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## **Introduction and Overview**

A forecast is a prediction of likely values of a variable in some future period, usually done within a margin of error. An economic forecast generally tries to predict growth, employment, productivity, inflation and interest rates. The rationale for forecasting is to develop a view of future economic developments and to identify and correct undesirable trends, for example a balance of payments crisis or inflation. Both of these developments can disrupt future economic growth and prosperity.

The scope for public policy in the member countries of the Eastern Caribbean currency union (ECCU) is limited and depends on the extent of foreign exchange inflows. In this framework the exchange rate is fixed and managed by a regional central bank. Fiscal policy conducted at the individual country level offers limited scope for raising national income in the short-term. The long-term standard of living in these countries depends on the terms of trade. This is why the former colonial masters erected preferential arrangements as development tools. These trade preferences accounted for much of the good performance of these countries over the decade of the 1980s. Over the next ten years the remaining preferences are likely to be rescinded and growth is likely to be affected, at least initially. To effectively deal with this new international environment the public policy authorities would be required to reform domestic

institutions, in particular creating a framework in which economic agents can thrive.

Economic policy must of necessity be forward looking. The goal is to anticipate events well before they actually occur so that strategic policy initiatives can be implemented. This must be the framework for the management of a small open economy. There are many ways of obtaining forecasts, using different models or just making a guess. Some practitioners use simple time series models to predict the short-term. Time series forecasting estimates the time trend, seasonal factors and cyclical components in the data and extrapolates from these patterns into the future. These models therefore assume that history provides a good guide to future events. Econometric models, which rely on causal relationships, are the second method. In this method, once estimates of parameters to an econometric model are derived, they can be employed to generate forecasts of the variables given their explanatory variables. These models can be single-equation models with one or two explanatory variables or simultaneous equations with a large number of variables.

In this work an econometric model is employed using a flow of funds framework for consistency to generate a set of economic forecasts for the ECCU over ten years. The outline for the remainder of the presentation is as follows: The economic structure of the ECCU is contained in

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<sup>1</sup>The views expressed are those of the author and do not necessarily reflect the position or policy stance of the ECCB.



section two, whilst recent economic performance is presented in section three. Section four is a discussion of three economic forecasts for the ECCU. Section five summarises and concludes.

**Economic Structure of the ECCU**

These economies are small and open. As a result of these characteristics they are extremely vulnerable to shocks from both the environment and those emanating from the rest of the world economy. Table 1 provides information on the vulnerability of six of the ECCU member countries relative to other countries. All members of the ECCU fall within the first fifty of the most vulnerable of countries in the sample.

**Table 1:  
Vulnerability of the ECCU Member Countries**

Countries	OVI	Rank	CVI	Rank
Antigua & Barbuda	13.38	3	11.246	2
Dominica	6.12	41	8.122	12
Grenada	6.89	31	7.848	15
St Kitts & Nevis	6.59	35	7.449	19
St Lucia	6.08	43	6.563	24
St Vincent & The Grenadines	5.97	50	6.362	29

**Notes:** OVI - output variability index and CVI - composite vulnerability index

**Source:** Extracted from table 2, in Small States: A Composite Vulnerability index, prepared by the Advisory Board to the Joint Commonwealth Secretariat/World Bank Task Force on small states. Second meeting St Lucia.

The countries are heavily dependent on external trade, with an openness ratio of well over 80.0 per

cent of GDP. Finally, because of their economic size and openness, these economies are price takers. Domestic prices are heavily influenced by imports and export prices are beyond the control of domestic producers. The terms of trade are therefore crucial to national income determination.

These economies are heavily dependent on a few activities for foreign exchange, see table 2. In the case of the Windward Islands, primary agricultural products such as bananas, nutmeg and cocoa are important sources of foreign exchange and employment. In the case of the Leeward Islands, the tourism industry is paramount. In the entire ECCU inflows of private foreign capital are very important. Most of these foreign capital inflows are related to the development and expansion of the tourism industry. Light manufacturing is also an important source of employment and foreign exchange earnings in at least four of the economies in the currency union.

**Table 2:  
Average Inflows of Foreign Exchange: 1993-1999**

Variable	EC\$M	% of Total Inflows	% of GDP
Bananas	210	3.7	3.4
Tourism	2,230	39.3	35.4
FDI	656	11.6	10.5
Total Inflows	5,671.5		90.5

**Source:** calculated by author

A regional central bank, the Eastern Caribbean Central Bank (ECCB) manages a foreign asset pool and a fixed exchange rate for the currency union. The central bank operates as a quasi-currency board and is legally constrained from creating excess

domestic liquidity. This situation is facilitated by the manageable fiscal deficits incurred by the fiscal authorities over the period under consideration.

The capital markets within the ECCU are underdeveloped, characterised by geographical segmentation, limited instruments and a small number of investors. The ECCB is coordinating a project to create a single financial space, through which the regional capital market would be enhanced. At present, the financial system in the ECCU is dominated by the commercial banks.

As in the case of the capital market, the labour market is segmented. The public sector is the major employer within the ECCU. However, there is high unemployment and informal sector activities in some countries. Moreover, for at least four countries a significant proportion of employment is in agriculture (see table 3). Generally the price of labour is determined by collective bargaining, led by developments within the public sector. Arguments for wage and salary adjustments usually revolve around productivity, inflation, and ability to pay considerations. Overall, labour productivity growth has been moderate.

**Table 3**  
**Employed Population in Agriculture**  
**(In per cent of Total Population)**

Country	1980	1991
Antigua & Barbuda	3.2	1.2
Dominica	30.7	30.8
Grenada	26.6	14.6
St Kitts & Nevis	26.1	13.8
St Lucia	26.5	23.6
St Vincent and The Grenadines	26.5	24.8

Source: Population Census (1980, 1991)

### Performance of the ECCU over the 1980 to 1999 Period

Over the period 1980 to 1999 the ECCU experienced reasonable economic growth of 4.6 per cent per annum (see table 4). This growth was characterised by a high degree of variability as evidenced by a standard deviation of 3 or approximately 65.2 per cent of the average growth.

Inflation was within the range of the region's main trading partners, at approximately 4.8 per cent per annum. However, as with economic growth, the inflation rate also showed some variability.

**Table 4:**  
**Economic Performance of the ECCU**  
**1980 - 1999: Selected Variables**

Variable	Mean Growth (%)	Standard Deviation
Output	4.6	3.0
Per Capita	3.8	3.0
Productivity	3.9	3.0
Investment	3.3	25.4
Prices	4.8	2.7
Money (M2)	9.9	6.0
Foreign Assets (FA)	8.1	16.9
Credit	10.5	9.7
<b>Memo:</b>		
<b>In Per cent of GDP</b>		
Fiscal Deficit	-1.7	1.5
External Sector Deficit	-15.0	4.8
<b>Other Indicators:</b>		
Broad Money (M2)/Foreign Assets (FA)	3.9	1.0
Domestic Credit (DC)/Gross Domestic Product (GDP)	40.9	9.3

Source: calculated by author.



The money stock grew by approximately 9.9 per cent, while foreign assets rose by 8.1 per cent per annum over the entire period of analysis. Domestic credit rose by 10.5 per cent. The banking system within the ECCU can be considered sound, as there have been no systemic banking failures or significant problems of the kind experienced by other emerging market economies. Indeed, the money stock to foreign assets ratio and growth of private sector credit to GDP indicators are well within the normal range of non-crisis countries. This is due to the relatively good economic performance and the continued vigilance of the regulatory authorities.

Over the period 1980 - 1999 government finances performed reasonably well, showing an overall deficit averaging approximately 1.7 per cent of GDP, with a variability of 88.0 per cent. Reflecting the openness and the developing nature of the regional economy, the balance of payments deficit averaged approximately 15.0 per cent of GDP over the period of analysis. The variability of this account was approximately 32.0 per cent of the mean. This in a way captures the continuous growth these economies have experienced over the period of analysis.

For the individual countries, St Kitts and Nevis and Antigua and Barbuda performed best, with per capita growth of 5.3 per cent and 4.9 per cent respectively (see table 5).

**Table 5:**  
**GDP Growth in the ECCU**  
**Period Average: 1980 - 1999**

Country	Per Capita (PC)	Per Worker	Coefficient of Variation of PC
Antigua & Barbuda	4.9	3.1	69.8
Dominica	3.7	3.1	168.7
Grenada	3.1	3.9	30.8
St Kitts & Nevis	5.3	5.3	15.1
St Lucia	3.2	3.2	261.0
St Vincent & The Grenadines	3.9	2.8	195.5

**Source:** calculated by author.

Higher inputs, in particular investment, led much of the output growth in these economies. As shown in table 6 St Kitts and Nevis had the highest investment to GDP ratio, whilst St Lucia had the lowest.

**Table 6:**  
**Investment to GDP Ratios in the ECCU:**  
**1980 - 1999**

Country	I/GDP
Antigua & Barbuda	33.0
Dominica	27.1
Grenada	27.5
St Kitts & Nevis	38.6
St Lucia	25.3
St Vincent & The Grenadines	30.5

**Source:** calculated by author.

Favourable movements in the terms of trade also explain part of the growth performance of these countries. Three countries - Antigua and Barbuda, Dominica and St Vincent and The Grenadines - enjoyed favourable movements in the terms of trade (see table 7). Grenada, St Kitts and Nevis, and St Lucia experienced marginally unfavourable movements.

**Table 7:**  
**Terms of Trade (TOT) Movements**  
**Period Average: 1980 - 1999**

Country	TOT Movements	Cost of the TOT
Antigua & Barbuda	0.33	0.38
Dominica	0.26	0.05
Grenada	-0.13	-0.08
St Kitts & Nevis	-0.002	-0.016
St Lucia	-0.03	-0.09
St Vincent & The Grenadines	0.33	0.18

**Source:** calculated by author.

Notwithstanding the relatively good growth performance of these countries poverty and unemployment continued to challenge most economies, as shown in tables 8 and 9.

**Table 8:**  
**Poverty Profile in the ECCU - 1992**

Country	% of Total Population
Antigua & Barbuda	12
Dominica	18
Grenada	20
St Kitts & Nevis	15
St Lucia	15
St Vincent & The Grenadines	18

**Source:** Reducing Poverty in the Caribbean, Greene, PAHO, 1995.

**Table 9:**  
**Unemployment Rates: ECCU**

Country	1970	1980	1991
Antigua & Barbuda	n.a.	n.a.	6.7
Dominica	8.1	18.6	9.9
Grenada	10.1	17.4	15.2
Montserrat	8.6	13.0	2.5
St Kitts & Nevis	8.2	10.3	3.1
St Lucia	9.2	3.2	18.0
St Vincent & The Grenadines	12.9	23.5	19.8

**Source:** Population Census (1970, 1980 and 1991)

This is the background against which a forecast for the next ten years (2000 – 2009) is prepared for the economies of the ECCU.

### Three Economic Forecasts for the ECCU

This section contains three sets of economic forecasts for the economies of the ECCU. Each of these scenarios contains different assumptions on key exogenous variables, which by themselves would impact developments in the economies. The first forecast presented is the baseline scenario. This will form the basis on which all other forecasts will be judged and it assumes a continuation of developments of the recent past. The other two scenarios gauge the response of the currency union economy, first to higher tourist receipts and then to lower private capital inflows over the ten-year projection horizon – 2000 to 2009.



## Baseline Scenario

In the baseline scenario, developments in the last five years in the economies of the currency union are extended into the future. This forecast assumes that export sector performance, foreign direct investment and the governments' fiscal policies would remain as obtained on average since 1995. In general there are two sets of variables under consideration in the forecast as shown in table 10.

**Table 10:**  
**Baseline Exogenous Variables Assumptions**

Variables	Baseline (%) Growth
<b>Exogenous: Policy Variable</b>	
1. G - Government Expenditure	8.4
<b>Other Exogenous</b>	
1. X - Export Earnings	4.2
i. Banana Revenues	1.0
ii. Tourist Expenditure	4.5
2. FDI - Foreign Direct Investment	12.0
3. Bank Lending to the Private Sector	10.5
4. Inflation	3.0

**Source:** calculated by author.

This forecast has a ten-year horizon. The results of this scenario are contained in table 11. With unchanged policies, real economic growth would average approximately 4.8 per cent per annum over the projection horizon. Inflation is projected to average 3.0 per cent, based mainly on developments in import prices.

**Table 11:**  
**Economic Forecasts of the ECCU: Selected Variables**

Variable	EC\$M '99	Average Growth Rate		
		Baseline	Scenario 2	Scenario 3
Nominal GDP	8,468.5	7.8	8.2	6.0
Private Expenditure	9,193.9	9.1	9.4	5.8
Government Expenditure	2,293.8	8.4	8.4	8.4
Domestic Expenditure	11,487.7	8.9	9.1	6.6
Exports	3,126.4	4.2	5.5	4.2
Imports	4,145.5	7.8	8.2	6.0
<b>Memoranda Items:</b>				
Government Revenues	2,238.2	7.8	8.2	6.0
Private Disposable Income	6,058.2	7.8	8.2	6.0
Inflation		3.0	3.0	3.0
Foreign Capital Inflows	1,076.0	12.0	12.0	0.0
Private Sector Acquisition of Financial Assets	11,632.0	9.1	9.4	5.8
<b>In Per cent of GDP</b>				
Balance of Payments Deficit	-12.7	-18.0	-16.3	-15.2
Fiscal Deficit	-0.7	-5.6	-4.6	-8.7

**Source:** calculated by author.

As shown in table 11, total domestic expenditure is projected to grow on average by 8.9 per cent per annum. Total private sector

expenditure is projected to grow on average by 9.1 per cent per annum. Growth in the governments' total expenditure is expected to average 8.4 per cent over the projection horizon.

The fiscal account is projected to generate an overall deficit averaging 5.6 per cent of GDP over the period. This is in line with expected revenue growth of only 7.8 per cent per annum and expenditure growth of 8.4 per cent.

The external sector is projected to generate a deficit of approximately 18.0 per cent of GDP over the period. In this development, imports are projected to rise by 7.8 per cent on average over the period, fuelled by increases of 8.9 per cent and 12.0 per cent in total domestic expenditure and private sector foreign borrowing respectively. Growth in total export earnings is projected to average approximately 4.2 per cent per annum. Among the components of export revenue, tourist receipts and banana revenues would significantly determine its path. Overall tourist receipts are projected to rise on average by approximately 4.5 per cent per annum. This is in line with hotel construction in St Lucia, St Kitts and Nevis, and St Vincent and The Grenadines, where extra room capacity has been or would be added over the projection horizon. The forecast also takes into account the slower growth of stay-over arrivals in Antigua and Barbuda. Overall, total visitor arrivals are projected to increase on average by 3.9 per cent per annum over the ten-year projection horizon. An important consideration in this forecast is the likely impact of crime and other forms of social deviance on visitor arrivals. In this projection, it is assumed that the authorities

are able to control criminal activity. With continued steady growth in visitor arrivals, FDI inflows would continue as expectations of future returns are maintained.

In the case of banana exports, revenues have been conservatively estimated to grow on average by approximately 1.0 per cent per annum over the projection horizon. The situation with bananas is complex and it is unlikely that the industry would return to its dominant position of the mid-1980s. In this work, it is assumed that the industry would consolidate at its current size, and banana revenues are projected to grow slowly, reflecting intense competition in Europe. This projection is optimistic, given the recent developments in the market and the track record of banana revenues, which have declined by 4.5 per cent over the last five years. It is likely that the industry will continue to contract and therefore a projection of 1.0 per cent growth may be excessive. What is clear is that the industry would be smaller. Nevertheless, while the impact on individual islands such as Dominica, St Lucia and St Vincent and The Grenadines may be large, at the currency union level it is not expected to be quantitatively significant.

Private sector financial asset acquisition is projected to grow as over the last five years or average approximately 9.1 per cent per annum. The pressure point in the short term for this scenario includes the USA where a full-fledged economic downturn could result in lower growth of visitor arrivals.<sup>2</sup> A downturn in the economy of the ECCU might also be the result of higher oil prices, which would lead to higher domestic inflation and wage

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<sup>2</sup> However, with lower interest rates in the short term this may encourage large private capital inflows and public sector borrowing



demands. These two events would lower expectations of future economic growth.

### **Scenario 2: Higher Tourist Receipts**

In this high growth scenario, tourist expenditures are projected to grow by 6.0 per cent on average over the projection horizon. Real economic growth is projected to average 5.2 per cent per annum over the projection horizon. Of this, total domestic expenditure is projected to grow on average by 9.1 per cent, of which private expenditure is projected to increase annually by 9.4 per cent. Government expenditure remains as in the baseline. The fiscal deficit in this scenario falls to approximately 4.6 per cent of GDP, as government's revenue is projected to grow by 8.2 per cent per annum.

Over the forecast horizon exports and imports are projected to grow on average by approximately 5.5 per cent and 8.2 per cent respectively. As a result the balance of payments deficit is projected to narrow to 16.3 per cent of GDP. Total visitor arrivals are projected to increase on average by approximately 5.4 per cent per annum over the projection horizon. This scenario is achievable, if Antigua and Barbuda comes back on stream with its stay-over product and St Vincent and The Grenadines is able to address some of the problems which plague its industry. In this scenario addressing social deviance and improving marketing also take on special importance. Finally, growth of private sector financial asset accumulation increases to 9.4 per cent per annum over the projection horizon.

### **Scenario 3: Lower Private Foreign Capital Inflows**

This scenario attempts to mimic the likely economic consequence of a fall off in the growth of private foreign capital inflows to 0.0 per cent per year relative to 1999, instead of 12.0 per cent as obtained in the baseline. This is a potential issue where the private sector expectations about future profitability sour because of uncertainty in respect of crime and social deviance. Another possibility is that foreign investors would no longer view hotel construction as viable because of a shift in the structure of visitor arrivals from stay-over to total cruise ship visitors.

In this scenario, economic growth is projected to amount to approximately 3.0 per cent per annum. Total domestic expenditure is projected to grow by 6.6 per cent annually, with projected private expenditure growth of 5.8 per cent over the period. The fiscal deficit is projected to average 8.7 per cent of GDP per annum, as government revenues grow by only 6.0 per cent.

The balance of payments deficit is projected to amount to approximately 15.2 per cent of GDP over the projection horizon. This result obtains because of lower growth of imports at 6.0 per cent, even as export growth is unaffected.

Finally, financial asset accumulation of the private sector is projected to slow down, in line with lower foreign borrowing and disposable income. However, overall a larger portion of government debt is expected to be accumulated by the private sector.

**Summary and Conclusions**

This paper examined the economic outlook for the economies of the ECCU. In general the economic outlook for the future is reasonably good. Economic growth of approximately 4.8 per cent per annum is anticipated, led by developments in the tourism industry and private capital inflows. In line with these developments, the external sector and fiscal deficits are projected to remain within manageable proportions.

The paper provides several insights. Firstly it defines the usefulness of economic forecasts in the context of strategic economic management of small open economies. Secondly it delineated the basic

economic characteristics of the economies which comprise the ECCU. Thirdly, the paper provided three different scenario forecasts of likely economic developments over the period 2000 - 2009.

Among the policy implications of the paper are the need for the policy authorities to conduct regular economic forecasts within an overall consistent framework as a basic planning tool, i.e. policy must be forward looking. Second the need to take into consideration the performance of the balance of payments in planning and forecasting of economic performance. Finally, there is need for a vision and a strategy for continued development of these countries as an equal member of the world community.



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