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Fiscal Sustainability and Policy Issues in the Eastern Caribbean Currency Union

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IMF Working Paper

Western Hemisphere Department

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Abstract

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The fiscal position of the Eastern Caribbean Currency Union (ECCU) has deteriorated significantly in recent years, resulting in sharp increases in public debt. The sustainability of public debt is examined using the public sector budget constraint to derive the maximum public-debt-to-GDP ratio that can be sustained based on a country's projected steady-state primary balance, interest rate on public debt, and economic growth rate. In this context, government deficits and debt in several ECCU member countries appear unsustainable, posing a risk to the stability of the currency union. A critical issue facing member countries is to implement fiscal policies consistent with sustainable public finances and debt to underpin the currency union.

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I. INTRODUCTION

The principal objective of the credit policy of the Eastern Caribbean Central Bank (ECCB), the central bank for the Eastern Caribbean Currency Union (ECCU), has been to sustain the fixed exchange rate system of the union. In this context, the ECCB has made very limited use of its authority to extend credit to member governments (Box 1). The monetary union has served its members well by keeping inflation low even though the fiscal policies of some member countries have not been well controlled.²

The fiscal positions of several countries have deteriorated significantly recently, causing public debt to rise sharply and raising concerns about sustainability. In this paper, the debt-stabilizing primary surplus in ECCU countries is compared with their actual primary balances to indicate the substantial adjustment needed to contain the accumulation of public debt. To address the issue of sustainability directly—a forward-looking exercise—the public sector budget constraint is used to derive the maximum public debt-to-GDP ratio that can be sustained by a country based on its projected steady-state primary balance, interest rate on public debt, and economic growth rate. Calculations of this maximum ratio point to potentially unsustainable fiscal positions in several countries, in particular, Antigua and Barbuda, Dominica, and St. Kitts and Nevis. High public-debt-to-GDP ratios in Grenada and St. Vincent and the Grenadines, although cause for concern, do not pose as great a threat to sustainability because of higher projected steady-state primary balances in these countries.

The ECCB is assisting the authorities in several member countries develop homegrown stabilization programs to help them achieve sustainable fiscal positions and enhance their economic growth over the medium term. In this paper, the quantitative and structural guidelines of the ECCB for member countries' fiscal performance are examined with a view to the convergence needed to support the currency union.

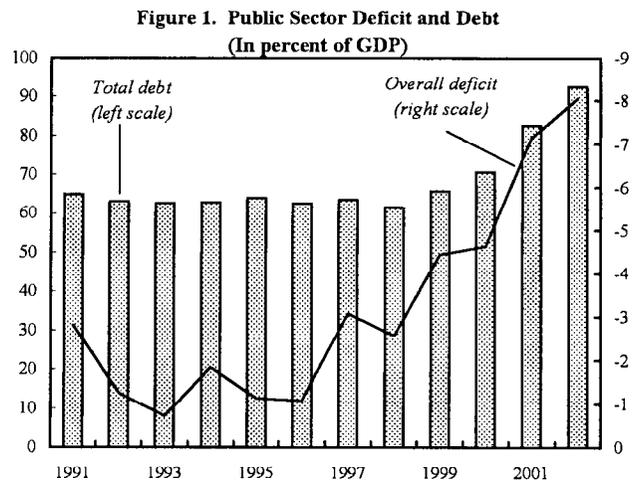
II. FISCAL DEVELOPMENTS AND POLICY ISSUES

After a long period of strong growth and satisfactory fiscal performance through the mid-1990s, the fiscal position of the ECCU weakened during 1997–2000 (Table A1). The public sector overall deficit rose from an annual average of 1½ percent of GDP during 1990–96 to 3¾ percent of GDP during 1997–2000, with a rising trend. These developments reflected a deterioration in central government finances owing to greater wage and interest payments and capital spending (Tables A2–5). In addition, revenue collection was hampered by large tax concessions (ranging from 5 percent of GDP in Dominica to 12½ percent of GDP in Antigua and Barbuda in 2000) and a policy of keeping domestic fuel prices fixed despite increases in world oil prices (which reduced petroleum excise collections). The central government deficit widened from an average of less than 2 percent of GDP during 1990–96 to 5¾ percent of GDP in 2000. Government and government-guaranteed debt, which was steady at about 65 percent of GDP during the 1990s, rose to 71 percent of GDP in 2000.

² Masson and Pattillo (2001) report that developments in the CFA zone in West Africa from the mid-1980s to 1994 show that it is possible for a monetary union to serve its members well and deliver low inflation even when fiscal policy is not well controlled.

The deterioration in the ECCU's fiscal performance accelerated in 2001 owing to the global economic slowdown, the impact on tourism of the September 11 terrorist attack, and declines in traditional agricultural output (bananas and sugar). An important contributing factor was a deterioration in external competitiveness associated with appreciation of the U.S. dollar and wage increases, led by the public sector, that exceeded productivity gains and inflation.

The overall deficit of the public sector rose sharply from 4½ percent of GDP in 2000 to 7¼ percent of GDP in 2001, leading to a steep increase in total public debt in the ECCU (Figure 1). The four countries with substantial deficits as a percentage of their GDPs were Antigua and Barbuda at 11¼ percent, Dominica at 10¾ percent, Grenada at 8¾ percent, and St. Kitts and Nevis at 12½ percent, where increases in total debt have been steep (Figure 2). The central government deficit of the ECCU jumped from 5¾ percent of GDP in 2000 to 8 percent of GDP in 2001. Deficits in some countries were financed by accumulation of arrears, including to wage earners and domestic suppliers (Antigua and Barbuda and Dominica). Government and government-guaranteed debt jumped by 12 percentage points of GDP to 82½ percent of GDP in 2001.

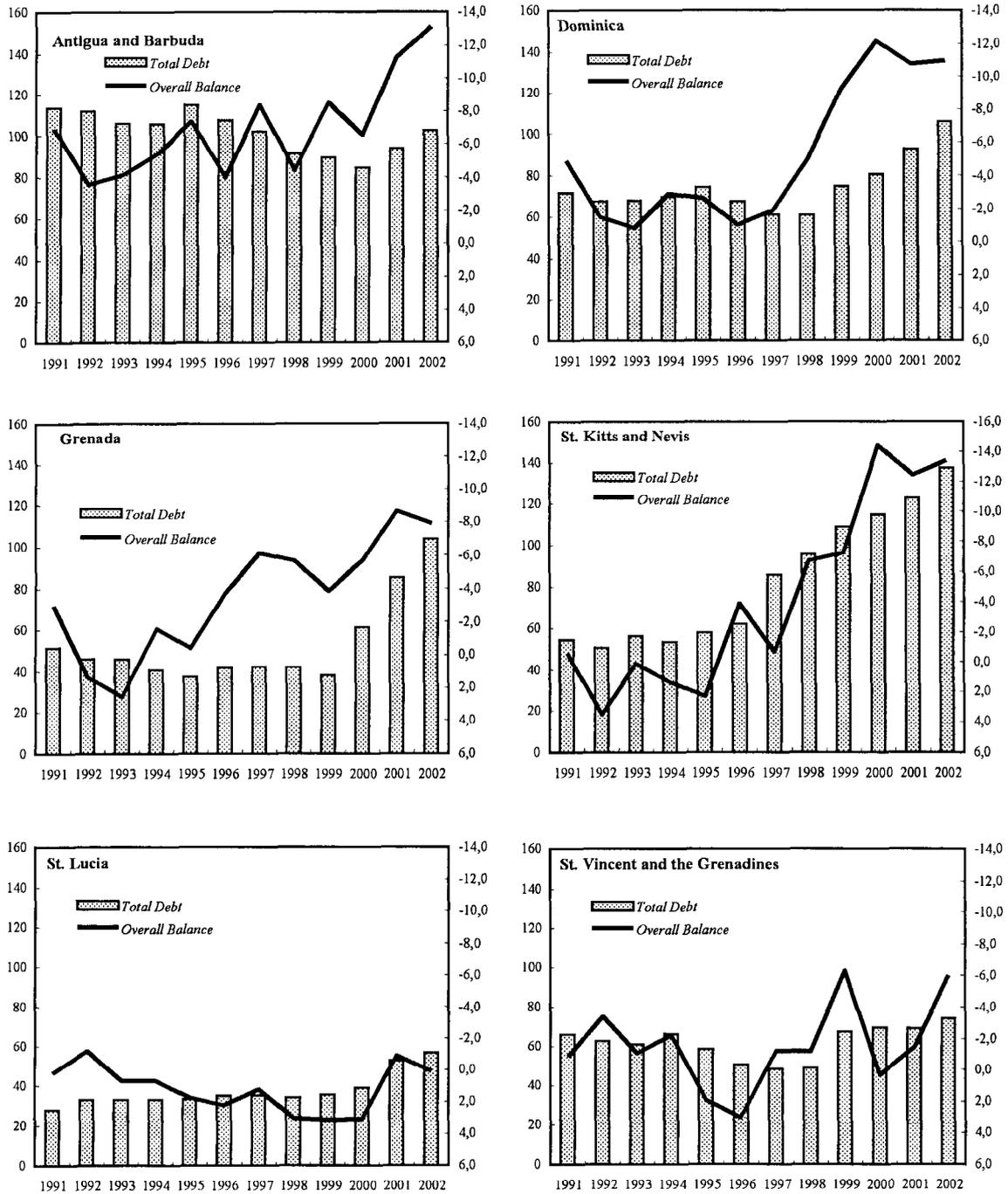


Fiscal deterioration in ECCU countries may have been attenuated by their membership in a monetary union. This deterioration was not accompanied by inflation, a depreciating exchange rate, or higher interest rates, thereby insulating member countries from the incentives for fiscal discipline. The lack of direct monetary financing was compensated by both domestic and external financing, including recourse to commercial borrowing.

This choice of financing in the context of a fixed exchange rate may reflect political concerns. Governments might reject seigniorage as a tax on current generations and incur high deficits, without internalizing the cost to be borne by future generations in terms of higher debt service. In the presence of a currency union, one or a few governments can pursue expansionary fiscal policies for a long time before adversely affecting macroeconomic variables of concern to the public, especially inflation, in all member countries. This is consistent with the experience of the CFA franc zone where heavy government borrowing from abroad and bank borrowing by public enterprises, accompanied later by the accumulation of domestic and external payments arrears, preceded the devaluation of its currency in 1994.³

³ The key objective of this devaluation was to address the loss of external competitiveness experienced during 1986–93 (Clément (1996)).

Figure 2. Eastern Caribbean Currency Union (ECCU): Public Sector Deficit and Debt, 1991– 2002 (In percent of GDP)



Sources: ECCU member country authorities; and IMF staff estimates.

A prolonged deterioration in a country's fiscal position may force the central bank to provide financial support to mitigate the threat to the stability of the monetary union. This does not have to take the form of direct central bank financing of the member country's fiscal deficit, but instead can take the form of emergency liquidity support to address impending commercial bank problems because the government is not servicing its debt or running arrears that adversely affect banks.

Another possibility is that countries are caught by administrative weaknesses that limit revenue collection and hamper expenditure control. Poor tax administration and expenditure management, combined with adverse shocks, may inadvertently cause debt to accumulate to a point where the government cannot generate the primary surpluses needed to stabilize, much less reduce, the public debt ratio. The ECCB recognized this in its own analysis of financial conditions in the ECCU, stating that required adjustments are more challenging as fiscal imbalances in member countries are accompanied by higher debt obligations than in earlier years. It further states: "As members of the ECCU, the fiscal policies of individual member countries have implications for the group. Sustained fiscal deficits by a significant number of countries would have implications for the viability of the exchange rate and therefore the value of the currency." (ECCB (2002)).

It is interesting to note that the empirical study of fiscal performance in the member countries of the European Monetary System shows that the move to greater exchange rate stability, as well as the convergence to greater price stability and lower money growth, did not appear to provide an effective constraint or incentive for reducing budget deficits (Begg et al. (1991), De Grauwe (2000)). Further, variations in the ratio of debt to GDP among member countries widened. However, significant improvement in the average primary balance suggested some fiscal consolidation.⁴

III. FISCAL GUIDELINES OF THE EASTERN CARIBBEAN CENTRAL BANK (ECCB)

Where macroeconomic imbalances exist, fiscal consolidation has been shown to have a positive effect on growth. A reduction of 1 percentage point in the ratio of the fiscal deficit to GDP has been estimated to lead to an average increase in per capita growth of $\frac{1}{4}$ to $\frac{1}{2}$ percent. Shifting the overall composition of public expenditure toward more productive uses is important for boosting growth and achieving sustained fiscal adjustment (Gupta, Clements, Balducci, and Mulas-Granadas (2002)).

The ECCB is committed to promoting growth in the region in the context of a fixed exchange rate. To achieve this objective while maintaining its strict policy of not financing member country's fiscal deficits through money creation, the ECCB has developed guidelines for fiscal performance. Their development represents an effort to strike a balance between the flexibility needed by member countries to implement fiscal measures appropriate for their economic situation and the potential for countries to pursue unsustainable fiscal policies in the context of the monetary union. The guidelines reflect a broad strategy for improving

⁴ From an average deficit of $2\frac{3}{4}$ percent in 1975–78 to a surplus of $1\frac{1}{4}$ percent of GDP in 1987–90 (Glick and Hutchison (1993), p. 51).

fiscal performance. The quantitative targets are complemented by structural reforms designed to improve the efficiency of taxation and expenditure to promote growth.

The ECCB's development of fiscal guidelines indicates that its policy of nonmonetization of members' budget deficits has not provided sufficient discipline for pursuit of sustainable fiscal policies. However, the guidelines are not binding and the ECCB has no formal mechanisms or authority to enforce compliance. The adoption of binding guidelines on member countries would suggest a need for a degree of fiscal convergence to support the currency union. This is supported by formal analysis of a monetary union with a commitment to a fixed exchange rate (Glick and Hutchison (1993)). This analysis allows for differences in the time pattern of fiscal policies, thereby accommodating the need for flexibility.

A. Quantitative Guidelines

Individual country performance in 2002 varied widely from the ECCB's quantitative guidelines (Table 1). All countries fell substantially short of the guidelines for central government and public sector savings. Antigua and Barbuda and Dominica showed government dissaving of 11¾ percent and 6¾ percent of GDP, respectively, while St. Kitts and Nevis' government dissaving was at 3 percent of GDP. Grenada and St. Vincent and the Grenadines had government savings in the 1–2 percent of GDP range and met the ECCB's target for public investment of 12 percent of GDP.

All countries, except St. Lucia, had public debt in 2002 above the maximum of 60 percent of GDP stipulated in the ECCB's benchmark. St. Kitts and Nevis has the highest at 137 percent of GDP. Excessive public debt levels could pose not only a risk to fiscal sustainability in member countries but also to the stability of the currency union.

It is useful to compare the ECCB's guidelines with those of the European Union (EU) and West African Economic and Monetary Union (WAEMU) (Table 2). The EU and WAEMU have chosen as their guidelines for budget performance the overall deficit, or a variation of it. They do not stipulate, as does the ECCB, public sector investment. In fact, externally financed public investment is not constrained by WAEMU's definition of the deficit. This strongly favors external over domestic financing, but risks an unsustainable accumulation of external debt. To address the risk of unsustainable debt accumulation, a ceiling on the ratio of debt to GDP—public sector debt by WAEMU and general government debt by the EU—was adopted. Although, the EU and WAEMU align their quantitative guidelines to important variables for assessing fiscal sustainability, as does the ECCB, a key missing variable is the primary balance.

Table 1. ECCU: Compliance with Proposed Fiscal Guidelines 1/
(2002 estimates unless otherwise indicated)

ECCB Proposal	ECCU 2/	Antigua and Barbuda 2/	Dominica 2/	Grenada	St. Kitts and Nevis 2/	St. Lucia	St. Vincent and the Grenadines
Objective: Increase public savings to finance increased public investment, provide adequate counterpart funds for externally supported projects, eliminate arrears, amortize debt by constituting sinking funds, and create reserves against emergencies.							
Central government saving of 4-6 percent of GDP	Dissavings 3.8%	Dissavings 11.8%	Dissavings 6.8%	Savings 1.9%	Dissavings 3%	Dissavings 0.9%	Savings 1.4%
Overall central government deficit of no greater than 3 percent of GDP	Deficit 9.6%	Deficit 13.2%	Deficit 11%	Deficit 8.1%	Deficit 13.4%	Deficit 7.4%	Deficit 3.6%
Central government debt of not greater than 60 percent of GDP 3/	92.5%	102.3%	105.8%	103.7%	137.2%	56.6%	74.1%
Public sector saving, including national insurance scheme, of 7-8 percent of GDP	Dissavings 1.4%	Dissavings 11.8%	Dissavings 6.8%	Savings 2.1%	Dissavings 3%	Savings 7.5%	Savings 4.3%
Public sector investment of 12 percent of GDP	8.8%	1.5%	5.4%	13.2%	14.4%	10.4%	12.1%
Public sector primary balance	3.2% deficit	7.8% deficit	5.7% deficit	3.8% deficit	6.1% deficit	4% surplus	2.1% deficit
Fiscal adjustment required to stabilize ratio of public debt to GDP	6.1%	8%	12.6%	3.8%	13.1%	0%	3.3%

Sources: ECCU member country authorities; and IMF staff estimates.

1/ Excludes territories of Anguilla and Montserrat.

2/ In 2000, 2001, and 2002, some public enterprise data are not available.

3/ The ECCU member country debt numbers refer to total public debt, including government guaranteed debt.

Table 2. ECCU: Quantitative Fiscal Guidelines of the ECCB, European Union (EU), and West African Economic and Monetary Union (WAEMU)		
ECCB	EU	WAEMU
<p style="text-align: center;">Benchmarks:</p> <ul style="list-style-type: none"> ▪ Central government saving of 4–6 percent of GDP. ▪ Overall central government deficit of not greater than 3 percent of GDP. 	<p style="text-align: center;">Accession Criteria: (Maastricht Treaty)</p> <ul style="list-style-type: none"> ▪ General government budget deficit of not more than 3 percent of GDP. 	<ul style="list-style-type: none"> ▪ Basic fiscal balance - defined as revenue before grants, minus expenditure excluding externally financed investment - of zero or a positive amount.
<ul style="list-style-type: none"> ▪ Central government debt of not greater than 60 percent of GDP. 	<ul style="list-style-type: none"> ▪ General government debt of not more than 60 percent of GDP. 	<ul style="list-style-type: none"> ▪ Overall public sector debt of less than 70 percent of GDP.
<ul style="list-style-type: none"> ▪ Debt service payments of not greater than 15 percent of GDP. 		<ul style="list-style-type: none"> ▪ No change or a decrease in domestic and external payment arrears.
<p style="text-align: center;">Guidelines:</p> <ul style="list-style-type: none"> ▪ Public sector saving, including national insurance scheme, of 7–8 percent of GDP ▪ Public sector investment of 12 percent of GDP. 	<p style="text-align: center;">Stability Pact:</p> <ul style="list-style-type: none"> ▪ Close to balanced budget or surplus for general government as underlying position (with automatic stabilizers operating around this position), with fines for persistent deficits above 3 percent of GDP that do not reflect special circumstances. 	<p style="text-align: center;">Second-Order Indicators:</p> <ul style="list-style-type: none"> ▪ Government wage bill of not more than 35 percent of tax receipts. ▪ Domestically financed investment of at least 20 percent of tax receipts. ▪ Tax receipts of at least 17 percent of GDP.

Regarding public debt limits, recent econometric evidence indicates that external public debt may begin to have an adverse impact on economic growth when it reaches about 40 percent of GDP (IMF (2002), Appendix I; Pattillo, Poirson, and Ricci (2002)). While the transmission mechanism from external public debt to growth was not modeled explicitly, this mechanism may have a fiscal component, either through crowding-out of private investment or creating expectations that future debt-service obligations will be met through distortionary taxation and reduction of public investment.

The experience of the CFA zones in the 1980s illustrate that fiscal targets can lead to creative accounting rather than real fiscal adjustment when the budget process is not transparent (Masson and Pattillo (2001)). In this context, efforts to improve budget transparency and implementation are critical.

B. Structural Guidelines

The structural elements of the ECCB's fiscal guidelines indicate a need for a degree of tax harmonization to enhance the efficiency of the tax structure and revenue collection in the region, and to limit tax competition (Table 3). Regional tax harmonization aims to reduce fiscal barriers, that is, the characteristics of national tax systems that distort the flow of goods and services within the region. The guidelines reflect a strategy for widening the revenue base by eliminating discretionary and other tax concessions, strengthening tax and customs administration, and implementing a VAT-type tax.

The benefits of a fixed exchange rate in a currency union are greater the more member countries trade among themselves. Toward this end, the ECCB's fiscal guidelines include implementation of CARICOM's (Caribbean Community and Common Market) common external tariff (CET) in the context of the process of economic integration toward a regional common market. This, in turn, is part of the larger process of the region's adaptation to global trade liberalization. The ECCB's guidelines reflect this process by shifting the main source of revenue collection from international trade taxes to a VAT-type tax.

The revenue objectives of the ECCB's guidelines are very close to those of West African countries in the CFA franc zone after its currency devaluation in 1994. Macroeconomic balance was to be achieved by increasing revenue through a broadening of the tax base, which was to more than compensate for a reduction of tax rates, especially on international trade. The reduction of international trade taxes reflected ongoing efforts to harmonize and reduce external tariffs in the shift to regional economic integration.

The ECCB's fiscal guidelines address weaknesses in the budgetary processes of member countries (ECCB (2002)). The experience in Europe in the 1980s demonstrated that improvements in the primary balances of government could be achieved through better control of noninterest expenditure (Giovannini and Spaventa (1991), p. 14)). Pro-growth adjustment in ECCU countries will require the implementation of measures to improve the efficiency of public investment to ensure that capital budgets only include projects that have clear economic benefits and support strong growth. Toward this end, St. Lucia recently established a cabinet-level committee to help ensure rigorous selection and efficient implementation of capital projects that preserve the safety net and provide the foundation for strong growth.

Table 3. ECCB's Structural Fiscal Guidelines and the ECCU Implementation as of 2001

ECCB Proposal	Antigua and Barbuda	Dominica	Grenada	St. Kitts and Nevis	St. Lucia	St. Vincent and the Grenadines
Objective: Tax reform aimed at improving efficiency, equity, and buoyancy, in order to promote saving and investment and strengthen tax administration.						
Harmonize the maximum rate for the personal and corporate income tax.	No personal tax. Corporate tax 40%	Personal tax rates range from 20% to 40%. Corporate tax rate 30%.	Personal tax rate 30%. Corporate tax rate 30%.	No personal tax (but a social levy of 8%, half paid by employer). Corporate tax 37%.	Corporate tax 33.3%	Personal tax rates between 0-40 percent. Corporate tax 40%.
Exempt dividend and interest earnings from the personal income tax.		No capital gains tax. Dividends tax 15%.	No capital gains tax and withholding tax.	Capital gains tax 20%. Withholding tax 10%.		No capital gains tax, withholding tax 10-20%. Dividend tax 15%.
Broaden the tax base by introducing a tax on value added or a general consumption tax covering services with rebates on inputs for exports.	Consumption tax ranges from 0-50%.	Consumption tax 25%, sales tax 5%.	Consumption tax 25% on imports; 10% on locally manufactured goods.	Consumption tax on businesses 4%, and hotel and restaurant tax 7%.	Consumption tax 0-45%.	Sales tax 5-10% on hotels and guesthouses.
Adhere to CARICOM schedule for the implementation of the CET.	Completed Phase IV April 1, 2000.	Completed Phase IV July 1, 2001	Completed Phase IV January 1, 2000.	Completed Phase III in January 1, 2001.	Completed Phase IV January 1, 2000.	Completed Phase IV January 1, 1998.
Improve property valuation and registration as well as the billing and collection of the property tax.	Property tax on citizens 10%. Noncitizens 20% of annual rental value.	Property tax 4%. Alien land holding license fee 10% of annual rental value.	5% of value of property. Alien land holding license fee 10% of annual rental value.	House tax 5% of rental value.		Property tax 2.5% of rental value. Alien land holding license fee 10% of annual rental value.
Streamline tax concessions	Comprise tax holidays, import duty exemptions, repatriation of profits and withholding tax exemptions.	Comprise tax holidays, import duty exemptions.	Comprise tax holidays, import duty exemptions, repatriation of profits and withholding tax exemptions.	Comprise tax holidays, import duty exemptions.	Comprise tax holidays, import duty exemptions, repatriation of profits and withholding tax exemptions.	Comprise tax holidays, import duty exemptions, repatriation of profits and withholding tax exemptions.
Duty-free access to imports from other ECCB countries	Granted to CARICOM countries meeting CARICOM rule of origin.	Margin of preference of 25% for CARICOM products.	Granted to CARICOM countries meeting CARICOM rule of origin.	Granted to CARICOM countries meeting CARICOM rule of origin.		Granted to CARICOM countries meeting CARICOM rule of origin.

Table 3. ECCB's Structural Fiscal Guideline and the ECCU Implementation as of 2001

ECCB proposal	Antigua and Barbuda	Dominica	Grenada	St. Kitts and Nevis	St. Lucia	St. Vincent and the Grenadines
Objective: Expenditure reform aimed at raising quality and efficiency.						
Improve budgeting procedures and prepare multiyear budgets	* Limited transparency, payment arrears, and off-budget operations. * Statutory bodies are required to purchase government paper. * Irregular budget reports.	* Arrears	* Arrears to national insurance scheme. 1/	* Duplication of services between St. Kitts and Nevis.		* No multiyear budgets. * Weak adherence to budget.
Privatizing utilities where there are identifiable benefits	* Intend to retain utilities. * No privatization plan	* No privatization plan	* Grenada privatized and commercialized most of its public entities.	* Intend to retain utilities. * No privatization plan	* No privatization plan in place, but government intends to privatize.	* No privatization plan, but government intends to privatize.
Introducing regional procurement of selected goods and services, including education and health services	Not a party to WTO Plurilateral Agreement on Government Procurement.	Not a party to WTO Plurilateral Agreement on Government Procurement.	Not a party to WTO Plurilateral Agreement on Government Procurement.	Not a party to WTO Plurilateral Agreement on Government Procurement. * Established a centralized government procurement system.	Not a party to WTO Plurilateral Agreement on Government Procurement.	* Not a party of WTO Plurilateral Agreement on Government Procurement.
Framing the public sector investment program (PSIP) in the context of an overall development strategy and in a manner consistent with absorptive capacity.	* Need to improve quality and focus of PSIP.	* Need to improve quality and focus of PSIP.	* Need to reduce commercial lease -to-own projects. 2/	* Imposed a freeze on new projects. * Need to restrict capital spending to annual budget and medium-term plan.	* Need to improve quality and focus of PSIP.	* Need to restrict capital spending to annual budget and medium-term plan.
Strengthening coordination in the preparation, implementation, and monitoring of the PSIP				* There is limited coordination.	* There is no monitoring of projects.	* There is limited coordination.

Sources: ECCU member country authorities, and World Trade Organization

1/ These arrears were later regularized.

2/ In 2002, the government of Grenada paid off its lease -to-own projects and acquired the properties.

The guidelines also call for streamlining the public sector by commercializing and privatizing public enterprises so that the public sector complements and supports private sector business. Privatization serves as a mechanism for achieving fiscal sustainability, with proceeds being used to reduce public debt directly.

IV. DEBT STABILIZATION

The recent fiscal deterioration in member countries of the ECCU raises concern about the sustainability of their fiscal position. The consolidated budget constraint of the public sector and central bank provides the framework for examining sustainability (Walsh (1998), pp. 132–33):

$$-(T - E) + rB = dB/dt + dM/dt \quad (1)$$

where T is public revenue; E is public primary expenditure, that is, total expenditure excluding interest payments on public debt; r is the interest rate on the stock of public sector debt, B ; and M is the monetary base. The left-hand side is the overall public sector deficit (defined as a positive number), consisting of the primary balance, $-(T - E)$, and interest payments on public debt, rB . The deficit can be financed by issuing debt, dB/dt , or increasing the monetary base, dM/dt .

In the interest of stability of prices and the exchange rate peg to the U.S. dollar, the ECCB has precluded use of the monetary base, that is, seigniorage, to finance fiscal deficits in member countries, which takes dM/dt out of the budget equation.⁵ The public sector budget constraint can be rewritten in terms of the ratio of its variables to GDP as follows:

$$-(\tau - e) + (r - g) b = db/dt \quad (2)$$

where τ is the ratio of public revenue to GDP and e is the ratio of primary public expenditure to GDP; g is the GDP growth rate; and b is the ratio of the stock of total public sector debt (domestic and external) to GDP and db/dt , its change. The primary balance as a share of GDP that stabilizes the ratio of public debt to GDP ($db/dt = 0$) is:

$$\tau - e = (r - g) b \quad (3)$$

The debt-stabilizing primary surplus matches interest payments net of the effect of GDP growth on the debt-to-GDP ratio.⁶ If the primary balance falls short, government is not

⁵ In fact, seigniorage is included in the ECCB's profits, part of which is remitted annually to member governments and accounted for as nontax revenue.

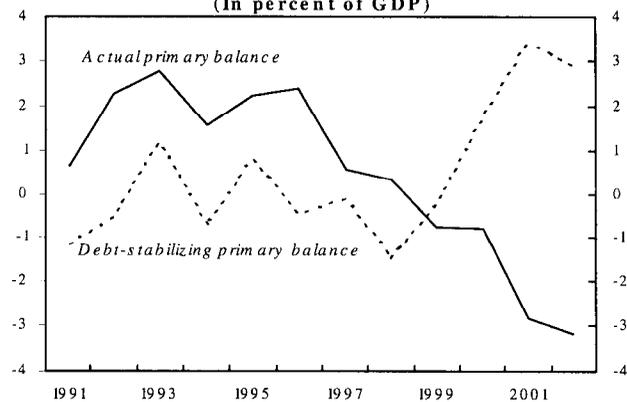
⁶ The current interest rate may be lower than the growth rate for a time given the maturity structure of outstanding debt and the past history of interest rates, as well as the institutional arrangements for service of outstanding debt. However, this can not be a steady-state condition as it would violate the golden rule for maximizing per capita consumption.

inevitably headed toward insolvency, as this depends on the future course of growth, debt, interest payments, and primary balances. The computation of debt-stabilizing primary balances is sensitive to the specifications of variables. The average interest rate applicable here is likely to be less than the current or marginal interest rate on newly contracted debt, thereby imparting a downward bias to the computation of the debt-stabilizing primary surplus.⁷

The debt-stabilizing primary balances computed for all countries exceeded except St. Lucia actual primary balances in 2002, indicating that debt will continue to grow in these countries unless fiscal policy is tightened (Figure 3). In these countries, debt-stabilizing balances were positive and actual primary balances negative, although the latter moved toward the former in 2002 as countries found it necessary to address their fiscal deterioration of previous years. The gap between the debt-stabilizing and actual primary balances ranged from 4 percent of GDP for Grenada and to around 13 percent of GDP for Dominica and St. Kitts and Nevis. Countries that allowed their fiscal deficits to increase sharply in recent years must now run significant primary budget surpluses to stabilize their debt ratios. Their experiences show that large government budget deficits can quickly lead to unsustainable debt dynamics from which it is difficult to extricate.⁸

For the ECCU as a whole the actual primary balance exceeded the debt stabilizing balance throughout the 1990s, but shifted below in 1999 with the shortfall widening significantly in 2001 (Figure 4). This could potentially pose a threat to the fiscal sustainability of the monetary union.

Figure 3. Primary Balances
(In percent of GDP)



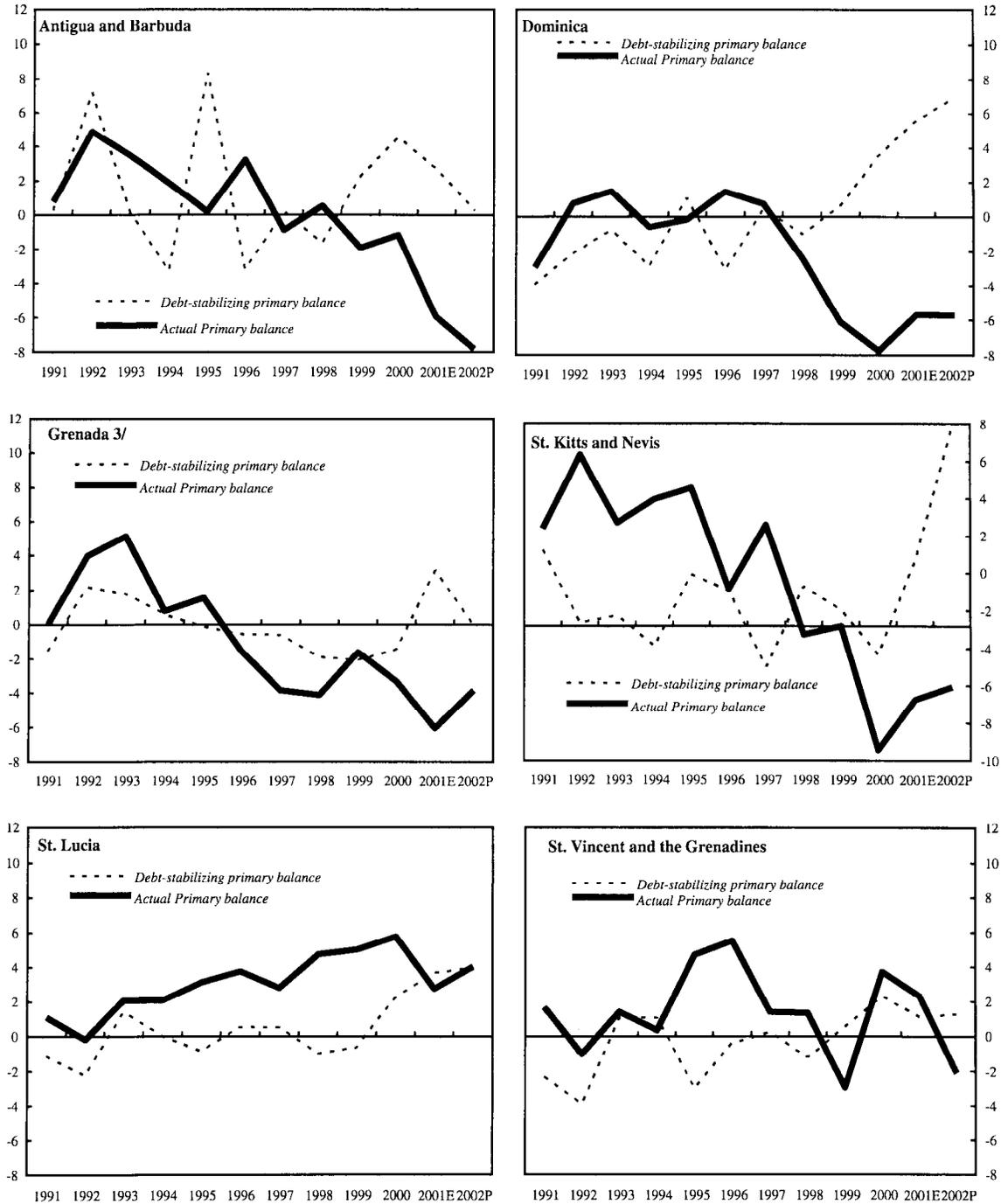
V. FISCAL SUSTAINABILITY

Stabilizing a country's debt ratio is not sufficient to achieve a sustainable level of debt. A country's debt ratio is sustainable if future primary balances are sufficient to meet the service obligations on existing and future debt. The dynamics of future primary balances and debt service is described by equation (2), whose solution as a differential equation going forward

⁷ The average interest rate equals interest payments on public debt divided by the public debt stock. The relevant interest rate is the effective interest rate on public debt taking into account all terms of repayment, calculated in present value terms. Data are not available for ECCU countries to do this.

⁸ This comports with the experience of European countries that allowed their budget deficits to increase significantly in the early 1980s and whose debt-to-GDP ratios were stabilized by the end of the 1980s after years of running substantial primary surpluses. Belgium achieved this stabilization at a very high ratio that did not permit the use of countercyclical fiscal policies to address the recession that hit in 1992–93 (De Grauwe (2000), p. 199).

Figure 4. ECCU Members: Primary Balance: Actual Versus DebtStabilizing, 1991–2002
(In percent of GDP) 1/



Sources: ECCU member country authorities; and Fund staff estimates.

1/ Some public enterprises data is not available for Dominica (1991–2002), Antigua and Barbuda (2000–02), Grenada (1991–2002), and St. Kitts and Nevis (2000–02).

2/ In Grenada beginning 2001, the debt figures include central government contingent liabilities.

in time stipulates the maximum level of the debt ratio, b , that can be sustained by the steady state primary surplus $(\hat{\tau} - \hat{e})$ in the future (Annex I):⁹

$$b = (\hat{\tau} - \hat{e}) / (\hat{r} - \hat{g}) \quad (4)$$

This formula presents the maximum sustainable debt level as the present value of consol yielding the steady-state primary surplus evaluated at the interest rate on public debt net of the rate of economic growth. If the debt ratio is stabilized at the current levels of the primary deficit, interest rate on public debt, and growth rate as stipulated in equation (3), but exceeds the maximum sustainable debt ratio given by equation (4), then it must be brought down to that level through debt restructuring.

It is not easy to make this formula operational as it requires projecting steady-state ratios of tax revenue and primary expenditure to GDP, the interest cost of public debt, and the GDP growth rate. The expenditure ratio is driven by commitments and political considerations regarding public employment and wages, retirement benefits, education and health services, and other social and economic infrastructure, as well as the capacity for public expenditure management. The collection of taxes is determined by their effect on the behavior of individuals and businesses—including the ability of taxpayers to influence tax policy and administration—the capacity of the tax administration, as well as political considerations.

Fiscal sustainability assessments are inherently probabilistic and no framework can dispense with the need for making judgments (IMF (2002), p. 6). Although it is difficult to get precise values for the relevant steady-state variables, it is informative to examine the maximum sustainable debt ratios for a range of values (Table 4). At a steady-state primary surplus of 2 percent of GDP, nominal interest rate of 7 percent, and nominal GDP growth rate of 4 percent, the maximum sustainable ratio of total public debt to GDP is 67 percent of GDP. For countries facing a higher interest rate of 8 percent owing to their precarious fiscal

Table 4. Maximum Sustainable Debt
(In percent of GDP)

Primary balance	Nominal interest rate					
	7 percent		8 percent		9 percent	
	Nominal growth rate 4 percent	Nominal growth rate 5 percent	Nominal growth rate 4 percent	Nominal growth rate 5 percent	Nominal growth rate 4 percent	Nominal growth rate 5 percent
2 percent	67	100	50	67	40	50
3 percent	100	150	75	100	60	75

⁹ Wyplosz (1991) uses the same formula based on the intertemporal model of the government budget constraint developed by Frenkel and Razin (1987) that separates time into two periods, the present and indefinite future. Although equation (4) is similar to equation (3) for computing the debt-stabilizing primary balance, the latter stipulates the primary balance at a particular time that would stabilize the debt ratio based on the rates of interest and GDP growth at that time. Debt sustainability is examined by shifting to the future values of variables in equation (4).

positions, such as Antigua and Barbuda, Dominica, or St. Kitts and Nevis, the maximum sustainable debt ratio declines to 50 percent of GDP. All these countries have actual debt ratios above 100 percent, indicating unsustainable fiscal positions. If these countries were to increase their steady-state primary surplus to 3 percent of GDP or nominal GDP growth rate to 5 percent, the maximum sustainable debt ratio would still be less than 100 percent. If they were able to achieve both these targets, the maximum sustainable debt ratio would be 100 percent, bringing them closer to sustainability.

Grenada, St. Lucia, and St. Vincent and the Grenadines are projected to have higher primary balances and GDP growth, which allow for maximum sustainable debt ratios of up to 100 percent. As such, Grenada's public debt ratio of about 100 percent, although cause for concern, does not pose the same threat to sustainability as do similar ratios in Antigua and Barbuda and Dominica. St. Lucia's public debt ratio of well under 100 percent presents less risk to sustainability.

It is important to note that the fiscal positions of Grenada and St. Vincent and the Grenadines were found to be sustainable based on medium-term projections for their primary balances and rates of interest and GDP growth, even though the computation of their debt-stabilizing primary balances based on current values of these variables indicated that their debt ratios to GDP would grow. The finding of sustainability in these cases reflects a crucial presumption that their ongoing substantial public investment will support stronger economic growth and fiscal sustainability in the future.

The computation of sustainable debt ratios is sensitive to variation in steady-state primary balances and rates of interest and GDP growth, requiring careful examination of the reasons for differences across countries. Differences in growth rates may reflect natural limits on the use of resources or their misuse as a result of poor policies. In the latter case, better policies would improve a country's growth prospects and debt capacity. It is important that projections of future levels of the primary balance, GDP growth, or the interest rate on public debt are not too optimistic as this would mask a problem of fiscal unsustainability and possibly delay the adoption of policies to restore sustainability. It is also important to recognize the endogeneity of the interest and growth rates. In particular, greater investment can bid up the interest rate and also reach a point of diminishing return in raising the growth rate, so that sustainable debt levels may be lower than the formula would indicate.

VI. SHOULD FISCAL GUIDELINES BE MADE BINDING?

One of the most controversial issues in the debate on monetary union in Europe was the extent to which fiscal policies must be constrained to ensure its success. Although the literature on the European Monetary Union did not reach a consensus on the need for fiscal constraints, they were adopted in the end as conditions for accession (Maastricht Treaty) and ongoing membership in the union (stability pact). An examination of performance of the CFA zone in West Africa concluded that a monetary union can be an effective agency of fiscal restraint only if strong fiscal constraints apply (Masson and Pattillo (2001)).

The main argument for adopting fiscal constraints is that a country with unsustainable fiscal policies can create significant negative externalities for other members of the monetary union. As a country whose public debt is rising borrows increasingly in capital markets available to the union, interest rates can rise, raising the debt burden for other member countries, as well as adversely affecting business investment and economic activity. This may force the central bank to abandon its prohibition on financing governments and bail out a country whose fiscal policy is unsustainable. The ECCB has expressed concern that sustained fiscal deficits by a significant number of countries would have implications for the viability of the exchange rate and value of the currency (ECCB (2002), p. 3)).

Another consideration is the risk of default of a country. If bonds issued by this country are widely distributed among households and financial institutions in the union, other countries can come under pressure to bail out the defaulting government to avoid disruptions and contagion in the financial system. The risk of contagion from default is not negligible in the ECCU as banks may be adversely affected.

A view opposed to fiscal constraints, other than the prohibition of central bank financing of government deficits, maintains that they are not necessary or even desirable (Dornbusch (1997), Breidenkamp and Deppler (1990), Begg et al. (1991)). According to this view, private financial markets will impose the necessary discipline on governments and limit destabilizing debt accumulation in a monetary union. Empirical studies of the currency unions in the United States, Canada, and European countries show that financial markets effectively incorporate differences in the fiscal positions of states and provinces in the cost of borrowing, and provide appropriate incentives for corrective action before government debt becomes unsustainable (Bayoumi, Goldstein, and Wolgrom (1995), Eichengreen (1993)).

The strength of the market discipline argument is mitigated for the ECCU because of the very small size of its member countries, presence of state-owned banks, and thinness of the markets for their sovereign debt, especially the virtual lack of a secondary market. In addition, the availability of exceptional external financing in some cases further weakens the potential discipline that financial markets might impose. Financial market discipline could be enhanced by various measures: statutory exposure limits on government debt held by the banking system; inclusion of government debt in the determination of prudential indicators; and limits on the issue of short-term debt (Giovannini and Spaventa (1991), p. 27)). These measures would insulate monetary policy from the negative consequences of a member country's fiscal indiscipline without recourse to binding fiscal constraints.

The ECCB's introduction of a regional government securities market (RGSM) can have an important bearing on the issue of whether to make fiscal guidelines binding. One possibility is that the RGSM provides new opportunities to place sovereign debt throughout the union at interest rates that vary little or not at all with differences in fiscal performance, which could lead to excessive government debt issuance. This would amplify the currency union's capacity for attenuating fiscal deterioration and enhance externalities among countries, which strengthens the case for adopting fiscal guidelines. On the other hand, the RGSM could contribute to improving efficiency in the market for sovereign debt, resulting in sharper differentiation of interest rate spreads based on fiscal performance. This would reduce and

ideally eliminate externalities, and diminish the need for guidelines. Although the objective of the RGSM should be to enhance market efficiency, this may take time in a small, thin market and require fiscal guidelines while the market is developing.

The evidence of the need for binding rules is mixed, although the adoption of such rules in the case of small countries with thin financial markets is favored (Masson and Pattillo (2001)). The experience of WAEMU after the devaluation of its currency in 1994 provides an interesting example of the implementation of fiscal guidelines. To achieve greater economic policy cohesiveness among member countries, the WAEMU established by the end of 1994 a multilateral surveillance system. In 1999 it adopted the Convergence, Stability, Growth, and Solidarity Pact, which established criteria for achieving greater cohesiveness (Box 2). Multilateral surveillance is intended to encourage convergence to these criteria to mitigate risks posed by uncoordinated fiscal policies. This approach provides a mechanism for achieving greater regional integration without adoption of binding constraints. The fundamental objective is the same as that of the ECCB's guidelines, which is to restore government savings and generate primary surpluses that would allow the stabilization and reduction of the public debt to GDP ratio (Clement (1996), p. 4)).

Whether fiscal guidelines should be binding or adopted at all has been the subject of considerable debate in the literature on the European and West African monetary unions. The issue hinges on whether financial markets can contain the consequences of a country's fiscal indiscipline to that country and keep it off an unsustainable fiscal course, or a country's unsustainable policies in fact impose externalities on other members of the currency union that can force a change in monetary policy or even threaten the stability of the monetary union. The EU opted for binding constraints, while WAEMU has adopted fiscal guidelines in the context of a multilateral surveillance system.¹⁰

VII. CONCLUSION

Fiscal performance in ECCU member countries has deteriorated steadily since 1997 and sharply after 2000. In 2002, the primary balance in all ECCU member countries except St. Lucia fell short of the level estimated to stop public debt from growing faster than GDP. The debt-stabilizing primary balances calculated based on outcomes in 2002 indicate that improvements ranging from 3.3 percent of GDP in St. Vincent and the Grenadines to 13 percent of GDP in St. Kitts and Nevis are required to stabilize public debt relative to GDP.

Stabilizing debt and achieving a sustainable fiscal position are not the same, as the latter is a forward-looking exercise. The formula presented in this paper for the maximum sustainable ratio of public debt to GDP based on the steady-state public sector primary surplus, interest rate on public debt, and rate of economic growth in the future provides a convenient rule of

¹⁰ The EU's fiscal rules aim for not only fiscal sustainability but also macroeconomic stabilization in regard to the operation of automatic stabilizers, as indicated in Table 2.

thumb for assessing sustainability. It suggests that Antigua and Barbuda, Dominica, and St. Kitts and Nevis face potentially unsustainable fiscal situations.

The current fiscal guidelines of the ECCB do not guarantee achievement of fiscal sustainability. The guideline for a ceiling on government and government-guaranteed debt of 60 percent of GDP represents a step in the right direction. Ultimately, public debt ceilings must reflect a country's capacity for generating primary surpluses, its cost of public financing, and steady-state growth in the future.

Achieving sustainable fiscal positions and growth over the medium term will require meeting quantitative targets underpinned by structural reforms to improve the efficiency and transparency of the tax system and public expenditure. The ECCB's structural guidelines reflect an effort to implement such reforms. A key reform is improvement in the implementation of public investment to ensure that capital budgets only include strong, growth-oriented projects financed to the extent possible from official sources on favorable terms, which would, in terms of the formula, increase "g" and lower "r," thereby increasing the sustainable level of debt. The ECCB's structural guidelines also call for streamlining the public sector by commercializing and privatizing public enterprises. Privatization proceeds could be used to reduce public debt directly.

In the final analysis, the ECCB must balance the need to support the currency union by applying uniform fiscal guidelines across all member countries, against the need to adapt fiscal targets to individual country circumstances. The ECCB's development of separate adjustment programs for member countries represents an application of fiscal guidelines to country circumstances. An examination of these programs' quantitative targets in the context of a fiscal sustainability analysis for each country would contribute to sharpening the specification of guidelines and the degree of fiscal convergence consistent with stability of the currency board arrangement.

Box 1. The ECCB: Operations as Fiscal Agent

The Eastern Caribbean Central Bank (ECCB) created a two-tranched reserve facility in 1995 from which member governments can borrow. The first tranche provides free access to governments and is funded from residual profits of the ECCB. The second tranche is accessible only with approval of the Monetary Council and is intended as a last resort to meet financing needs in response to natural disasters. This tranche is funded by a EC\$4 million allocation from ECCB profits. The Articles of Agreement of the ECCB stipulate that it may extend credit to member governments under specified categories (for example, temporary advances and treasury bills) and subject to prescribed limits. At the beginning of each financial year (April 1), the ECCB allocates the global credit limit to member governments in proportion to their shares of total regional recurrent revenue. The amount of credit available to each member government for the financial year is its allocation less all its outstanding balances and arrears. Starting in 1999, 30 percent of the global credit limit is set aside to provide credit to banks and for indirect support to the government securities market, reducing the potential amount of credit by that amount.

The ECCB maintains the stability of the Eastern Caribbean dollar through strong foreign currency backing. The Articles of Agreement require that the level of pooled reserves be maintained at not less than 60 percent of the ECCB's demand liabilities, namely, reserve money consisting of commercial banks' reserves at the ECCB and currency issued. The sum of the maximum amounts that the ECCB could lend under its credit lines typically exceeds the 40 percent global limit on domestic assets. In practice, net new lending to governments has been minimal in recent years as member governments have been reluctant to borrow and the ECCB has been conservative in its allocation of credit, typically maintaining a foreign exchange backing ratio in excess of 95 percent. The ECCB's policy of providing strong foreign exchange backing for the currency to support the fixed exchange rate leaves no scope at the country level for financing government through money creation.

Box 2. The WAEMU's Convergence Criteria

The Convergence, Stability, Growth, and Solidarity Pact adopted by West African Economic Monetary Union (WAEMU) governments in 1999 established the following performance criteria for member countries:

- an average annual inflation rate of not more than 3 percent;
- a basic fiscal balance, defined as revenue before grants minus expenditure excluding externally financed investment, at zero or a positive amount based on the need to strengthen fiscal sustainability;
- overall public sector debt of less than 70 percent of GDP;
- no change or a decrease in domestic and external payment arrears.

The above so-called first-order criteria are supplemented by the following second-order indicators:

- wage bill of not more than 35 percent of tax receipts;
- domestically financed investment of at least 20 percent of tax receipts;
- tax receipts of at least 17 percent of GDP;
- external current account deficit, excluding grants, of not more than 3 percent of GDP.

ANNEXES

I. Sustainable Debt and Solvency

The formula for b over time obtained by solving the differential equation for b given by equation (2) is:

$$b(t) = (\hat{\tau} - \hat{e})/(\hat{r} - \hat{g}) + [b_0 - (\hat{\tau} - \hat{e})/(\hat{r} - \hat{g})]e^{-(\hat{r} - \hat{g})t} \quad (A1)$$

where b_0 is the initial debt ratio.

Sustainability requires that $b(t)$ not increase without bound over time, implying that the expression in brackets in the second term can not exceed zero, that is, the initial debt ratio, b_0 , can not exceed $(\hat{\tau} - \hat{e})/(\hat{r} - \hat{g})$, the maximum sustainable debt ratio. If b_0 is stabilized at the current levels of the primary deficit, interest rate on public debt, and growth rate, but exceeds the maximum sustainable debt ratio, then it must be brought down to that level through debt restructuring.

Equation (2) can be expressed in terms of discrete time intervals as:

$$b_t - b_{t-1} = (\hat{r} - \hat{g})b_0 - (\hat{\tau} - \hat{e}) \quad (A2)$$

which can be solved by forward iteration to yield the following formula for b :

$$b_t = (\hat{\tau} - \hat{e})/R + (\hat{\tau} - \hat{e})/R^2 + \dots + (\hat{\tau} - \hat{e})/R^n + b_0/R^{n+1} \quad (A3)$$

where $R = (1 + \hat{r})/(1 + \hat{g})$ and n is the maturity of initial debt. The values of variables can be stipulated to differ across time periods. Solvency requires that initial debt, b_0 , is paid off. The constant or steady level of the primary surplus needed to pay off initial debt is:

$$\hat{\tau} - \hat{e} = b_0/(R + R^2 + \dots + R^n) \quad (A4)$$

which is the discrete time version of equation (4) through period n .

The general formula for solvency in discrete time for the indefinite future presented in the staff report on assessing sustainability is¹¹:

¹¹ IMF (2002, Box 1).

$$\sum_{i=0}^{\infty} \frac{E_{t+i}}{\prod_{j=1}^i (1+r_{t+j})} \leq \sum_{i=0}^{\infty} \frac{Y_{t+i}}{\prod_{j=1}^i (1+r_{t+j})} - (1+r_t)D_{t-1} \quad (A5)$$

Sustainability is defined as satisfying this solvency formula without a major correction in the balance of income and expenditure given the costs of financing presented in the market. Whether initial debt, D_0 , is sustainable, or debt can be sustained at a higher level, can be examined using projected values of variables in the formula.

II. STATISTICAL ANNEX

Table A1. ECCU: Selected Public Sector Fiscal Indicators by Region and Country, 1990–2002 1/
(In percent of GDP)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	Prel. 2001	Est. 2002
Saving 2/	4.1	3.9	4.1	4.8	4.2	3.8	3.8	3.3	3.9	3.2	2.3	-1.0	-1.4
Antigua and Barbuda 2/	-2.2	-3.4	-3.6	-2.7	-1.9	-2.8	-0.2	-1.3	0.7	-2.5	-1.5	-9.3	-11.8
Dominica 2/	5.1	4.2	2.8	1.6	0.9	2.6	3.9	2.7	2.3	1.5	-0.6	-5.4	-6.8
Grenada	0.5	3.0	3.4	5.2	4.1	2.2	2.1	-0.3	0.6	3.2	3.6	2.2	2.1
St. Kitts and Nevis 2/	5.0	2.7	5.7	6.7	4.8	7.7	2.4	4.6	2.3	1.0	-5.2	-4.9	-3.0
St. Lucia	9.1	9.7	9.7	10.5	9.7	7.9	7.2	6.7	8.3	8.8	8.1	6.5	7.5
St. Vincent and the Grenadines	8.4	7.9	6.7	8.3	8.0	6.5	7.8	8.3	7.8	6.4	5.9	4.1	4.3
Primary balance 2/	2.1	0.6	2.3	2.8	1.5	2.2	2.4	0.5	0.3	-0.7	-0.8	-2.8	-3.2
Antigua and Barbuda 2/	6.5	0.7	4.9	3.5	1.8	0.2	3.2	-0.9	0.5	-1.9	-1.2	-5.9	-7.8
Dominica 2/	-5.9	-2.9	0.7	1.5	-0.6	-0.2	1.4	0.7	-2.4	-6.1	-7.8	-5.7	-5.7
Grenada	-4.3	0.0	4.0	5.1	0.8	1.5	-1.5	-3.8	-4.1	-1.6	-3.3	-6.1	-3.8
St. Kitts and Nevis 2/	5.2	2.4	6.4	2.7	4.0	4.6	-0.8	2.6	-3.2	-2.8	-9.5	-6.8	-6.1
St. Lucia	4.0	1.1	-0.2	2.1	2.1	3.1	3.8	2.8	4.7	5.0	5.8	2.8	4.0
St. Vincent and the Grenadines	1.1	1.7	-1.0	1.4	0.4	4.7	5.5	1.4	1.4	-2.9	3.7	2.3	-2.1
Capital expenditure 2/	8.4	9.4	7.0	8.0	8.3	7.0	7.0	7.8	8.9	9.9	9.2	8.5	8.8
Antigua and Barbuda 2/	1.9	4.7	0.9	2.4	3.9	5.0	4.5	7.4	6.8	6.7	5.3	2.5	1.5
Dominica 2/	19.3	13.8	8.3	5.8	8.8	12.3	11.1	9.1	11.6	14.8	19.0	11.4	5.4
Grenada	11.3	10.2	4.2	8.0	10.0	5.8	9.7	8.7	9.2	10.2	12.3	15.1	13.2
St. Kitts and Nevis 2/	4.7	5.3	3.7	7.8	4.9	6.5	6.9	5.7	9.2	8.5	10.3	8.5	14.4
St. Lucia	7.2	10.8	11.5	13.1	11.1	8.2	6.7	6.4	8.2	9.2	7.6	9.4	10.4
St. Vincent and the Grenadines	14.5	14.3	13.0	9.9	12.2	5.6	5.9	11.6	11.4	14.7	7.2	8.7	12.1
Overall balance 2/	-1.8	-2.8	-1.3	-0.7	-1.8	-1.1	-1.1	-3.1	-2.6	-4.4	-4.6	-7.2	-8.1
Antigua and Barbuda	-2.8	-6.9	-3.6	-4.2	-5.4	-7.4	-4.0	-8.4	-4.4	-8.5	-6.5	-11.3	-13.2
Dominica	-7.6	-4.9	-1.5	-0.8	-2.9	-2.6	-1.0	-1.9	-4.9	-9.3	-12.1	-10.8	-11.0
Grenada	-7.7	-3.0	1.4	2.5	-1.6	-0.4	-3.7	-6.1	-5.7	-3.9	-5.7	-8.7	-7.9
St. Kitts and Nevis	1.8	-0.6	3.5	0.1	1.4	2.3	-3.9	-0.7	-6.7	-7.2	-14.4	-12.4	-13.4
St. Lucia	3.0	0.2	-1.2	0.7	0.7	1.8	2.2	1.2	3.0	3.2	3.1	-0.9	0.1
St. Vincent and the Grenadines	-0.9	-0.8	-3.4	-1.1	-2.2	1.9	3.0	-1.2	-1.2	-6.3	0.3	-1.4	-6.0
External financing	3.2	4.0	3.1	2.4	1.7	1.5	2.7	4.9	3.3	3.3	...	...	...
Antigua and Barbuda	3.4	7.5	4.9	3.9	3.8	4.5	4.6	5.2	2.2	3.6	2.5	0.0	...
Dominica	4.5	4.1	1.2	-1.3	-0.5	0.2	0.2	0.5	1.6	7.3	9.0	0.0	0.0
Grenada	6.0	1.3	-0.5	-0.5	1.4	-1.3	0.8	0.6	2.3	3.0	4.4	3.9	7.3
St. Kitts and Nevis	1.5	1.4	1.8	2.1	2.1	1.8	2.2	17.0	7.5	4.2	...	...	...
St. Lucia	0.7	1.9	3.5	2.2	1.2	1.2	1.9	2.6	1.3	0.8	1.6	...	...
St. Vincent and the Grenadines	5.5	6.5	5.4	6.5	0.0	0.0	5.3	6.1	8.1	4.2	4.3	7.0	4.4
Domestic financing	-1.5	-1.2	-1.9	-1.7	0.2	-0.3	-1.6	-1.9	-0.7	1.1	...	...	...
Antigua and Barbuda	-0.6	-0.6	-1.4	0.2	1.6	2.9	-0.6	3.2	2.2	4.9	4.0	11.3	...
Dominica	3.1	0.8	0.3	2.2	3.4	2.4	0.8	1.4	3.4	2.0	3.2	10.8	11.0
Grenada	1.7	1.8	-0.9	-2.0	0.2	1.7	2.9	5.5	3.4	0.9	1.3	4.7	0.6
St. Kitts and Nevis	-3.3	-0.7	-5.3	-2.2	-3.4	-4.1	1.7	-16.3	-0.8	3.0	...	...	...
St. Lucia	-3.7	-2.2	-2.4	-2.8	-1.9	-3.0	-4.1	-3.9	-4.3	-4.0	-4.7	...	...
St. Vincent and the Grenadines	-4.6	-5.7	-2.0	-5.4	2.2	-1.9	-8.3	-4.9	-6.9	2.1	-4.7	-5.6	1.6

Sources: ECCU member country authorities; and IMF staff estimates.

1/ ECCB-wide data is based on a weighted average. Excludes Anguilla and Montserrat.

2/ Some public enterprise data are not available for 2000, 2001, and 2002.

Table A2. ECCU: Selected Central Government Fiscal Indicators by Region and Country, 1990–2002 1/
(In percent of GDP)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	Prel. 2001	Est. 2002
Saving	2.1	2.2	2.2	2.7	1.9	2.4	1.8	1.1	1.4	1.3	0.2	-2.7	-3.8
Antigua and Barbuda	-0.2	-1.2	-1.0	-1.6	-1.9	-1.5	-0.3	-2.2	-4.0	-4.6	-5.9	-9.3	-11.8
Dominica	2.8	2.0	1.2	0.2	-0.2	0.1	1.4	0.7	0.6	-0.1	-2.5	-5.4	-6.8
Grenada	-3.0	-0.5	-0.5	1.7	0.1	2.2	2.1	-0.3	1.3	4.8	6.1	2.1	1.9
St. Kitts and Nevis	2.1	-0.4	0.4	2.7	1.0	3.6	0.4	1.1	0.2	-2.6	-5.2	-4.9	-3.0
St. Lucia	5.4	6.7	7.0	7.6	6.7	5.9	3.5	3.7	6.1	6.1	5.3	1.6	-0.9
St. Vincent and the Grenadines	5.0	4.6	2.8	4.1	4.1	3.2	3.8	3.9	4.1	3.4	2.4	0.7	1.4
Capital expenditure	5.8	6.9	5.4	6.4	6.1	5.9	5.7	6.3	7.1	8.3	7.6	7.4	7.6
Antigua and Barbuda	0.8	4.2	0.9	2.1	3.9	3.7	2.5	3.0	2.5	4.1	2.7	2.5	1.5
Dominica	14.6	10.3	7.8	5.2	8.2	10.6	9.4	8.0	10.4	13.2	14.9	11.4	5.4
Grenada	9.5	8.9	3.1	4.7	6.8	5.8	9.7	8.7	9.2	10.2	12.3	15.1	13.2
St. Kitts and Nevis	2.1	3.6	3.0	3.7	3.5	6.5	4.9	5.2	7.1	9.7	10.3	8.5	14.4
St. Lucia	5.2	6.1	7.9	12.2	8.1	6.8	6.4	6.0	7.9	9.1	7.3	7.0	8.5
St. Vincent and the Grenadines	8.4	11.2	10.7	7.3	6.6	3.5	3.7	10.3	9.8	7.1	3.9	5.0	6.7
Primary balance	0.9	-0.5	0.1	0.6	-0.5	0.5	0.3	-1.1	-0.4	-2.0	-2.6	-4.4	-5.4
Antigua and Barbuda	4.4	-1.7	2.2	0.3	-2.0	-1.6	1.4	-0.4	-0.6	-3.5	-4.0	-6.9	-8.7
Dominica	-4.3	-1.8	-0.5	0.5	-1.9	-1.3	0.5	-0.2	-3.0	-6.2	-6.7	-5.7	-5.7
Grenada	-6.3	-2.3	0.8	2.4	-1.2	1.4	-1.6	-3.9	-1.5	-1.3	-0.8	-6.1	-4.1
St. Kitts and Nevis	4.1	0.3	1.1	2.2	1.2	0.5	-0.9	-0.8	-2.7	-7.3	-9.5	-6.8	-6.1
St. Lucia	1.8	1.8	-0.1	0.4	0.7	1.7	-0.7	0.2	3.0	1.8	0.2	-1.5	-4.7
St. Vincent and the Grenadines	1.9	-0.6	-4.2	-1.6	0.6	2.3	2.7	-2.8	-1.4	0.9	2.3	0.6	-0.8
Overall balance	-1.4	-2.5	-1.9	-1.5	-2.6	-1.5	-2.0	-3.6	-3.0	-4.9	-5.7	-8.0	-9.6
Antigua and Barbuda	0.1	-4.7	-1.0	-3.0	-5.4	-4.9	-2.0	-5.0	-5.0	-8.2	-8.1	-11.3	-13.2
Dominica	-5.9	-3.8	-2.8	-1.8	-4.2	-3.7	-2.0	-2.9	-5.6	-9.4	-11.1	-10.8	-11.0
Grenada	-9.7	-5.4	-1.8	-0.2	-3.5	-0.6	-3.7	-6.2	-3.1	-3.5	-3.2	-8.7	-8.1
St. Kitts and Nevis	1.2	-2.5	-1.5	-0.3	-1.4	-1.7	-3.9	-3.7	-5.9	-11.2	-14.4	-12.4	-13.4
St. Lucia	1.0	1.1	-0.9	-0.3	0.0	0.9	-1.6	-0.8	1.8	0.6	-1.4	-3.8	-7.4
St. Vincent and the Grenadines	1.3	-1.6	-5.2	-2.8	-0.7	0.6	1.2	-4.5	-3.3	-1.7	-0.3	-2.4	-3.6
External financing	1.8	2.4	1.2	0.6	0.8	1.2	2.2	5.4	8.9	2.9	3.7	5.8	7.1
Antigua and Barbuda	-1.1	2.8	-0.1	-0.4	0.0	0.2	2.1	13.1	26.4	3.9	3.8	5.3	6.8
Dominica	4.9	4.2	1.3	-1.2	-0.4	0.4	-0.3	0.2	1.6	7.3	9.0	4.8	4.8
Grenada	6.1	1.3	-0.3	-0.4	1.1	-1.5	0.8	0.5	2.1	2.8	2.6	3.9	7.3
St. Kitts and Nevis	0.9	3.7	2.8	1.4	2.5	7.9	8.0	8.1	7.0	4.3	1.4	13.6	10.9
St. Lucia	1.0	0.7	2.0	1.6	1.0	1.5	2.3	2.9	1.4	0.8	4.5	6.2	8.8
St. Vincent and the Grenadines	2.5	3.9	2.0	2.6	1.1	-0.4	0.6	2.6	4.6	0.4	0.9	1.5	2.4
Domestic financing	-0.4	0.1	0.7	0.8	1.8	0.4	-0.2	-1.8	-6.0	2.0	2.1	2.2	2.5
Antigua and Barbuda	1.0	1.9	1.1	3.4	5.4	4.6	-0.1	-8.1	-21.4	4.3	4.2	6.0	6.3
Dominica	1.0	-0.4	1.5	3.0	4.6	3.3	2.3	2.7	4.0	2.1	2.1	6.0	6.2
Grenada	3.6	4.1	2.1	0.5	2.4	2.0	2.9	5.6	1.0	0.8	0.6	4.8	0.8
St. Kitts and Nevis	-2.1	-1.2	-1.2	-1.1	-1.1	-6.2	-4.1	-4.4	-1.1	6.9	13.0	-1.1	2.5
St. Lucia	-2.0	-1.8	-1.1	-1.2	-1.0	-2.5	-0.7	-2.0	-3.2	-1.3	-3.2	-2.4	-1.5
St. Vincent and the Grenadines	-3.8	-2.2	3.2	0.2	-0.4	-0.2	-1.7	2.0	-1.3	1.3	-0.6	0.9	1.3

Sources: ECCU member country authorities; and IMF staff estimates.

1/ ECCB-wide data is based on a weighted average. Excludes Anguilla and Montserrat.

Table A3. ECCU Region: Central Government Operations, 1990–2002 1/

(In percent of GDP)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	Prel. 2001	Est. 2002
Revenue and grants	26.2	25.7	25.2	26.7	26.0	26.8	27.1	26.5	28.2	27.6	26.9	26.7	27.0
Current revenue	24.0	23.6	23.9	24.5	24.4	24.8	25.2	24.9	25.4	25.5	25.2	24.6	25.1
Tax revenue	21.5	21.0	20.9	21.3	21.1	21.3	21.5	21.5	21.9	21.7	21.5	21.2	...
Nontax revenue	2.5	2.5	2.9	3.3	3.3	3.4	3.8	3.4	3.5	3.8	3.7	3.4	...
Capital revenue	0.3	0.3	0.2	0.2	0.2	0.3	0.2	0.2	0.6	0.2	0.2	0.2	0.2
External grants	1.9	1.9	1.1	2.0	1.5	1.7	1.7	1.3	2.3	1.9	1.5	1.9	1.9
Expenditure	27.7	28.3	27.1	28.2	28.6	28.3	29.1	30.2	31.1	32.5	32.6	34.7	36.6
Current expenditure	21.9	21.4	21.7	21.8	22.5	22.4	23.4	23.9	24.0	24.2	25.0	27.3	29.0
Wages and salaries	11.7	11.6	11.7	11.9	11.9	12.2	12.4	12.4	12.4	12.5	12.7	13.6	14.0
Goods and services	4.6	4.6	4.7	4.4	4.7	4.5	5.2	5.3	5.2	5.3	5.2	5.6	6.1
Interest	2.3	2.0	2.0	2.1	2.1	2.0	2.2	2.6	2.5	2.9	3.1	3.7	4.2
Domestic	1.5	1.3	1.3	1.3	1.3	1.3	1.4	1.4	1.3	1.4	1.8	2.1	2.1
External	0.8	0.7	0.7	0.8	0.8	0.7	0.9	1.2	1.2	1.6	1.4	1.6	2.0
Transfers	3.2	3.2	3.3	3.4	3.7	3.7	3.6	3.7	3.9	3.5	3.9	4.4	4.7
Capital expenditure	5.8	6.9	5.4	6.4	6.1	5.9	5.7	6.3	7.1	8.3	7.6	7.4	7.6
Savings	2.1	2.2	2.2	2.7	1.9	2.4	1.8	1.1	1.4	1.3	0.2	-2.7	-3.8
Primary balance	0.9	-0.5	0.1	0.6	-0.5	0.5	0.3	-1.1	-0.4	-2.0	-2.6	-4.4	-5.4
Overall balance	-1.4	-2.5	-1.9	-1.5	-2.6	-1.5	-2.0	-3.6	-3.0	-4.9	-5.7	-8.0	-9.6
Financing 2/	1.4	2.5	1.9	1.5	2.6	1.5	2.0	3.6	3.0	4.9	5.7	8.0	9.6
External	1.8	2.4	1.2	0.6	0.8	1.2	2.2	5.4	8.9	2.9	3.7	5.8	7.1
Domestic 3/	-0.4	0.1	0.7	0.8	1.8	0.4	-0.2	-1.8	-6.0	2.0	2.1	2.2	2.5

Sources: ECCU member country authorities; and IMF staff estimates.

1/ Excludes Anguilla and Montserrat.

2/ Excludes statistical discrepancies.

3/ Residual.

Table A4. ECCU: Central Government Revenue Indicators by Region and Country, 1990–2002 1/
(In percent of GDP)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	Prel. 2001	Est. 2002
Tax revenue	21.5	21.0	20.9	21.3	21.1	21.3	21.5	21.5	21.9	21.7	21.5	21.2	...
Antigua and Barbuda	18.2	17.0	17.5	17.2	17.5	17.8	18.5	18.0	17.5	17.1	15.9	17.4	18.8
Dominica	25.6	24.9	24.2	23.4	22.1	23.7	23.6	23.7	23.8	24.4	23.9	22.6	...
Grenada	21.9	21.6	21.8	23.0	21.8	22.6	22.8	22.0	22.2	22.7	24.2	23.4	23.6
St. Kitts and Nevis	19.7	19.3	19.7	21.4	21.2	21.5	21.6	22.2	22.6	22.3	21.2	20.9	23.2
St. Lucia	21.9	22.2	22.0	22.5	22.4	22.1	21.4	22.2	23.5	22.9	23.5	21.5	21.1
St. Vincent and the Grenadines	24.7	23.7	22.3	22.8	23.9	23.0	23.9	24.1	24.4	24.1	23.9	24.5	25.9
Income tax revenue	4.4	4.5	5.1	4.9	5.0	4.9	4.8	4.7	4.9	5.2	5.7	5.4	...
Antigua and Barbuda	2.6	2.1	2.0	1.9	1.9	1.5	1.6	1.6	1.6	1.9	2.1	2.6	3.2
Dominica	6.7	7.2	7.0	6.2	5.8	6.5	6.9	6.7	6.6	7.2	7.5	6.5	...
Grenada	0.0	0.8	5.1	5.4	4.9	5.8	4.2	2.6	3.0	3.7	4.6	5.1	3.8
St. Kitts and Nevis	4.7	4.2	4.1	4.1	4.6	4.8	4.9	5.2	6.1	6.0	6.6	6.2	6.7
St. Lucia	6.0	6.5	6.5	6.2	6.5	6.2	6.1	6.4	6.2	6.9	7.5	6.6	5.7
St. Vincent and the Grenadines	7.1	7.4	6.8	6.6	7.7	6.7	7.3	7.5	8.5	7.9	7.9	7.5	8.2
Taxes on goods and services	6.6	6.9	6.9	7.3	7.2	7.4	7.4	7.6	8.0	7.4	7.2	7.3	...
Antigua and Barbuda	7.4	7.4	7.9	7.7	7.8	8.4	8.5	8.0	7.9	7.3	6.1	6.7	7.2
Dominica	1.8	2.4	2.9	3.8	3.7	3.7	3.6	3.7	3.8	3.9	4.0	4.1	...
Grenada	11.9	11.1	10.6	11.7	11.8	11.6	12.1	12.9	12.9	12.3	12.6	12.0	12.6
St. Kitts and Nevis	1.8	2.5	2.9	3.0	3.0	3.6	4.5	4.5	5.0	4.6	3.5	4.1	4.6
St. Lucia	8.4	9.6	9.3	9.9	9.5	9.5	8.7	9.4	11.1	9.4	9.4	9.4	9.9
St. Vincent and the Grenadines	2.9	2.8	2.7	3.0	3.1	3.2	3.5	3.3	3.2	3.5	4.5	4.7	5.0
International trade taxes	9.8	8.7	8.5	8.7	8.5	8.6	8.7	8.8	8.7	8.7	8.3	8.0	...
Antigua and Barbuda	8.0	7.2	7.3	7.3	7.6	7.7	8.0	8.0	7.7	7.6	7.4	7.8	8.0
Dominica	16.8	15.0	13.9	13.0	12.2	13.1	12.8	13.0	13.2	12.9	12.0	11.7	...
Grenada	7.6	5.9	5.5	5.2	4.6	4.6	5.8	6.0	6.0	5.9	6.0	5.5	6.1
St. Kitts and Nevis	12.7	12.1	12.3	13.8	13.1	12.7	11.8	12.0	11.1	11.3	10.6	10.1	11.4
St. Lucia	6.9	6.0	6.1	6.3	6.3	6.4	6.5	6.2	6.2	6.6	6.5	5.2	5.3
St. Vincent and the Grenadines	13.7	12.7	11.6	11.9	11.6	11.8	11.3	12.0	12.5	12.4	11.3	11.9	12.4
Nontax revenue	2.5	2.5	2.9	3.3	3.3	3.4	3.8	3.4	3.5	3.8	3.7	3.4	...
Antigua and Barbuda	2.7	2.5	3.6	3.2	3.1	3.1	3.3	3.0	3.0	2.6	2.4	2.2	2.1
Dominica	2.4	3.2	3.4	3.5	3.6	2.9	4.3	4.9	4.3	4.4	4.4	3.9	...
Grenada	1.8	2.3	2.1	2.6	2.3	2.6	2.3	2.1	3.0	3.5	2.9	2.6	2.3
St. Kitts and Nevis	4.7	2.7	4.1	4.3	5.9	8.5	8.6	7.8	8.0	8.3	7.5	7.3	8.2
St. Lucia	1.7	1.9	1.9	2.9	2.4	2.2	2.8	1.8	2.0	2.6	2.7	2.4	1.9
St. Vincent and the Grenadines	3.1	3.7	3.5	3.8	3.7	3.3	3.7	3.8	3.5	4.5	4.9	4.4	4.4
External grants	1.9	1.9	1.1	2.0	1.5	1.7	1.7	1.3	2.3	1.9	1.5	1.9	1.9
Antigua and Barbuda	0.5	0.3	0.7	0.5	0.2	0.0	0.4	0.0	0.9	0.3	0.2	0.4	0.0
Dominica	5.4	3.9	2.8	2.5	3.7	6.1	5.8	3.6	3.1	3.4	6.0	5.7	3.3
Grenada	2.6	3.6	1.7	2.7	3.1	2.6	3.8	2.7	4.6	1.9	3.0	4.2	3.0
St. Kitts and Nevis	0.8	1.1	0.6	0.3	1.0	1.1	0.3	0.2	0.1	0.9	0.8	0.5	3.3
St. Lucia	0.5	0.4	0.0	4.2	1.3	1.9	1.1	1.4	3.3	3.4	0.6	1.5	1.9
St. Vincent and the Grenadines	4.6	5.0	2.7	0.3	1.2	0.6	1.0	1.6	1.7	1.4	1.1	1.8	1.7

Sources: ECCU member country authorities; and IMF staff estimates.

1/ ECCB-wide data is based on a weighted average. Excludes Anguilla and Montserrat.

Table A5. ECCU: Central Government Expenditure Indicators by Region and Country,
1990–2002 1/
(In percent of GDP)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	Prel. 2001	Est. 2002
Current expenditure	21.9	21.4	21.7	21.8	22.5	22.4	23.4	23.9	24.0	24.2	25.0	27.3	29.0
Antigua and Barbuda	21.1	20.7	22.1	22.0	22.5	22.5	22.1	23.1	24.4	24.3	24.2	28.9	32.7
Dominica	25.2	26.1	26.4	26.8	25.8	26.5	26.4	27.9	27.5	28.8	30.8	31.9	32.3
Grenada	26.6	24.4	24.4	24.0	24.0	23.0	23.0	24.4	23.9	21.4	21.0	23.9	24.1
St. Kitts and Nevis	22.2	22.4	23.4	23.0	26.1	26.4	29.9	28.9	30.4	33.2	33.9	33.0	34.4
St. Lucia	18.1	17.4	17.0	17.8	18.1	18.5	20.6	20.2	19.4	19.4	20.8	22.3	24.0
St. Vincent and the Grenadines	22.8	22.8	22.9	22.4	23.6	23.1	23.8	24.1	23.8	25.2	26.4	28.3	29.0
Wage bill	11.7	11.6	11.7	11.9	11.9	12.2	12.4	12.4	12.4	12.5	12.7	13.6	14.0
Antigua and Barbuda	11.4	11.3	12.0	11.8	11.7	12.1	11.6	11.2	12.2	11.7	11.9	14.4	15.4
Dominica	14.4	14.8	14.7	14.6	14.5	14.8	14.8	15.1	14.7	15.1	15.7	16.2	16.5
Grenada	13.7	12.7	13.4	12.9	12.0	12.0	12.3	13.0	12.2	11.7	11.4	11.9	11.0
St. Kitts and Nevis	11.6	11.2	11.2	12.0	12.7	14.0	14.8	13.5	14.2	15.3	15.4	15.1	15.6
St. Lucia	9.6	9.4	9.1	9.8	10.1	10.3	10.9	11.0	10.6	10.8	11.4	11.9	11.9
St. Vincent and the Grenadines	12.7	12.9	12.7	13.1	13.3	12.9	13.0	13.5	13.0	13.3	13.7	14.1	15.0
Spending on goods and services	4.6	4.6	4.7	4.4	4.7	4.5	5.2	5.3	5.2	5.3	5.2	5.6	6.1
Antigua and Barbuda	4.1	5.1	5.1	5.0	5.2	4.7	4.6	5.1	5.0	5.5	5.2	6.3	8.4
Dominica	5.2	5.2	5.2	5.2	5.0	5.1	5.2	5.5	5.6	5.7	5.5	5.2	5.0
Grenada	6.1	4.0	4.0	3.5	4.3	3.9	4.1	3.8	3.9	3.0	2.9	4.9	3.9
St. Kitts and Nevis	4.4	4.8	5.8	5.4	6.3	6.0	8.8	9.3	9.4	10.2	9.9	8.6	7.8
St. Lucia	3.7	3.8	3.4	3.6	3.5	3.6	4.6	4.2	3.9	3.9	4.0	4.1	4.4
St. Vincent and the Grenadines	5.6	5.0	6.0	4.7	5.2	5.0	5.4	5.3	5.2	5.7	5.9	5.6	6.1
Interest payments	2.3	2.0	2.0	2.1	2.1	2.0	2.2	2.6	2.5	2.9	3.1	3.7	4.2
Antigua and Barbuda	4.3	3.0	3.2	3.3	3.4	3.2	3.4	4.6	4.4	4.7	4.1	4.3	4.4
Dominica	1.6	1.9	2.2	2.3	2.3	2.4	2.5	2.6	2.5	3.2	4.4	5.1	5.3
Grenada	3.4	3.0	2.6	2.6	2.4	2.0	2.2	2.3	1.6	2.3	2.4	2.6	4.1
St. Kitts and Nevis	2.9	2.8	2.7	2.5	2.6	2.3	3.0	2.8	3.2	3.9	5.0	5.7	7.3
St. Lucia	0.8	0.7	0.8	0.8	0.7	0.8	0.9	1.0	1.3	1.3	1.6	2.3	2.6
St. Vincent and the Grenadines	0.7	1.1	1.0	1.2	1.3	1.7	1.6	1.8	1.9	2.6	2.6	3.0	2.8
Current transfers	3.2	3.2	3.3	3.4	3.7	3.7	3.6	3.7	3.9	3.5	3.9	4.4	4.7
Antigua and Barbuda	1.4	1.3	1.8	1.9	2.4	2.5	2.4	2.2	2.7	2.4	3.0	3.9	4.4
Dominica	4.0	4.2	4.3	4.7	4.1	4.2	4.0	4.7	4.7	4.9	5.2	5.4	5.5
Grenada	3.5	4.6	4.4	5.0	5.3	5.1	4.4	5.3	6.2	4.5	4.3	4.6	5.1
St. Kitts and Nevis	3.2	3.5	3.8	3.2	4.5	4.1	3.3	3.3	3.6	3.8	3.7	3.7	3.6
St. Lucia	4.0	3.6	3.7	3.6	3.8	3.8	4.3	4.0	3.7	3.4	3.8	4.1	5.0
St. Vincent and the Grenadines	3.8	3.8	3.2	3.4	3.8	3.5	3.8	3.6	3.8	3.6	4.2	5.6	5.1

Sources: ECCU member country authorities; and IMF staff estimates.

1/ ECCB-wide data is based on a weighted average. Excludes Anguilla and Montserrat.

Table A6. ECCU: Government and Government Guaranteed Debt by Region and Country, 1990–2002 1/
(In percent of GDP)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	Prel. 2001	Est. 2002
Total debt 2/	65.4	65.0	63.1	62.6	62.9	64.0	62.5	63.5	61.4	65.7	70.7	82.6	92.5
Antigua and Barbuda 2/	114.2	113.5	112.0	105.9	105.5	114.9	107.4	102.1	91.1	89.1	84.3	93.5	102.2
Dominica 2/	68.5	71.5	67.5	67.9	69.9	74.3	67.6	61.1	60.8	74.7	80.5	92.4	105.8
Grenada	55.9	51.5	46.0	45.7	40.6	37.3	41.8	42.2	41.9	37.9	61.3	85.0	103.7
St. Kitts and Nevis 2/	54.2	54.2	50.8	56.3	53.2	57.8	62.0	85.6	95.3	108.5	114.6	122.5	137.2
St. Lucia	25.7	27.8	32.8	32.8	32.6	33.0	34.7	35.1	33.9	35.3	38.7	52.5	56.6
St. Vincent and the Grenadines	68.9	65.7	62.2	60.7	66.0	58.4	50.4	48.1	48.9	67.4	69.3	68.9	74.1
External debt 2/ 3/	43.4	44.8	44.0	43.1	43.1	44.5	43.8	43.1	39.6	42.7	44.1	49.6	55.9
Antigua and Barbuda 2/	83.7	85.5	85.7	81.1	81.4	92.8	87.0	80.6	68.1	62.6	59.0	63.5	66.8
Dominica 2/	51.6	52.3	50.8	47.0	45.8	47.1	43.6	36.4	35.1	48.4	54.0	65.8	64.8
Grenada	40.4	36.1	33.9	34.2	29.6	26.8	29.3	27.9	27.2	26.2	25.3	40.4	62.4
St. Kitts and Nevis 2/	25.1	25.3	24.9	24.0	23.3	23.9	25.0	39.2	43.4	50.3	59.4	55.9	59.1
St. Lucia	17.5	21.9	23.9	23.9	23.6	23.3	24.9	25.4	22.6	24.2	27.6	30.9	38.6
St. Vincent and the Grenadines	28.4	31.4	30.5	32.4	36.1	33.0	30.8	30.0	31.6	48.4	48.0	49.8	48.9
Domestic debt 2/ 4/	22.1	20.2	19.1	19.5	19.7	19.5	18.7	20.4	21.8	23.1	26.6	33.0	36.6
Antigua and Barbuda 2/	30.4	28.0	26.3	24.8	24.1	22.1	20.3	21.5	23.0	26.5	25.3	30.0	35.4
Dominica 2/	16.9	19.2	16.7	20.8	24.1	27.1	24.0	24.7	25.7	26.3	26.5	26.7	41.0
Grenada 5/	15.5	15.4	12.1	11.5	11.0	10.5	12.5	14.3	14.7	11.7	36.0	44.6	41.3
St. Kitts and Nevis 2/	29.1	28.9	25.9	32.3	29.9	33.9	37.1	46.5	51.9	58.2	55.2	66.6	78.1
St. Lucia	8.2	5.9	8.9	8.9	9.0	9.7	9.8	9.7	11.3	11.1	11.1	21.6	18.0
St. Vincent and the Grenadines	40.5	34.3	31.7	28.3	29.9	25.4	19.6	18.1	17.3	19.0	21.3	19.1	25.3

Sources: ECCU member country authorities; and IMF staff estimates.

1/ ECCB-wide data is based on a weighted average. Excludes Anguilla and Montserrat.

2/ Some public enterprise data are not available for 2000, 2001, and 2002.

3/ Includes external arrears.

4/ Data refer to the financial system's gross credit to the public sector.

5/ For Grenada beginning 2001, the debt figures include central government contingent liabilities.

Table A7. ECCU: Arrears by Region and Country, 1990–2001, 1/
(In millions of U.S. dollars)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	Proj. 2001
Total change in arrears	36.9	54.3	56.4	24.8	37.6	38.5	27.6	39.9	20.0	24.1	10.7	8.8
Antigua and Barbuda	29.3	53.3	52.1	35.6	40.4	36.5	26.5	38.6	15.8	24.1	10.7	0.0
Dominica	...	...	...	...	...	...	...	...	...	...	...	...
Grenada	7.9	1.1	4.3	-10.7	-2.8	2.0	1.2	1.3	4.2	0.0	0.0	8.8
St. Kitts and Nevis	...	...	...	...	...	...	...	...	...	...	...	...
St. Lucia	...	...	...	...	...	...	...	...	...	...	...	...
St. Vincent and the Grenadines	...	...	...	...	...	...	...	...	...	...	...	...
Change in external arrears	33.0	50.5	53.4	40.8	33.3	35.5	28.1	31.6	12.1	20.3	10.7	0.0
Antigua and Barbuda	27.2	49.1	53.1	41.5	36.1	34.4	27.5	33.1	12.1	20.3	10.7	0.0
Dominica	...	...	...	...	...	...	...	...	...	...	...	...
Grenada	6.1	1.4	0.3	-0.7	-2.8	1.0	0.6	-1.5	0.0	0.0	0.0	0.0
St. Kitts and Nevis	...	...	...	...	...	...	...	...	...	...	...	...
St. Lucia	...	...	...	...	...	...	...	...	...	...	...	...
St. Vincent and the Grenadines	...	...	...	...	...	...	...	...	...	...	...	...
Change in domestic arrears	3.8	3.9	3.0	-15.9	4.3	3.1	-0.5	8.3	7.9	3.8	0.0	8.8
Antigua and Barbuda	2.1	4.2	-1.0	-5.9	4.3	2.1	-1.1	5.5	3.7	3.8	0.0	0.0
Dominica	...	...	...	...	...	...	...	...	...	...	...	...
Grenada	1.7	-0.4	4.0	-10.0	0.0	1.0	0.6	2.8	4.2	0.0	0.0	8.8
St. Kitts and Nevis	...	...	...	...	...	...	...	...	...	...	...	...
St. Lucia	...	...	...	...	...	...	...	...	...	...	...	...
St. Vincent and the Grenadines	...	...	...	...	...	...	...	...	...	...	...	...

Sources: ECCU member country authorities; and IMF staff estimates.

1/ Excludes Anguilla and Montserrat.

REFERENCES

- Agell, Jonas, Lars Calmfors, and Gunnar Jonsson, 1996, "Fiscal Policy When Monetary Policy is Tied to the Mast," *European Economic Review*, Vol. 40, pp. 1413–40.
- Bayoumi, Tamin, Morris Goldstein, and Geoffrey Wolgrom, 1995, "Do Credit Markets Discipline Sovereign Borrowers? Evidence from U.S. States," *Journal of Money, Credit and Banking*, Vol. 27, No. 4 (November), pp. 1046–56.
- Begg, David, Francesco Giavazzi, Luigi Spaventa, and Charles Wyplosz, 1991, "European Monetary Union—The Macro Issues," in *Monitoring European Integration: The Making of Monetary Union*, London: Centre for Economic Policy Research, pp. 3–66.
- Bredenkamp, Hugh, and Michael Deppler, 1990, "Fiscal Constraints of a Fixed Exchange Rate Regime," in Victor Argy and Paul De Grauwe, (eds.), *Choosing an Exchange Rate Regime: The Challenge for Smaller Industrial Countries* (Washington: International Monetary Fund) pp. 350–98.
- Chari, V. V., and Patrick J. Kehoe, 1998, "On the Need for Fiscal Constraints in a Monetary Union", Federal Reserve Bank of Minneapolis, Working Paper 589.
- Clément, Jean A. P., 1996, *Aftermath of the CFA Franc Devaluation*, IMF Occasional Paper No. 138 (Washington: International Monetary Fund).
- Debrun, Xavier (2000), "Fiscal Rules in a Monetary Union: A Short-Run Analysis", *Open Economies Review*, Vol. 1, pp. 323–358.
- De Grauwe, Paul, 2000, *Economics of Monetary Union*, Fourth Edition (New York: Oxford University Press).
- Doré, Ousmane, and Paul R. Masson, 2002, "Experience with Budgetary Convergence in the WAEMU," IMF Working Paper 02/108 (Washington: International Monetary Fund).
- Dornbusch, Rudi, 1997, "Fiscal Aspects of Monetary Integration," *American Economic Review*, Vol. 87, No. 2 (May), pp. 221–23.
- Eastern Caribbean Central Bank, 2002, "Fiscal Machinery of the ECCU: The Road to Public Sector Reform," Policy Paper based on the Public Sector Symposium, June 5–6, 002.
- Edison, Hali J., and Michael Melvin, 1990, "The Determinants and Implications of the Choice of the Exchange Rate System," in Haraf, William S., and Thomas D. Willett (eds.), *Monetary Policy for a Volatile Global Economy* (Washington: American Enterprise Institute), pp. 1–44.
- Eichengreen, Barry, 1993, "European Monetary Unification," *Journal of Economic Literature*, Vol. 31, (September), pp. 1321–57.

- Frenkel, Jacob, and Assaf Razin, 1987, *Fiscal Policies and the World Economy* (Cambridge: MIT Press).
- Giovannini, Alberto, and Luigi Spaventa, 1991, "Fiscal Rules in the European Monetary Union: A No-Entry Clause," CEPR Discussion Paper No. 516 (London: Centre for Economic Policy Research).
- Glick, Reuven, and Michael Hutchison, 1993, "Fiscal Policy in Monetary Unions: Implications for Europe," *Open Economies Review*, Vol. 4, pp. 39–65.
- Gupta, Sanjeev, Benedict Clements, Emanuele Balducci, and Carlos Mulas-Granados, 2002, "Expenditure Composition, Fiscal Adjustment, and Growth in Low-Income Countries," IMF Working Paper 02/77 (Washington: International Monetary Fund).
- International Monetary Fund, 2002, "Assessing Sustainability," available on the Internet at <http://www.imf.org/external/np/pdr/sus/2002/eng/052802.htm>.
- Jahjah, Samir, 2001, "Financial Stability and Fiscal Crises in a Monetary Union", IMF Working Paper WP/01/201 (Washington: International Monetary Fund).
- Kopits, George, and Steven Symansky, 1998, *Fiscal Policy Rules*, IMF Occasional Paper No. 162 (Washington: International Monetary Fund).
- Masson, Paul, and Catherine Pattillo, 2001, "Monetary Union in West Africa: An Agency of Restraint for Fiscal Policies?," IMF Working Paper 01/34 (Washington: International Monetary Fund).
- McKinnon, Ronald I., 1997, "EMU as a Device for Collective Fiscal Retrenchment," *American Economic Review*, Vol. 87, No. 2 (May), pp. 227–29.
- Pattillo, Catherine, Hélène Poirson, and Luca Ricci, 2002, "External Debt and Growth," IMF Working Paper 02/69 (Washington: International Monetary Fund).
- Tornell, Aaron, and Andrés Velasco, 1995, "Fiscal Discipline and the Choice of Exchange Rate Regime," *European Economic Review*, Vol. 39, pp. 759–70.
- Walsh, Carl E., 1998, *Monetary Theory and Policy* (Cambridge: MIT Press).
- Wyplosz, Charles, 1991, "Monetary Union and Fiscal Policy Discipline," CEPR Discussion Paper No. 488 (London: Centre for Economic Policy Research).