



# EAST CARIBBEAN CURRENCY UNION

## SELECTED ISSUES

June 2017

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# EASTERN CARIBBEAN CURRENCY UNION

## SELECTED ISSUES

May 17, 2017

Approved By  
**Western Hemisphere  
Department**

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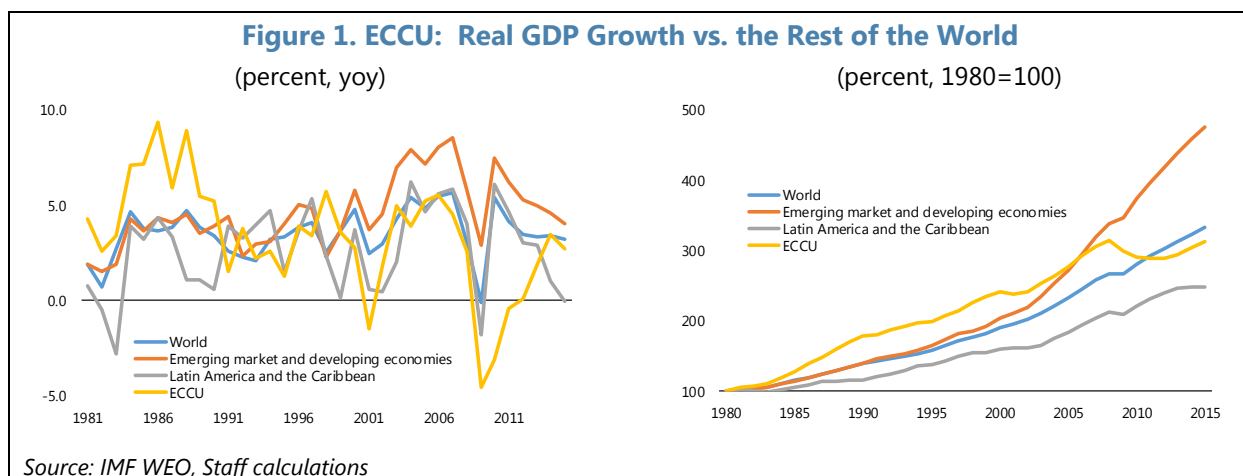
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## PRODUCTIVITY AND POTENTIAL OUTPUT IN THE ECCU<sup>1</sup>

This paper analyzes productivity in the ECCU by exploring two complementary exercises. First, it computes total factor productivity (TFP) by extending standard growth accounting frameworks with (i) the impact on natural disasters (NDs) on the stock and productivity of physical capital; (ii) human capital accumulation; and (iii) the impact of out-migration on labor and human capital. Second, the paper analyzes labor productivity, including across economic sectors. The results indicate that the historical deceleration in growth was mostly driven by the declining contribution of TFP, resulting in stagnation in the aftermath of the Global Financial Crisis (GFC). Labor productivity measures show that labor is largely allocated in the sectors with relatively lower productivity. A simulation exercise indicates that a continuation of these trends would imply potential output growth in the range of 1.5-2.5 percent in the ECCU.

### A. Historical Trends in Output and Factors of Production

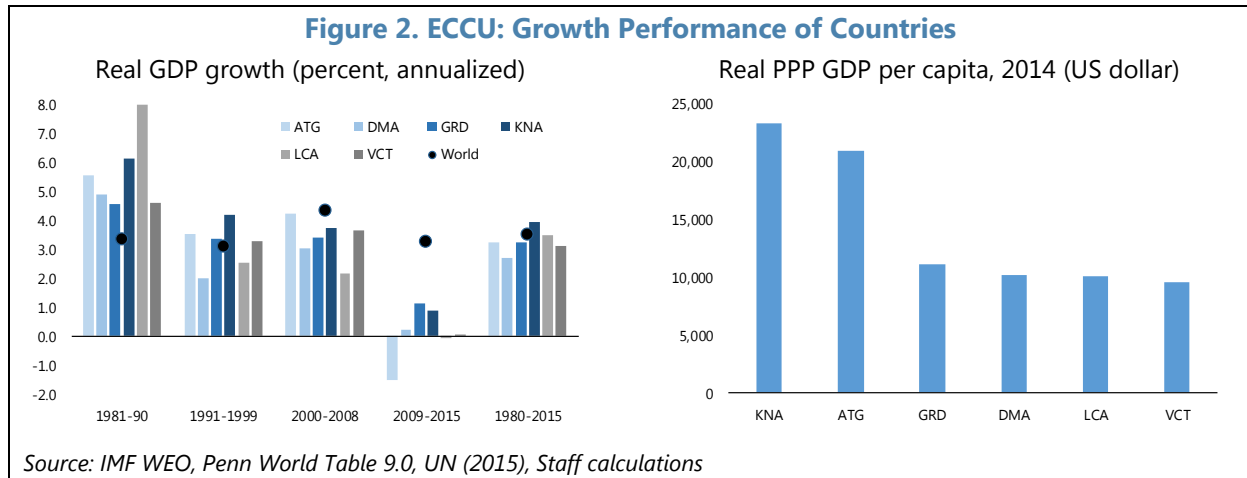
- Output growth in the ECCU has lagged behind growth in emerging markets and developing economies (EMDE) in the last four decades.** The ECCU economy has been growing at an annualized rate of 3.3 percent since 1980, well below 4.5 percent in EMDEs and slightly above 2.7 percent in Latin America and the Caribbean (LAC). Although the ECCU and EMDEs had broadly similar cumulative growth between 1980 and 2008, mostly due to the economic boom in the ECCU in the 1980s, the region's divergence from EMDEs started at the beginning of the 2000s and intensified in the aftermath of the GFC (Figure 1, Box 1). Indeed, economic activity has broadly stagnated in the ECCU since the start of the GFC. This stands in sharp contrast with growth of 5.3 percent in the world economy and 10.6 percent in EMDEs over the same period.



- There is considerable heterogeneity across ECCU countries in terms of their growth performance and level of development** (Figure 2). Annualized growth was close to 4 percent in St. Kitts & Nevis, around 3.3-3.5 percent in Antigua and Barbuda, Grenada, St. Lucia and St. Vincent and the Grenadines, and slightly below 3 percent in Dominica between 1980 and 2014. As a result of their different growth paths and initial conditions, GDP per capita in St. Kitts & Nevis, closely followed by

<sup>1</sup> Prepared by Alejandro Guerson and Balazs Csonto.

Antigua and Barbuda, is around twice as high as in other ECCU countries (Figure 2). Each country's growth performance, however, also showed high volatility over time. For example, while St. Kitts & Nevis and Antigua and Barbuda experienced similar growth in the pre-GFC period, economic activity in the latter has not even recovered to its pre-crisis level yet, while St. Kitts & Nevis is 1 percent higher than its pre-crisis level.



- 3. Labor contribution to growth has been low as a result of significant outward migration, albeit with considerable cross-country heterogeneity.** While St. Lucia and Antigua and Barbuda had the lowest natural growth rate in the ECCU, they experienced the highest population growth as outward migration played a limited role relative to other countries (Figure 3). Moreover, these countries also benefited from the demographic transition as reflected in the increasing share of working-age population. On the other hand, there was sizable outward migration in the rest of the ECCU. For example, population growth turned negative in Dominica. These trends were partially offset by an increase in human capital as reflected in the increasing average educational attainment of the population. However, outward migration included a high proportion of the more educated (high-skilled emigration rate of 80 percent on average in the ECCU), further reducing growth. The weak trends in employment have also been a drag on growth. There are considerable differences across ECCU countries in terms of the employment-to-population ratio – ranging from 50 percent in St. Kitts & Nevis to near 30 percent in St. Lucia and St. Vincent and The Grenadines.<sup>2</sup> Moreover, public sector employment accounts for around 20 percent of total employment in the latter country group.

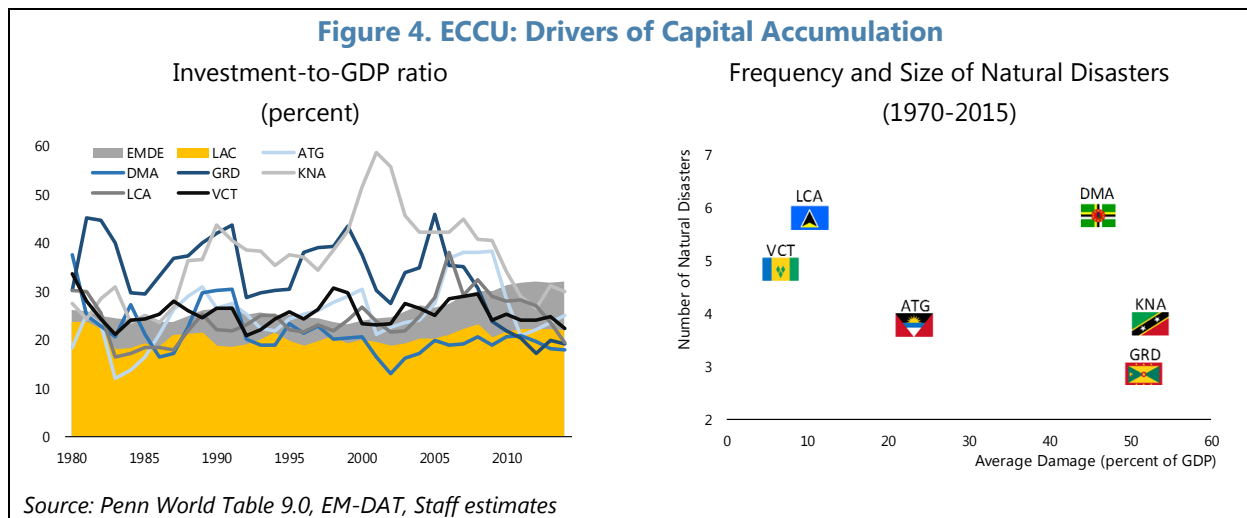
<sup>2</sup> Kandil et al. (2014) identified several institutional and structural factors that constrain employment in the Caribbean. These include skills mismatch, disconnect between productivity and wage growth as well as inadequate labor market institutions and policies.



**4. Physical capital accumulation has been lowered by regional specific factors, including NDs.**

Investments in the ECCU are high in international comparison (Figure 4); however, various reasons suggest that the return in terms of output of these investments may not be as high as in other countries. First, capital accumulation has been affected by NDs and inclement weather. For example,

Dominica, one of the most exposed countries to NDs in the region, had six major NDs between 1970 and 2015 with an average damage of 46 percent of GDP. This does not only imply faster depreciation and at times the destruction of the existing capital stock, but it also causes inefficiencies in investment as the completion of existing projects often needs to be postponed, rescheduled or abandoned to allow space for rehabilitation and reconstruction projects. Second, the high level of public debt recurrently forces countries into fiscal and financing constraints that often result in the adjustment of public investment, while also absorbing domestic savings, and in some cases increase country risk premia and interest rates, thus crowding out private investment.<sup>3</sup> In addition, investments in the Caribbean are typically driven by public investments and foreign direct investments that have relatively modest multiplier effects on private domestic investments (Roache 2006). Finally, capacity constraints in public administration also affect the execution and financing of investments.



## B. Measuring Productivity Trends

**5. This section computes productivity in the ECCU based on two methodologies: growth decomposition and average labor productivity indicators.** First, the growth decomposition exercise is applied with the treatment of NDs to account for their impact on the capital stock and its productivity. Second, the calculation of average labor productivity is applied to economic sub-sectors, which provides further insights about underlying forces driving productivity.

<sup>3</sup> For example, Benson and Clay (2004) note that the NDs in 1979-80 forced Dominica into a structural adjustment program, arguably lowering the space for investment financing by both public and private sectors. Also, they suggested that the scale of losses and reconstruction funds created an opportunity to replace and update infrastructure, potentially increasing productivity.

## Total Factor Productivity

### Methodology and Data

**6. In order to understand developments in TFP and its impact on growth, a growth accounting framework is applied.** The starting point is a standard Cobb-Douglas production function:

$$Y_t = A_t K_t^\alpha (L_t h_t)^{(1-\alpha)},$$

where  $Y_t$ ,  $A_t$ ,  $K_t$ ,  $L_t$  and  $h_t$  stand for real GDP, TFP, physical capital, labor and human capital, respectively, while  $\alpha$  is the share of capital and is fixed at 0.35<sup>4</sup>.

**7. The methodology used for the calculation of physical capital accumulation accounts for the impact of NDs.** Traditional methods do not adjust for the impact of NDs on physical capital. This is important in the case of the ECCU countries, as the omission of this factor would lead to the overestimation of the growth contribution of physical capital: the reconstruction and rehabilitation of damaged infrastructure would be included in total investments, but the damage and destruction caused by NDs would be omitted. Thacker et al. (2012) applied the direct deduction from physical capital stock of the estimated damage of each ND event. Their method, however, leads to a large negative contribution of physical capital in years of NDs as the observed decline in output is typically not commensurate to the estimated size of damage. This is because, even in the case of sizable damages to infrastructure, roads and other infrastructure might still be usable, even if at a lower efficiency level or at higher costs, thereby resulting in a decline in economic activity that is smaller than the one implied by an outright destruction of capital.<sup>5</sup> This disproportionality between damage and decline in output motivates the third method proposed in this paper. Specifically, physical capital is adjusted by a factor that addresses an efficiency loss associated with NDs. We thus modify the Cobb-Douglas production function in the following way:

$$Y_t = A_t (\theta_t K_t)^\alpha (L_t h_t)^{(1-\alpha)},$$

where  $\theta_t$  measures the efficiency of the use of physical capital stock and is estimated as follows:

- Step 1: calculate investment excluding the impact of NDs ( $\tilde{I}$ ), based on ARIMA estimations;
- Step 2: calculate physical capital stock excluding the impact of NDs ( $\tilde{K}$ ):  $\tilde{K}_{t+1} = \tilde{K}_t(1 - \delta) + \tilde{I}_t$ ;<sup>6</sup>
- Step 3: calculate real GDP excluding the impact of NDs ( $\tilde{Y}$ ), based on ARIMA estimations;<sup>7</sup>

<sup>4</sup> See Gollin (2002).

<sup>5</sup> For example, while damage was estimated at 64 percent of GDP (with total damages and losses of 96 percent of GDP) following Tropical Storm Erika in 2015 in Dominica, the decline in real GDP was 1.8 percent.

<sup>6</sup> The initial level of physical capital stock is calculated as  $K_0 = \frac{I_0}{g+\delta}$ . The initial level of investments ( $I_0$ ) and real GDP growth ( $r$ ) are calculated as the average level of investments and growth, respectively, during the first decade of the sample (1970-80), while the amortization rate ( $\delta$ ) is fixed at 6 percent. Data on investments are from the Penn World Table 9.0 (Feenstra et al., 2015).

<sup>7</sup> Hochrainer (2009) also estimated an ARIMA to compare counterfactual (i.e., no ND) and actual GDP. He showed that NDs have significant negative effects on GDP.

- Step 4: calculate TFP excluding the impact of NDs ( $\tilde{A}$ ) using  $\tilde{K}$  and  $\tilde{Y}$  as follows:  $\tilde{A}_t = \tilde{Y}_t / (\tilde{K}_t^\alpha (L_t h_t)^{(1-\alpha)})$ ;
- Step 5: calculate  $\theta_t$  as  $\theta_t = Y_t / (\tilde{A}_t \tilde{K}_t^\alpha (L_t h_t)^{(1-\alpha)})$  in years of NDs that converges to 1 over two years following NDs.

**8. In order to capture improvements in the quality of labor, we also estimate human capital accumulation.** Specifically, human capital is calculated as follows:

$$h = \exp\left(\frac{\theta}{1-\omega} s^{1-\omega}\right),$$

where  $s$  stands for years of schooling of the population aged 24 or older, while  $\theta = 0.32$  and  $\omega = 0.58$  following Bils and Klenow (2000) and Sosa et al. (2013).<sup>8</sup> Given that average years of schooling was not available for the ECCU countries, we estimated it in three steps. First, we estimated the skill composition of the population using the skill-specific emigration rates and number of migrants from the IAB database and population data in the UN (2015) database. Second, we regressed the average years of schooling on the share of low-, medium- and high-skilled people in total population in the Barro-Lee (2010) database. Third, we estimated the average years of schooling based on the estimated skill composition from step 1 and the estimated coefficients from step 2.

**9. Changes in TFP are calculated on a residual basis.** Given actual data on real GDP growth as well as estimated labor growth and physical and human capital accumulation, TFP growth is calculated on a residual basis:

$$\dot{A}_t = \dot{Y}_t - \alpha \dot{K}_t - (1 - \alpha) \dot{L}_t - (1 - \alpha) \dot{h}_t.$$

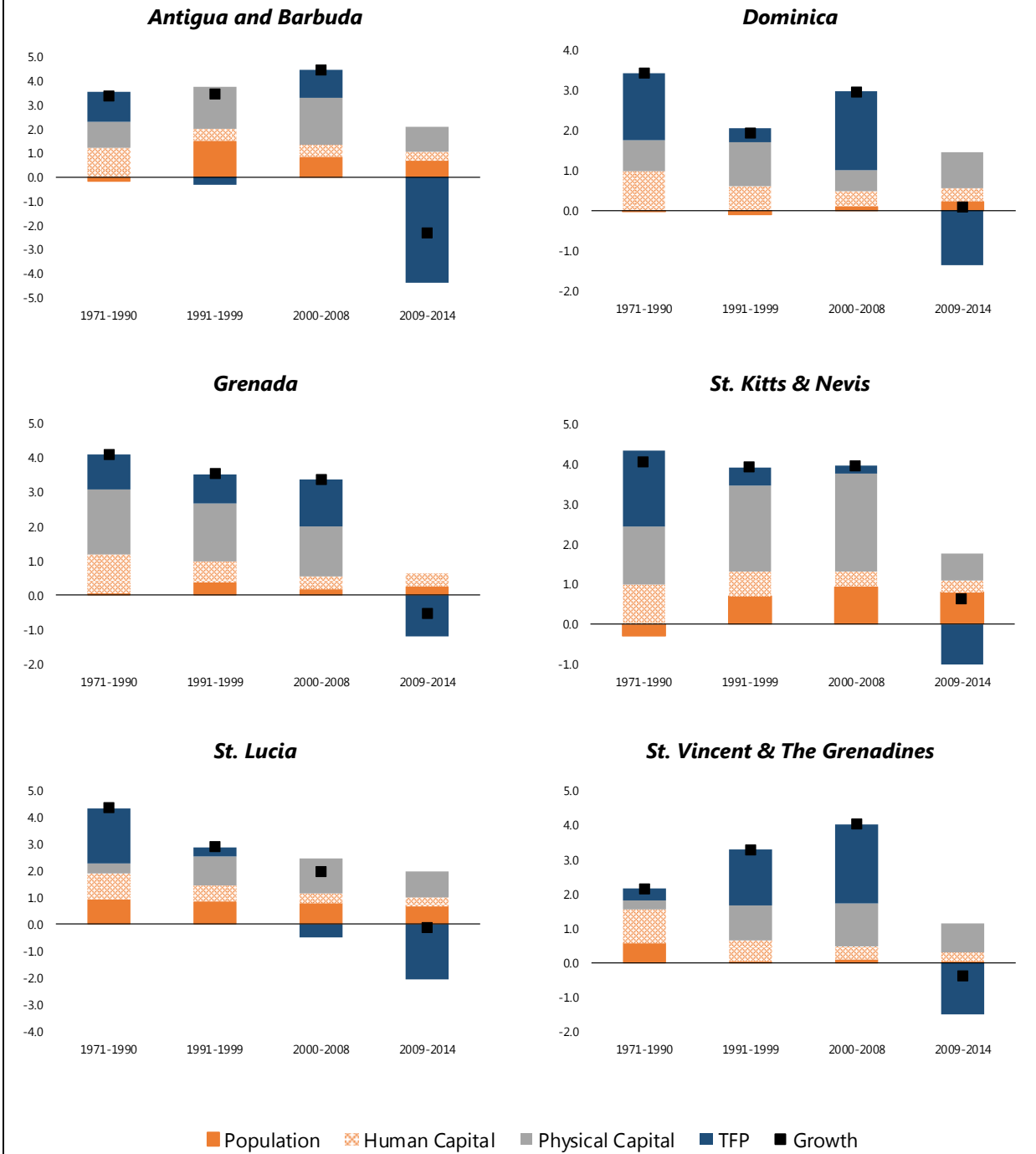
### **Results: Trends in TFP**

**10. TFP was a main driver behind historical episodes of high growth as well as behind the recent period of stagnation in the ECCU.** In line with developments in economic activity, TFP showed high volatility over time (Figure 5). However, two periods stand out when TFP had a consistently positive contribution to growth across countries, namely the 1980s and the pre-GFC period. On the other hand, TFP growth turned negative at the onset of the GFC in each ECCU country, constraining growth in the last few years. As regards factors of production, even despite significant NDs, physical capital accumulation had continuously positive contribution to growth, albeit to varying extent across countries and periods. As a result of the continuous improvement in the average educational attainment of the population, human capital accumulation also had a positive but declining contribution to growth in every ECCU country. Given the different demographic pattern of countries, the contribution of population to growth varied substantially, ranging from high positive contribution (Antigua and Barbuda, St. Kitts & Nevis, St. Lucia) to low or broadly zero contribution (Dominica, Grenada, St. Vincent & The Grenadines).

<sup>8</sup> Population data are from UN (2015).

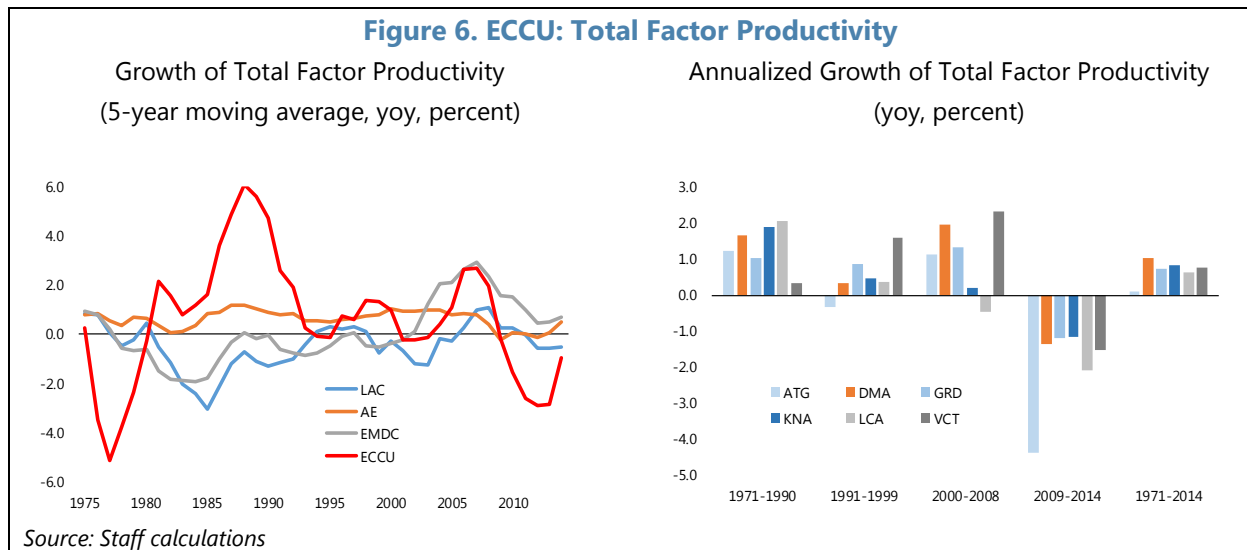


**Figure 5. ECCU: Growth Decomposition, 1971-2014**  
(Percentage point, annualized)



Source: Staff calculations

**11. The growth contribution of TFP has been continuously declining and turned negative at the onset of the GFC.<sup>9</sup>** TFP growth has been continuously decelerating since the beginning of the 1980s, except for a temporary uptick in the pre-GFC period (2000-2008) (Figure 6). The latter is assumed to simply reflect accelerating growth, mostly driven by favorable external developments as indicated by increasing TFP growth in EMDEs and LAC. As Thacker et al. (2012) noted, the long-term decline in TFP could be related to the transition from labor-intensive agricultural sector to more capital-intensive tourism sector. These patterns have been broadly consistent across ECCU countries over the long term.

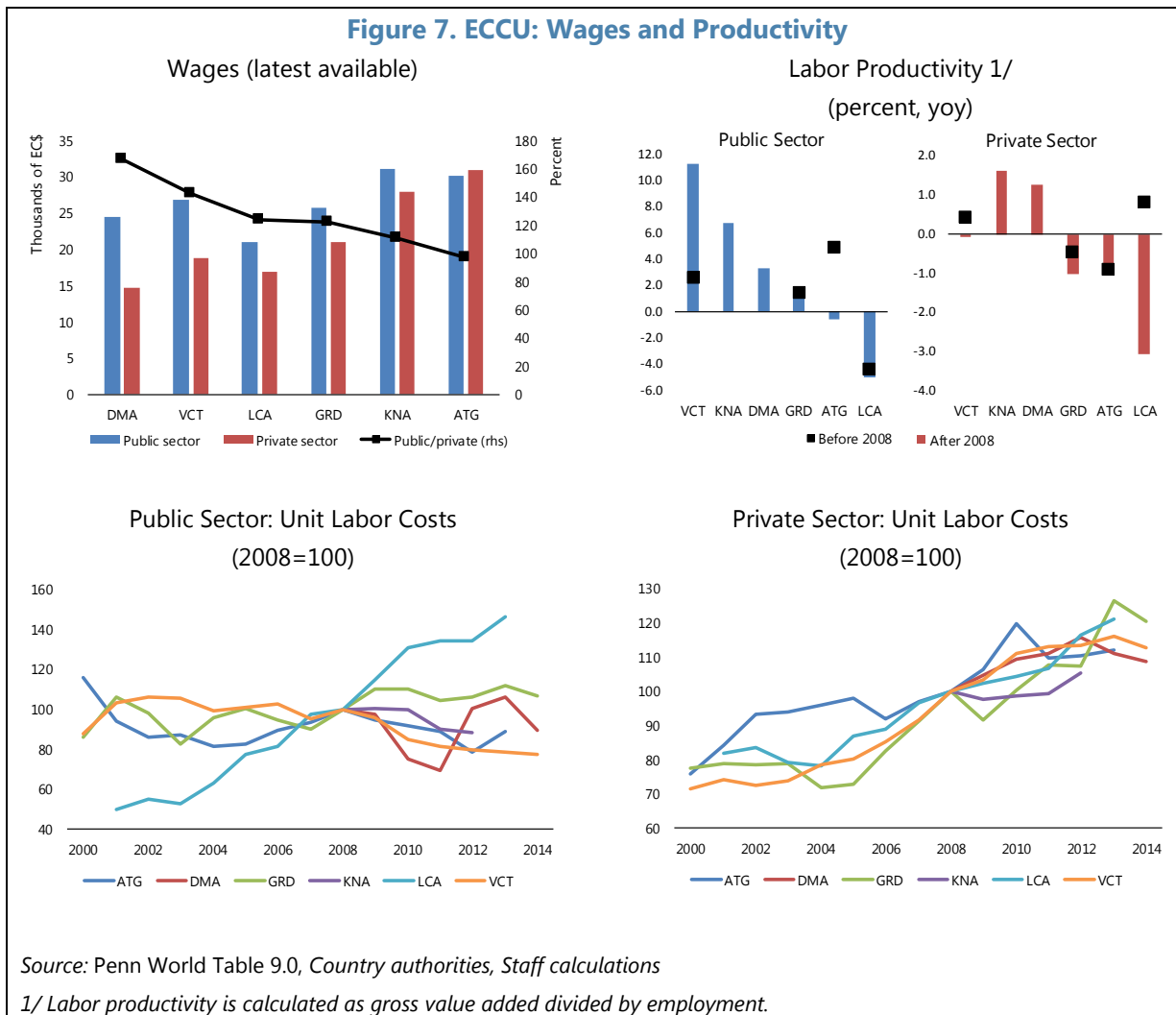


## Labor Productivity

**12. This subsection presents labor productivity (output per worker) trends that can be measured more directly and can be used to complement the understanding of the drivers of low TFP growth.** Labor productivity indicators complement the analysis on productivity trends from a different angle, and could be informative to explain negative productivity growth estimates in the previous section.

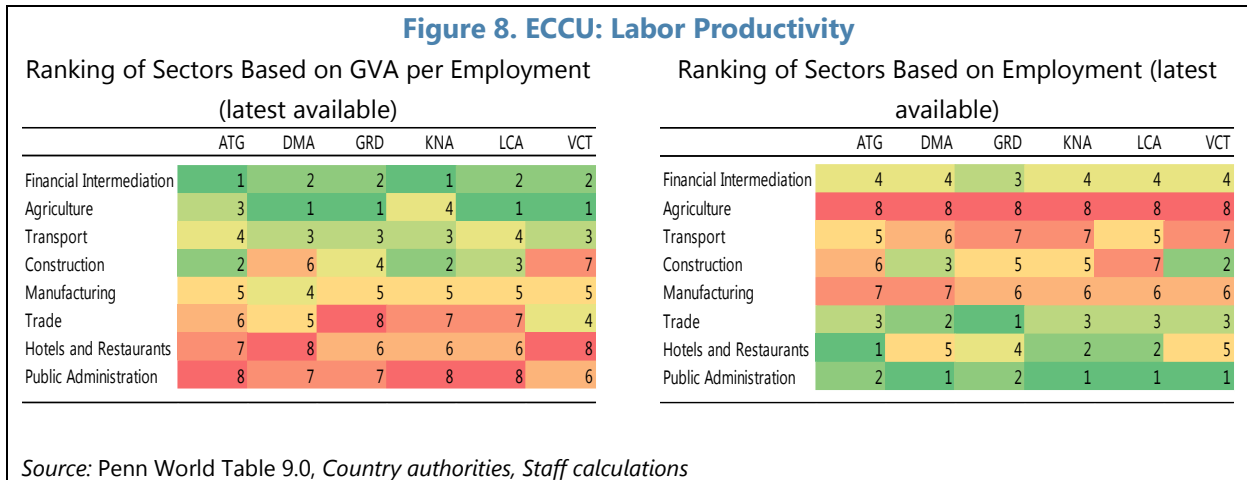
**13. Wage growth seems disconnected from labor productivity growth.** Most countries show a significant differential between public and private sector wages that does not appear to reflect differences in labor productivity (Figure 7). This wage differential can put pressure on wages in the private sector, increasing production costs and reducing investment. In addition, unit labor costs in the private sector show an increasing trend in all countries, most significantly since the GFC. This means that the growth rate of wages has been higher than that of output per worker. As a result, the negative combined contribution of physical capital and TFP since the GFC, as shown in the previous section, imply that these increasing trends cannot be backed up by growth in labor productivity.

<sup>9</sup> Thacker et al. (2012) also found that the slowdown in growth is due to a decline in productivity. Daude and Fernandez-Arias (2010) showed that TFP is the main factor behind the stagnation of LAC relative to other developing countries.



**14. The disconnect between wages and labor productivity can explain the high employment in relatively less productive sectors.** This observation is consistent with the hypothesis that labor allocation is not determined by productivity gaps across sectors, but by other factors such as unionization, insufficient labor adaptability, higher bargaining power or other labor market rigidities and frictions that prevent labor mobility. While financial intermediation, agriculture and transport are the most productive sectors in the ECCU in terms of gross value added (GVA) per employee, they account for only 15-25 percent of total employment (Figure 8).<sup>10</sup> On the other hand, public administration, which is among the least labor productive sectors, employs 20-30 percent of total employees. Hotels and restaurants, one of the main drivers of economic activity, are also lagging behind other sectors in terms of labor productivity.

<sup>10</sup> These results should be interpreted with caution, as some of these sectors may underreport employment and rely on informal hiring practices. For example, given the anecdotal information about the size of the black economy in agriculture, employment in agriculture is likely to be underreported, and thus GVA per employee substantially overestimated.

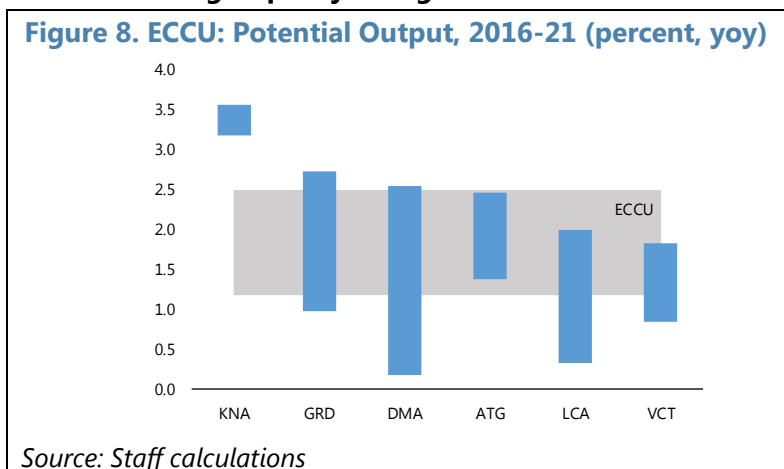


### C. Implications for Potential Output

**15. The growth decomposition and labor productivity analysis provides a useful platform to propose plausible potential output growth scenarios.** This can be done by inspecting the main sources of growth during the historical sample period, and proposing conjectural alternatives about the evolution of the factors of production and TFP that are commensurate to plausible foreseeable developments. It also permits an evaluation of the factor and productivity requirements in order to accelerate potential growth, which could prove useful to inform economic policies. For the calculation of potential output, we thus estimate trend series for TFP and physical capital ( $A_t, K_t$ ), using the Hodrick-Prescott, Baxter-King and Christiano-Fitzgerald filters<sup>11,12</sup>. For the period 2016-21, we assume that human capital is growing at its average growth rate between 2006-10, while the growth rate of labor is expected to equal population growth projected by the UN (2015).

**16. The results above indicate that, without meaningful policy changes that affect investment and labor allocation, potential growth will remain disappointing.**

Potential output growth is estimated to be in the range of 1.5-2.5 percent in the ECCU (Figure 8). Should post-GFC trends in TFP continue, growth would be closer to the lower end of the range. Labor market policies that can influence migration and labor allocation across sectors could be a key to improve potential growth. For example, addressing the



<sup>11</sup> Following Sosa et al. (2013).

<sup>12</sup> We consider two scenarios for 2016-21. First, both are assumed to grow at the same rate as in the aftermath of the GFC. Second, we also estimate potential output assuming that TFP and physical capital accumulation return to the long-term historical growth rate.

constraints on factor mobility across sectors, possibly including skill mismatches and/or education and training policies that facilitate labor adaptability, could further contribute to potential growth. In addition, decisions on public wage increases should also be mindful of their impact on the broad economy, in particular on investment in other sectors. Investment and the enactment of regulations that ensure the resilience of public and private infrastructure to NDs would also have a positive contribution, including also by increasing investment levels.

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## FISCAL RULES FOR THE ECCU<sup>1</sup>

*The ECCU public debt target provides its member countries with a long-term anchor for their fiscal policies, but offers no short-term operational guidance to achieve this goal. Fiscal Responsibility Legislation can offer a pre-commitment strategy enabling countries to conduct more effective and credible fiscal consolidation.*

### A. Limits of the Current Framework

**1. While the ECCU debt target provides a long-run anchor for member governments' fiscal policies, it does not offer a policy coordination mechanism to meet the target.** In 1998, the ECCU set a long-term target for member countries' public debt of 60 percent of GDP and an overall deficit target of 3 percent of GDP. The deficit target was abandoned in 2006 for lack of compliance and in 2015 the 2020 deadline for the public debt target was extended to 2030. The decision taken by the ECCB's monetary council was motivated with the difficulties encountered by governments in meeting the original target in a challenging economic context. In fact, the target is not binding and ownership by national governments seems low. Moreover, attaining a long-term debt target requires a framework to provide short-term operational guidance, which includes designing the path to the target and ensuring adherence to the path.

**2. Setting fiscal rules and sound foundations for their effective implementation would support member countries in their effort to attain the 2030 public debt target.** Some ECCU countries are preparing or refining their medium-term fiscal frameworks and reforming their public financial management. Implementing fiscal rules would build on reforms already under way in each country of the union. It would provide ECCU governments with a pre-commitment strategy to help them pursue sustainable fiscal policies, in certain cases already outlined in their medium-term fiscal frameworks, despite political economy pressures to deviate from that path.

### B. The Increasing Use of Fiscal Rules

**3. Fiscal rules have spread worldwide to tackle pressures on public finances.** In the 1990s, very few countries had fiscal rules while they are now in effect in at least 45 economies.<sup>2</sup> Factors that motivated their adoption range from reigning in debt excesses that resulted from banking and economic crises in the early 1990s (e.g., Finland, Sweden) and debt crises in Latin American countries (e.g., Brazil, Peru); consolidation needs to qualify for the euro area (e.g., Belgium); and, more generally, attempts to reduce trends of rising deficits and debts (e.g., the Netherlands, Switzerland). In some cases, the introduction of the rules coincided with large fiscal adjustments, in others (e.g., in Finland) it followed an improvement in fiscal positions to ensure continued fiscal discipline after the crisis.

<sup>1</sup> Prepared by Gregorio Impavido and Dominique Simard.

<sup>2</sup> Countries that had adopted fiscal rules in the 1990s include: Australia, Belgium, members of the CFA franc zone, Canada, Denmark, Germany, Indonesia, Japan, Luxembourg, The Netherlands, New Zealand, and the United States.

### Box 1. ECCU: Fiscal Rules in Grenada and Jamaica

Fiscal rules in Grenada and Jamaica are governed by Grenada's 2015 Fiscal Responsibility Act and Jamaica's 2014 amendments to the Financial Administration and Audit Act and the Public Bodies Management and Accountability Act.

**Although both countries limit the wage bill, Grenada targets an explicit primary surplus while Jamaica sets a primary surplus consistent with lowering public debt to a set ceiling by a given date.**

The wage bill is set at 9 percent of GDP (Grenada and Jamaica), the real growth in the central government's primary spending is limited to 2 percent annually (Grenada, in line with estimated potential output growth), the primary surplus is set at 3.5 percent of GDP (Grenada) while the annual fiscal balance—recalibrated every three years—is legally defined as a formula to achieve the public debt anchor by the target date (Jamaica). The debt anchor is 55 percent of GDP, currently estimated to be reached by 2021 (Grenada), and 60 percent of GDP by end-March 2026 (Jamaica).

**Coverage.** The rules cover not only the central government, but also statutory bodies and public enterprises (Grenada, Jamaica). Interest expenditure, grants, and citizenship-by-investment flows are excluded from the rule (Grenada). Commercial public enterprises that do not engage in significant fiscal operations could be excluded by the Office of the Auditor General (OAG) (Jamaica).

**Implementation.** Rules are supported by guidelines on public sector wage negotiations (Grenada), ceilings on PPPs' contingent liabilities (Grenada, Jamaica), and limits on the use of below-the-line financing operations to meet the target (Grenada). The new framework is implemented over 3 phases of progressively lower primary surpluses until the 55 percent debt target is reached (Grenada).

**Corrective mechanisms. Grenada:** After public debt reaches its target of 55 percent of GDP, accumulated deviations from the target primary balance of more than 3 percent of GDP force revenue and/or expenditures adjustments to reduce accumulated deviations to zero over 3 fiscal years. A debt to GDP ratio exceeding 60 percent forces revenue and/or expenditures adjustments to reduce public debt to 55 percent of GDP over 3 fiscal years. **Jamaica:** Annual deviations from the overall balance floor are stored in a notional account. Accumulated deviations of more than 1.5 percent of GDP force annual adjustments estimated to reduce accumulated deviations below the 1.5 percent trigger. Accumulated deviations of 3.5 percent of GDP force primary expenditures adjustments of 1.5 percent of GDP compared to the outturn of the previous year. Both adjustments are subject to Parliament approval.

**Escape clauses. Grenada:** These include: (i) natural disasters, public health epidemics, or wars that trigger a declaration of a state of emergency; (ii) recessions resulting in a decline in real output of at least 2 percent in a given fiscal year or 3 percent over 2 consecutive years; and (iii) financial crisis as defined by the ECCB with expected fiscal costs higher than 4 percent of GDP. **Jamaica:** These include: (i) adverse shocks with an estimated impact of 1.5 percent of GDP as validated by the OAG; (ii) public emergency, including natural disasters, invoked under Section. 20 of the Constitution; and (iii) financial crisis as defined by the Bank of Jamaica.

**Institutional arrangements.** The Ministry of Finance implements the rules, reports to parliament on implementation, and triggers the escape clauses (Grenada, Jamaica). A fiscal council, comprised of three members nominated by a parliamentary committee as advised by the Director of Audit (Grenada) or the OAG (Jamaica) is responsible for independently monitoring compliance with the rules and reporting to Parliament. In Jamaica, the OAG also presents proposals on how to address fiscal shortfalls.

**4. Laws already adopted in Jamaica and Grenada provide a useful benchmark for the design of fiscal rules in ECCU countries.** Both Jamaica (which amended in 2014 its Financial Administration and Audit Act and the Public Bodies Management and Accountability Act) and Grenada (which adopted the Fiscal Responsibility Act in 2015) designed their fiscal rules to reflect



best practices and each country's specific circumstances, with the support of IMF technical assistance. Both sets of rules feature: (i) a ceiling on the wage bill; (ii) a primary surplus floor; (iii) a public debt ceiling; (iv) automatic correction mechanisms for deviations from the rule; (v) escape clauses; and (vi) an institution responsible for monitoring and reporting to parliament on the consistency of fiscal developments with the rule, like the fiscal councils adopted in many countries (Box 1).

**5. Anguilla's Fiscal Responsibility Act, also an interesting case, sets borrowing limits and imposes strict requirements for sound public financial management.** The legislation sets ceilings for: net debt and debt service at 80 and 10 percent of recurrent revenue, respectively. It also sets a floor on liquid assets at 25 percent of recurrent expenditure. However, Anguilla's deadline for complying with these requirements has been extended from end-2017 to end-2025, given the additional one-off fiscal costs of addressing the bank resolution which had not been anticipated in 2013 when the Act was adopted. The Act includes an escape clause but provides a three year deadline to fully correct the course and comply with fiscal parameters. The Act specifies the periodicity for data reporting, stipulates the requirement to annually publish a Medium-Term Fiscal Plan with specific features including a risk assessment, and authorizes the government to contract Public Private Partnership (PPP) Agreements only if it has complied with the fiscal framework for two consecutive fiscal years and meets criteria for the government's capacity to contract and manage PPPs.

### C. Designing Fiscal Rules for the ECCU

**6. Selecting a primary balance floor for each country as its government operational target provides clear guidance and is easily communicated and monitored.** However, maintaining a primary balance above the floor likely requires compressing primary expenditure in case of an economic downturn, which may exacerbate it. This issue, however, is much less relevant in small ECCU islands, which are very open economies with low government multipliers.<sup>3</sup> Against this disadvantage, the advantages of the primary balance rule<sup>4</sup> are that it is fully under the government's control, is simple to understand by the government and the public, leads to a lasting reduction in public debt, and is verifiable.

**7. The primary balance rule should exclude most exceptional non-tax revenue such as receipts from Citizenship by Investment (CBI) Programs.** This would enhance the resilience of

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<sup>3</sup> Gonzales-Garcia, J., Lemus, A., and Mrkaic, M. (2013) "Fiscal Multipliers in the ECCU", IMF Working Paper WP/13/117.

<sup>4</sup> The perimeter of the fiscal rule would ideally cover the general government. However, if confronted with binding capacity constraints which would impede the timely provision of statistics on the budgetary operations of public enterprises, the primary balance rule could be first restricted to the central government. Under the circumstances, additional limits could be placed on the stock of overall public debt.

the rule by avoiding placing excessive reliance on windfall receipts that may not persist over the medium-term. For instance, in the case of Grenada, 40 percent of monthly inflows from the citizenship program into the National Transformation Fund (NTF) is expected to be saved to finance the budget, including for contingency spending, natural disasters and debt reduction.<sup>5</sup> Only a fraction of these funds (up to 1.5 percent of GDP) can be transferred to the budget to meet the primary balance target. The NTF regulations limit the remaining 60 percent of inflows to fund non-recurrent productive infrastructure, but only if these resources adequately finance each selected project (always included in the Public Sector Investment Program (PSIP)) through its completion and maintenance over the medium-term. While this expenditure should be excluded from the primary balance rule, the restriction on NTF-funded infrastructure spending is a specific expenditure rule which accompanies the primary balance rule.

**8. To preserve its credibility, the fiscal rule needs to include escape clauses allowing the government to temporarily deviate from the rule under very specific circumstances.** A credible fiscal rule is also flexible in circumstances when the economy suffers well-specified and identifiable exogenous adverse events. Well-defined escape clauses may serve to minimize deviations from the rule. The definition of the triggers to temporarily deviate from the rule must be very specific, with shocks linked to independently verifiable events with a projected fiscal impact exceeding a pre-specified threshold. Events which would justify deviating from the fiscal rule could include<sup>6</sup>: (i) natural disasters, public health epidemics, wars leading to a state of emergency; (ii) deep recessions, measured by real GDP declining by a specified percentage in a fiscal year or a cumulative decline exceeding a minimum percentage over two consecutive fiscal years; (iii) banking crises, as identified by the central bank, with official estimates of the cost of any recapitalization of banks by the government after exhausting other solutions. The duration of the deviation from the rule needs to be specified in advance and be relatively short, such as one or two years. Some countries also impose administrative, financial, or judicial, sanctions for deviations from the rules beyond the escape clauses. For instance, the EU Stability and Growth Pact provides for the imposition of financial sanctions for excesses above the deficit reference value. In Canada, some provinces allow for cuts in cabinet member salaries for excess budget deficits that are not caused by exogenous shocks.

**9. Including natural disasters into an escape clause from the fiscal rule is not a substitute for sound disaster management preparations.** Depending on available budgetary resources, ECCU governments should continue strengthening the resilience of public infrastructure to natural disasters and climate change. ECCU countries also need to accumulate buffers to better address the fiscal cost of recurrent natural disasters when they materialize. Each country's history of natural disasters can be used to statistically estimate the probability of a disaster's recurrence in any given year and its fiscal cost. The natural disaster trigger for the escape clause could be whether the

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<sup>5</sup> Dominica is currently preparing the institutional framework to allocate some of its ECP revenue into a vulnerability fund.

<sup>6</sup> The examples in the list are included in the fiscal rules of both Grenada and Jamaica.

difference between the actual fiscal cost of the disaster (as estimated by an independent multilateral institution) and the buffers that the country should have accumulated by the time of the disaster's occurrence exceeds a pre-determined floor.<sup>7</sup>

**10. A plan for returning to the fiscal rule should be prepared and presented to parliament along with the request to deviate from the rule.** The recovery plan would include corrective measures, with their estimated budgetary impact, to be enacted at the expiration of the period for which parliament approves the suspension of the fiscal rule. This is critical to maintain the credibility of the rule. Enforcement of rules is typically supported by automatic correction mechanisms and sanctions. In the United States, for instance, automatic spending cuts (called "sequester") are enforced mainly on discretionary spending when spending line firewalls or debt limits are breached. The Office for the Management of the Budget (OMB) manages all aspects of the sequester and there are no escape clauses, bar a declaration of war. Other countries have rules to ensure that, within the budget cycle, deviation from targets are budget neutral, i.e., changes in expenditure or revenue lines can be adopted if compensating measures are also proposed.

**11. Effective public finance management (PFM) and credible medium-term fiscal plans are necessary preconditions for the implementation of fiscal rules.** Fiscal rules are no more than multi-period constraints on fiscal policy. If basic capacity to forecast fiscal aggregates, prepare fiscal plans, and implement them are absent, fiscal rules cannot be enforced. In that regard, medium-term budget frameworks, such as those used in Peru, Brazil, Australia, France, Sweden, and the United Kingdom, prioritize, present, and manage both revenue and expenditure over a multi-year framework at the same level as budget appropriations. This enables governments to demonstrate the impact of current and proposed policies over the course of several years, set future budget priorities, and ultimately achieve better control over public expenditure. Presenting the budget over a multi-year horizon, demonstrates ex ante whether government policy is consistent with the fiscal rule and which policy actions are necessary to bring it into line when it is not. ECCU countries are all reforming their respective PFM, thereby strengthening their capacity to implement fiscal responsibility legislations.

**12. For currency unions, sound and uniform PFM procedures across members are important.** Such procedures include: (i) shared medium and long-term fiscal objectives to guide budget formulation and fiscal intermediate targets; (ii) shared global macroeconomic assumptions to ensure consistent budgetary projections across all levels of government; (iii) timely and frequent production of within-budget-cycle fiscal reports, annual accounts, and financial statements at each government level, followed by an independent and external audit; and (iv) common budget classification and accounting standards.

**13. The task of monitoring the government's implementation of the fiscal rule and reporting it to the public should be performed by an independent institution using adequate**

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<sup>7</sup> Building buffers could be included in the fiscal rule in several ways. If they are constituted through budgetary savings, the primary balance rule could be adjusted upwards by the amount of the required annual savings. If they are constituted by accumulating resources from large windfall receipts such as the CBI program, they may not impact the primary balance, but be governed by specific rules applying to the fund where CBI resources are saved.

**statistics.** The executive branch of the government needs to be held accountable for proper adherence to the fiscal rule. A fiscal council, independent from the government, for example with members appointed by a bipartisan parliamentary committee and holding suitable expertise as in Grenada, should be tasked with overseeing the execution of the government's fiscal policy and report on this execution to parliament on a regular basis, such as biannually. It should also present its assessment of whether economic forecasts presented in the annual budget or supplementary budget and supporting documents comply with the legal provisions of the fiscal rules. For that purpose, enhancing the quality of statistical reporting becomes critical, including to widen the coverage of the fiscal rule to the broadest possible definition of the public sector (and making the fiscal rule as effective as possible). Furthermore, the office of the Auditor General would likely need to be strengthened, along with implementing all the other necessary reforms in public financial management.

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