: loans/total assets	25.1	3.2	9.8	36.2	2.3	22.5	16.3
General government loans/total loans	37.6	7.0	13.8	70.1	3.7	31.7	26.8
Total banking sector							
Gross government exposure/total assets	12.5	10.8	12.3	26.5	8.9	19.0	14.1
of which: loans/total assets	10.7	2.2	6.3	20.5	4.5	10.9	9.5
General government loans/total loans	19.7	4.6	9.0	40.4	6.2	17.5	15.8
Indigenous banks' share in total banking sector							
Asset	38.9	52.3	18.3	52.8	40.3	37.1	43.6
Gross government exposure	90.2	91.0	21.8	89.7	44.7	73.6	72.8

1/ Including Anguilla and Montserrat.
Source: ECCB.

National Insurance Schemes' Exposure to the Public Sector (Dec 2009)

	Antigua and Barbuda	Dominica	Grenada	St. Kitts and Nevis	St. Lucia	St. Vincent and the Grenadines	ECCU 1/
	(Percent)						
NIS deposit/total deposit							
Indigenous banks	2.3	14.2	14.0	33.6	13.7	14.1	15.8
Total banking sector	1.1	7.2	6.5	17.9	12.2	5.8	8.8
	(In percent of GDP)						
Direct and indirect exposure of NIS to the public sector							
Direct lending to the public sector	--	10.7	5.6	18.3	--	2.5	4.5
Deposit in banking sector	1.3	9.4	9.2	35.5	15.5	5.3	11.5

1/ Excluding Anguilla and Montserrat.
Source: ECCB.

8.   **Looking forward, the public sector financing model in those countries that rely heavily on financing from the banking system should be changed**. In this context, the banking sector regulatory framework should reduce the incentives for banks to favor lending to government over lending to the private sector. In addition, further development and deepening of the Regional Government Securities Market (RGSM) over the medium term could also help to reduce the exposure of banks to the public sector, to the extent that the RGSM attracts more regional and international investors to invest in T-bills and bonds issued by the ECCU governments.

E. Conclusion

9.   **ECCU countries have sustained high levels of public debt and remain among the most highly indebted in the world**. About half of the regional debt is owed to domestic creditors, and the reliance is particularly high in Antigua and Barbuda and St. Kitts and Nevis, which have limited access to concessional external financing. High debt levels are in part the result of captive markets. Both the indigenous banking sector and national social security systems have played major roles in providing credit to the public sector.

10.   **A public debt decomposition shows that both primary deficits and other factors have contributed to the build-up of debt**. Central government primary deficits were a key determinant of the build-up of public debt. While a number of countries are pursing primary

surplus targets of 2–4 percent of GDP to put debt on a firmly downward trajectory, others still have follow suit. Depending on initial conditions, the required adjustments would range from 2 to almost 10 percent of GDP in comparison to the respective passive scenarios. The debt composition suggests that fiscal adjustments need to be complemented by measures to prevent the transfer of government activities to off-budget operations. Given the currency board arrangement and peg to the U.S. dollar, the implementation of fiscal reforms by all members simultaneously is paramount to avoid spillovers from the weakest member, which in turn can undermine confidence in the currency.

Table 1. ECCU: Total Public Sector Debt Accumulation by Components

(In percent of GDP, period average)

Year	Total public debt to GDP (in percent) (end of period)	Public debt accumulation	o/w: public corporations debt accumulation	Contribution to increase in debt to GDP ratio							
				Primary fiscal balance (excl. grants)	Grants	Primary balance (includes grants)	Interest payments	Output growth	Interest-output difference effect	Price effect	Events and measurement errors 1/
ECCU-6											
1991-97	64.2	-0.1	…	1.7	-1.6	0.1	2.1	-1.6	0.5	-1.8	1.1
1998-2004	112.3	6.9	0.9	4.3	-2.1	2.2	3.6	-2.1	1.5	-1.9	5.1
2005-08	94.6	-4.4	-1.6	3.2	-2.7	0.5	3.8	-4.3	-0.5	-3.5	-1.0
2009	107.9	13.3	1.6	6.6	-3.3	3.4	5.0	5.0	10.0	-1.9	1.8
Antigua and Barbuda											
1991-97	102.1	-1.7	-2.5	0.6	-0.3	0.3	3.4	-3.1	0.3	-2.8	0.4
1998-2004	135.0	4.7	-6.3	4.4	-1.6	2.8	4.4	-4.5	-0.1	-1.5	3.5
2005-08	92.8	-10.5	-0.7	4.3	-1.3	3.0	3.8	-6.6	-2.8	-3.5	-7.2
2009	115.3	22.5	3.3	11.5	0.0	11.5	7.6	6.8	14.4	-2.3	-1.2
Dominica											
1991-97	59.8	-0.8	-0.1	4.6	-4.0	0.7	2.3	-1.4	0.8	-2.0	-0.4
1998-2004	107.8	6.9	0.9	6.6	-5.2	1.4	4.7	0.4	5.1	-2.7	3.0
2005-08	84.9	-5.7	-0.3	4.4	-9.4	-5.0	3.0	-3.2	-0.2	-2.0	1.5
2009	83.8	-1.1	-0.3	8.3	-11.3	-3.0	2.1	0.3	2.4	-1.4	1.0
Grenada											
1991-97	43.6	-1.8	…	3.5	-2.9	0.6	2.4	-1.1	1.3	-1.4	-2.4
1998-2004	120.5	11.0	2.5	6.7	-4.0	2.7	3.3	-1.5	1.8	-1.5	8.0
2005-08	102.2	-4.6	-2.6	8.7	-6.0	2.7	2.0	-4.1	-2.1	-6.0	0.9
2009	122.3	20.1	1.7	7.9	-4.1	3.8	2.8	8.6	11.4	1.9	3.0
St. Kitts and Nevis											
1991-97	84.8	4.4	…	0.1	-0.7	-0.5	2.7	-2.4	0.2	-1.8	6.4
1998-2004	194.4	15.7	6.0	7.0	-0.9	6.0	5.7	-3.3	2.4	-3.5	10.8
2005-08	170.0	-6.1	-8.2	-1.6	-2.3	-3.9	8.7	-7.2	1.4	-8.9	5.3
2009	184.7	14.7	1.7	-0.4	-4.6	-5.0	8.2	9.5	17.7	-5.6	7.7
St. Lucia											
1991-97	37.9	2.0	…	0.9	-1.5	-0.6	0.8	-0.6	0.3	-0.7	3.1
1998-2004	64.4	3.8	-0.5	2.1	-1.5	0.6	2.1	-0.7	1.3	-1.6	3.4
2005-08	66.2	0.5	-0.9	0.8	-0.4	0.4	3.3	-1.8	1.5	-1.2	-0.3
2009	74.7	8.5	-0.7	4.2	-1.7	2.5	3.6	3.5	7.1	-2.8	1.7
St. Vincent and the Grenadines											
1991-97	48.1	-3.0	-1.4	2.3	-1.8	0.5	1.4	-1.7	-0.3	-1.8	-1.4
1998-2004	77.4	4.2	0.1	1.4	-1.2	0.3	2.5	-2.0	0.5	-1.1	4.5
2005-08	69.4	-2.0	1.4	2.5	-1.7	0.8	3.1	-3.2	-0.1	-2.6	-0.1
2009	75.0	5.5	2.7	5.5	-5.0	0.5	3.1	0.7	3.8	-0.3	1.5

Source: Fund staff calculations based on data from country authorities.

Note: A positive (negative) sign means that the component contributed to an increase (decrease) in the public debt to GDP ratio.

1/ Events include those that do not appear in the fiscal accounts but modify the public debt.

Figure 1. Debt Decomposition
(In percent of GDP)
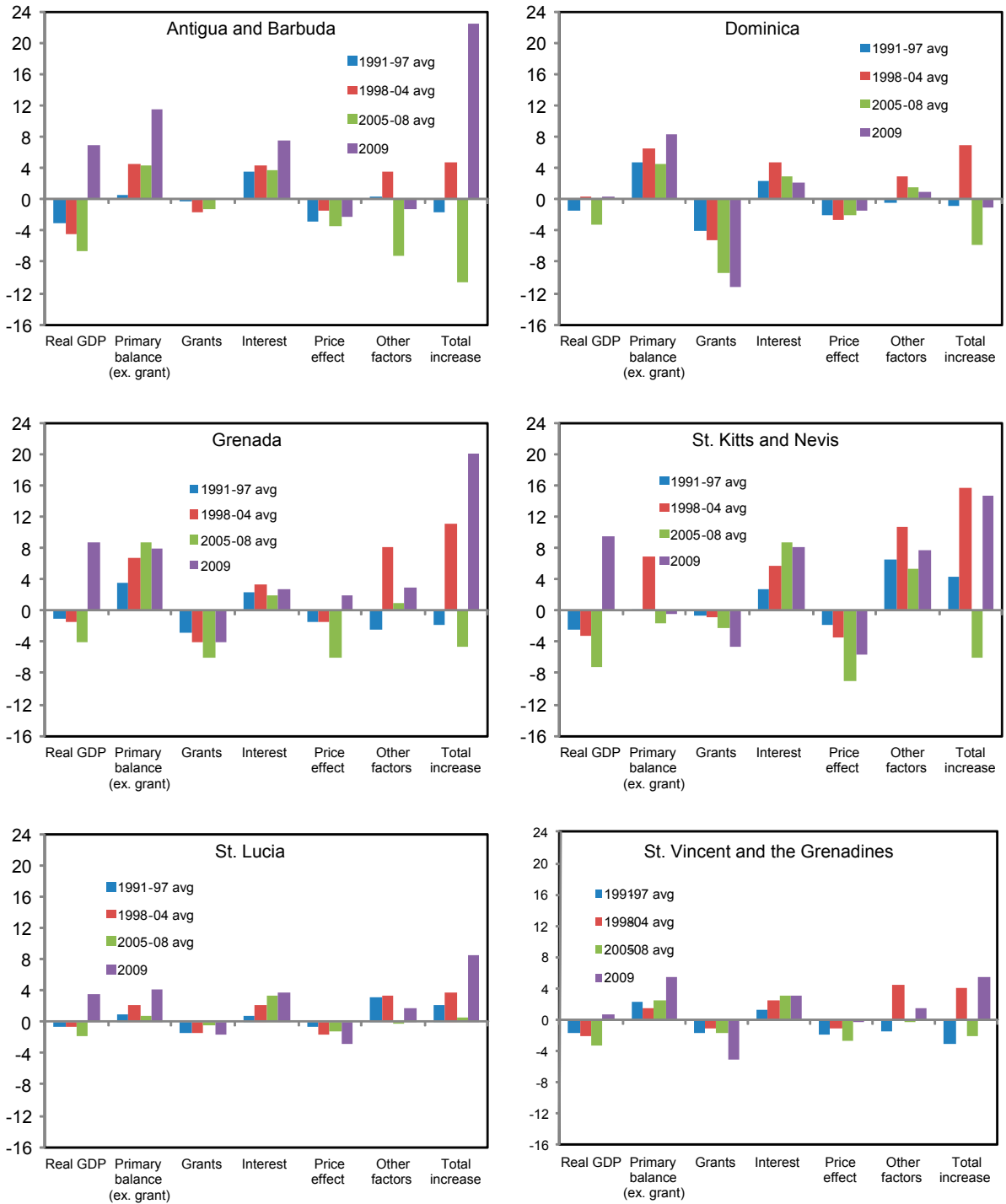
Sources: Country authorities; and Fund staff estimates.

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III. RATIONALIZING PUBLIC EXPENDITURE IN THE ECCU[1]

A. Introduction

1.   **Given the high level of deficits and outstanding public debt in the ECCU,[2] fiscal consolidation is paramount** (see also Chapter II on public debt). Without sizable adjustments, the present situation and trends in several ECCU member countries are not sustainable. High and growing debt and debt service payments have not only limited the fiscal space for responding to shocks, but also crowded out other priority spending to support growth and poverty reduction. Moreover, the growing financing needs associated with the fiscal deficits risk undermining the stability of the currency union.

2.   **While there is room for broadening the revenue base in the ECCU, the relatively high level of revenue-to-GDP ratios suggests that there is considerable scope to achieve fiscal consolidation through expenditure rationalization and control.** Indeed, insufficiently rigorous budget procedures or controls and difficulties in reining in growth in entitlements have contributed decisively to the increase in deficits. In this context, rationalizing government expenditure would generate fiscal savings as well as enhance the efficiency of government spending. To this end, the ECCU authorities have established a Public Expenditure Commission, supported by technical assistance from the Fund (Fiscal Affairs Department), to provide guidance on best practices and benchmarks and to seek the necessary political support.

3.   **This chapter discusses selected expenditure issues in the ECCU.** Section B briefly discusses the evolution of public finances. Section C reviews government compensation and employment, followed by a discussion on social security (Section D), health (Section E), education (Section F), social assistance (Section G), and spending issues related to parastatal entities (Section H). Given the importance of sound public financial management systems for the implementation of expenditure policies, Section I summarizes key issues in this area. Section J discusses weaknesses in the management of investment projects that have contributed to sharp increases in capital spending and Section K concludes.

B. Evolution of Public Finances

4.   **Fiscal imbalances widened significantly in the last decade.** Average primary fiscal balances have deteriorated during the 2000s in most ECCU countries with the notable exception of Dominica and St. Vincent and the Grenadines (Table 1). In 2009, the average primary fiscal balance declined by about 3½ percentage points of GDP for the ECCU as a whole, reflecting a sharp contraction in economic activity.

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[1] Prepared by Shamsuddin Tareq, Alejandro Simone, Koffie Nassar and Arina Viseth.

[2] ECCU countries covered are: Antigua and Barbuda, Dominica, Grenada, St. Kitts and Nevis, St. Lucia, and St. Vincent and the Grenadines.

Table 1. ECCU: Selected Economic and Financial Indicators, 1990–2009[1/]

	1990-99	2000-09	1990-94	1995-99	2000-04	2005-09	2008	2009
Real GDP Growth								
Antigua and Barbuda	3.4	3.6	3.4	3.3	3.3	3.8	1.8	-7.0
Dominica	2.6	0.9	3.0	2.2	-1.0	2.7	3.2	-0.3
Grenada	3.9	1.5	2.4	5.5	1.4	1.6	2.2	-7.7
St. Kitts and Nevis	4.1	2.5	3.9	4.3	2.8	2.2	4.6	-5.5
St. Lucia	3.1	1.0	4.0	2.2	0.7	1.2	0.7	-5.2
St. Vincent and the Grenadines	3.6	3.1	2.8	4.4	2.9	3.3	-0.6	-1.0
Weighted average	3.4	2.2	3.3	3.4	1.9	2.5	1.7	-5.2
Primary fisal balance (in percent of GDP)								
Antigua and Barbuda	0.0	-4.1	0.6	-0.6	-3.5	-4.7	-3.1	-11.5
Dominica	-1.9	2.3	-1.6	-2.1	0.0	4.6	3.1	3.0
Grenada	-1.3	-3.1	-1.3	-1.3	-3.2	-2.9	-3.0	-3.8
St. Kitts and Nevis	-0.3	-1.0	1.8	-2.5	-6.2	4.2	3.3	5.0
St. Lucia	1.2	-1.5	0.9	1.5	-2.2	-0.8	2.2	-2.5
St. Vincent and the Grenadines	-0.4	-0.3	-0.8	0.0	0.1	-0.7	1.4	-0.5
Weighted average	-0.2	-1.9	0.1	-0.4	-2.7	-1.1	0.1	-3.4
Public sector debt (in percent of GDP)								
Antigua and Barbuda	111.3	118.8	110.2	112.4	133.9	103.8	92.8	115.3
Dominica	68.2	102.8	67.3	69.1	114.5	91.1	84.9	83.8
Grenada	49.1	100.0	…	49.1	87.5	112.5	102.2	122.3
St. Kitts and Nevis	75.5	172.6	54.8	83.8	161.0	184.2	170.0	184.7
St. Lucia	32.1	61.6	27.8	36.4	55.4	67.8	66.2	74.7
St. Vincent and the Grenadines	59.5	72.0	64.7	54.3	70.5	73.5	69.4	75.0
Weighted average	67.8	101.0	66.7	68.8	100.3	101.6	94.6	107.9

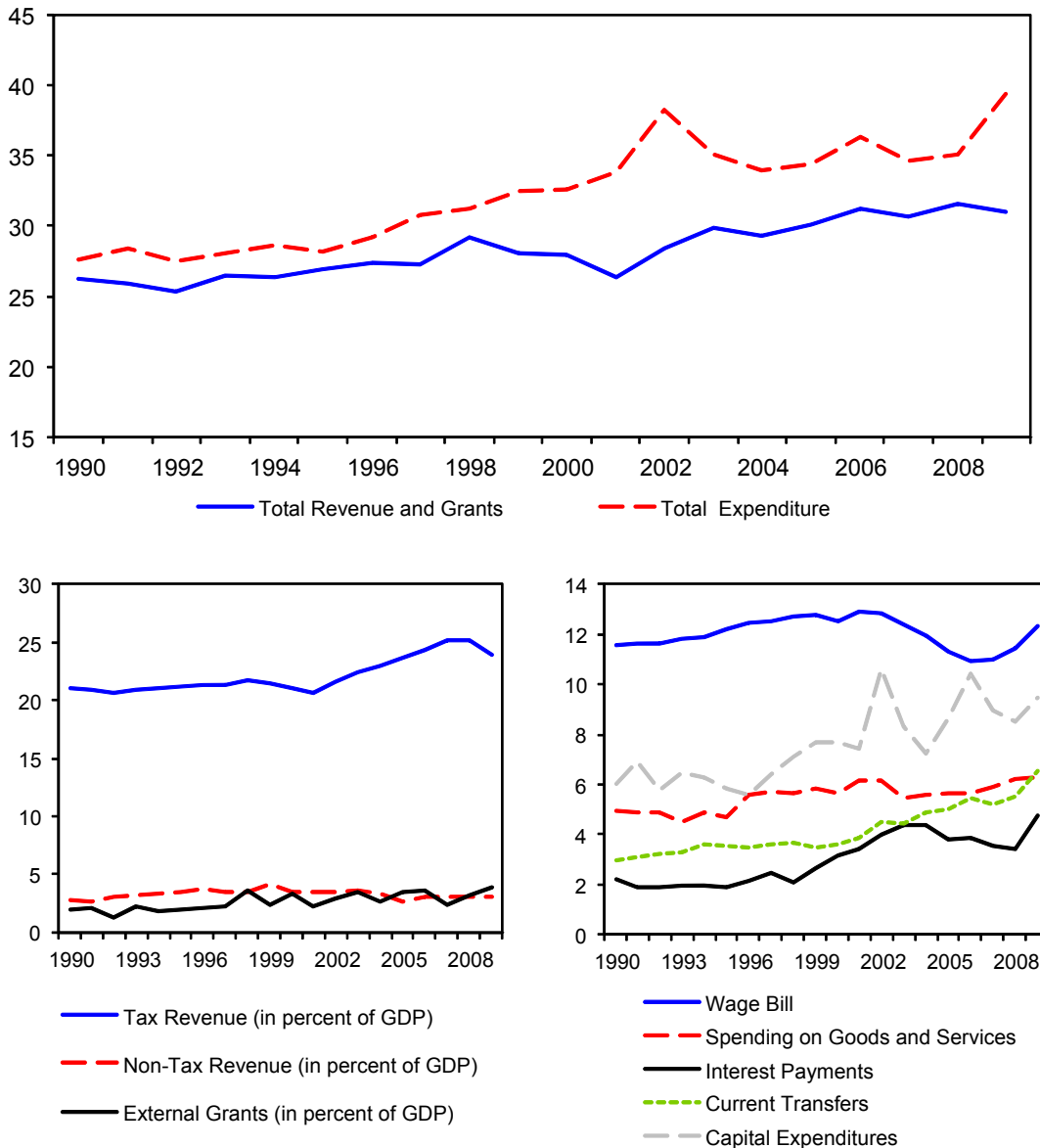Sources: Country authorities; and Fund staff estimates.

[1]/ Includes Antigua and Barbuda, Dominica, Grenada, St. Kitts and Nevis, St. Lucia, and St. Vincent and the Grenadines.

5.   **Large fiscal imbalances have contributed to a build-up of public sector debt in the ECCU.** While government revenue (including grants) increased from about 26 percent of GDP in 1990 to 31 percent of GDP in 2009 (Figure 1), total expenditure increased from 28 percent of GDP to about 39 percent of GDP.[3] Capital spending increased the most during this period. Moreover, average central government spending as a share of GDP has increased by about 3 percent of GDP since 2006 (Table 2). The resulting deficits have been financed by borrowing leading to rising interest bills and high public sector debt averaging 108 percent of GDP for the six ECCU countries in 2009.

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[3] These figures exclude spending by parastatal entities as well as investments financed through special financing arrangements. There is not sufficient cross country information available to attempt a correction.

6.   **Developments in the composition of spending are unsustainable.** There have been large increases in non-discretionary transfers (including public pensions and subsidies). In particular, during the period 2006–09, current expenditure increased by about 3½ percentage points of GDP, mainly on account of increases in the wage bill and current transfers. Thus, the increasing weight of non-discretionary recurrent spending has reduced the flexibility of budgets to respond to shocks.

Figure 1. ECCU: Revenue and Expenditure, 1990-2009
(In percent of GDP)

Sources: Country authorities; and Fund staff estimates.

Table 2. ECCU: Central Government Expenditure, 20006–2010[1]

(In percent of GDP)

	2006	2007	2008	2009	2010 Proj.
Total expenditure	36.0	34.2	34.7	38.8	37.9
Current expenditure	25.5	25.3	26.1	29.2	29.4
Wage bill	10.9	10.9	11.3	12.0	12.0
Spending on goods and services	5.3	5.6	5.9	6.0	5.6
Interest payments	4.1	3.8	3.6	5.0	4.7
Current transfers	5.2	5.0	5.2	6.2	7.1
Capital expenditure	10.5	8.9	8.6	9.6	8.5

Sources: Country authorities; and IMF staff estimates.

[1] Weighted average for Antigua and Barbuda, Dominica, Grenada, St. Kitts and Nevis, St. Lucia, and St. Vincent and the Grenadines.

7. **To achieve fiscal consolidation, two principles that could guide expenditure rationalization are:**

- *Improving the efficiency of spending.* Countries should seek to reduce the cost of producing existing public sector outputs. In addition, spending should be allocated to activities that provide the greatest marginal benefits to society as a whole.

- *Ensuring equity.* Growth without equity is less durable,[4] and so expenditure policy must reflect the need for both intra- and intergenerational equity. Greater targeting of social spending may also be necessary to ensure that the poor are protected as spending levels as a share of GDP are reduced.

C. Government Compensation and Employment

8. **The government wage bill constitutes the largest expenditure item in the budgets of ECCU countries.** Expenditure on wages and salaries averaged close to a third of total government expenditure (over 11 percent of GDP during 2006–09) and account for a significant share of total revenue (Figure 2). When other elements of the compensation package are included (i.e., other benefits and allowances, employer contributions and civil service pensions), the total compensation costs of civil servants approaches almost two-thirds of budgetary revenue in some countries (e.g. Antigua and Barbuda), raising questions about

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[4] Berg, Ostry, and Zettelmeyer (2008); and Tanzi, Chu, and Gupta (1999).

affordability and sustainability. These figures do not include parastatal entities which tend to have compensation arrangements which are at least as generous as the ones in the civil service (see Section G). Given their large relative size, reducing compensation expenditure will have to be a central element of any expenditure rationalization strategy.

9. **Several factors account for the relatively large size of the wage bill in ECCU countries.** Small island economies, such as those in the ECCU, tend to have relatively large governments reflecting indivisibilities in the provision of public services. Nevertheless, high government wage bills in these countries also reflect the fact that, with unemployment high in the region,[5] governments have acted as "employer of last resort." This has led to overstaffing typically reflected in a high ratio of government employment as a share of the population and duplications in functions across several government entities. Overstaffing tends to be prevalent at lower levels in the civil service and results in high compensation costs. In addition, collective bargaining agreements have led, in some cases, to a proliferation of allowances and other benefits and large wage increases (e.g., St. Lucia). More generally, a World Bank study concluded that there was evidence of a positive public sector wage premium over the private sector in some countries.[6]

10. **Absenteeism contributes to high compensation costs in some ECCU countries.** While statistics on absenteeism are difficult to come by,[7] there are indications that this has resulted in high spending on overtime payments in some countries.[8]

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[5] For example, labor survey information available for St. Lucia suggests that unemployment has exceeded 14 percent during most of the last 15 years.

[6] According to World Bank (2005a), in most countries the expectation in terms of wage premium is for it to be negative. Wages in the government sector tend to be lower as employees typically have greater job security and enjoy a number of other pecuniary and non-pecuniary benefits.

[7] There are two types of government employees in ECCU countries—established and non-established. Employees appointed by the Public Service Commissions are referred to as established employees and cover all types of government employees, including teachers, health workers, the police, and the military. The prevalence of manual processing of human resource information for established workers and the existence of significant non established employment have led to the limited availability of information.

[8] For example, in Antigua and Barbuda, physician absenteeism is reportedly common in public health care facilities.

Figure 2. Wage Bill as a Share of Total Revenue, 2009 [1/]

(In percent)
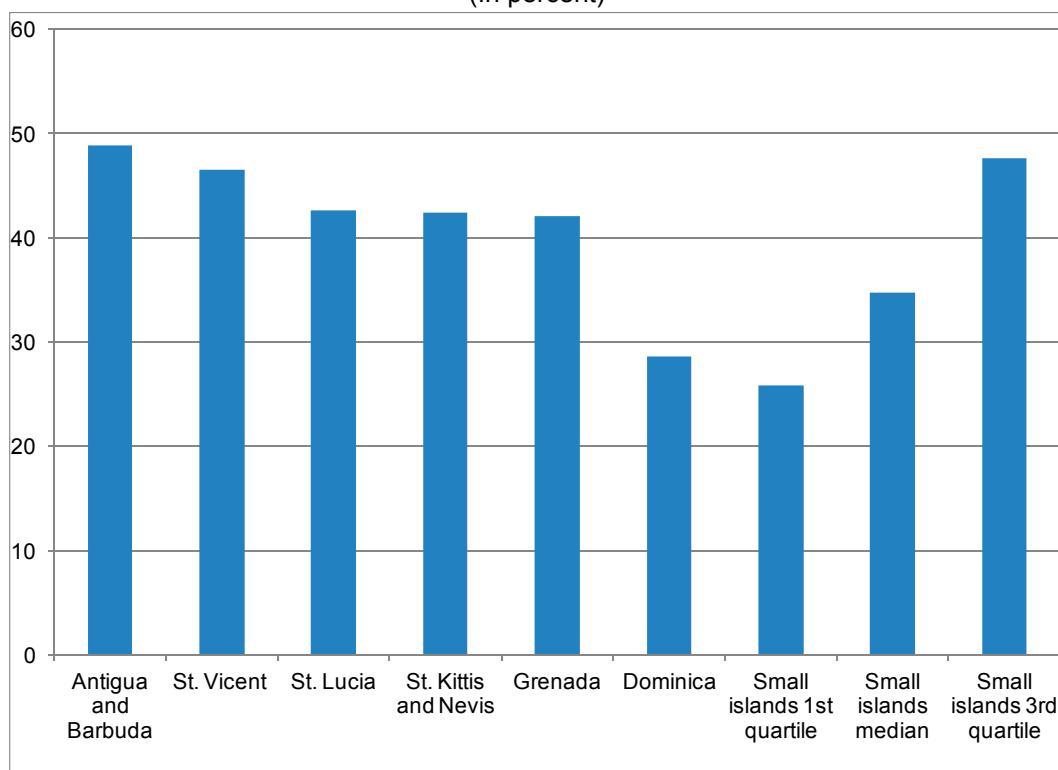
Source: Country authorities and Fund staff estimates.

[1/] The small island economies group includes Bahamas, Barbados, Belize, Brunei, Trinidad and Tobago, Fiji, Jamaica, Kiribati, Maldives, Marshall Islands, Palau, Papua New Guinea, Samoa, Solomon Islands, Sri Lanka, Timor Leste, Tonga, and Vanuatu.

11.   **The wide-spread use of non-established workers has also undermined control over employment and compensation in ECCU countries.** Non-established employees constitute a significant share of total central government employment in ECCU countries—exceeding 50 percent in some cases (e.g. Antigua and Barbuda). The conditions of employment in these positions are determined in contracts negotiated separately with each individual worker and do not necessarily follow established civil service rules. This has led to: (i) important inequities in pay and benefits between established and non established workers; (ii) increased politicization in the appointment of civil servants; and (iii) difficulties in keeping track of the number of non established employees and their compensation arrangements.

12.   **Insufficient clarity in regulations about severance payments/termination procedures makes rationalizing central government employment costly or difficult**. In some cases, the regulations are unclear regarding severance payments for established employees who are declared redundant (e.g., Antigua and Barbuda). In other cases, the termination procedures of established employees specified in the legislations involve numerous stages of appeals which can take several years.

13.   **A number of countries in the region have implemented reforms to reduce high wage bills.** However, these have often not been underpinned by an overall employment and compensation reform strategy. Short-term measures included wage and hiring freezes with different wage definitions and degrees of coverage of the central government. Medium-term measures included voluntary separation packages (e.g., Antigua and Barbuda), outsourcing, and statutorization of government departments (e.g., Grenada and Dominica). The results from these measures have been mixed as illustrated by the increase in the central government wage bill in recent years, following a decline in the early 2000s.

14.   **Several ECCU countries have begun to implement more comprehensive reforms to streamline government employment and compensation**. Antigua and Barbuda, Grenada and St. Lucia are undertaking civil service censuses, payroll audits, and functional reviews of government departments. Results from these exercises will help design a comprehensive employment and compensation reform strategy with proper quantification of its impact on compensation costs. These efforts are being supported by technical and financial assistance from the World Bank.

15.   **ECCU countries could consider additional measures for reducing employment and compensation costs.** In the short term, streamlining and/or tightening eligibility requirements for allowances and benefits, enforcing civil service regulations to reduce absenteeism and overtime, and reducing legal hurdles to public sector downsizing could not only provide some savings, but also facilitate medium term reforms. In the medium term, a review of the role of the government more generally, including parastatal entities, would help identify government units that could be merged, closed or divested. Some countries in the region (e.g., Antigua and Barbuda) have already taken some steps towards this end. Also, as basic distortions in the grading and classification of established personnel are resolved, gradually integrating non-established employees into the establishment would avoid the inequities and adverse consequences created by the two parallel systems.

D. Social Security

16.   **National social security systems are a key source of fiscal vulnerability in ECCU countries.** A rapid demographic transition due to ageing is currently underway in the region which, combined with high emigration, is projected to significantly worsen the dependency ratios of national social security systems. Consequently, while most schemes are currently operating in surplus, available actuarial projections indicate that, under current policies, reserves in St. Vincent and the Grenadines and Antigua and Barbuda's schemes will be exhausted by 2026 and 2029, respectively.[9]

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[9] See Monroe, H. (2009) and Roache, S. and Rasmussen, T. (2007) for additional discussion.

17.   **A number of design features and weaknesses in reserve management have worsened the financial position of these schemes.** Contribution rates and retirement ages tend to be low compared to OECD countries in spite of recent decisions to gradually increase the retirement age in some countries in the region (Table 3).[10] Moreover, pension benefit calculation formulas are based on front-loaded accrual rates and short earnings averaging periods, which favor workers with short contribution history.[11] With respect to reserve management, limited diversification and investment concentration in government instruments and social investments have reduced effective real rates of return on reserves and contributions. High administrative costs, in part due to the small size of most schemes, have also reduced the rate of return on contributions.

Table 3. Comparison of Key Parameters of Pension Systems
Across the Caribbean

| | Retirement age (years) | Contributions (% of earnings or payroll) | | Replacement Rates | | | | Admin. costs (% of contrib.) |
| | | | | Minimum | | Maximum | | |
		Employee	Employer	Years	%	Years	%	
Antigua and Barbuda	60	2.0 to 3.0	5.0	10	25	35	50	17 3/
Barbados	65.5	8.2	8.2	10	40	30	60	6.2
Belize	65	1 to 3.5	3.5 to 6	10	31	35	60	52.2
Dominica	60 1/	4.0	6.8	10	30	40	60	18.4
Grenada	60	4.0	5.0	10	30	40	60	12.2
Guyana	60	5.2	7.8	15	40	35	60	16.2
Jamaica	M65, F60	2.5	2.5	10	12	N/A	50	10.1
St. Kitts and Nevis	62	5.0	6.0	10	30	35	60	19.2
St. Lucia	63 1/	5.0	5.0	14 2/	40	32	60	11.3 3/
St. Vincent and the Grenadines	60	3.5	4.5	10	30	40	60	15.3
Trinidad and Tobago	60	3.5	7.0	10	30	N/A	60	7.1

Sources: Pettinato and Cassou, "A Needs Assessment of Pension Systems in the English Speaking Caribbean;" Mitchell and Osborne, "Old Age Pension Reform in the English Speaking Caribbean;" Brunton and Masci, "Workable Pension Systems: Reforms in the Caribbean," IADB and CDB (2005); and World Bank, "Strengthening Caribbean Pensions: Improving Equity and Sustainability" (2009).

1/ In these cases, the retirement age is gradually being increased to 65 years. In Jamaica, the retirement ages of men and women will be equalized by 2015 at 65 years of age.

2/ Increasing to 15 years after 2012.

3/ Average for 2006–09 for Antigua and Barbuda and 2006–08 for St. Lucia.

18.   **Countries in the region also have separate, non-contributory, civil service pension schemes**. In some cases, such as in Antigua and Barbuda and Saint Vincent and the Grenadines, these schemes pay retired civil servants additional pension benefits, over and above those paid by the national social security system. Civil service pension spending currently range between 1 and 2 percentage points of GDP in ECCU countries for which

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[10] See IMF (2010).

[11] In some cases, such as in Antigua and Barbuda, pension parameters are especially generous for certain groups of workers including parliamentarians, teachers, and police.

information is available. In some cases, civil servants can draw more than one pension, which when combined with the pension from the national scheme, provide replacement rates which exceed 100 percent.

19. **Generous civil service pension schemes can also create adverse labor market incentives and complicate public employment and compensation reform.** The drawbacks include: (i) reduced labor mobility between public and private sector through long vesting periods and a "golden handcuff effect" by severely penalizing early retirement and limiting pension portability; (ii) reduced credibility of the compensation package given that it is concentrated in future benefits; (iii) costly separation of inefficient workers, which reduces the net fiscal gains from privatization, divestment, or downsizing; and (iv) increased administrative costs needed to administer multiple pension schemes.[12] The latter issue is especially important in the region, given the high administrative costs that arise from relatively small systems.

20. **Some ECCU countries are implementing parametric reforms to restore the sustainability of their national social security schemes**. St. Lucia and Dominica are raising the retirement age, increasing contribution rates, and reducing the generosity of the formula for calculating social security benefits. Other countries in the region also need to move in this direction. Further efforts are needed in all countries for changing pension calculation formulae and reducing front-loaded accrual rates. In addition, investment policies should be strengthened to increase portfolio diversification and the rate of return.

21. **Similar reforms should also be implemented for the civil service pension schemes**. Capping the civil service replacement rate to ensure that the combined replacement rate is below 100 percent and making the civil service pension scheme a contributory system would be good first steps. These measures would contribute towards leveling the playing field with the private sector and reducing the net fiscal cost of the schemes. Over the medium term, civil service pension schemes should be phased out. This can be achieved by eliminating eligibility for new civil servants to the scheme, which has been the approach taken by Dominica and St. Lucia. If a supplementary pension scheme for civil servants is still viewed as needed, an alternative approach is to create a new voluntary defined contribution scheme for civil servants. The defined contribution nature would ensure that benefits and contributions are appropriately aligned, and that benefits are portable, and thus remove some of the disincentives for mobility between the public and private sectors. Such a system would be best created at a regional level to reduce administrative costs and with strong governance arrangements.

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[12] See Palacios and Whitehouse (2006).

22.   **There may also be scope for enhanced regional coordination in the social security area.** Important areas of coordination would include greater harmonization of pension benefits and a review of current arrangements regarding portability of pension rights to ensure that no portability gains or losses arise due to labor mobility across the region by workers. Sharing of administrative structures could also help exploit economies of scale and lower administrative costs.

E. Health

23.   **Public provision and public financing dominate health care systems in the ECCU.** As a share of GDP, average government spending on health is about 3 percent. Government expenditure on health constitutes more than half of total health spending in these countries, but could be as high as two-thirds in some countries.[13] Private health insurance currently plays a very limited role in most ECCU countries, but is most prevalent in Antigua and Barbuda and St. Lucia. In some countries, health financing is facing strong budgetary pressures in light of the fiscal crisis. At the same time, the ageing of the population and the trend towards non-communicable chronic diseases will put strong upward pressure on health spending in the region.[14]

24.   **Almost all public spending in health is financed by general revenue.** Only in Antigua and Barbuda is there a mix of general revenue and a separate payroll tax to finance health care. User fees for public health facilities do exist, but they are not a significant source of financing. According to World Bank public expenditure reviews, health indicators are generally good with respect to countries' income levels.[15] In addition, they tend to compare favorably with other small island economies (Table 4).

25.   **Primary care facilities are underutilized due to two factors.** First, there are concerns regarding quality of care due to physician absenteeism in some countries which discourages patients from going to these centers. Quality of care problems also arise when patients are referred by hospitals to primary care facilities, since physicians are often unavailable to ensure continuity of care. Second, user fees for hospitals (which exists in all ECCU countries except Antigua and Barbuda) tend to be low and not reflective of costs. As a result, many patients seek primary care at more costly but better staffed and equipped emergency hospital facilities.

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[13] World Health Organization (2009).

[14] According to a World Bank study (2010), demographic changes alone will increase total health spending needs in Latin America and the Caribbean region by 47 percent over the next 20 years.

[15] See World Bank (2005a, 2005b, 2005c, and 2005d).

Table 4. Health Outcomes and Spending across the ECCU and in Small Island Economies[1]

	Life expectancy at birth (years)	Infant Mortality per 1000 live births	Standarized Mortality Rate per 100000- Non communicable diseases	Age Standarized Mortality Rate per 100000- Cardiovascular	Age Standarized Mortality Rate per 100000- Cancer	Age Standarized Mortality Rate per 100000- Injuries	PPP adjusted Per capita total expenditure on health (US$)
St Lucia	75	12	522	205	128	67	350
Antigua and Barbuda	74	11	674	296	160	45	517
St Vincent and the Grenadines	70	17	674	289	152	64	230
St Kitts and Nevis	71	17	691	424	108	43	570
Grenada	68	17	827	426	186	47	333
Dominica	74	13	580	242	167	32	275
ECCU excluding St Lucia	71	16	689	335	155	46	385
Small Islands	70	15	701	348	119	92	324

Source: World Health Organization.

[1] Data used are for latest year available. For most countries this is year 2007 for life expectancy, 2004 for standardized death rates.

26.   **Low user fees have also contributed to increased demand for pharmaceuticals and medical supplies.** Spending on medical supplies and pharmaceuticals are among the main cost drivers for public health expenditure in some ECCU countries. Low or no copayments for drugs also discourages greater use of generic substitutes contributing to higher pharmaceutical costs. There is also scope for reducing pharmaceutical costs by rationalizing procurement systems and public health campaigns to reduce the incidence of certain diseases.[16]

27.   **The use and maintenance of hospital infrastructure is suboptimal in some countries.** For example, in St. Lucia, hospital occupancy rates are low by international standards, generating high and unnecessary operational costs. Also, health facilities are insufficiently maintained, requiring costly rebuilding or repairs.

28.   **Cost controls are weak.** Costing of health services and drugs provided in the public benefit package is weak and formal processes for examining their cost-effectiveness are deficient. Information on cost of treating specific diseases tends not to be available at health facilities. Health information systems are also not sufficiently developed to allow the recording of all health expenditure related to providing treatment to patients. This has led to situations where decisions to expand the benefit package have been taken without clarity about cost implications leading to arrears and overruns.

[16] In Antigua and Barbuda, there are three different procurement systems for pharmaceutical products in public health facilities reducing the potential for savings from centralized procurement. In St. Lucia, there is a shared perception among several health professionals that certain diseases that lead to high drug consumption could be most cost effective if addressed by public health campaigns to inform the population of the risk factors and how to prevent them. Widely cited cases are diabetes and hypertension.

29.   **ECCU countries can take a number of measures to enhance the efficiency of health spending over the short and medium term**. In the short term, there may be scope for:

- **Increasing revenue through user fees,** while ensuring that user fees: (i) exclude only the poor and those with chronic conditions who cannot afford to pay the fees; (ii) exempt services that treat infectious diseases due to externalities; (iii) are not covered by private insurance, since this weakens the incentives for efficient utilization; and (iv) are fully collected from those required to pay.

- **Strengthening monitoring and enforcement to ensure services are delivered as contracted**. Physicians and other health workers should be monitored to verify that they report to work and perform as intended. An optimal strategy might be to implement a random checking system as is being done in St. Lucia. Penalties should be set appropriately based on the number of infractions, large enough to change behavior, and enforced to instill credibility.

- **Ensuring proper maintenance of hospital infrastructure.** This will avoid the need for costly rebuilding or repairs in the medium term.

- **Undertaking cost audits and installing appropriate health information technology to be able to track costs.** This will also provide critical information to further revise the schedule of user fees and to prepare the ground for medium term reforms discussed below. Appropriate health information technology to support the reforms is paramount.

In the medium term, consideration could be given to:

- **Reviewing public benefits packages taking into account budget constraints.** Given the strong medium-term pressures resulting from demographic and epidemiological transitions, a review of the current health benefits packages is needed to ensure that appropriate prioritization and cost control decisions are taken to maintain their affordability.

- **Greater regional cooperation to reap benefits from economies of scale.** ECCU countries are already benefiting from regional procurement of pharmaceuticals. This could be expanded to include other medical supplies. Since establishing a formal regional cost-effectiveness agency could be challenging and expensive, one strategy would be to base the pharmaceutical list and reimbursement decisions on the evaluations of agencies from other countries, such as the National Institute of Clinical Excellence in England and Wales.

- **Rationalizing the use of hospital infrastructure.** Given the relatively low occupancy rates in hospitals in some countries, there is scope for rationalizing the number and distribution of hospital beds. This could lead to more efficient utilization of hospital resources.

- **Basing some portion of hospital reimbursement on prospective methods, such as diagnosis-related groups (DRGs)**. DRGs pay hospitals a fixed amount to treat a patient based on diagnosis at admission. Since these payment methods put part of the provider's income at risk, he or she is likely to be more attentive to the costs and benefits of treatment decisions and has an incentive to minimize costs. However, DRGs also incentivize providers to increase admissions and to reduce non-observable quality so that it is necessary to monitor admissions, treatment patterns, and adherence to standard protocols to ensure appropriate delivery of care and that budgets are adhered to.

F. Education

30. **At about 6½ percent of GDP, government spending on education in ECCU countries is relatively high with respect to comparator countries** (Table 5). Education outcomes have improved over the last two decades. Access to both primary and secondary education and enrollment rates for secondary education have improved markedly over the past decades. Most ECCU countries have achieved the Millennium Development Goal (MDG) of universal primary education.

Table 5. Education Expenditure in ECCU Countries[1/]

	Public education spending	
	percent of GDP	in per capita US$
Antigua and Barbuda	4.7	531
Dominica	4.8	183
Grenada	5.2	242
St. Kitts and Nevis	9.9	536
St. Lucia	6.4	319
St. Vincent and Grenadines	7.0	375
ECCU Countries	6.3	364
Other Small Island States	7.2	319
Latin America	3.9	259
OECD	5.6	1,602

Sources: Country authorities and Fund staff estimates based.

[1/] Figures for each country correspond to latest year available.

31.   **High spending levels are due in good part to the fact that education systems have yet to adjust to demographic changes**. Total number of students enrolled has been declining steadily with the fall in birth rates. However, this does not seem to have been reflected in the net hiring of teachers as illustrated by Figure 3 below for the case of St. Lucia. This reflects an inertial input-based approach to budgeting, which is based on historical spending and does not allow adjustments in the number of teachers and schools in response to demographic developments.

32.   **The demographic changes are resulting in low and decreasing student teacher ratios (STR) for primary and secondary education.** The student-teacher ratios for primary education and secondary education have declined to about 20 or below in most ECCU countries. They are lower than in other Caribbean and Latin American countries and below international standards. The World Bank recommends student teacher ratios of 25 and 30 for primary and secondary education, respectively given that internationally there is empirical evidence that increasing student teacher ratios to those levels would not harm outcomes.[17] [18]

33.   **The relatively high spending on wages and salaries is crowding out important recurrent spending.** Salaries in some countries consume over 90 percent of current outlays leaving few resources for supplies and materials, operating and maintenance services, and teacher training. Under-provision of these inputs can have a detrimental impact on the quality of education.

Figure 3. St. Lucia. Number of Students and Teachers in Primary and Secondary Education
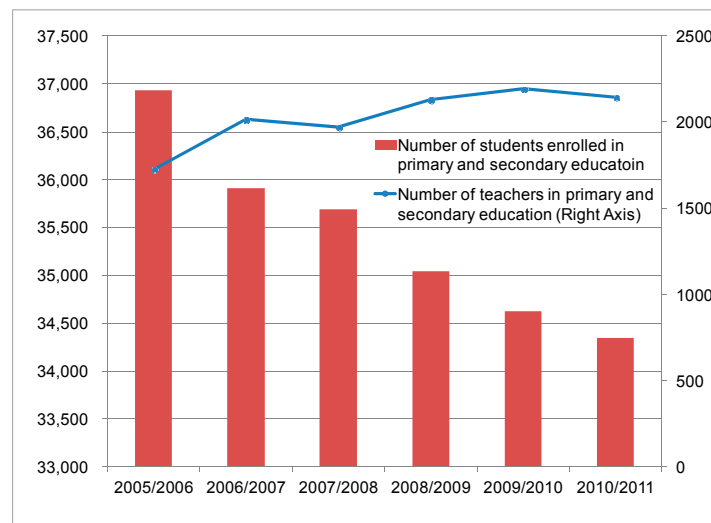
Sources: St. Lucia's Budget Estimates 2010/11 and Statistical Digest 2009 Ministry of Education and Culture.

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[17] See World Bank (2005a, 2005b, 2005c and 2005d).

[18] See Eric Hanushek (1998).

34.   **Cost recovery in tertiary education is low in most countries**. Typically, tuition and fees cover only a small portion of total cost in tertiary education. In fact, cost recovery of tertiary education spending is considerably higher in Latin America and North America than in the ECCU. In some countries, the benefits of subsidized fees in tertiary education accrue mostly to the non-poor. For example, household survey data indicates that in St. Lucia, only 11.4 percent of the students in tertiary education come from poor households. Greater effort could also be placed on means testing scholarships that would allow more needy individuals to attend universities while retaining funding for top performing students.

35.   **Administrative expenses are relatively high due to the small size of the countries, while some subsidized programs are not well-targeted**. Larger countries spend roughly half of the amount ECCU countries spend on administration. The fixed costs of developing curriculum, information systems, and guidelines for the education sector drive this difference. Inefficient targeting of some programs such as school feeding, subsidies for tuition and textbooks also raise equity concerns.

36.   **Enhancing the efficiency of education spending could lead to better outcomes while also generating some cost savings for the budget**.

- Measures in the short term could include: (i) increasing student-teacher ratios through attrition; (ii) reallocating existing spending more towards non-salary components; (iii) better targeting of subsidized educational programs; and, (iv) introducing/raising user fees at the tertiary level.

- In the medium term, reforms could include:

  - **Reforming the financing and organization of primary and secondary education to better match resources to demographic changes**. Establishing a system that bases funding on the number of students in school would automatically adjust financing so that spending on teachers declines as fewer are needed. Some countries (e.g., St. Lucia) have introduced multi-grade teaching in response to declining student population. At some point, merging schools may be required to achieve higher student-teacher ratios. However, this would likely engender higher public spending on transportation as well as higher private costs. For that reason, careful monitoring is needed to ensure that educational outcomes do not suffer.

  - **Achieving economies of scale through greater regional cooperation**. Improved coordination among ECCU countries could help reduce administrative costs without sacrificing quality of education. At the primary and secondary levels, economies of scale could be achieved in areas such as curriculum development. This could also be relevant at the tertiary level and include specialization in particular fields with different countries specializing in different areas.

G. Social Assistance

37.   **ECCU countries implement a wide array of social assistance programs to provide income support and access to basic services to the poor and the vulnerable**. These include transfers (both cash and in-kind), labor-market programs (including public works and training programs), welfare programs based on education or health, programs for the disabled, and housing programs.

38.   **Spending on social assistance programs has increased steadily in almost all countries in the region over the last few years**. Spending on such programs varies across countries—ranging from less than 1 percent of GDP in Antigua and Barbuda to over 3 percent of GDP in Grenada.[19] This compares with spending of 1.4 percent of GDP in Latin America and the Caribbean countries.[20]

39.   **Poverty assessment reports point to limited coverage of the most vulnerable by these programs**. For example, public assistance programs covered less than 20 percent of the poor and indigent in Dominica, 25 percent of the elderly in Grenada, and 9 percent of the poor in St. Lucia. This is due to low spending on these programs as well as inadequate targeting.

40.   **Social assistance programs are implemented by different government agencies with little or no coordination**. Large number of programs, each with its own administrative system and procedures, stretches the capacity of staff and results in high start-up and administrative costs.

41.   **Targeting, accountability and monitoring mechanisms are weak**. Weak targeting of some programs has resulted in considerable leakage to non-poor groups. For example, children from both highest and lowest quintiles appear to benefit almost equally from school feeding programs in St. Lucia, while close to half of the benefits of the welfare assistance program accrues to the non-poor. There is also a lack of effective monitoring and evaluation of programs due to weak accountability and monitoring mechanisms.

42.   **Programs lack flexibility to respond to shocks**. Financial crisis, price shocks, and natural disasters can all have an adverse impact on the poor and the vulnerable. Protecting the population from shocks require that programs be expanded or contracted as appropriate, both in terms of beneficiaries as well as benefit levels. Lack of effective planning and possible financing constraints may have contributed to the lack of flexibility of programs.

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[19] However, comparison of spending figures across countries can be misleading because of different definition and coverage of such programs.

[20] World Bank (2005e).

43.   **There is scope for improving the efficiency of social assistance programs in ECCU countries**.

Short term options include:

- **Introducing objective and transparent targeting mechanisms**. In the first instance, targeting mechanisms in existing programs should be evaluated and all non-transparent methods replaced with explicit and verifiable methods. Household survey data provides important information for the construction of poverty maps and collection of other relevant information for targeting.

- **Establishing a central beneficiary system for all programs**. Such a system would provide important monitoring and planning information. It would also streamline the application procedure and reduce administrative costs for targeting and approval. Since the programs cover only a small number of beneficiaries, this could be done rather quickly.

Medium term options include:

- **Rationalizing social assistance programs on the basis of a coherent social protection strategy**. The strategy should specify objectives, core programs with fiscal allocations that match these priorities, implementation arrangements, accountability and control mechanisms, and monitoring and evaluation plans. One set of programs could focus on addressing key dimensions of extreme poverty and intergenerational transmission of poverty, covering also the elderly and the disabled who are not covered by the social security scheme. Small labor-intensive public works type of programs could form a second group which can be scaled up or down in response to economic shocks. A third group could concentrate on skills training and development.

- **Linking social assistance programs to actions that promote human capital development**. Conditioning social assistance on regular visits to health clinics or attendance and progression of children in schools can be an effective method of breaking intergenerational transmission of poverty. However, these programs require more sophisticated administrative and institutional frameworks. Governments have attempted to overcome these constraints by rolling these programs out gradually over time.

- **Strengthening information management systems**. Computerization would enhance the ability of the governments to monitor and evaluate programs and also reduce administrative costs. Programs and beneficiaries can be tracked over time and evaluated with respect to inputs and outcomes. This is an area where a regional approach might be explored with the goal of improving cost-effectiveness and overcoming capacity constraints.

H. Parastatal Entities

44.   **Parastatal entities are government units that operate separately from the budget.** In ECCU countries, a variety of entities operate as parastatal entities including public enterprises, government corporations, regulatory commissions, extra-budgetary funds, and government agencies. Many of these entities perform non-commercial functions that are normally carried out by government departments. In some countries, the number of such bodies has increased steadily over the years and currently account for a significant share of public employment and spending. For example, in Antigua and Barbuda, these entities account for more than 40 percent of public employment, while budgetary transfers to them amount to more than 2 percent of GDP. Similarly, in St. Lucia the most recent information available indicates that transfers to parastatals accounted for about 1¾ percent of GDP.

45.   **Parastatal entities do not fully comply with the legal reporting and auditing requirements.** In some countries of the ECCU, established legislation specify governance arrangement and reporting requirement for parastatal entities. However, compliance with the law is very weak. Moreover, available financial information is often incomplete and not sufficiently reliable to evaluate their financial condition. In most countries, there is no dedicated unit or body monitoring the operations of these entities. Even in countries where there is one, such as in St. Lucia, monitoring is weak due to capacity constraints.

46.   **The proliferation of parastatal entities combined with insufficient oversight and limited information on their financial operations is a source of concern.** Country experiences have shown that establishing new parastatal entities can create inefficiencies and loss of fiscal control, if appropriate governance arrangements and reporting requirements are not in place. In particular, this can lead to:

- *A multiplicity of institutions with related responsibilities, but no mechanism to prioritize and avoid duplications.* This can generate high overhead costs and waste limited public resources;

- *A reduction in budget discipline.* Statutory bodies may be used to circumvent regular budget procedures and the checks and balances implied by them resulting in reduced transparency, a loss of control over spending, and the potential creation of significant contingent liabilities; and

- *Reduced credibility to meet deficit and debt targets.* When entities do not have the financial capability to cover their spending needs or service their debt, the government may need to intervene in ways that move them away from the debt target, by issuing supplementary budgets, or assuming off-budget debt.

47.   **Reform options in the short term to address these issues include**:

- **Enforcing existing legislation on reporting requirements and strengthening sanctions for non-compliance.** Deadlines for submitting audited financial statements

need to be clarified and penalties for non-compliance increased. Such penalties could include the withholding of transfers and the rejection of any loan approval if the information on their finances is not submitted on time and in line with the regulations and international accounting standards

- **Ensuring that sufficient and reliable information is available to determine the financial condition of the entities and that it is presented in a way that facilitates analysis.** Compiling the information in line with international government finance statistics standards such as in the *Government Financial Statistics Manual (GFSM2001)* could help significantly in achieving that objective. Bridge tables could then be prepared from the financial statements of the statutory bodies into the GFS2001 methodology to prepare the information for analysis.

- **Strengthening the oversight of parastatal entities**. With increased and improved information on statutory body finances, the focus should first be in ascertaining the financial situation of the largest statutory bodies and the factors underlying their financial position since those are the ones which could impact the budget most with contingent liabilities. This will allow the government to identify measures that will enable them to strengthen their financial condition, minimize their reliance on transfers, and thus save resources for the budget. Moreover, the ministries of finance should play an important role in approving investment projects (see Section J) and controlling borrowing by parastatal entities.

- **Increasing the level of scrutiny to justify the creation of new parastatal entities and periodically assessing whether their objectives remain relevant.** The first objective could be attained by requiring an independent assessment of the business case for the establishment of a parastatal entity by showing that objectives would be met at a lower cost than with other alternatives, including through existing government departments. The second objective could be met by introducing automatic sunset clauses for some institutions in the relevant acts and requiring periodic reviews of their performance with respect to the objectives for which they were created.

48.   **A review of the functions and rationale of the existing statutory bodies should be undertaken over the medium term**. This could be done in the context of the review of the role of government discussed above. The review will help identify areas of duplication, if any, which could create rationalization opportunities and savings for the budget. It would also help decide which entities should continue to operate, be merged, divested or closed down.

I. Public Financial Management[21]

49.   **Successful expenditure rationalization will also require reforms in broader public financial management (PFM).** Diagnostic assessments and technical assistance undertaken during the period 2006–09, have pointed to a number of weaknesses in budget formulation, execution, accounting, recording, and reporting. These include:

- **Budget formulation:** ECCU countries continued to be heavily reliant on supplementary warrants, suggesting that their original budgets were not comprehensively formulated. The fiscal crisis in 2009 also demonstrated fragility in budget processes, particularly in relation to the absence of clear processes. Policy based budgeting is underdeveloped, as is the linkage between the budget and the overall policy objectives of the government. Formal multi-year fiscal frameworks are either absent or limited. The recurrent and development budgets are also not well integrated.

- **Budget execution:** Predictability and control in budget execution in the region remains weak. Discipline, particularly in relation to commitments, is not always achieved, requiring a large volume of virements and frequent use of supplementary warrants. A significant growth in arrears was also seen in 2009, in part due to the absence of commitment control. In general, the performance of the Accountant General's operations is below the level required to provide quality financial information for decision making. This is in part due to the fragmented nature of government finances.

- **Accounting, recording and reporting:** While detailed budget documentation is available in most cases, there is an overall lack of regular consolidation of economic and financial information on externally financed projects, limited information on the macroeconomic framework/fiscal risks (including debt and pensions), and poor reporting by, and oversight of, statutory bodies and state owned enterprises. Most governments experience bank reconciliation challenges, delayed in-year budget reports and annual financial statements, and deficiencies in terms of the quality of auditable information. In terms of transparency, countries release only limited information for public scrutiny, and external scrutiny and audit is seen as the weakest area. Delays in producing financial statements undermine the capacity of both the external auditor and the Public Accounts Committees (PACs) to properly perform their roles.

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[21] This section is based on contribution by Marc Silins of the Caribbean Regional Technical Assistance Center (CARTAC).

- **Information Technology (IT) systems:** Countries continue to struggle to maintain these systems and are not realizing their full potential. While a number of issues could be traced to the level of support made available by software providers, countries themselves continue to allocate insufficiently skilled human resources to the proper maintenance of these mission critical systems. It is also clear that not enough attention is given to the reengineering of business processes to gain maximum benefits from these systems, with many countries continuing with their pre-system manual processes, often duplicating these functions within the new systems.[22]

50.   **ECCU countries are in the process of formulating PFM action plans to address these issues.** Six of the eight ECCU members have undertaken a Public Expenditure and Financial Assessment (PEFA) in the last 12 months; and seven will have completed PFM reform action plans by the end of the year. This will assist authorities to identify short and medium-term reform priorities and to seek coordinated support from development partners. Importantly, countries are likely to identify similar areas of need and this presents an opportunity to jointly undertake reforms and to provide peer support.

51.   **Key short-term reform measures include**:

- **Strengthening the budget preparation process.** This area of reform needs to focus on all aspects of public spending and revenue and must ensure full consolidation of the budget process. This will also support the preparation of a proper medium-term fiscal framework (MTFF). A formal mid-year budget review should also become a standard feature on the budget calendar for each country.[23]

- **Increasing predictability and control in budget execution.** This can be achieved by (i) ensuring that all government spending and receipts are within the control of the Accountant General's Department and within the government Financial Management Information System (FMIS), and (ii) centralizing the management of government's resources within a treasury single account system. The experience of CARTAC technical assistance suggests the need to focus work on fundamental processes, such as bank reconciliations, accounting, cash management, commitment recording, chart of accounts redesign and timely reporting.

- **Strengthening internal control**. Reengineering processes to better utilize available technology would realize major benefits, including improving controls and greater efficiency. Investing in capacity building programs to ensure that financial actors understand their roles will also improve the quality of financial processing—

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[22]Based on a CARTAC regional IT Study (which included ECCU countries) focusing on the three major PFM IT systems: tax, customs and treasury undertaken over 2008–10.

[23] Note that Grenada is successfully implementing quarterly reviews.

particularly as many countries have enacted new laws and regulations in recent years and changed certain PFM processes, but have not adequately raised the level of awareness of these changes among relevant players.

52.   **Key medium term reform measures include**:

- **Examining regional solutions to retaining skills in the region.** In order to avoid the inhibitive costs often associated with an individual approach among small economies, ECCU countries need to pursue opportunities for collaboration, such as in the development of laws, policies, and procedures, and IT systems, or by sharing skilled people and training programs. External audit represents another area where expertise could be shared across the region.

- **Exploiting opportunities to promote regional collaboration in capacity building initiatives and building a common program of development activities**. CaPFA/CARTAC's one-week PFM workshop has been successfully implemented in six countries in the region over the past 12 months, and was developed in the region and delivered by regional presenters. The pool of regional experts to deliver this and future training initiatives should also be expanded.

- **Reviewing business processes to streamline workloads.** Efforts to reduce or even eliminate both cheque payments and receipts would significantly reduce workloads. The new Support for Economic Management in the Caribbean (SEMCAR) program, financed by the Canadian Development Agency (CIDA), should also provide a strong basis for upgrading existing IT systems and creating a regional focus in the medium and longer term.

J. Capital Spending[24]

53.   **Capital spending has been the area of largest expenditure growth in the ECCU.** As illustrated in Figure 1, capital spending hovered around 6 percent of GDP in the 1990s. Since then, it has grown considerably, exceeding 10 percent of GDP in 2006.[25] Only since 2006 have capital spending levels started to come down and further adjustments are expected in 2010 as the region adjusts to the fiscal impact of the global economic and financial crisis.

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[24] This section draws on various public expenditure reviews undertaken by the World Bank.

[25] These figures do not include capital spending by parastatals or financed under special arrangements (e.g., public-private partnerships) thereby understating capital spending. On the other hand, all foreign financed capital projects are automatically included as capital expenditure in most, if not all, countries in the region. These project expenditure also include some current spending so that this practice results in inflating capital spending.

54.   **The process underlying capital spending decisions has contributed significantly to expenditure growth.** While some countries were hit by natural disasters (especially hurricanes), which triggered large reconstruction needs, World Bank public expenditure reviews (PERs) for several countries in the region have also flagged weaknesses in the planning, execution and monitoring of public sector investment programs (PSIPs) that have contributed to high and inefficient investment spending. These include:

- **Dual budgeting**. This refers to the practices where *de jure* or *de facto* recurrent and capital expenditure are budgeted separately. These practices have typically led to underestimation of the recurrent cost implications of capital projects since these are normally not included in the public sector investment programs. This also leads to serious inefficiencies, since under-budgeting of maintenance and operations spending can reduce the rate of return of capital projects.

- **Lack of a clear budget constraint for capital**. Entities involved in investment planning are not given a clear budget envelope. This has resulted in an unfinanced list of projects commonly referred to as a "wish list" and does not force prioritization at the budget stage. It leads to inefficient prioritization at the execution stage where projects are arbitrarily matched with available resources.

- **Lack of project selection criteria and link to the countries' medium term economic strategies**. Projects are approved and included in the budget without the necessary information to carry out feasibility studies and cost benefit analysis, without them being fully financed, or without being consistent with the relevant sectoral strategies. In addition to increasing the risk of approving projects with low or negative rate of return, it makes budgeting unrealistic and may lead to spending overruns, forcing revisions in budget appropriations during the year, as discussed in Section H.

- **Limited coverage**. Projects carried out by statutory bodies, state enterprises or financed using special arrangements (such as public-private partnerships or projects executed by private companies financed by guaranteed loans) are not included in the PSIPs subverting the prioritization process.

- **Poor monitoring and insufficient ex-post project evaluation.** Detailed project execution report requirements are not adhered to on a regular basis by the entities with reporting responsibilities. In addition, capital expenditure disbursed directly by donors are unlikely to be recorded and reported in the budget. Ex-post project evaluation is only carried out for externally funded projects where it is required by the financing institution.

55.   **ECCU countries can take a number of measures to rationalize capital spending and enhance its efficiency in the short and medium term**:

In the short term, there may be scope for:

- **Giving the ministry of finance a greater gateway role.** This can be achieved by requiring that all investment projects above a certain threshold should be screened by the ministry of finance (MOF). The MOF would have to give a go-ahead on the basis of the financial viability of the project and an assessment of the risks to the budget.

- **Defining and strictly enforcing simple selection criteria for screening investment projects.** For example, investment projects considered for inclusion in the budget or the PSIP should: (i) be submitted with all the information needed to evaluate them (including information on their recurrent spending implications); (ii) have gone through appropriate feasibility studies/cost benefit analysis, especially for large projects; and (iii) be fully financed, consistent with sectoral priorities and spending envelopes provided by the MOF to the requesting entity. The criteria should apply to all public investment projects independently of the way they are financed and without any exceptions.

- **Strengthening and enforcing monitoring procedures.** In particular, monthly monitoring of capital spending execution should be required and credible penalties should be applied to non-compliant institutions.

In the medium term, consideration could be given to:

- **Developing capacity for cost benefit analysis at the regional level.** While in the short term feasibility/cost benefit analysis studies can be contracted out due to capacity constraints, steps should be taken to develop such capacity over the medium term. Standard manual on ex ante and ex post evaluation of projects could be developed to guide this process. A regional approach could be considered to take advantage of scale economies not only in the development of the manuals but also in training of government officials.

- **Carrying out systematically ex-post cost benefit analysis of large investment projects.** Information on what went right and what went wrong with projects is very valuable to refine the project selection criteria to limit the losses from projects with low or negative rates of return.

K. Conclusion

56.   **Fiscal consolidation efforts in the ECCU need to focus on the expenditure side of the budget**. The surge in fiscal deficits and the associated increase in debt have raised concerns regarding fiscal and debt sustainability. This has also constrained the fiscal space needed to respond to shocks and expand social and poverty-reducing spending. Given extremely high revenue-to-GDP ratios in the region, expenditure rationalization efforts will be key to successful fiscal consolidation. These efforts should be guided by two principles: equity and efficiency.

57.   **The government wage bill and social security schemes are two priority areas for expenditure rationalization**. Given that the wage bill constitutes the biggest expenditure item in the ECCU, any meaningful rationalization effort would have to address this issue. Some countries have implemented short-term measures to contain the growth of the wage bill. These need to be complemented with more medium-term measures. Social security systems also are a key source of fiscal vulnerability over the medium-term. Parametric reforms are needed to restore the financial sustainability of these schemes. Dominica and St. Lucia have been leaders in this area of reform, but other countries need to follow suit. There is also scope for efficiency enhancing reforms in other expenditure areas.

58.   **Successful expenditure rationalization will also require strengthening PFM systems**. ECCU countries are in the process of formulating reform action plans to strengthen these systems. Implementing these plans would require continued financial and technical assistance from donors, including CARTAC and the IMF.

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