A MONETARY UNION FOR SELECTED CARIBBEAN COUNTRIES: EMPIRICAL EVIDENCE BASED ON TIME VARYING PARAMETERS*

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Abstract

This paper examines the case for a monetary union in selected Caribbean countries. We examine two scenarios: The enlargement of the Eastern Caribbean Monetary Union and the formation of a new union, centered on Trinidad and Tobago. The Kalman Filter is applied to derive time varying estimates for the degree of convergence of shocks that measure the extent to which Caribbean economies are synchronized. Based on the findings, there is no support for either scenario and we recommend the strengthening and deepening of intra-regional trade and institutional arrangements as the precursor to establishing a single CARICOM currency in the Caribbean.

1. INTRODUCTION

Recently, several Caribbean governments ratified an agreement to establish the CARICOM Single Market and Economy (CSME)[1]. An important component of the CSME is the expected use of a single CARICOM currency by 2008 (http://en.wikipedia.org/wiki/CARICOM_Single_Market_and_Economy). The CSME is intended to foster, among other things, free movement of labor, capital, goods and services in intraregional trade; the use of a common external tariff; revenue sharing on goods imported from extra regional sources; private sector freedom to establish businesses in any member state; a common

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[1] The Caribbean Community and Common Market (CARICOM) was formed in 1973 and is comprised of the following 15 countries: Antigua & Barbuda, The Bahamas, Belize, Barbados, Dominica, Grenada, Guyana, Haiti, Jamaica, Montserrat, St. Kitts & Nevis, St. Lucia, St. Vincent & the Grenadines, Suriname and Trinidad and Tobago.

trade policy; law harmonization; fiscal prudence, debt and deficit control; and the convergence of monetary policy through a Regional Central Bank (www.CARICOM.org).

Presently, there are varieties of exchange rate regimes in CARICOM. For example, several countries that comprise the Eastern Caribbean Currency Union (ECCU), including Antigua and Barbuda, Dominica, Grenada, Montserrat, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines as well as Anguilla, use the Eastern Caribbean dollar that has been pegged to the US dollar at the rate of ECD $2.70 to USD $1.00 since 1976. Some CARICOM countries such as the Bahamas, Barbados and Belize have maintained fixed exchange rate systems for several years. In contrast, some CARICOM nations have adopted flexible exchange rate systems. To some extent these currencies are allowed to float against the United States Dollar. CARICOM countries that maintain fixed exchange rates, such as the ECCU members, have performed better than those countries, such as Guyana and Jamaica that have adopted more flexible exchange rate regimes. The driving force for an expanded monetary union is varied, but key among them is regional success of the aforementioned fixed exchange regimes and the positive outcome of the European Monetary Union.

CARICOM countries are small open economies that are vulnerable to a wide array of shocks. The most crippling so far has been the phasing out of the preferential treatment of Caribbean exports to Europe which resulted in a significant change in the structure of several CARICOM economies. Second, the pending expiration of the Caribbean Basin Initiative in 2008 coupled with failure of the Doha Round of Trade Negotiations will affect investment opportunities particularly in the agriculture and manufacturing sectors. Finally, the aftermath of the September 11th attacks has not spared Caribbean tourism; due to travel restrictions for tourists, there has been a reduction of export earnings and exchange rates have been affected negatively. A monetary union is therefore seen as an important institutional arrangement, aimed at protecting the financial system and reducing the impact due to shocks in these economies.

It should be emphasized that although policy makers have decided to form a monetary union, no serious empirical investigation has been undertaken to ascertain whether or not the data, along with economic and monetary experiences, support the existence of a monetary union and an optimal currency area (OCA). Previous research on this topic has focused on the structure of the monetary union in the Caribbean (Farrell 1994; Worrell 1991; Blackman 1994) and to the best of our knowledge this paper is the first attempt in providing an empirical assessment of the feasibility of a monetary union in selected Caribbean countries.

The purpose of this paper, therefore, is to examine the prospects of forming a monetary union in CARICOM by investigating the feasibility of an expanded currency union in CARICOM using Trinidad and Tobago as the center. We have selected Trinidad and Tobago as the center mostly because of its recent economic success in attracting significant investment, maintaining macroeconomic stability, and fostering export-led growth, mainly through the petroleum sector. At the same time, we examine the feasibility of a monetary union based on an expansion of the ECCU that has performed relatively better than some of the other CARICOM countries in terms of economic growth, low inflation and overall macroeconomic stability. The remaining sections of the paper are as follows. Section two examines the literature on monetary unions and the path taken by CARICOM to establish a monetary union. Section three presents the methodology used, while section four discusses the results of the empirical investigation. The conclusion is presented in section five.

2. SELECTED LITERATURE

A monetary union may be defined as a geographical area through which a single currency circulates as the principal medium of exchange (Masson and Taylor, 1993), with the underlying theoretical foundations for a currency union being guided by the literature on optimum currency area (Mundell 1961; Kenen 1969; McKinnon 1969). Its desirability is determined by the benefits versus the cost of adopting a common currency and, by extension, the degree to which the criteria of the optimum currency area (OCA) are satisfied. The OCA criteria include trade openness between members; similarity in the economic structures across countries; symmetry in shocks and preferences; the degree of factor mobility, or wage flexibility as a substitute for labor mobility; and the existence of a system of fiscal transfers (Ingram 1969; Ishyiama 1975; Tower and Willet 1976; Mason and Taylor 1993).

The benefits of a monetary union have been identified by many researchers, including Rogoff 1996; McCallum 1999; O'Shea and Keane 1999; De Grauwe 1997; Ishiyama 1975. Among the key benefits, are improvements in financial and non-financial market integration, the reduction in transaction costs, and the implementation of credible anti-inflation policies. While Bean (1992) suggests that a monetary union may lead to a reduction in inflation rates, O'Shea and Keane (1999) maintain that a single currency results in a reduction in economic uncertainty. For example, in situations where there

are several currencies, the uncertainty concerning nominal and real exchange rates may lead to lower investment and production levels. Mc.Callum (1999) contributes an additional benefit of a monetary union, the avoidance of monetary disturbances and speculative bubbles that may result in unnecessary fluctuations in the real exchange rate.

There is, of course, the down side to a single currency in the form of costs to the system (Mundell 1962; Fleming 1962; Parkin 1972; Laidler 1973; McCallum 1999; DeGrauwe 1997; Rogoff and Obstfeld 1997; Obsfeld 1998). One of the concerns is that some regions in a currency union may lose the option of using monetary policy to respond to region-specific macroeconomic disturbances (Obstfeld and Rogoff, 1996). Giavazzi and Pagano (1988) have argued, however, that the loss of monetary autonomy may be a benefit if a country can gain creditability through participation in a monetary union with low inflation. Others have suggested that countries implement a fixed exchange rate system among themselves, when adopting a single currency. In this case, there maybe the risk that one of the members may devalue its currency, if monetary policies are not harmonized. Also a major concern is the possibility for speculative attacks in the transition from individual currencies to a common currency. In this regard, Rogoff and Obstfeld (1996) point to the currency crises in Europe during the early 1990's as evidence of this phenomenon.

Another consideration is relinquishing the option to use inflation as a means to reduce the real burden of public debt. Rogoff and Obstfeld (1996) posit that this budgetary inflexibility might be a hindrance, especially in times of war or national disasters. Moreover, since a monetary union forces convergence of inflation rates at the lower end, high inflation countries will be forced to sell more debt in order to reduce their budget deficits (Bean, 1992).

CARICOM policy makers, in an effort to establish the monetary union, agreed to a set of monetary criteria that include maintaining a foreign reserve cover, equivalent to three months of imports for a period of 12 months. Additionally, they specified that parity with the US dollar should be unchanged for 36 consecutive months. There should be no accumulation of arrears on the external debt. The debt service ratio should be limited to 15 percent of the exports and the establishment of a Caribbean Monetary Authority by 2007 was proposed to implement policy and manage the money supply. Evidence suggests, however, that most of these goals have not been achieved. In fact, not much progress has been made towards the goal of establishing a CARICOM monetary union, largely because of administrative and the political deliberations (Kendall 2000; Henry 2002).

Meanwhile, Anthony and Hughes Hallett (2000), maintain that the CARICOM area does not satisfy any of the criteria for an OCA suggested by Mundell (1961), Kenen (1969) and McKinnon (1996). Examining the trade criteria, Anthony and Hughes Hallett (2000), found that intra-regional exports range from 0.8 percent of GDP in Belize to 11.1 percent for Trinidad and Tobago. Similarly, intra-regional imports range from 1.5 percent for Trinidad and Tobago to 15.3 percent for Grenada as most of the trade is with the United States (for example, Trinidad and Tobago is the leading supplier of liquid natural gas to the United States totaling approximately 75 percent of imports). In addition, labor migration and capital flows are also very small, and no system of fiscal transfers exists. Anthony and Hughes Hallett (2000) also found that the correlations of GDP among the countries in many cases were low, while others were even negative. Based on their analysis, Anthony and Hughes Hallett (2000) maintained that the case for a monetary union in the wider Caribbean area was rather weak. Equally important is the fact that a large proportion of the skilled-labor force frequently migrates from CARICOM to the US where opportunities to earn higher incomes are available.

3. METHODOLOGY

Determining whether a group of countries meets the requirements for the formation of a currency union is a central focus in most of the empirical literature, along with ascertaining whether the benefits of a monetary union outweigh the costs. The answer to this question is largely based on the degree of the symmetry of the shocks affecting the economy. If the shocks were symmetric, the benefits of a monetary union would outweigh the costs. Alternatively, if the shocks were asymmetric, the costs would outweigh the benefits, implying that countries experiencing large asymmetric shocks are poor candidates for a monetary union (Bayoumi and Eichengreen, 1994).

In this study we use the Kalman Filter in order to assess the degree of symmetry of the shocks in the respective countries. We note that correlation of demand shocks measure the degree of similarity of the business cycle, while the analysis of the supply shocks represents the structural side of the economy. Since supply shocks have a more permanent effect on the economy, greater emphasis will be placed on the convergence of the supply shocks, as opposed to the convergence of the demand shocks.

The methodology consists of two steps; the first step involves the recovery of supply and demand disturbances. This approach is based on the work by Blanchard and Quah (1989) and Bayoumi and Eichengreen (1994). As-

suming that output and inflation are stationary, then the bivariate moving average (BMA) representation of the growth and inflation sequences can be written as:

$$\begin{bmatrix} \Delta y_t \\ \Delta p_t \end{bmatrix} = \begin{bmatrix} C_{11}(L) & C_{12}(L) \\ C_{21}(L) & C_{22}(L) \end{bmatrix} \begin{bmatrix} \varepsilon_{1t} \\ \varepsilon_{2t} \end{bmatrix} \qquad (3.1)$$

where Δy_t is the growth rate and Δp_t is the inflation rate; ε_{1t} and ε_{2t} are independent white noise disturbances with constant variances (Enders 1995). The C_{ij} (L) are the polynomials in the lag operator such that the individual coefficients of C_{ij} (L) are denoted by C_{ij} (k). An important assumption is that one of the shocks (ε_{1t}) affecting output, the demand shock, has only a temporary effect, but with the possible cumulative effect on any Δy_t sequence being zero (Enders, 1995). In equation 3.1, the supply and demand shocks are not observed. However, when the variables are stationary, there exists a vector auto regression (VAR) representation written as:

$$x_t = A (L) \, x_{t-1} + e_t \qquad (3.2)$$

where: x_t is the column vector $(\Delta y_t, \Delta p_t)'$; and e_t is the column vector of the residuals (e_{1t}, e_{2t}).

Since the VAR residuals are composites of the pure innovations ε_{1t} and ε_{2t}, it can be shown that the residuals can be specified as:

$$\begin{bmatrix} e_{1t} \\ e_{2t} \end{bmatrix} = \begin{bmatrix} C_{11}(0) & C_{12}(0) \\ C_{21}(0) & C_{22}(0) \end{bmatrix} \begin{bmatrix} \varepsilon_{1t} \\ \varepsilon_{2t} \end{bmatrix} \qquad (3.3)$$

In order to identify the coefficients of the C matrix, four restrictions are required, with the main restriction being the demand shocks that have no long run effects on output. This restriction further allows the long run impact matrix to be uniquely defined and the demand and supply shocks to be identified.

It is important to note that in the estimation of the VARs, we accounted for shocks (like hurricanes) to the economies through the inclusion of dummy variables. In summary, VARs involving the growth rate of output were estimated separately for each country in the sample; thereafter, the method of Blanchard and Quah (1989) was used to recover supply and demand disturbances.

In the second step, following Boone (1997) and Babetskii et al. (2004), we applied the Kalman Filter to assess the degree of convergence of the

economies. A useful starting point is to consider three countries i,j and k. Suppose our goal is to test for the convergence of a variable X in country ι towards country j (X could represent supply or demand shocks). The following system can be estimated:

$$(X_t^j - X_t^i) = \alpha_t + \beta_t (X_t^j - X_t^k) + \varepsilon_t \tag{3.4}$$

where α and β are governed by the following transition equations:

$$\alpha_t = \alpha_{t-1} + \eta_{1t}$$
$$\beta_t = \beta_{t-1} + \eta_{2t}$$

It is assumed that ε_t is uncorrelated with both η_{1t} and η_{2t}. The implication of (3.1) and (3.4) is that as β tends to zero, the movements of X for country i are explained by the fluctuations of X in country j, which implies there is convergence. However, when β tends towards 1, the spread on x for country i and j are explained by the spread between countries j and k, implying the absence of any convergence between country i and j. The main advantage of using this technique is that it allows time varying parameters to be estimated, enabling the observation of the ongoing process.

Two feasibility studies are conducted. First, we examine the feasibility of a monetary union in CARICOM with Trinidad and Tobago at the center. To facilitate this, we test for convergence on Trinidad and Tobago as opposed to convergence on the rest of the world. This latter hypothesis is in keeping with the spirit of the CARICOM proposals on the formation of a monetary union. It is conceivable that the process of a monetary union could be deepened through an expansion of the Eastern Caribbean Currency Union. For our second hypothesis we test for convergence on the ECCU countries as opposed to convergence on to the rest of the world. Following Boone (1997) and Babetskii et al. (2004) we use the USA as a proxy for the rest of the world. For both hypotheses we used the Kalman Filter to estimate:

$$(X_i - X_j) = \alpha_\tau + \beta_t (X_i - X_{US}) + e_t \tag{3.5}$$

Where X_i, X_{US}, and X_j represented the supply (demand) shocks of Trinidad and Tobago (ECCU), the United States and the individual CARICOM countries, respectively. In addition α_τ and β_t are time-varying parameters. If there is convergence towards Trinidad and Tobago (ECCU) then β_t should be close to zero. Alternatively, if there is convergence towards the rest of the world (using the US as a proxy), then β_t approaches a value of 1 in the model.

4. DATA

The data used in the analysis consists of annual observations of real and nominal GDP for 15 CARICOM countries for the period 1970 to 2005. This period is chosen based on the availability of data for each country. Real dollar GDP is based on year 2000 prices and exchange rates. The source of the data is the National Statistical Offices, the National Central Banks and the United States Agency for International Development data base for Latin America and the Caribbean. The implicit price deflator is specified as the ratio of GDP/real GDP, with the annual change in the log of the GDP deflator being used as a measure of inflation, while the growth rate is defined as the change in the log of real GDP. The US annual data covering the period 1970 to 2005 is derived from the Federal Reserve Bank of St. Louis's (FRED) database. Because the estimation methodology involved the use of lags and first differences for the inflation rate and the growth rate, the second stage of the estimation covers the period 1972 to 2005.

5. RESULTS

Our results are derived from equation 3.4. It is important to point out that because the data series are considered as shocks, α should tend to zero, whether or not there is convergence. In every instance α approached zero; and therefore, we do not include the results for this parameter in our reported results. Accordingly, our attention is focused on the coefficient of the parameter β. In all cases, we use the US as a proxy for the rest of the world. Similar to Babetskii et al (2004), our results are based on the following interpretation: (i) Convergence is complete if beta is zero; (ii) convergence is weak if beta declines towards zero or (iii) beta show signs of declining over the latest part of the sample; (iv) the pattern is unclear when we observe an erratic pattern and (v) there is no convergence in all other cases.

5.1. Convergence on Trinidad and Tobago

Demand Shock Convergence: The results are presented in Table 1A. In most instances the betas are relatively large, indicating that there is no convergence. Based on the evidence from the demand shocks, we can conclude that a monetary union between Trinidad and Tobago and the other CARICOM countries would be too costly and should not be attempted at this time.

Table 1A. Demand Shocks Convergence to Trinidad and Tobago as opposed to the Rest of the World (Mean values of β)

Countries	1972-1983	1984-1994	1995-2005
Antigua and Barbuda	1.16 (0.64)	0.88 (0.03	0.78 (0.04)
The Bahamas	0.61 (0.28)	0.83 (0.02)	0.85 (0.01)
Barbados	0.83 (0.33)	0.88 (0.02)	0.90 (0.02)
Belize	1.19 (0.44)	0.93 (0.05)	0.89 (0.03)
Dominica	0.25 (0.90)	0.70 (0.04)	0.74 (0.02)
Grenada	0.68 (0.29)	0.85 (0.04)	0.81 (0.03)
Guyana	0.93 (0.62)	0.93 (0.14)	0.97 (0.06)
Haiti	0.82 (0.50)	0.65 (0.10)	0.67 (0.10)
Jamaica	0.50 (0.90)	0.27 (0.56)	1.47 (0.08)
St. Kitts and Nevis	1.12 (0.47)	0.95 (0.03)	0.78 (0.05)
St. Lucia	0.59 (0.44)	0.92 (0.03)	0.79 (0.02)
St. Vincent and the Grenadines	1.03 (0.41)	1.01 (0.05)	0.90 (0.02)
Suriname	0.52 (0.21)	0.50 (0.21)	0.88 (0.08)

Note: the β coefficient is estimated from Equation 3.5 over the sample period 1972-2005. The hypothesis being tested is convergence on Trinidad and Tobago ($\beta = 0$) as opposed to the rest of the world ($\beta = 1$). The numbers in parentheses are thestandard deviations.

Supply Shock Convergence: The findings are presented in Table 1B. Convergence appears to be weak in the case of Dominica and St. Lucia. For most of the other countries, the betas are very large, indicating a lack of convergence. The implication of these results is that a monetary union between Trinidad and Tobago and the rest of CARICOM would be too costly and should not be attempted at this time.

Table 1B. Supply Shocks Convergence to Trinidad and Tobago as opposed to the Rest of the World (Mean values of β)

Countries	1972-1983	1984-1994	1995-2005
Antigua and Barbuda	0.55 (0.29)	0.67 (0.07)	0.72 (0.05)
The Bahamas	-0.05 (0.54)	0.05 (0.03)	0.34 (0.02)
Barbados	0.55 (0.28)	0.72 (0.05)	0.69 (0.03)
Belize	0.46 (0.42)	0.58 (0.09)	0.48 (0.04)
Dominica	1.48 (0.07)	0.45 (0.15)	0.36 (0.07)
Grenada	-0.47 (0.64)	0.15 (0.25)	0.91 (0.02)
Guyana	0.98 (0.46)	0.97 (0.04)	0.69 (0.02)
Haiti	0.47 (0.03)	0.67 (0.07)	0.69 (0.03)
Jamaica	0.70 (0.33)	0.78 (0.05)	0.73 (0.03)
St. Kitts and Nevis	-0.40 (0.37)	-0.26 (0.30)	0.28 (0.07)
St. Lucia	0.08 (0.37)	-0.41 (0.24)	-0.16 (0.03)
St. Vincent and the Grenadines	0.31 (0.22)	0.62 (0.12)	0.67 (0.04)
Suriname	0.56 (0.27)	0.67 (0.05)	0.64 (0.04)

Note: the β coefficient is estimated from Equation 3.5 over the sample period 1972-2005. The hypothesis being tested is convergence on Trinidad and Tobago ($\beta = 0$) as opposed to the rest of the world ($\beta = 1$). The numbers in parentheses are the standard deviations.

5.2. Convergence on the ECCU as Opposed to the Rest of the World

Demand Shocks: The results are presented table 2A. There is evidence of convergence in the case of Suriname, whereas for Haiti convergence is weak. For Belize, Guyana and Jamaica, there is the appearance of wide divergence, particularly over the period 1984 to 1994. However, this may be explained by

the episodes of economic difficulty that some of these countries have experienced since the 1980s. In the case of Trinidad and Tobago, the period 1995 to 2005 witnessed an increasing degree of divergence with the ECCU. In relation to the demand shocks, it appears that Haiti and Suriname would be good candidates for entry into the ECCU. For the other countries, however, the cost of a monetary union would be relatively large, based on the lack of convergence in the demand shocks.

Table 2A. Demand Shocks Convergence to the ECCU as opposed to the Rest of the World (Mean values of β)

Countries	1972-1983	1984-1994	1995-2005
The Bahamas	1.06 (0.45)	0.98 (0.05)	0.82 (0.04)
Barbados	0.74 (0.35)	0.70 (0.02)	0.66 (0.02)
Belize	0.45 (0.48)	0.96 (0.04)	0.84 (0.05)
Guyana	0.31 (0.45)	0.49 (0.11)	0.47 (0.03)
Haiti	0.34 (0.45)	0.74 (0.25)	0.31 (0.26)
Jamaica	0.11 (0.71)	0.62 (0.53)	1.25 (0.11)
Suriname	0.55 (0.51)	0.02 (0.14)	0.06 (0.16)
Trinidad and Tobago	1.23 (1.02)	0.47 (0.14)	0.59 (0.03)

Note: the β coefficient is estimated from regression 3.5 over the sample period 1972-2005.
The hypothesis being tested is convergence on the ECCU ((β =0) as opposed to the rest of the world (β =1).
The numbers in parentheses are the standard deviations

Supply Shocks: The results are presented in Table 2B. For Belize convergence on the ECCU can best be described as weak. For the other countries, however, the betas are too large to imply any kind of convergence. It appears that for the most part, there was an increase in the level of asymmetry between the ECCU and the other countries. This is largely attributable to the sharp fall in banana prices, which coincided with the advent of the EU in 1992. Based on evidence from the convergence of supply shocks, the case for opening up the ECCU to other countries of CARICOM is weak.

Table 2B: Kalman Filter Estimates of supply Shocks Convergence to the ECCU as opposed to the Rest of the World (Mean values of β)

Countries	1972-1983	1984-1994	1995-2005
The Bahamas	0.64 (0.43)	0.74 (0.10)	0.72 (0.06)
Barbados	0.68 (0.23)	0.78 (0.03)	0.75 (0.02)
Belize	0.29 (0.17)	0.21 (0.06)	0.20 (0.01)
Guyana	1.04 (0.35)	1.49 (0.03)	0.99 (0.02)
Haiti	0.62 (0.29)	0.68 (0.06)	0.69 (0.02)
Jamaica	0.77 (0.26)	0.82 (0.05)	0.78 (0.02)
Suriname	0.63 (0.21)	0.66 (0.03)	0.65 (0.02)
Trinidad and Tobago	0.36 (0.16)	0.45 (0.04)	0.41 (0.01)

Note: the β coefficient is estimated from equation 3.5 over the sample period 1972-2005.
The hypothesis being tested is convergence on the ECCU ((β =0) as opposed to the rest of the world (β = 1). The numbers in parentheses are the standard deviations.

6. CONCLUDING REMARKS

We have examined two convergence hypotheses for a monetary union in selected Caribbean countries. In keeping with the CARICOM proposals, we examined the formation of a monetary union with Trinidad and Tobago as the center. We also examined the feasibility of expanding the ECCU to all the other members of CARICOM. The data does not support either of the two scenarios.

The lack of convergence may be due, in part, to the low level of interregional trade. This result is consistent with research findings by Frankel and Rose (1998), and Baxter and Kouparitsas (2005) who identified trade intensity as a robust determinant of business cycle synchronization. From a policy perspective, therefore, efforts to strengthen and deepen intraregional trade could be the first step required before efforts are made to establish a single currency in CARICOM. Additionally, Faia (2007) found that synchronization

was influenced by the degree of financial linkages, while (Darvas et al., 2005) noted that greater synchronization could result from improved fiscal discipline among members states. CARICOM policy makers should therefore focus on these issues as well as on the removal of cross border restrictions on capital flows, as they seek to implement a single CARICOM currency.

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Résumé

Cet article analyse l'hypothèse d'une union monétaire aux Caraïbes en prenant en considération deux cas : l'élargissement des l'Union Monétaire des Caraïbes Orientaux et la formation d'une union nouvelle, centrée au Trinidad et Tobago. Le Kalman Filter est applique pour dériver les estimations *time varying* pour le degré de convergence des chocs qui mesure les niveau de synchronie des économies des Caraïbes. Les résultats démontrent qu'il n'y a pas de support pour les deux cas et les auteurs recommandent un renforcement des échanges commerciaux dans la région et des accords institutionnels avant qu'une monnaie commune ne soit créée.