

Monetary Union and Fiscal Discipline: Evidence from the Caribbean

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ABSTRACT

This paper is an empirical study of fiscal policy in Caribbean countries that are members of a monetary union. We discuss the ways, both positive and negative, that a monetary union could affect fiscal discipline and the arguments for explicit fiscal restraints considered in the literature about the European Monetary Union (EMU), and consider their applicability to CARICOM. We study members of the Eastern Caribbean Currency Union in order to determine if there is any systematic difference between fiscal policy in extreme monetary regimes and that of typical countries that retain monetary sovereignty. The empirical results on fiscal discipline in the ECCU versus the rest of CARICOM are mixed. However, the general trend indicates that there is less fiscal discipline in the ECCU compared to the rest of CARICOM.

Keywords: empirical; monetary union; fiscal discipline.

1. Introduction

Can a monetary union (also known as currency union) be free of a certain degree of fiscal unification? While admittedly not a new question, it is one that is now especially acute in the Caribbean given the relatively advanced implementation of the Caribbean Single Market and Economy (CSME) and the “success” of the experiment in Europe. Although no date has been officially set for monetary union and a single currency, the Caribbean has been putting measures in place to aid that process. The Council of Finance and Planning (COFAR), which has responsibility for monetary union, has agreed to some of the basic criteria for monetary union which remains an integral part in the move towards greater economic integration.

This paper will evaluate fiscal policy in the Eastern Caribbean Currency Union (ECCU) in order to determine if monetary union could be an effective “agency of restraint” (Collier, 1991) on fiscal policies. Our motivation for this analysis stems from two branches. First, a number of countries around the world are considering whether to abandon national monetary sovereignty and join a multilateral currency union or unilaterally adopt the money of another country. Table 1 shows the main directions and discussions in the terms of existence, enlargement and creation of monetary unions. More generally, there has been much discussion of the “disappearing centre” of exchange rate regimes; countries are said to have a choice of either freely floating or going to an extreme monetary stance.¹

A tight monetary regime might be expected to be associated with a smaller fiscal presence, since it reflects generally conservative economic policies. It also might induce conservative fiscal policy to harmonise policy, avoid fiscal externalities, and enhance the sustainability of the monetary regime, as

¹ Following Fatas and Rose (2001), a country is said to have an extreme monetary stance if it is part of a currency union or currency board.

is the (partial) intent of the “Growth and Stability Pact” (Eichengreen and Wyplosz, 1998). More generally, if one interprets an extreme monetary regime as a credible commitment device to improve credibility by limiting discretionary economic policy, then one might expect a smaller fiscal presence in extreme monetary regimes. On the other hand, a tight monetary regime makes fiscal policy a more potent tool of policy in a variety of models. For instance, the classic Mundell-Fleming logic dictates that fiscal policy grows in importance when monetary independence is abandoned. The role of fiscal policy might therefore be expected to be large in countries with extreme monetary regimes. The purpose of this paper is to explore if there is in fact any systematic difference between fiscal policy in the ECCU and that of other Caribbean countries that retain monetary sovereignty.

The relationship between monetary union and fiscal discipline is an issue that has been discussed extensively in the context of the European Monetary Union (EMU). This paper will first discuss the ways that monetary union could affect fiscal discipline and the arguments for explicit fiscal restraints considered in the EMU literature, and consider their applicability to the Caribbean. Section 3 describes the econometric methodology and data. The empirical analysis appears in Section 4 and Section 5 concludes.

2. Theory and Literature Review

2.1 Exchange Rate Regime and Fiscal Policy

Although economists have long been interested in the influence of monetary union on fiscal discipline, little work has been done on the theoretical relationship between exchange rate regimes and fiscal policy. Further, while there is a large literature on the effects of the exchange rate regime on macroeconomic variables (volatility, trade), even less attention has been paid to the interaction between the exchange rate regime and the way fiscal policy should operate using modern techniques. This is

even truer of the empirical relationship between the exchange rate regime and fiscal policy, about which little is known.²

There are essentially three theoretical channels through which fiscal policy is related to the exchange rate regime:

- fiscal policy as a credibility device;
- fiscal policy as a stabilising tool; and
- the externalities associated with loose fiscal policy in multilateral currency unions.

The first channel argues that fixed exchange rate regimes are associated with stricter fiscal policy because of the credibility role of economic policies. Tighter fiscal policy becomes a required element in any exchange-rate-based stabilisation due to the association between exchange rate devaluations and fiscal deficits and credibility problems for governments and central banks. The external visibility and impact of devaluations in a fixed exchange rate regime raises the cost associated with irresponsible fiscal policy. Because flexible exchange rates are not subject to large realignments, they do not provide the type of political disincentive to discourage governments from pursuing irresponsible fiscal policies.

The second channel argues that because different exchange rate regimes have different types of risks, we should expect different exchange rate arrangements to lead to different design of fiscal policies. When governments abandon monetary policy by fixing the exchange rate, they eliminate an important stabilisation tool. There is therefore a bigger need to make use of the other available tools such as fiscal policy. As a result, fiscal policy might be larger and more responsive to business cycles under

² Seerattan (2000) has performed some work in this area for selected Caribbean countries.

fixed exchange rates. Further, following the standard textbook Mundell-Fleming model, fiscal policy is more effective as a stabilising tool under fixed versus flexible exchange rates.

The third channel originates from the need to overcome the externality associated with irresponsible fiscal policy of partners in monetary unions. In this case, countries might want to impose limits on fiscal policy because of the fear that others in the currency union, having abandoned monetary policy, will opt for fiscal policy that is too loose and imposes externalities on their neighbours.

2.2 Optimal Currency Areas

The theoretical analysis of monetary unions began with a seminal paper by Mundell (1961). Mundell's analysis answered the question, "What is the appropriate domain for a currency?" Mundell argued that there are advantages to regions that use a common money. In particular, monetary union facilitates international trade; a single medium of exchange reduces transactions costs, as does a common unit of account. However, a common currency can also cause problems in the dual presence of asymmetric shocks and nominal rigidities (in prices and wages).

Suppose demand shifts from Eastern to Western goods. The increase in demand for Western output results in inflationary pressures there, while East goes into recession. Mundell argued that if unemployed labour could move freely from East to West to relieve inflationary pressures in the West, both problems could be resolved simultaneously. However, in the absence of labour mobility, the asymmetric shock could be better handled by allowing the Western currency to appreciate. But in order for this to happen, both East and West must have their own monies. Mundell concluded that the optimal currency area (OCA) was the area within which labour was mobile; regions of labour immobility should have their own currencies.

In addition to the mobility of labour (and other factors), theory suggests that for a region to be considered an OCA and therefore adopt a single currency there should be a high degree of openness among member countries and some measure of similarity in their economic structures. Finally, a system of fiscal transfers should exist or some form of policy coordination as a substitute. In other words, adopting a single currency makes sense “if trade within the area is very large relative to trade with ‘outside’ countries, if there is a good amount of central policy coordination for the entire area, and if the mobility of factors of production is great” (Schiavo-Campo, 1978).

Two other classic contributions to the theory of optimal currency areas are worthy of note. McKinnon (1963) examined the effects of size on monetary unions (smaller is worse) while Kenen (1969) considered the effects of the economy’s degree of diversification (more is better).

After over forty years of work, Mundell’s basic theoretical OCA framework remains virtually unchanged. The ability of a region to respond to an asymmetric shock is viewed as a critical part of a sustainable and desirable monetary union. However, the narrow specifics of Mundell’s original model are not viewed seriously. That is, Mundell’s idea of labour mobility is not viewed as a particularly viable adjustment mechanism.

2.3 Costs and Benefits of Joining a Monetary Union

Clearly there is a political cost associated with monetary union. There is a strong connection between national identity and national money, otherwise it would be difficult to explain the historical fact that most countries have their own moneys. Still, some countries have entered into monetary union. Why?

Monetary unions are fully compatible with Mundell's celebrated "Trilemma" or "Incompatible Trinity". This basically states that three desirable goals are mutually exclusive: domestic monetary sovereignty, exchange rate stability and capital mobility. Members of a monetary union essentially relinquish monetary independence in exchange for other benefits. An interesting aspect of identifying costs and benefits of joining the monetary union is that the relevant benefits are usually at microeconomic level, while costs are at macroeconomic level.

First, the loss of power to affect a national money supply is legitimately feared, since in an integrated market, all member countries will jointly control their monetary policy. Typically, the loss of a country's ability to use the exchange rate and monetary policy for stabilisation was considered to be the most important cost of joining a currency area. The argument about the loss of monetary and exchange rate policy was especially emphasised in the early 1970s when many economists believed in a negatively sloped Phillips curve. In that case, the common currency would imply that a country with a higher unemployment rate, relative to other members of the currency area, would no longer have the option of using monetary policy. As a result, a country would not achieve the desired mix of inflation and unemployment.

Second, there are concerns about fiscal policy. It is not clear what the implication of membership is in the currency area for an independent fiscal policy. It is not necessarily the case that monetary union means the end of independent fiscal policy for its member states. It is likely that even in a complete monetary union, countries keep their fiscal policies independent. However, some centralisation of fiscal policies could serve as one of the mechanisms in adjusting to an asymmetric shock. On the other hand, the centralisation of budgets often leads to an increase in spending.

Third, another cost of joining a currency area is the loss of seignorage. Seignorage is the revenue the government obtains by financing its budget deficit through printing money rather than selling debt. That is why at full employment printing money would lead to inflation.

Fourth, in an uncertain world, risk-averse households and firms would gain welfare (after the elimination of adjustment costs) if one of the sources of uncertainty in exchange rates were eliminated. This argument implicitly assumes that exchange rate volatility has a negative effect on economic calculation. If the exchange rate reflects movements in fundamentals, then volatility does not matter. On the other hand, if the movements in exchange rates reflect feelings, speculation etc., and then high volatility could lead to misallocation of resources. But the decrease in the uncertainty of the evolution of exchange rates lowers the expected profit of investment, which would subsequently influence output; therefore the theoretical outcome is ambiguous.

Fifth, the elimination of exchanging one currency for another is the most visible benefit of monetary union. It is only an empirical question how much the economic agents gain in the long run (after the adjustment of all agents to the new environment). However, there are also indirect benefits from the elimination of the national currencies, such as price discrimination.

2.4 Monetary Union and Fiscal Discipline

The main questions concern the effect of monetary union on fiscal discipline; whether lack of fiscal discipline is an obstacle to achieving the objective of monetary union (in particular price stability); and what sort of fiscal constraints might be effective while at the same time not interfere with using fiscal policies for other legitimate purposes (e.g., cushioning shocks to the economy).

Economists that have researched this area, hold startlingly different opinions regarding the influence of monetary union for fiscal discipline. De Grauwe (1996) argues that the influence of any single government over the monetary authority is weakened, since it is but one of several governments in the monetary union. Similarly, Beetsma and Bovenberg (1998) posit that because of political myopia among other reasons, the fiscal authorities may attempt to force the central bank to moderate the effect of distortionary taxes by increasing inflation. Within a monetary union, their power to do so is diminished. However, if there is fiscal policy coordination by members in the monetary union, this may strengthen the hand of governments over the union central bank.

Second, according to Collier (1991), a monetary union may be able to provide an “agency of restraint” over macroeconomic policies particularly, if the union contains ‘convergence criteria’ requiring monetary and fiscal policies.

A third argument for effective fiscal discipline is that a single currency would allow for more effective operation of market discipline. Using US and Canadian data on the borrowing costs of states and provinces respectively, Bayoumi *et al.* (1995) conclude that in these currency unions, financial markets effectively ‘price’ in differences in fiscal positions, providing proper incentives to take action before government debt becomes unsustainable. However, given that some financial markets within CARICOM are not well developed or integrated, a single currency may not bring about the market discipline that might operate in more developed countries.

Conversely, there are also several arguments why monetary union may induce fiscal *indiscipline*. The first argument concerns moral hazard (Beetsma and Bovenberg, 1998; Chari and Kehoe, 1998). They argued that in a monetary union, if a country running excessive fiscal deficits can be bailed out by the

central bank, the costs are borne by other members of the union. This reduces the incentive that members have to be fiscally disciplined.

Second, according to Tornell and Velasco (2000), pegged exchange rates may provide a less visible discipline for policy makers than flexible exchange rates, contrary to conventional wisdom. This argument runs counter to the first channel regarding the relationship between exchange rate regime and fiscal policy outlined in Section 2.1. Tornell and Velasco claim that "...in situations where there is no fiscal discipline to begin with and authorities have no recourse to debt financing, fixed rates *per se* do not generate discipline; conversely, flexible rates may tilt the balance in favour of greater discipline because of the immediacy of punishment associated with imprudent fiscal policies." In a monetary union, with pooled foreign exchange reserves, the expanding country can avoid market discipline even longer.

A third argument is the danger that countries will be pushed into a region where fiscal policy becomes uncontrollable. Assuming that there is an upper limit to the debt ratio that investors are willing to finance, governments could be pushed close to this threshold as a result of the loss of seigniorage revenues occasioned by a move to monetary union. Given the impossibility of reducing the deficit to zero, governments would be vulnerable to adverse shocks that might lead inevitably to bail-out or default and the union central bank might be induced to provide the former (Bovenberg *et al.*, 1991).

2.5 Are Constraints on Fiscal Policies Needed in a Monetary Union?

Whether or not incentives for undisciplined fiscal policies increase in a monetary union, the more basic question is whether constraints on fiscal policies are needed at all. To discuss this question, consideration of the use of ceilings on deficits and debt first, as conditions for membership in the monetary union and second, as permanent features to limit fiscal deficits in a monetary union is useful.

Eichengreen and Wyplosz (1998) and Beetsma and Uhlig (1999) argue that the main justification for fiscal restraints is that prohibition against bail-outs in some form is never ironclad, particularly in countries with weak monetary and fiscal institutions and lack of strong public support for low inflation. Large fiscal deficits make it more likely that the union central bank might yield to pressures for bail-out despite its formal statutes.

Another justification for the use of ceilings on debt and deficits is as a condition for entry to monetary union (Masson, 1996). First, a deeply indebted country in a monetary union would be vulnerable to adverse shocks, even if its fiscal deficit were currently under control. An unsustainable level of debt would raise the dilemma for the central bank of choosing between allowing a government to default or bailing it out. Second, fiscal convergence criteria (as well as other conditions) signal the country's willingness to adhere to the constraints of a monetary union. Inability to satisfy the criteria would indicate that the country was unlikely to satisfy the criteria necessary to remain in the monetary union in the face of unfavourable shocks.

2.6 What Form should Fiscal Restraints Take and CARICOM's Approach to Monetary Integration

The Maastricht Treaty of the EU describes an excessive deficit procedure that would limit general government deficits to 3% of GDP and gross debt to 60% of GDP. The Stability and Growth Pact provides for fines imposed on countries running excessive fiscal deficits which were not due to exceptional circumstances, in particular those not due to a sharp or sustained downturn in economic activity.

A key debate in Europe is whether it is desirable to restrict fiscal policy in this manner and whether other criteria such as cyclically adjusted deficits would have been preferable. Opponents of the pact have pointed to the need for greater fiscal flexibility in response to shocks, in a context where shock

absorbers (fiscal transfers between countries, labour mobility) were modest. The operation of automatic stabilisers to cushion cyclical fluctuations could be inhibited, especially if countries started at fiscal positions that were close to the 3% deficit ceiling (Eichengreen and Wyplosz, 1998).

Defenders of the Pact point to the fact that it takes into account cyclical downturns in evaluating whether financial sanctions would be applied, as well as allowing a degree of discretion to the Council of Finance Ministers (Buti *et al.*, 1998). Moreover, its intended role is to force countries to have reduced fiscal deficits before the downturn occurs. Countries which in good times ran fiscal surpluses would have substantial room to let the automatic stabilisers operate and to perform discretionary fiscal expansion.

The criteria for entry into a Caribbean Monetary Union (CMU) were presented in the 1992 report of the Central Bank Governors. The 3-12-36-15 criteria required that:

- countries maintain foreign reserves equivalent to three months of import cover for a period of 12 months;
- the exchange rate be maintained at a fixed rate to the US dollar for 36 consecutive months without external debt payment arrears; and
- the debt service ratio be maintained within 15% of the export of goods and services.

In 1996, it was proposed that the import cover criterion be amended to include three months of import cover or 80% of central bank current liabilities, whichever is greater. Additionally, it was proposed that the fixed parity rule be amended to include bands of 1.5% on either side of parity for floaters. Fixers were required, however, to maintain their parity for a period of 36 months. Governors of

Caribbean Central Banks gave to the Caribbean Centre for Monetary Studies the responsibility of monitoring the foregoing indicators.

The community envisaged the implementation of a monetary union in three stages on the basis of two groupings, A and B. The OECS, The Bahamas and Belize were placed in category A. Since these countries had already met the criteria for entry in 1992, their task was simply the maintenance of macroeconomic stability. Category B countries included all other CARICOM members whose task it was to make the appropriate adjustments to satisfy the entry criteria.

The first phase of the monetary integration process was to have been concluded in 1996 and was to have included the OECS, Belize, The Bahamas, Barbados and Trinidad and Tobago. There was to have been a common currency with the exception of Belize and The Bahamas. The second stage was to have covered the period 1997 to 2000 and was to include the following initiatives:

- the formation of a Caribbean Monetary Authority (CMA) to oversee regulation of a regional currency;
- the issuance and circulation of a common currency in the first tier countries excluding The Bahamas;
- use of the new currency in the remaining countries as a unit of account in the settling of regional transactions; and
- continued adjustment by Jamaica and Guyana to meet the criteria for entry into the union.

The third phase, which was to have begun in the year 2000, had the objective of entering all CARICOM countries into membership of the Caribbean Monetary Authority. However, with the floating of the Trinidad dollar in 1993, the implementation of Stage I was suspended. In sustained pursuit of the goal of monetary integration, Caribbean Central Bank governors responded by making regional currencies fully convertible with each other. It was subsequently proposed that Barbados, Belize and the OECS form a union by the end of 1997. This also was not achieved.

Compared to the EU, the dangers of fiscal overshoots are greater, particularly for some countries, judging from the most recently available history (Table 2). In theory, the concept of a monetary union is that it will cushion the effect of negative shock to a member(s) by reallocating resources to resolve the problem(s). Yet, what happens if a member continues to pursue policies that cause its economic performance that diverge significantly from those outlined for union members has not been addressed so far. No sanctions mechanism has been put in place to screen countries. This raises the danger that a CMU may not be successful, in that countries that join may be forced to withdraw later. However, since countries unable to meet convergence criteria are often facing unfavourable circumstances, sanctions may be difficult if not impossible to apply, except in the most egregious of circumstances.

Table 2 also shows that some members have a huge debt overhang. These countries would be vulnerable to adverse shocks, even if its fiscal deficit were under control. An unsustainable level of debt would raise the dilemma for a CMU central bank of choosing between allowing a government to default or bailing it out. The history of large budget deficits and inability to service debt suggests that it will be important to apply criteria for membership in a CMU rigorously.

It is not clear either, that a sanctions mechanism would be a feasible way to deter violations of fiscal restraints. The credibility of a policy in which the union imposes sanctions on its members, is

questionable, as is the likelihood that a sanctioned member would pay its fines. We have no experience with the application of sanctions in CARICOM, but CARICOM has a history of commitments by member countries that were not honoured (such as eliminating all internal barriers to trade and labour mobility, and paying dues to Community organisations). In the Euro area, the excessive deficits procedure seems unlikely (given the flexible interpretations applied to countries that have exceeded the deficit ceiling) to lead to sanctions. A more effective system may then be one that would temporarily suspend a country's union membership if it is deemed to be in serious violation of the rules.

Comparing the experience of the European Union, where the transition period took place 7 years after the signing of the Maastricht Treaty in 1992, a realistic transition period for CARICOM may not be the 8 years originally envisaged for the start of the third phase by 2000. A longer transition period, coupled with more intense scrutiny of CARICOM countries for qualification may be in order.

The proposed CMU was severely criticised by Anthony and Hughes-Hallett (2000). First, Anthony and Hughes-Hallett note that the main case for CMU is based on two main contentions: (i) that by having a single currency tied to the USD "CARICOM countries will be able to import the monetary [and fiscal] stability of the US" and (ii) that the single currency can lead to an endogenisation of the OCA conditions. The latter contention in effect suggests that the other aspects of integration would be enhanced because of the single currency instead of the other way around, as in Europe. According to Anthony and Hughes-Hallett (2000), the CARICOM region fails three of the conditions to be considered an OCA (see section 2.2); only the similarity of economic structures may perhaps be applicable for a CMU.

3. Methodology and Data

The methodology will consist of regressing different variables that proxy fiscal policy against a dummy variable for ECCA countries. We also run regressions with a set of variables that we expect will be related to both fiscal policy and the exchange rate regime. Our goal is to assess whether fiscal policy in Eastern Caribbean (EC) countries, i.e., countries which are a member of a monetary union, is significantly different from fiscal policy in the countries in the rest of the sample.

Equations of the form are estimated:

$$Y_{it} = \beta_0 + \gamma ECCU_{it} + \phi X_{it} + \varepsilon_{it} \quad (1)$$

$$Y_{it} = \beta_0 + \gamma_1 ECCU_{it} + \gamma_2 FIX_{it} + \phi X_{it} + \mu_{it} \quad (2)$$

where Y is one of our measures of fiscal policy, i and t denote countries and time periods respectively, X is a set of variables which we discuss in the next section, $ECCU$ is a dummy variable for countries in the Eastern Caribbean Currency Union, FIX is a dummy for fixed exchange rate regimes and ε and μ are well-behaved error terms which capture all other influences of fiscal policy. We are essentially interested in the γ . Positive γ estimates indicate a larger fiscal presence i.e., less fiscal discipline.

The data set consists of countries that are members of CARICOM with the exception of Montserrat. Our data set is data taken from the World Bank's *World Development Indicators* database. The measure of fiscal policy that we use is government consumption as a percentage of GDP

(NE.CON.GOV.T.ZS).³ Other controls are real GDP per capita, openness, measured as the ratio of imports and exports to GDP, land, population and urbanisation.

In equation 1, we will compare fiscal discipline in the ECCU with fiscal discipline in all other CARICOM members regardless of their exchange rate regimes over the period 1977-2002. Since some of the members of CARICOM moved from a fixed to a flexible exchange rate regime over that period, we also estimate equation 1 using only data on ECCU members and those countries classified as fixed using the International Monetary Fund's classification system, again over the entire period 1977-2002.

Next we estimated equation 1 over the period 1977-1987 comparing fiscal discipline in the ECCU with CARICOM members with fixed exchange rates over this period. Finally, we estimated equation 2 in order to compare fiscal discipline in the ECCU versus fiscal discipline in CARICOM countries with fixed and flexible exchange rate regimes respectively over the period 1994-2002. These different models were run in order to confirm the robustness of our original (Table 3, Benchmark Results, Panels A and B) results since they might be affected by the changing exchange rate classification of some countries over the entire sample.

4. Results

Table 3 contains the separate means of the non-monetary union (NMU) members of CARICOM and ECCU members. The test that the ECCU effect is equal to NMU is tested and the *p*-value reported; the hypothesis is easily rejected. The unconditional mean of government consumption in the ECCU is greater than that for other members suggesting that fiscal discipline as proxied by government size is not as tight inside the union as outside.

³ Rodrik (1998) favours the uses of government spending to government expenditures, even though government expenditures is broader measure, since government expenditures is subject to more measure problems associated with certain categories of spending.

Table 4 reports benchmark regressions for our fiscal variable, government size as proxied by government consumption. Panel A uses only two controls, the natural logarithm of real GDP and the log of openness. This panel is broken into two parts: to the left are the benchmark results which compares fiscal discipline in the ECCU with fiscal discipline in all other members of CARICOM and to the right, fiscal discipline in the ECCU is compared with fiscal discipline in CARICOM members which had fixed exchange rate regimes over the entire period under study, 1977-2002.

We find that government size increases with openness in the benchmark regression but decreases when we compare the ECCU with fixed exchange rate regimes only. We also find that government size is negatively related to real GDP per capita in the benchmark and comparison regressions, a result that accords with Rodrik (1998). The coefficient on the ECCU dummy is positive and significant for both the benchmark regression and the ECCU versus fixed regimes regression.

In Panel B of Table 4, equation 1 is estimated with additional controls, land area and urbanisation. Each of these controls is significant and positive in both the benchmark and comparison regressions with the exception of land area which is (surprisingly) significantly negative in the comparison of ECCU versus fixed regimes. Openness in both the benchmark and comparison regressions is insignificant, but the sign is positive in the benchmark and negative in the comparison against “fixers”. Real GDP per capita is positively related to fiscal discipline in the benchmark regression but negatively so in the comparison regression. Finally, we still find that the ECCU effect is positive in both the benchmark and comparison regressions, even though it is insignificant in the comparison regression.

The sample is then restricted to 1977-1987. Over this time period, we estimate the unconditional means of government size in the ECCU and the fixed regimes in CARICOM (Table 5). The test that government size is on average the same inside the union as outside is again soundly rejected.

In Table 6, the results show that openness is significantly positive while real GDP per capita is significantly negative, for the regressions with and without additional controls. The coefficient on the ECCU dummy is positive in both regressions but only significantly so in the regression with openness and real GDP per capita as controls.

Finally, we restrict the sample to 1994-2002. The unconditional means for members of the ECCU, fixed regimes and flexible regimes in the rest of CARICOM are estimated (Table 7). Tests of the hypotheses that fiscal discipline is the same in the ECCU versus “Fixers” and the same in “Fixers” versus “Floaters” respectively are both rejected. However, we are unable to reject this hypothesis for the ECCU versus “Floaters”.

In Table 8, Panel A, the regression with real GDP per capita and openness as controls the results show that the “Floaters” have the least fiscal discipline followed by “Fixers” and then the ECCU. When additional controls are added, the results again show that the “Fixers” and “Floaters” have the least fiscal discipline when compared to the ECCU. The coefficients on “Fixers” and “Floaters” are insignificant, but that on the ECCU is significantly negative indicating a smaller fiscal presence.

Overall, the empirical results on fiscal discipline in the ECCU versus the rest of CARICOM are mixed. Including some relevant controls, the ECCU has a larger fiscal presence, i.e., less fiscal discipline when compared to the rest of CARICOM over 1977-2002. When compared with only fixed exchange rate regimes over the period 1977-1987, we also find that the ECCU has less fiscal discipline. Finally, when

compared with both types of regimes in the period 1994-2002, we find that the ECCU has the greatest fiscal discipline. Thus the traditional view that monetary union is by itself associated with tighter fiscal discipline is still not resolved in the case of CARICOM.

5. Conclusion

This paper investigated the differences between fiscal discipline in the Eastern Caribbean Currency Union and the rest of CARICOM in order to explore if there is in fact any systematic difference between fiscal discipline in the ECCU and that of other Caribbean countries that retain monetary sovereignty over the period 1977-2002. We also reviewed the theoretical debate on monetary unions and the costs and benefits of joining a monetary union.

From a theoretical point of view, it is to be expected that fiscal policy in countries trying to establish the credibility of their economic policies should be more restrictive (compared to other countries). On the other hand, countries that have abandoned monetary policy under fixed exchange rate regimes might be more likely to use fiscal policy (than “floaters”) to stabilise business cycles and to insulate themselves from adverse shocks. If this is the case, then we should see larger governments and more responsive fiscal policy under monetary unions.

The literature on the EMU reviewed in this paper demonstrate that if the CMU is to go forward, it will be critically important to set up rules, institutions and a mutual surveillance process to try and make the monetary union an effective restraint on fiscal policies. Fiscal excesses that either lead individual countries to leave the monetary union, or the regional central to monetise deficits and engage in over-expansionary policies, would likely mean that the monetary union would not be successful.

The empirical evidence that we present on fiscal discipline in the ECCU versus the rest of CARICOM is mixed. We find that when we compared fiscal discipline as measured by government consumption in the ECCU versus the rest of CARICOM, that the ECCU has a larger fiscal presence, implying less fiscal discipline. Because this result may be due to some form of contamination due to some countries in the sample that changed exchange rate regimes over the sample, we compared fiscal discipline in the ECCU versus CARICOM members with fixed exchange rate regimes over the entire sample. We also find that the ECCU has less fiscal discipline. When we split the sample, the ECCU once again has less fiscal discipline over the period 1977-1987, but greater fiscal discipline over the period 1994-2002. The overall trend, however, suggests that there is less fiscal discipline in the ECCU when fiscal discipline is proxied by government consumption (size).

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APPENDIX

Table 1 Current Directions and Discussions of Creating Monetary Union

Potential Monetary Unions / Enlargement of Current Monetary Unions	Country	Further Information
Europe	Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden, United Kingdom, Cyprus (Greek part), the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia and Slovenia.	See: http://europa.eu.int
East Africa	Kenya, Tanzania, Uganda	Signed treaty in (1999) forming an economic block and monetary union, which is reviving their former currency union – see Mkenda (2001).
West Africa	Economic Community of West African States (ECOWAS): Benin, Burkina Faso, Guinea- Bissau, Mali, Niger, Cote d'Ivoire, Senegal, Togo, Gambia, Ghana, Guinea, Liberia, Nigeria and Sierra Leone	Declared in April 2000 the intention to form a broader monetary union. Monetary union of ECOWAS countries would be created in 2004 ⁽ⁱ⁾ – See Masson and Patillo (2001).
Arabian Gulf	Gulf Co-operation Council: Bahrain, Qatar, Kuwait, Oman, Saudi Arabia and United Arab Emirates	Announced in early 2002, a custom union by 2003 and a plan for a common currency by 2010. New currency, possible to be called the Gulf dinar, will be established, and is likely to be pegged to the USD – See Jadresic (2000).
Asia	ASEAN: Brunei, Burma, Cambodia, Indonesia, Laos, Malaysia, Philippines, Singapore, Thailand and Vietnam.	Leaders of ASEAN endorsed in December 1988 a project to study the feasibility of their currency, “ASEAN currency” – See Yam (1999).

Australia and New Zealand	Monetary integration among: (a) Australia and New Zealand or (b) adopting the Australia dollar by New Zealand.	Coleman (2001) provides a discussion of suggestion for an “Anzac dollar”.
South America	MERCOSUR: Argentina, Brazil, Paraguay and Uruguay and associate members Bolivia and Chile.	Two discussed strategies: (a) the common currency adopted would be the USD or (b) to create the regional “Mercosur currency”.
North America	NAFTA: Canada, Mexico and USA	A NAFTA dollar or “Amero” has been proposed, e.g., by Grubel (1999).

(i) This date has been revised to 2005.

Table 2: Fiscal Indicators: Comparison of Euro Area, 1999, with Select CARICOM Countries

	Government Expenditure	Government Revenue (excluding grants)	Overall Fiscal Position	Public Debt	
				Domestic	External
Euro Area	47.6	46	-1.6		
Barbados	33.5	31.1	-2.4	42.5	15.9
Belize	24.8	22.5	-2.3	13.1	25.7
Grenada	24.7	24.1	-0.6		
Guyana	43.2	34.0	-9.2	33.9	210
Haiti	11.4	9.0	-2.4		
St. Vincent and the Grenadines	35.3	30.9	-4.4	18.8	42.6
Trinidad and Tobago	28.1	27.9	-0.2		

Notes:

1. Source: International Monetary Fund *International Financial Statistics* database.
2. The year 1999 was used for comparison with the Euro Area since this was the year of the Euro's inception.
3. Due to the unavailability of data for 1999, indicators for some countries were taken from the closest possible year. These are Belize, 1996; Grenada, 1995; Guyana, 1997; and Trinidad; 1995. All others are from 1999.

Table 2: Descriptive Statistics

	Mean for Non-Union Members (NMU)	Mean for ECCU (ECCU)	Test NMU = ECCU (P-value)
Government Consumption	17.74 (0.52)	20.22 (0.26)	0.00

Notes:

1. Standard errors in parentheses.

Table 3: Fiscal Policy in the ECCU versus the Rest of CARICOM

Panel A: Results with income and openness controls

	Benchmark Results				Against Fixers			
	ECCU	RGDP	Openness	R ²	ECCU	RGDP	Openness	R ²
Gov't Consumption	0.12 (0.00)	-0.02 (0.42)	0.24 (0.00)	0.16	0.20 (0.00)	-0.05 (0.02)	-0.20 (0.00)	0.28

Notes:

1. P-values are in parentheses.

2. All controls are in natural logarithms.

Panel B: Results with additional controls

	Benchmark Results				Against Fixers			
	ECCU	RGDP	Openness	R ²	ECCU	RGDP	Openness	R ²
Gov't Consumption	0.48 (0.00)	0.14 (0.01)	0.06 (0.30)	0.27	0.03 (0.43)	-0.12 (0.00)	-0.02 (0.77)	0.41

Notes:

1. P-values are in parentheses.

2. All controls are in natural logarithms.

3. Additional controls are the natural logarithm of: urbanisation and land area.

Table 4: Descriptive Statistics (1977-1987)

	Mean for Fixers (FXS)	Mean for ECCU (ECCU)	Test FXS = ECCU (P-value)
Government Consumption	17.19 (0.62)	21.02 (0.37)	0.00

Notes:

1. Standard errors in parentheses.

Table 5: Fiscal Policy in the ECCU versus Fixers in CARICOM (1977-1987)

	Results with income and openness controls				Results with additional controls			
	ECCU	RGDP	Openness	R ²	ECCU	RGDP	Openness	R ²
Gov't Consumption	0.07 (0.09)	-0.11 (0.00)	0.43 (0.00)	0.41	0.05 (0.45)	-0.07 (0.02)	0.22 (0.00)	0.50

Notes:

1. P-values are in parentheses.
2. All controls are in natural logarithms.
3. Additional controls are the natural logarithm of: urbanisation and land area.

Table 6: Descriptive Statistics (1994-2002)

	Mean for Fixers (FXS)	Mean for Floaters (FRS)	Mean for ECCU (ECCU)	Test FXS = ECCU (P-Value)	Test FRS = ECCU (P-Value)	Test FXS = FRS (P-Value)
Government	14.37	19.22	20.34	0.00	0.12	0.00
Consumption	(1.09)	(1.35)	(0.51)			

Notes:

1. Standard errors in parentheses.

Table 7: Fiscal Policy in the ECCU versus Fixers and Floaters in CARICOM (1994-2002)

Panel A: Results with income and openness controls

	ECCU	FIX	FLOAT	RGDP	Opennes s	R ²
Government	1.64	1.34	1.60	0.10	0.11	0.27
Consumption	(0.59)	(0.00)	(0.00)	(0.02)	(0.20)	

Notes:

1. P-values are in parentheses.
2. All controls are in natural logarithms.

Panel B: Results with additional controls

	ECCU	FIX	FLOAT	RGDP	Opennes s	R ²
Government	-0.22	-0.87	-0.94	0.47	-0.40	0.45
Consumption	(0.00)	(0.43)	(0.18)	(0.00)	(0.01)	

Notes:

1. P-values are in parentheses.
2. All controls are in natural logarithms.
3. Additional controls are the natural logarithm of: urbanisation and land area.