

Currency Crisis Vulnerability:

The Case of The Eastern Caribbean Currency Union

Work In Progress

Abstract

This paper seeks to review the evolution of several indicators over a 10-year period for member countries of the Eastern Caribbean Currency Union (ECCU) and discuss whether the existing trend points to an impending crisis. The role of fiscal policy under a fixed exchange rate system is examined, highlighting the contribution of fiscal management policy in generating a currency crisis. The discussion suggests a link between fiscal sustainability and currency crises, which has implications for ECCU member countries.

Keywords: currency crises, fixed exchange rate system, fiscal sustainability

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INTRODUCTION

The 1990's have witnessed three major currency crises: the European crisis of 1992/93, the Latin American of 1994/95 and the East Asian of 1997/98. These crises have prompted mounting studies of crises. Theorists have looked for possible causes and feasible explanations for them, while empirical modellers have examined data for crisis predictors or indicators. There are three genres of models on currency crises in economic literature.

The earliest works, now called first-generation models, emphasise that under a fixed exchange rate system, weak fundamentals such as expansionary fiscal and monetary policies result in a persistent loss of international reserves and ultimately lead to an attack on the currency. This attack that occurs with investors trying to profit ultimately forced the authorities to abandon the parity thereby pushing the economy into crisis (Krugman, 1979; Flood and Garber, 1984). Under this model, the level of international reserves, growth in domestic credit relative to money demand, fiscal imbalances and excessive credit to the public sector could serve as indicators of an approaching crisis.

More recent models, such as the second-generation model (Obstfeld, 1994) suggest that a crisis results from changes in other variables; it stresses the trade-off between the fixed exchange rate system and other policy objectives (low domestic interest rates, unemployment and growth). These models seem to highlight the possibility that crises are self-fulfilling. Based on these models, the evolution of output and domestic and foreign interest rates may be useful indicators of currency crises.

Finally third generation models focus on the features of the financial system. They address issues relating to the balance sheets of the banks and emphasise the role of financial fragility in generating the currency crisis.

These theoretical works have given modellers the fundamentals/variables to use in their empirical studies as they seek to determine potential predictors. Kaminsky-Lizondo-Reinhart (1997) grouped these studies into four broad categories:

- i. papers that provide only a qualitative discussion of the causes and developments leading to the currency crisis;
- ii. those that examine the stylized facts of the period leading up to and immediately following the currency crisis;
- iii. those that estimate the probability of devaluation one or several periods ahead, usually on the basis of an explicit theoretical model;
- iv. those that present a nonparametric approach to evaluate the usefulness of several variables in signalling an impending crisis.

Most of these studies, have focussed on industrialised, emerging market and the larger developing countries, and very little on small island economies, particularly the Caribbean. It is our intention to examine the macroeconomic fundamentals for the Eastern Caribbean currency union (ECCU)² over the last 10 years in an effort to determine its vulnerability. As with other developing countries, the members of the ECCU have followed the policy of determining an official exchange rate for the Eastern Caribbean (EC) dollar. From 1976 the E.C. dollar has been pegged to the US dollar at \$2.7, and the Eastern Caribbean Central Bank (ECCB) views as crucial the external policy objective of maintaining the exchange rate peg. It has been argued that a fixed exchange rate contributes to low domestic inflation and to a low and stable rate of money growth. Ultimately the questions to be answered are; how vulnerable is the ECCU to a currency crisis? What type of shock could force the ECCB and the member governments to deviate from the declared parity. Can the fiscal situation of the currency union as a whole or even that of some of its members result in a threat to or collapse of the fixed exchange rate system? Can unsustainable fiscal deficits trigger a banking crisis that could lead to a devaluation and result in a currency crisis?

This paper will address the development of a framework for studying a currency crisis associated with a fiscal imbalance will be addressed. Our foremost concern will be to understand the relationship between currency crises and fiscal sustainability. Section II of the paper reviews the theoretical literature, identifying a set of vulnerability indicators of a currency crisis,

² ECCU members comprise Anguilla, Antigua and Barbuda, Dominica, Grenada, Montserrat, St. Kitts and Nevis, St. Lucia and St. Vincent and The Grenadines. They are served by a common central bank, the Eastern Caribbean Central Bank (ECCB) under a fixed exchange rate system.

concentrating to a large extent on its relationship to fiscal sustainability. Section III examines the fundamentals for the ECCU and reports on the patterns in the identified variables. Finally section IV will provide a synopsis of the findings of the analysis in Section III and highlight the relevant conclusions as they relate to improving the domestic financial system and recognising the warning signals of a currency crisis. Some shortcomings of our analysis will be discussed and areas for expanding the research piece will be identified.

II. LITERATURE REVIEW

A review of the literature on crises over the last few years has led to two types of crises being identified: currency crises and financial crises. Economic literature defines a currency crisis as a situation in which an attack on the currency leads to a sharp depreciation of the currency, a large decline in international reserves, or a combination of the two. Simply, The World Economic Outlook of the IMF defines it as “substantial nominal currency devaluation”. A currency crisis involves a sudden movement in the exchange rate and a sharp change in capital flows. A financial crisis, on the other hand, originates in or induces insolvency in the banking system, and features a collapse in asset prices, most often in equity and securities markets.

A number of theoretical pieces have been written on vulnerability to a crisis. Our focus will be on the “vulnerability theory” or first-generation models and on those that suggest fiscal imbalance as an explanation of currency crisis. Athukorala and Warr (2002) cited the Asian currency crisis as a good example of the vulnerability theory as it reflected an unsustainable deterioration in the macroeconomic conditions within the affected countries. The vulnerability theory accepts that “market over-reaction, triggered by ‘manias and panics’ may have made the financial collapse more severe” in Asia than was warranted by the macroeconomic circumstances of the country at the time of the crisis. In this context vulnerability refers to a country’s susceptibility to a currency crisis. Corbitt and Vines (1998) argue that a country’s vulnerability to a crisis can be caused by either inadequate macroeconomic policies or an inadequately developed financial system. A state of vulnerability by itself does not give rise to a currency crisis, there must be a disturbance or trigger, which will push a vulnerable situation into an actual collapse.

According to Athukorala and Warr (2002) a currency crisis occurs when “market participants lose confidence in the currency of a particular country and seek to escape assets denominated in that currency.” Investors try to avoid short-term capital losses, by exiting from countries where they expect that large nominal value exchange rate depreciation will take place. The concerns governing their actions are the likelihood that the currency would depreciate should capital inflows reverse and the possible magnitude of that depreciation.

Studies of currency crises have revealed that an effective warning system should take into account a variety of indicators, as crises are usually preceded by symptoms that arise in a number of areas. A warning system involves monitoring the evolution of these indicators monthly; every time a variable exceeds a certain ceiling, this is viewed as a 'signal' that a crisis may occur within a specified period. Following from the arguments of a number of theorists including Athukorala and Warr (2002) and Corbett and Vines (1998) we will focus on the following four key indicators that may be useful in assessing vulnerability:

- Adequacy of reserves
- Financial sector fragility
- Real exchange rate misalignment
- Macroeconomic conditions

Adequacy of Reserves

As one of the key indicators of a country's vulnerability to a currency crisis, reserve adequacy involves an examination of a number of balance of payments issues for countries with fixed or adjustable peg exchange rates. The conventional yardstick of this indicator is what is usually referred to as the import cover ratio. Basically this ratio looks at the amount of reserves it would take to facilitate one month's worth of imports. However in his 1995 paper Calvo discredited the use of this ratio as an adequate measure of vulnerability since he noted that a "run against a currency is not usually affiliated with an import spree." Instead vulnerability to a currency crisis should be linked to reserve levels in relation to mobile capital. The appropriate level of reserves should depend on the volume of all short-term external liabilities and not just the import bill, since they are the liabilities, which can most severely affect the strength of the currency if investors decide to bail out.

In line with this trend of thought, another indicator of a country's ability to withstand speculative capital outflows is the maturity structure of the outstanding external debt. A country with a large component of its external debt in short term liabilities would need to frequently roll over that debt and will face difficulty in defending the currency in the event of a massive outflow caused by panic within the system. In contrast a county with a debt structure characterized by a small portion of short-term debt has more time to reverse its policy errors. As Athukorala and

Warr (2002) point out 'such a country does not need constant access to capital markets to service its debt,' it is able to plan and stage its recovery by reviewing its policies and taking corrective action.

The difficulties presented by using the debt maturity structure indicator are two-fold. In the first instance data on the maturity structure of a country's debt seldom capture portfolio inflows, which forms an important part of volatile capital. Secondly according to Athukorala and Warr (2002), as it relates to vulnerability what is important is the volume of short-term capital in relation to the stock of reserves. A country with a large external debt stock could have very few short-term liabilities in its portfolio yet the enormity of the debt stock in relation to the reserves may be quite significant.

Financial Sector Fragility

The second main area, which is considered in relation to the impending potential for a currency crisis has to do with the health of the banking sector, which forms the corner stone of the financial system. One of the conventional indicators of the soundness of the banking system is the non-performing credit ratio. This ratio is an indicator of the proportion of the banks credit in terms of loan resources, which generate negative returns for the institution. If several banks in a country have high-levels of non performing loans, which occupy the greater proportion of their loan portfolio, the potential for bank failure can easily become a reality. However two main limitations arise in relation to this indicator namely that it focuses on historical data and that measurement errors on account of the vagueness of statistical definitions may rise when conducting the supervisory exercise.

A more popular indicator of the soundness of the banking system, is the level of domestic credit to the private sector as a percentage of the gross domestic product at market prices or the private sector leverage ratio. Athukorala and Warr (2002) clarify the underlying hypothesis for this indicator as it relates to a country's vulnerability to a crisis and argue that, " countries with a rapid build up in bank credit would have more fragile banking systems, higher non performing credit ratios and more vulnerability to a crisis."

Real Exchange Rate Developments

The alignment of the exchange rate itself can serve as a proxy for the vulnerability of a country to a currency crisis. The real exchange rate (RER) is the price of the country's traded goods relative to that of its non-traded goods. The real exchange rate has always been proxied by available prices of domestic and foreign goods or import and export prices in some cases. Several different methods have been used in devising an appropriate proxy. Popular methods include computing the ratio of the RER as follows; $RER = EP^*/P$ where E denotes the nominal exchange rate, P^* is an index of foreign prices and P is the index of domestic prices.

Sahely (2001) defined the effective exchange rate as "an artificial index that measures the average change of a country's exchange rate against a number of other currencies during a given period." The real effective exchange rate is the nominal rate deflated by a similarly weighted average of foreign prices relative to those in the home country. Accordingly she developed such a proxy for the Eastern Caribbean currency union by constructing a CPI deflated fixed-base REER for St. Lucia. The argument in relation to the exchange rate can be described simply as follows; if it costs more for imports than can be made from exports then the depletion of foreign reserves to facilitate importing will become a necessity.

The REER also brings into play another indicator that may provide warning signals for a currency crisis and that is the terms of trade. Mounsey (2002) defines the terms of trade simply as "the performance of export prices relative to import prices." In other words, if the performance of export prices relative to import prices is declining, and assuming that prices of imports are relatively inelastic for a small open economy, the implications for a declining terms of trade is that as the import bill becomes larger, exports earnings may not be able to facilitate the import bill. This in turn will lead to a widening of the current account of the balance of payments, which may have to be financed by depleting foreign reserves in a situation of declining capital inflows.

Macro- Economic Conditions

First generation models follow from Krugman's seminal work of 1979 and argue that crises reflect unsustainable deterioration in macroeconomic conditions within the economy of the

affected country. Such unsustainable economic policies could include overly expansionary monetary and fiscal policies, excessive debt accumulation and declining competitiveness. These conditions make an economy susceptible to a currency crisis, and any trigger can push the economy into collapse. Triggers could come from weakness in the financial structure or external conditions. The ability of the central bank to postpone any deviation from the parity will depend on the volume of its foreign exchange reserves.

Macroeconomic imbalances have often been at the root of foreign exchange market crises. The experiences of a number of Latin American countries have clearly shown that unsustainable large current account deficits can bring about sudden reversal in capital flows and consistent with the “panic theory” result in sharp changes in the exchange rate. However while external factors may influence or precipitate a crisis, a country’s vulnerability to a currency crisis will to a large extent depend on its domestic economic conditions and policies such as excessive borrowing for unproductive uses.

The role of macroeconomic instability in many financial crises has become increasingly apparent. In many cases overly expansionary monetary and fiscal policies have encouraged lending booms and excessive debt accumulation. The resulting tightening of fiscal policy to alleviate inflationary pressures and assist in the adjustment of external positions has subsequently lead to a slow down in economic activity, debt servicing difficulties and rising levels of non performing loans that threatens banks’ solvency. In many Latin American and other developing countries, macroeconomic instability has played an important role in creating financial sector vulnerability. It has also been as an underlying factor in most of the banking crises experienced by industrial countries in the post- war period.

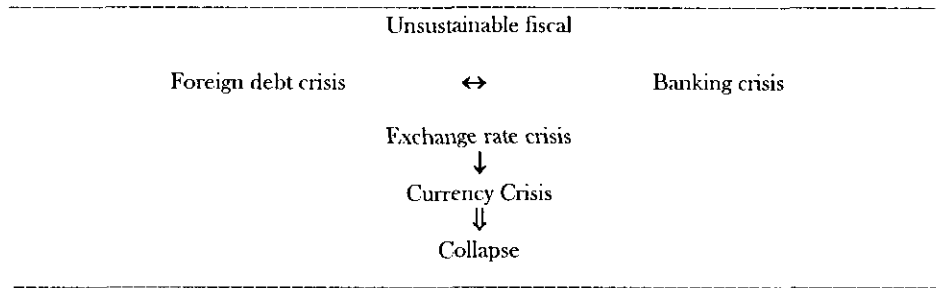
The Argentine crisis provides a lucid example of the role that macroeconomic imbalances can play in creating a currency crisis. Nicholls (2002) argues that difficulties in maintaining fiscal discipline appeared to have been among the main contributing factors to the development of the crisis in Argentina. The expansionary fiscal stance of the state was reflected in the growth of the average fiscal deficit from an average 1.0 per cent of GDP in 1994/1995 to approximately 3.0 per

cent of GDP in 1999. Further, public sector expenditure continued to increase and the overall deficit moved from an average of 0.7 per cent in 1990 to 1995 to 3.0 per cent in 1999.

Theoretically an expansionary fiscal policy will result in fiscal imbalances, which have to be financed by domestic credit creation. If the central bank were to be the source of financing for these imbalances this would eventually lead to a depletion of its international reserves. Subsequently as investors attack the exchange rate, domestic prices will rise resulting in the appreciation of the real exchange rate and the deterioration of the external current account. Corbett and Vines (1998) argue further that the inflexibility of monetary policy imposed by a fixed exchange rate in circumstances when an economy is booming can be particularly dangerous if fiscal policy is not contracting sufficiently.

According to Hector et al (2001), fiscal performance is judged on the basis of sustainability and sustainability can be defined as the ability of the fiscal authorities to maintain a constant debt to GDP ratio, over time. The sustainability of the public sector's fiscal policy package is measured as the difference between the path of the actual primary surplus and the path of the calculated primary surplus required for sustainability. The size of the required primary surplus determines the proportion of output that must be taken from other uses to service debt obligations, and thereby maintain public sector sustainability. If the difference is positive, meaning that the actual surplus is less than the required sustainability balance, then a fiscal adjustment indicated by the difference is required. The evolution of this indicator over time shows whether a country is moving closer or farther from a fiscal sustainability position. Whether a country's fiscal position is sustainable it can indirectly have implications for its ability to purchase foreign exchange to finance its operations, which subsequently can be a trigger for a currency crisis. The link between fiscal sustainability and currency crisis can be seen in the diagram I below.

Diagram 1: The Link Between Fiscal Sustainability and Currency Crises



In the case of Argentina, the fiscal deficit was financed primarily from external sources resulting in a rapid increase in total public sector debt, which increased by 80.7 per cent between 1990 and 1999. The state turned to the central bank for assistance in paying the external debt, however as the crisis progressed the government, as Nicholls (2002) highlights, could “print no more money.” The government then decided to print bonds which unsuspecting borrowers bought, causing the debt to expand even further. By December 2001, the government announced that it could not meet its debt obligations and would default, stimulating investor bailouts and the largest sovereign debt default in history.

In the Eastern Caribbean currency union, where there are eight member countries, access to credit from the central bank is different. The member states can obtain credit from the central bank for development financing. According to Venner and Williams (1995), “the extent to which this is possible is circumscribed by the legal requirements of the Eastern Caribbean Central Bank, to maintain a foreign exchange reserves to demand liabilities ratio of 60.0 percent.” In addition, the legal requirements provide that the ECCB holdings of treasury bills of any member government should not exceed 10.0 per cent of the member’s current revenue. Also the requirements advocate that holdings of securities other than treasury bills should not exceed 15.0 percent of its currency in circulation and other demand liabilities. The ECCB temporary advances to a member in any financial year not exceed 5.0 per cent of that member’s average annual recurrent revenue over the three preceding years. A large increase in credit extended to the member governments could reduce the foreign exchange cover and initially have an adverse impact on the balance of payments and reserves in the future. However as Venner and Williams

point out “there could be a positive impact on the balance of payments and reserves if the projects generate sizeable foreign exchange earnings.

Often crises have emerged when large external balances have developed in fixed exchange rate systems that have allowed the currency to become overvalued. The Eastern Caribbean currency union has become an area of increasing intellectual curiosity in relation to the theory surrounding currency crises and the success of currency boards. Worell, Marshall and Smith (1999) make reference to the ECCU and its unique attributes, which has allowed it to maintain its fixed exchange rate since 1976. Some of the countries of the currency union have exercised expansionary fiscal policy (Antigua and Barbuda since the 1980s, Grenada in the 1980s, Dominica in late 1990s and St. Kitts and Nevis in the 1990s) resulting in higher fiscal deficits and increasing debt burdens. In light of the indicators examined above, the susceptibility of the Eastern Caribbean currency union to a currency crisis therefore requires an in-depth examination of the indicators of vulnerability in relation to the currency union.

II. VULNERABILITY OF THE ECCU

For member countries of the ECCU the performance of the external account and the fiscal policy stance are critical. Financial sector fragility is also of interest, particularly the health of indigenous banks, since a currency crisis may originate from weaknesses in the financial system.

The ECCB Agreement (1983) requires that domestic financial policies be consistent with the external policy objective. Firstly, the ECCB has to maintain a foreign exchange reserves to demand liabilities ratio of 60 per cent. Secondly there are statutory limits on the availability of credit to any of the eight member governments. There is therefore a strict limit on the degree of domestic credit creation by the ECCB to ensure that lending to member governments causes no fall in foreign reserves. Moreover, it has been the historical practice for the Central Bank to maintain high foreign asset cover in excess of the 60 per cent minimum. The institutional framework of the ECCB distributes decision-making power equally among members and the

unanimity rule applies with regard to the currency peg. Thus any loss of reserves and any trigger for a crisis would be channelled through the commercial banking system as governments seek to finance their budget deficits by expanding domestic credit.

The following sub-section examines patterns in vulnerability variables for the ECCU over the period 1990 to 2001.

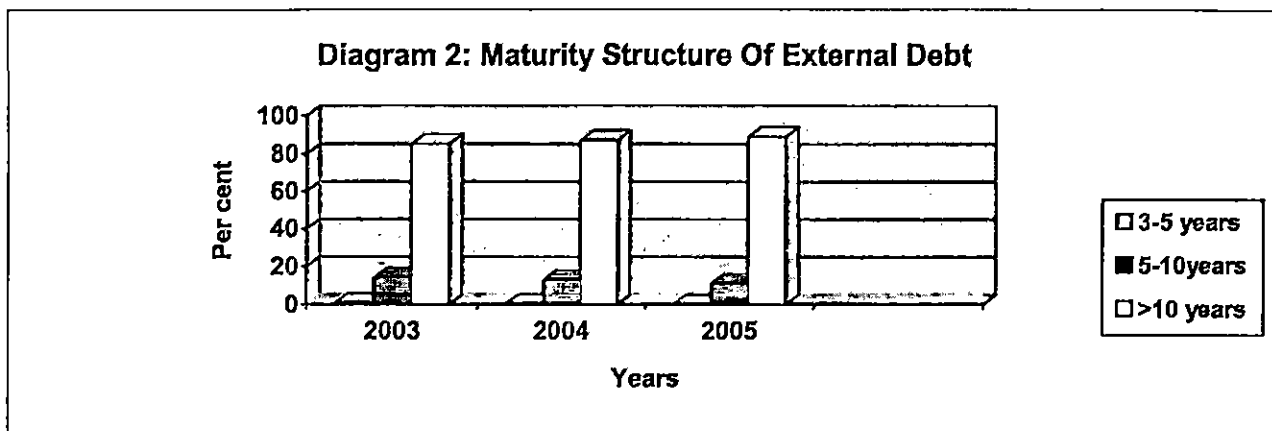
Adequacy of Reserves

Import Cover

A conventional yardstick of reserve adequacy is the import-month equivalent of reserves. A rule of thumb the ECCB adheres to is that official foreign exchange reserves should be equivalent to at least three months' worth of imports. For the period reviewed, 1990 to 2001, the import cover for the ECCU has been well above this benchmark and on an increasing path, with the lowest cover being 4.0 months in 1990 and 1997. This indicates a healthy exchange position since reserves would be able to cover at least four months worth of imports in the event of foreign exchange difficulties.

Foreign Debt Maturity

The maturity structure of outstanding foreign debt is another indicator of a country's vulnerability to currency crises and a critical element in crisis prevention. An examination of the ECCU's public sector external debt by remaining maturities shows that the region does not have a large stock of short-term external debt. Of the existing debt stock between 2003 and 2005, over 85.0 per cent mature in over ten years, while approximately 13.0 per cent mature in 5 - 10 years and 2.0 per cent in 3 -5 years. Diagram 2 below depicts the case of the ECCU.



External Debt Stock to Reserves

An examination of this ratio for the period 1990 to 2001 indicated that generally the level of external debt has been above the total of net international reserves. On average external debt has been 19.0 per cent higher than net international reserves. But post 1996, external debt has grown at a faster pace relative to the net international reserves, accentuating further that the reserves are insufficient to cover the level of external debt in the event of foreign exchange difficulties. But, this situation would become fearful only if all creditors were to demand repayments at the same time. It may be necessary to look at annual debt service payments vis-à-vis the level of reserves.

Financial Sector Fragility

Private Sector Leverage Ratio

Unsatisfactory assets and risky investments may accompany rapid credit expansion relative to economic growth within a short time frame. In the currency union, the ratio of outstanding credit to GDP has been consistently above 50.0 per cent in the period reviewed, except in 1990. The ratio moved from 48.9 per cent in 1990 to 77.8 per cent in 2001. Though the growth has been consistent, it has not been particularly rapid. Nonetheless closer analysis of the data revealed that growth in private sector credit has outpaced that of total output of goods and services. Moreover, the increase in credit was concentrated in the personal sector, mainly for consumption purposes, implying a low level of domestic investment. This may make it difficult for borrowers to repay, and contribute to weakening the banking system.

Non performing credit ratio

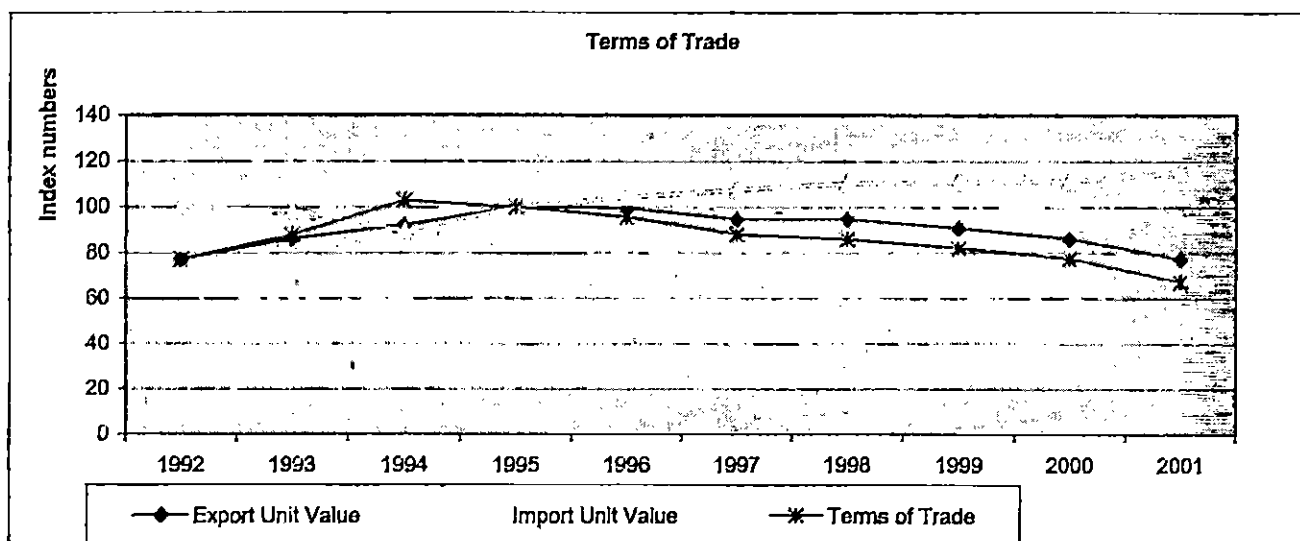
The overall trend in the nonperforming credit ratio for the ECCU suggests an improvement in asset quality, as the ratio fell from 16.0 per cent in 1990 to 11.7 per cent in 2000, though it rose to 13.6 per cent in 2001. In spite of this declining trend, the ratio has remained above the benchmark of 10.0 per cent set by the ECCB. The largest proportion of unsatisfactory assets was to be found in the indigenous commercial banks, some of which have been the main domestic creditors to central governments. Twenty of the 42 banks in the ECCU are indigenous banks. These indigenous banks over the last six years had an average nonperforming ratio of 19.6 per cent, and accounted for over 70.0 per cent of the total unsatisfactory assets of the banking system. It is likely that the nonperforming ratio for the banking system may grow over the medium to long term given the fiscal difficulties of the public sector and the economic downturn. These developments would impact on the overall financial strength of the banking system.

Real Exchange Rate

Terms of Trade

The terms of trade of ECCU member countries have generally been adverse and deteriorating, as the unit price of imports has risen over the period reviewed, while export prices have fallen. Export performance has been weak as earnings from bananas, sugar and even tourism have declined in recent years. Additionally, prospects are that these economic conditions will continue and contribute to a further deterioration, which implies that governments would have to rely more on external debt for foreign exchange or borrow from the domestic banking thereby depleting foreign reserves. See diagram 3 below.

Diagram 3: Terms of Trade



Real exchange rate developments

Theoretically a persistent appreciation in the real exchange rate may induce a run on the currency, as it may imply that the central bank is unable to defend the currency in the event of capital outflow, particularly mobile capital such as portfolio investments. In cases of exchange rate appreciation, exports prices are increasing thus reducing the foreign exchange earnings capacity of the country. In the latter part of the period under review, the real exchange rate for the combined governments of the ECCU appreciated, the index moved from 101.3 in 1994 to 106.3 in 2001. Nevertheless, the level has remained below the ceiling of 110 established by the ECCB. The appreciation of the EC dollar may be tied to the strong US dollar, which has appreciated vis-à-vis most currencies, especially the EURO. However, this trend renders the region uncompetitive in terms of its exports or traded commodities, and would contribute to a decline in foreign exchange earnings. Nonetheless, capital market development in the region is limited and most of the capital inflows are in the form of private direct fixed investments in the tourism industry. Therefore the degree of volatility of capital flows is narrow.

Macroeconomic Developments

Following strong growth averaging 7.0 per cent in the 1980s, real growth receded to roughly 3.0 per cent during the 1990s. Economic growth in the currency union contracted during 2001,

disrupting the trend of positive growth experienced over the last two decades. Among the factors contributing to the weak performance were the slowdown in the global economy which was compounded by the events of September 11, increased competition in the tourism industry and manufacturing sector, unfavourable weather and crop infestation. Consistent with the economic downturn is the weakened performance of the external sector.

External Sector

In the 1980s and early 1990s a relatively high level of foreign direct investment and foreign currency receipts from exports of goods and services (primarily bananas, sugar and tourism) was used to finance external payments. However, since 1995 capital inflows and export earnings have declined with the passage of a number of hurricanes and the attack on the preferential arrangement for the export of bananas. Over the period the current account deficit of the currency union fluctuated, but followed an upward trend, largely reflecting developments in the merchandise trade account as well as in current transfers. This performance was attributed to a number of factors, including unfavourable weather, particularly hurricanes, the lumpiness of investment activity by the private and public sectors, and external shocks, mainly increases in oil prices, and the September 11 attacks on the US.

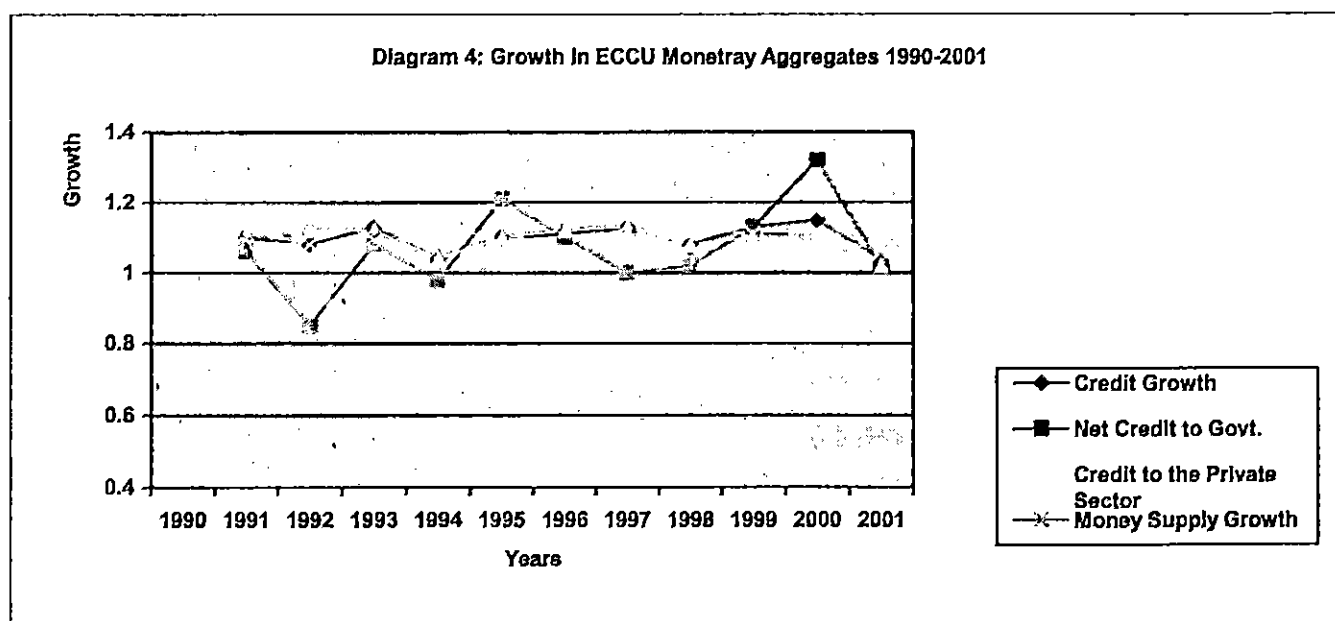
Over the period under review direct investment inflows have been relatively erratic, peaking at \$955.2m, the equivalent of 12.9 per cent of GDP in 1999. In 2001 inflows of foreign direct investment amounted to \$829.6m, or 10.8 per cent of GDP, compared with \$901.8m (11.8 per cent of GDP) in 2000. The decline was partly attributed to the completion of some hotel upgrading and expansion projects. Approximately 80-85 per cent of foreign direct investment projects in the currency union were concentrated in the tourism industry.

Fiscal Sustainability

Notwithstanding the declining trend in real output growth, member governments maintained their expansionary fiscal stance, which contributed to a deterioration of public finances, accumulation of arrears and a reduction in the implementation rate of the PSIP. An examination of the data for the period 1990 to 2001 revealed that the overall balance on the fiscal accounts deteriorated. The fiscal situation of a number of the countries, particularly Antigua and Barbuda, Dominica and St. Kitts and Nevis has worsened, while the surplus in others has contracted. As a

percentage of GDP, the combined overall deficit for regional governments was 2.6 per cent in 1990. It fell to 1.4 per cent in 1991 before deteriorating further to 6.5 per cent by 2001. Over the same period, the primary deficit averaged 0.3 per cent of GDP. In this scenario, the countries could not have stabilised their debt-to-GDP ratios and were moving away from a sustainable and solvent fiscal path. Member governments have found themselves in greater difficulties in meeting their external payments. To finance their fiscal imbalances, they have resorted to both external and domestic loans, and an accumulation of external arrears.

There has been a trend of increasing debt in the Eastern Caribbean currency union. At the end of December 2001, the total outstanding external public sector debt stood at approximately \$3.0 billion. The expansion has generally been in relation to loans to the combined central governments. The disbursed outstanding debt to GDP ratio rose from an average of 64.1 per cent in the period 1990 to 1997 to 79.4 per cent in 2001. At the same time, domestic debt grew to 30.4 per cent of GDP from 19.9 per cent in 1990. Below we will discuss further the rate of domestic credit creation and in particular credit to the public sector. Diagram 4 below shows the growth in the monetary aggregates for the ECCU between 1990 and 2001.



The trend in credit growth, as seen in the above graph, shows that between the period 1994 to 2000, credit growth followed an upward path. The absolute value increased to \$6,033.3m in

2001 from \$2,169.7m in 1990. The driving force behind this credit expansion has been growth in net credit to the central government as generally non-financial public enterprises are net depositors. At the end of 2001, net credit to the central government combined amounted to \$697.5m compared to \$358.0m in 1990. At the same time, growth in the money supply has been slightly below that of domestic credit, indicating tight liquidity and the drawing down of foreign assets by the commercial banks to meet the credit demand.

In proportion to the expansion in public sector debt, debt-service payments have also risen. Over the period 1990-97, interest payments averaged 3.5 per cent of GDP, whilst by 2001 they averaged 3.9 per cent of GDP. The deterioration in the fiscal accounts and the rising debt levels could place additional pressure on the banking system. The example of the West Africa Monetary Union (WAMU) and its subsequent devaluation of the CFA franc has been highlighted in economic literature as being due to "profligate fiscal policies."³ Consequently, rising debts and the excessive fiscal imbalances of some ECCU member countries could raise alarm bells. There are no statutory constraints, though the ECCB has recommended certain prudential guidelines for levels of fiscal deficits.

³ Hector et al (2001)

IV. RECOMMENDATIONS AND CONCLUSIONS

A synopsis of the situation highlights several warning signs that should not be ignored if a currency crisis is to be avoided. The main concern for the ECCU member countries in relation to a currency crisis stems from their fiscal situation. A number of the member countries have unfavourable macroeconomic conditions, growing fiscal deficits and increasing debt burdens. However each member country has responsibility for the management of its fiscal accounts, so that any ensuing crisis for the currency union will require that all the countries face fiscal difficulties at the same time. The scope for spill-over effects in light of the current fractionalisation of the financial space is limited. If the single financial space becomes a reality this may change.

The strength of the EC dollar has its roots in the institutional arrangements and legal policy guidelines that govern the Eastern Caribbean currency union. The strong dollar policy, which the ECCB strictly adheres to, ensures that the backing ratio is well above the prudential limit and that the EC dollar is not susceptible to a crisis on account of financing government expenses. In essence the reserves position of the Central Bank seems to be good, but a weakening banking system and perpetuating fiscal and debt problems could in the long run result in some foreign exchange difficulties. In this regard, the countries should move toward implementing structural adjustment programmes as recommended by the ECCB with technical assistance from Caribbean Regional Technical Assistance Centre (CARTAC), in an attempt to stabilise their fiscal positions and avoid any impending crises.

The currency crises of the 1990s have pointed to the fragility of fixed exchange rate regimes. Not all crises are the same and not all arise from the behaviour of indisciplined governments. However, by putting appropriate policies and structures in place, a country can make it more likely that crises will be avoided. Research points to a number of such measures that can be implemented including:

- monitoring indicators of vulnerability on a more systematic basis
- getting the fiscal fundamentals right as a necessary condition for the success of a fixed exchange rate system
- ensuring that government expenditure does not rise

- keeping macroeconomic fundamentals in line
- putting in place an appropriate institutional structure to regulate the banking system
- improving policies for debt management

The scope of the analysis in this paper does not extend beyond an examination of indicators of vulnerability to a currency crisis. An in-depth analysis of the mobility of capital, the health of the indigenous commercial banks and the likelihood of a financial crisis will be undertaken in future work. Additionally it may be interesting to look at the hypothetical case of separate central banks for each member countries and develop of a time of collapse model.

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