

## A SINGLE CURRENCY FOR THE PACIFIC ISLAND COUNTRIES: A STEPWISE APPROACH

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*Two agreements, the Pacific Agreement on Closer Economic Relations and the Pacific Island Countries Trade Agreement, which were signed in August 2001, are important milestones towards greater regional integration in the south Pacific. In addition to trade integration, the adoption of a single currency for 12 countries in Europe and similar efforts in the Eastern Caribbean Currency Union have kindled new interest in the subject. This paper seeks to examine, as a first step, the feasibility of a single currency for a compact group of the Melanesian island countries, which share many commonalities.*

In August 2001, economic integration efforts in the South Pacific region were given a boost by the signing of two agreements by the 16-member countries<sup>1</sup> of the Pacific Islands Forum (the Forum). These two agreements are known as the Pacific Agreement on Closer Economic Relations (PACER), signed by all Forum Countries (FCs) and the Pacific Island Countries Trade Agreement (PICTA), signed by 14 Forum Island Countries (FICs).

Whilst PACER sets out the general basis for the future development of trade between all FICs, PICTA specifically provides for the establishment of a free trade area among 14 FICs with a population of six million people. This is to be achieved by the phasing out of trade barriers of all kinds by 2010. However, for the nine least developed FICs, namely Cook Islands, Kiribati, Nauru, Niue, Samoa, Solomon Islands, Marshall Islands, Tuvalu and Vanuatu, the deadline for the phasing out of tariffs has

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<sup>1</sup> Member countries of the Forum are referred to as Forum Countries (FCs). They are two developed countries, Australia and New Zealand; and 14 developing island countries, also known as Forum Island Countries (FICs). The FICs are: Cook Islands, Federated States of Micronesia, Fiji, Kiribati, Nauru, Niue, Palau, Papua New Guinea, Marshall Islands, Samoa, Solomon Islands, Tuvalu, Tonga and Vanuatu. The PICTA will come into effect after its ratification by six FICs. As of February 2003, only five FICs (Cook Islands, Fiji, Niue, Samoa and Tonga) had ratified it. The broader PACER, however, came into force on October 3 after the seven required ratifications (Australia, Cook Islands, Fiji, New Zealand, Niue, Samoa and Tonga) were obtained.

been fixed as 2012 (Qalo, 2001). When implemented, free trade between FICs and eventual economic cooperation between FICs and FCs are likely to bring about substantial gains in the long run (Scollay, 1998, Centre for International Economics, 1998).

Worldwide trends in economic integration ranging from preferential trading arrangements to free trade arrangements and to ultimate economic and monetary union<sup>2</sup> in both developed and developing regions have kindled great interest in the subject for the policy makers in the South Pacific (Jayaraman, 2002). The economic gains of a currency union with a single currency in circulation replacing independent currencies are substantial. They include reduction in transaction costs, formulation and implementation of a single monetary policy and harmonization of fiscal policies. These features are expected to contribute to the development of a single economic space (Worrell, 2001), resulting in the emergence of a single financial and capital market. In such a market, it is expected that investors from all member countries will jointly conceive, plan and implement investment projects in areas such as tourism, fisheries and forestry in which island countries have a comparative advantage. Further, a region-wide capital market would also speed up diversification of the economies by enlarging the market size for products and services and these efforts can be effectively undertaken only by domestic enterprises. Since foreign investment has been seen to follow the well-trodden paths of demonstrated profitability, only indigenous efforts at the subregional level can meet the adverse effects of external shocks (Worrell, 2001).

The objective of this paper is to explore the possibility of a currency union in the South Pacific by adopting a stepwise approach. In the region, four Melanesian countries, namely, Fiji, Papua New Guinea, Solomon Islands and Vanuatu have shown a degree of commitment by undertaking initiatives since 1994 towards promoting regional trade and cooperation. They formed an informal trade bloc known as the Melanesian Spearhead Group (MSG). It is, therefore, considered more appropriate to focus our attention in this paper on MSG countries with a view to examining the possibility of their eventual monetary integration, as a first step before considering a currency union for all 14 FICs in the region. The paper is organized into five sections: the first section provides a background; the second section of this paper examines whether MSG countries fulfill the pre-conditions; the third section deals

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<sup>2</sup> The monetary union arrangement, which is a looser concept than currency union allows the circulation of individual national currencies with no need for a common currency under the following conditions: (i) the currencies of member countries should be fully convertible at immutably fixed exchange rates; (ii) there should be a single monetary policy which is determined at the union level, permitting no autonomy at the national level; and (iii) there should be a single external exchange rate policy (Allen 1976). Monetary union allows an exit from the monetary union, when a member country wants to return to its previous regime. The exiting country can easily fall back upon its own currency. Such an exit from a currency union is far more difficult. The exiting member country will have to face substantial costs towards restoring its discontinued national currency and reviving its central bank and related arrangements.

with fiscal and monetary discipline as goals of currency union; the fourth section evaluates the costs and gains involved in terms of loss of seignorage revenue and reduction in transaction costs; and the final section presents a summary and conclusions.

## I. BACKGROUND

The birth of the euro in 1999, as a common currency first for 11 member-countries<sup>3</sup> in the European Union's Economic and Monetary Union (EMU), began with similar efforts in 1958 towards free trade amongst themselves and with common tariffs against third countries. In the developing world, there are notable integration efforts in Africa and in the Caribbean region. The African attempts have been Communauté Financière Africaine (CFA), the West African Monetary Union and the Central African Economic and Monetary Union and the rand zone. While these attempts have been marked by conflicts of various sorts, the most durable currency union since 1976 has been the Eastern Caribbean Currency Union (ECCU)<sup>4</sup> which is reputed for its very stable exchange rate regime for the last 25 years with a low inflation record.

Experiences of the Caribbean Island countries, with which the South Pacific Island countries share many commonalities (Fairbairn and Worrell, 1996), are more relevant. However, there is a basic difference between the two regions. In contrast to the Caribbean region, political solidarity which is an essential requirement for monetary union since the question of monetary sovereignty is involved in such integration efforts (Demas, 1974 and Blackman, 1998), is lacking in the South Pacific. The Caribbean islands have already recorded substantial progress in this area by having set up a customs union in 1973, known as the Caribbean Community (CARICOM). Further, a currency union (ECCU) for eight member countries of the Organization of Eastern Caribbean States (OECS) has been in existence since 1976. The stepwise approach by the formation a currency union in 1976 by eight member states of OECS proved an outstanding success and has been hailed as an inspiration for the rest of the Caribbean region.

The exchange rate arrangements of 14 FICs vary, spanning the continuum from the exclusive use of a foreign currency as domestic currency through to a freely floating domestic currency. There are eight FICs, which do not have any independent domestic currency of their own. After gaining political independence, they decided to

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<sup>3</sup> Austria, Belgium, Finland, France, Germany, Ireland, Italy, Luxembourg, Netherlands, Portugal and Spain, which were joined by Greece in 2001.

<sup>4</sup> The member countries of ECCU are: Antigua and Barbuda, Dominica, Grenada, Montserrat, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines with the British Virgin Islands and Anguilla as associate members. Maintenance of a stable exchange rate for 25 years at US\$ 1 = EC\$ 2.70 and low inflation in the ECCU countries compared with that of other member countries in the Caribbean Community (CARICOM) are major achievements (Hilaire 2001 and 2000; Van Beek 2000; and Hilaire and others 1994; Blackman 1998).

adopt the respective currencies of their previous colonial masters such as Australia, New Zealand or the United States as their legal tender, an arrangement, which is referred to as dollarization. These eight FICs are Kiribati, Nauru and Tuvalu: Australian dollar; Cook Islands and Niue: the New Zealand dollar; and Marshall Islands, Federated States of Micronesia and Palau: United States dollar.

**Table 1. Melanesian spearhead group of countries: basic indicators**

<i>Countries</i>	<i>Fiji</i>	<i>PNG</i>	<i>Solomon Islands</i>	<i>Vanuatu</i>
Population 1999 ('000)	811.0	4 400.0	459.0	188.0
Annual average GDP growth rate: 1990-1999 (per cent)	3.0	4.4	3.4	1.9
Per capita GDP 1999 (US\$)	2 310.0	810.0	750.0	1 180.0
Structure of the economy: 1995-1999				
Share of agriculture (per cent)	18.0	29.0	22.0	16.0
Share of industry (per cent)	25.0	38.0	15.0	11.0
Share of services (per cent)	57.0	33.0	63.0	74.0
External aid: 1995-1999				
Per capita (US\$)	46.0	79.0	102.0	222.0
(per cent of GNP)	2.2	n.a.	12.5	14.4
Average overall fiscal balance: 1995-1999				
Excluding grants (per cent of GDP)	-3.7	-6.6	-16.2	-5.6
Including grants (per cent of GDP)	-3.5	-2.1	-3.4	4.7
Average external current A/C (per cent of GDP): 1995-1999	0.9	3.9	2.4	2.1
Growth in M2 (per cent): 1990-1999	-0.1	11.9	8.7	5.0
Currency as per cent of GDP (average of 1990-1999)	4.5	3.6	5.5	5.8
Annual average of high powered money per cent of GDP: 1990-1999	9.0	4.8	7.5	11.7
Annual average inflation (per cent) (1990-1999)	4.2	8.7	10.8	3.3
Average of export and imports (per cent of GDP): 1995-1999	85.9	103.6	99.8	95.0
International reserves: 1999				
Months of import cover	4.6	1.2	2.8	3.0
External debt (per cent of GNP) 1999	9.3	78.6	50.7	28.2
Debt service (per cent of exports) 1999	3.5	9.6	4.7	1.1

*Sources:* Asian Development Bank (2001).  
World Bank (2001).

Dollarization has enabled each of the eight FICs to enjoy substantial savings in terms of financial and human resources. These resources would have been otherwise spent away on establishing and running central banks for formulating and implementing

an independent monetary policy for each island country, responsibilities for which have been now shifted to the central banks of the concerned metropolitan countries. The policy behind such savings embody a 'piggy back' or 'free rider' effect of using an established foreign currency as one's own; and this is regarded as one of the "virtues of small, open island economies" (Armstrong and Read, 1998, 2002a, 2002b).

It should be noted that the dollarization of these eight FICs was not inspired by any economic integration philosophies. None of the aforementioned metropolitan powers were keen themselves for any economic union with the FICs. Dollarization just happened to be an administrative arrangement of expediency and convenience at independence but which also proved subsequently useful. It should also be noted that there were no moves of a notable nature towards economic integration with metropolitan countries initiated by them since their independence. Further, there has been no instance of any sharing of seignorage revenue by Australia, New Zealand or the United States with the eight FICs.

There are six FICs (Fiji, Papua New Guinea, Samoa, Solomon Islands, Tonga and Vanuatu) which have their own national currencies. Of these, five have pegged their currencies to baskets of currencies of major trading partners, whose composition and trade weights are kept confidential. Only one FIC, namely Papua New Guinea has a floating exchange rate regime since mid-1994. However, noting that each FICs inflation record during a ten-year period (1991-2000) was not significantly different from that of the others, Rosales (2001) observes that as far as the Pacific region is concerned, there is nothing to commend any specific exchange rate regime.

In these circumstances, ongoing initiatives by four MSG countries since 1994 towards promoting greater intra-trade and deepening political association assume significance. Aside from the trade objective, various initiatives by MSG countries including their readiness to assist a fellow MSG country in periods of distress such as sending peacekeeping forces to Papua New Guinea and the ongoing attempts at solving inter-island ethnic strife in Solomon Islands are worth mentioning. In the context of rising political solidarity among the MSG countries, it would be appropriate to adopt a stepwise approach towards monetary integration and an ultimate currency union in the South Pacific region, similar to ECCU in the Caribbean region.

## II. MSG COUNTRIES AND OPTIMUM CURRENCY AREA CRITERIA

The optimum currency area (OCA) criteria, which have been derived from the contributions of Mundell (1961), McKinnon (1963) and Kenen (1969) are applied for the analysis in this section. The purpose is to evaluate whether a given set of countries is ready for monetary integration with the coexistence of their currencies but with immutable exchange rate relationships between them and for the much more restricted version, currency union with a single currency, replacing their national currencies (Grauwe, 1997). The OCA criteria relate to:

- (i) Intraregional trade and openness
- (ii) Similarity in economic structures and product diversification
- (iii) Factor mobility
- (iv) Fiscal transfers

The four MSG countries are highly open economies. Exports and imports expressed as a proportion of gross domestic product each year during 1995-99 on an average were about 86 per cent for Fiji, 95 per cent for Vanuatu and well above 100 per cent for both Papua New Guinea and Solomon Islands (table 1). However, their intraregional trade volume (table 2) was very low. Intraregional trade, expressed as a percentage of GDP in 2000 was below 1 per cent of GDP for both Fiji and Papua New Guinea, whereas for Solomon Islands it was 3.7 per cent and 5.7 per cent for Vanuatu (table 2). However, there has been an upward trend in intraregional trade both in terms of percentages of GDP and of total trade for each MSG country. Australia is the leading country among the major trading partners of MSG countries. Trade with Australia is about 25 per cent of total trade for all MSG countries, except for Papua New Guinea, with whom New Zealand and Australia have equal proportions of

**Table 2. Intraregional export of Melanesian Spearhead Group of Countries**

<i>Countries</i>		<i>Intra-regional exports (per cent of total exports)</i>	<i>Intra-regional Imports (per cent of total imports)</i>	<i>Intra-regional trade (per cent of total trade)</i>	<i>Intra-regional trade (per cent of GDP)</i>	<i>Total trade (per cent of GDP)</i>
Fiji	Average of 1994-1997	0.31	0.07	0.38	0.505	76.87
	1998	1.75	0.12	1.87	0.73	86.84
	1999	1.56	0.10	1.57	0.64	90.62
	2000	2.10	0.14	2.24	0.94	89.62
Papua New Guinea	Average of 1994-1997	0.03	0.03	0.06	0.11	88.89
	1998	0.21	0.24	0.45	0.21	94.70
	1999	0.18	0.26	0.44	0.23	114.12
	2000	0.21	0.36	0.57	0.29	116.45
Solomon Islands	Average of 1994-1997	0.38	0.66	1.04	1.92	94.27
	1998	1.07	4.30	5.10	2.66	108.46
	1999	1.29	3.70	4.36	2.81	110.78
	2000	2.10	6.10	8.20	3.70	85.89
Vanuatu	Average of 1994-1997	0.01	0.93	0.94	2.67	85.58
	1998	1.41	5.67	7.08	3.92	92.30
	1999	1.19	4.12	5.31	3.98	122.87
	2000	4.84	8.55	13.39	5.75	79.20

Source: IMF (2001).

**Table 3. Melanesian Spearhead Group of Countries trade with major partners**

Country	Trade with Australia (per cent of total trade)	Trade with Australia (per cent of GDP)	Trade with New Zealand (per cent of total trade)	Trade with New Zealand (per cent of GDP)	Trade with Japan (per cent of total trade)	Trade with Japan (per cent of GDP)	Total trade (per cent of GDP)
<b>Fiji</b>							
1994-1997 (Average)	24.57	18.87	12.21	9.23	6.40	4.95	76.87
1998	25.91	22.50	10.34	8.98	4.82	4.18	86.84
1999	24.91	22.58	9.54	8.65	4.65	4.22	90.62
2000	26.65	23.88	8.56	7.67	4.04	3.62	89.62
<b>Papua New Guinea</b>							
1994-1997 (Average)	18.14	16.13	2.36	2.07	14.54	12.86	88.89
1998	18.22	17.25	1.87	1.77	9.24	8.75	94.70
1999	15.71	17.93	1.32	1.50	9.42	10.76	114.12
2000	14.11	16.43	1.60	1.86	8.67	10.09	116.45
<b>Solomon Islands</b>							
1994-1997 (Average)	23.19	21.84	3.72	3.50	36.30	34.14	94.27
1998	22.09	23.96	2.45	2.66	19.63	21.29	108.46
1999	23.49	26.02	3.49	3.87	22.22	24.62	110.78
2000	20.57	17.67	3.35	2.88	12.92	11.10	85.89
<b>Vanuatu</b>							
1994-1997 (Average)	23.89	20.27	4.55	3.82	41.81	36.00	85.61
1998	20.28	18.72	3.30	3.05	16.98	15.67	92.30
1999	16.91	20.77	2.88	3.54	35.97	44.20	122.87
2000	24.02	19.03	5.03	3.98	18.99	15.04	79.20

Source: IMF (2001).

trade, namely 16 per cent. The second major trading partner for Fiji, Solomon Islands and Vanuatu is New Zealand (table 3). In May 2002, intraregional trade among MSG countries was given a further boost with Papua New Guinea allowing 350 more Fiji products to be imported with little or no tariff.

The MSG countries' economic structure is basically primary sector oriented. The services sectors for all countries mainly in terms of tourism have played a dominating role. Only Fiji and Papua New Guinea have a significant manufacturing base, which enables them to process primary goods for both domestic markets as well as for exports. The leading manufactured exports are sugar, copra products and

processed foods such as cooking oil, biscuits and spices. Vanuatu is the leading exporter of beef, mostly to Japan. Solomon Islands exports palm oil and fresh and canned fish.

The revival in October 2001 of the original 1998 Sugar Agreement between Fiji, the only sugar producing country in the region and other FICs, which was suspended due to supply and production difficulties, is expected to increase the intra-trade volume. Other than sugar, exports of MSG countries are similar: kava, fish and logs. Thus, MSG countries, except Fiji and Papua New Guinea are much less diversified. However, between Fiji and Papua New Guinea there is no intra-industry (differential product) trade.

External shocks are traced to unexpected changes in prices of export commodities and they vary: sugar in the case of Fiji, minerals and coffee for Papua New Guinea, palm oil and logs for Solomon Islands and beef, coffee, copra and cocoa for Vanuatu. De Brouwer (2000) undertook a study on the impact of these shocks on FICs by analyzing past movements in real effective exchange rates. The latter being endogenous, prices are the outcome of the structure of the economy as well as domestic and external shocks. If a given set of countries were similarly placed both in terms of economic structure and external and domestic shocks, their real effective exchange rate movements would have common trends. In his study on real effective exchange rate movements in all FCs, including FICs and the developed countries, Australia and New Zealand, de Brouwer (2000) showed that that there has been substantial divergence from each other, indicating that all the Forum countries were prone to asymmetric shocks.

**Table 4. Correlation of annual growth rates of real GDP with MSG regional growth rates**

	<i>MSG region</i>		
	<i>1984-93</i>	<i>1994-99</i>	<i>1984-99</i>
Fiji	0.557	0.577	0.494
Papua New Guinea	0.573	0.892	0.700
Solomon Islands	0.504	0.489	0.499
Vanuatu	0.329	0.477	0.463

*Source:* Author's Calculations.

A more simple analysis was undertaken to determine the extent to which the GDP growth rates of MSG countries move together. Table 4 presents the estimated coefficients of correlation between real GDP growth rates of each of the four MSG countries with the annual real growth rate of the MSG region. Over the fifteen-year

period (1984-1999) as well as in a recent six-year period (1994-1999), correlation is found to be low. Thus, there has not been any notable convergence in growth rates of MSG countries, although the correlation coefficient between Papua New Guinea's growth rate and the regional growth rate was relatively high. In regard to the association between regional growth rates and Australian and New Zealand growth rates, the correlation coefficient is negative for the 16-year period (1984-1999) and in recent years although positive, is very low (table 5).

**Table 5. Correlation of regional growth rates with growth rates of Australia and New Zealand**

	<i>Australia</i>			<i>New Zealand</i>		
Region	1984-93	1994-99	1984-99	1984-93	1994-99	1984-99
	-0.340	0.074	-0.332	-0.224	0.586	-0.660

*Source:* Author's Calculations.

Prices and wages in all four MSG countries have not been flexible downwards. The downward inflexibility is due to the presence of strong unionism in the public sectors, which dominate the economy's formal sectors. Therefore, any unhindered labour mobility between the four countries could provide a way out to reduce the adverse impact of asymmetric shocks. However, this is not the case. There are legal hurdles to free intraregional labour mobility. Further, there is no likelihood in the near future of a change in migration policies in the region. As regards fiscal transfers, there has not been any instance in the past of such transfer of funds. Thus, most of the traditional OCA conditions are not satisfied for suggesting a currency union for MSG countries.

These trends should not by themselves discourage efforts towards integration, since most of the literature on OCA criteria was written in the context of European monetary integration. It is increasingly argued that these criteria do not have much predictive power when applied to actual exchange rate regimes. Masson and Pattillo (2001) refer to the findings of a recent study by Frankel and Rose (2000, 1998). Their findings are that OCA criteria are to some extent endogenous and that currency union might help make the shocks hitting member countries more symmetric and may also expand intraunion trade. These findings echo similar views expressed by Scitovsky (1958), just around the time when the European common market was born, that common currency arrangements would tend to make countries more similar. The reasoning runs as follows: a single currency will encourage a greater volume of trade among the members of a currency union since transaction costs would be reduced and uncertainty in exchange rate movements would be completely eliminated. An evolving,

single market would stimulate trade. As the volume of intraunion trade increases, economic divergence will decrease and each country would become more like each other, thus reducing asymmetric shocks. As a result, OCA criteria would be gradually endogenized.

However, the optimism about the endogenization of the OCA conditions is not widely shared. Anthony and Hughes-Hallett (1999) observe that if the pre-union intraindustry (differential product) trade is found almost exclusively in the trade of manufactured goods, which is generally observed in large and well-diversified economies, there is a likelihood of economic convergence taking place after the union. Since MSG countries are small in size and as there has been no substantial trade in manufactured goods, it is too difficult to expect any more diversified industrial structures to evolve and result in greater intraindustry trade. Thus, endogenization of OCA conditions does not appear to be a possibility. If OCA criteria are not fulfilled before the union and chances of endogenization of OCA are also remote, what are the incentives for a group of countries to strive towards a currency union? The next section deals with these aspects.

### III. GOALS OF MONETARY AND FISCAL DISCIPLINE

The arguments in favour of a currency union for countries, which have not yet fulfilled the OCA criteria as prior requirements because of a poor policy environment, are largely inapplicable in regard to achieving the desired goals of discipline. These relate to monetary and fiscal rectitude, resulting in low inflation and exchange rate stability. A single common currency, aside from reduction in transaction costs in payments promoting trade in commodities and tourism, would mean a single monetary policy with one central bank for the region as a whole. A common central bank replacing national central banks is expected to be more independent and assertive; and thus, it would be able to resist pressures from individual member governments to monetise fiscal deficits (Fry, 1993). In other words, the common central bank would act as “an agency of constraint” (Collier, 1991).

Because of rigid fiscal discipline indirectly imposed by a more autonomous common central bank, the exchange rate of the currency union, if floated or when anchored to a strong external currency as in the case of ECCU, would come under much less pressure than otherwise. Policy credibility would, therefore, be a positive gain. Additional gains would be mainly in terms of savings in both human and financial resources, which are likely to arise from economies of scale in the conduct of a common monetary policy. In the context of a relative scarcity of qualified staff, a common central bank of the currency union would release excess resources in skilled human resources, which are presently employed in each country’s central bank, for employment in other critical areas in the private and public sectors (Rosales, 2001).

In the CARICOM region, the gains outlined above provided powerful arguments in favour of currency union. Policy credibility and improvement in macroeconomic discipline in the region were the motivating forces for concluding an agreement in 1992 for a currency union<sup>5</sup> for the entire region expanding beyond the existing ECCU. The following criteria for accession to currency union, referred to as convergence criteria, were laid down requiring that each country in CARICOM should have:

- (i) maintained an unchanged US dollar value of its currency for 36 consecutive months;
- (ii) maintained a minimum of foreign exchange reserves equivalent to three months of imports for at least 12 consecutive months; and
- (iii) recorded a ratio of external debt service to the export of goods and services of no more than 15 per cent.

Since regional integration efforts in the South Pacific are only of recent origin, no such criteria have evolved so far. However, as a rule of thumb, one can apply the CARICOM criteria to MSG countries as well. Examining the performance of four MSG countries against each of the three criteria reveals that the Solomon Islands have lagged considerably behind the other three MSG countries.

Among the four MSG countries, Fiji, Solomon Islands and Vanuatu have adopted a fixed pegged rate arrangement under which their currencies are linked to a basket of currencies of their major trading partners, Australia, New Zealand, Japan and the United States. On the other hand, Papua New Guinea has an independently floating exchange rate<sup>6</sup> since 1994. In regard to exchange rate stability, the last devaluation of Fiji's currency was in 1998, which was considered as a pre-emptive step in the wake of the Asian financial and currency crises. The new rate since then is allowed to fluctuate around a narrow band. There were, however, fears of devaluation in May 2000, when there was a violent change of Government, which was followed by capital outflows. However, timely intervention by the Reserve Bank of Fiji in terms of capital controls and restrictions on current account transactions stemmed further outflows and restored some stability.

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<sup>5</sup> Decision of the Conference of the Heads of Governments of the Caribbean Community on Caribbean Monetary Integration, Port of Spain, Trinidad and Tobago, July 1992. For details, see Farrell and Worrell (1994:244-246).

<sup>6</sup> There are press reports from time to time that Papua New Guinea would be re-examining its exchange rate regime, as the flexible exchange rate system has exposed the country to high risks due to fluctuations in its currency. Worrell (2001) argues that a fixed exchange rate regime is preferable for small open economies for the following reasons: changes in exchange rates do not automatically result in switches in expenditure towards production for export and consumption of import substitutes: also, such changes have no effect on financial inflows and outflows if the exchange rate change is anticipated. They only precipitate capital flight in cases of unanticipated devaluation. Furthermore, exchange rate depreciation can and has been highly inflationary.

Solomon Islands devalued its currency in 1998. Its currency has been under constant pressure due to rising fiscal deficits and current account imbalances, aside from the pressures due to civil strife. In April 2002, the Solomon dollar was devalued by 25 per cent, but it was reversed within 24 hours and the Minister of Finance was forced to resign by the cabinet. The Reserve Bank of Vanuatu devalued its currency *vatu* in March 1998, following heavy capital outflows triggered by a run on its public sector owned provident fund. However, the devaluation was a short-lived one (Jayaraman, 2001).

Exchange rate stability has, thus, eluded MSG countries. The basic reasons are not far to seek. The fundamentals have not been sound: sustainable fiscal balance and monetary discipline, the lack of which was attributed to an absence of autonomy on the part of the central banks. Among the four MSG countries, Fiji has displayed far stricter fiscal and monetary discipline despite a fragile political environment since 1987.

In such a disparate group of countries with varying degrees of fulfillment of convergence criteria, there is obviously an asymmetric incentive problem involved in a currency union proposal. While Solomon Islands, which has a poor record of policy credibility, would prefer to enter a currency union with other countries having better economic fundamentals, the latter group of countries must have an additional incentive for welcoming it into a union. Anthony and Hughes-Hallett (1999) posed the same question in regard to currency union efforts in CARICOM: why should the better-governed countries admit those with weaker policy credibility and less fiscal and monetary discipline to their club? The dilemma faced by some successful CARICOM countries, including the Bahamas, Barbados, Belize, and the OECS, when faced with a decision to admit fellow countries with poor records to any hypothetical currency union, is referred to a “a version of the Groucho Marx theorem for club membership” (Hughes-Hallett, 1998).

This brings us to an important question. If a country wants to impart the credibility of fiscal and monetary discipline, instead of joining a currency union with a new regional currency, why could it not adopt a currency of a major trading partner, which has a proven record of low inflation, stable exchange rate and credible fiscal and monetary policies? By adopting the Australian dollar as its own currency, Solomon Islands, for example, can solve many of its current problems. First and foremost, there will be no question of frequent exchange rate adjustments. Second, as there will be no independent currency of its own, there would not be any need to formulate and implement a monetary policy for Solomon Islands, as authorities would leave monetary management and related worries to Australia’s central bank. The only worry would be about the prudent management of its own budget, since there will be no possibility of the monetization of budget deficits by the Reserve Bank of Australia. Fischer (1982) observed that the discipline imposed by the adoption of a foreign

currency as a legal tender by discontinuing use of domestic currency is greater than that imposed by adopting a regional currency pegged to a foreign one.

#### IV. SEIGNORAGE REVENUE AND TRANSACTION COSTS

The adoption of a foreign currency, as legal tender has its own cost, which has to be weighed against the gains of policy credibility. A major cost is the loss of revenue earned from the creation of domestic money, known as seignorage revenue. Seignorage accrues to the Government from its monopoly power to print money. Once the Government decides to discontinue the use of its own national currency by adopting a foreign currency, it is bound to lose seignorage revenue.<sup>7</sup>

Adopting the methodology employed by Fischer (1982), estimated figures of seignorage revenue earned by each of the four MSG countries as a proportion of their respective GDPs are given in table 6. The estimates are given in two versions: upper bound and lower bound. The upper bound includes the currency printed and reserves held by commercial banks with the respective central bank, whereas the lower bound

**Table 6. Seignorage revenue of the melanesian spearhead group of countries (per cent of GDP) Average of 1990-1999**

Countries	Inflation component		Real balance component		Seignorage	
	Lower bound <sup>1</sup>	Upper bound <sup>2</sup>	Lower bound <sup>1</sup>	Upper bound <sup>2</sup>	Lower bound <sup>1</sup>	Upper bound <sup>2</sup>
Fiji	0.189	0.378	0.135	0.270	0.324	0.648
Papua New Guinea	0.313	0.418	0.158	0.211	0.471	0.629
Solomon Islands	0.594	0.810	0.187	0.257	0.781	1.067
Vanuatu	0.191	0.386	0.111	0.222	0.302	0.608

Source: Author's calculations.

<sup>1</sup> In the calculation procedure, reserves kept by the commercial banks with the central bank are ignored.

<sup>2</sup> In the calculation procedure, both currency issued and reserves kept by the commercial banks with the central bank are taken into account.

<sup>7</sup> The only way to retain it is to negotiate with the country whose currency has to be adopted as legal tender and get an agreed percentage transferred each year. The chances of such a negotiated transfer on an agreed annual basis are remote, as it transpired when Argentina was considering dollarization in the late 1990s. The US Treasury and the Federal Reserve were reported to be against any transfer of funds by way of compensating the latter the loss of seignorage revenue. Further, the US Treasury and Federal Reserve were also unwilling to be lenders of last resort or to provide any liquidity in support of banks in dollarized countries (Latibeaudiere 2001).

estimate excludes reserves and relates only to currency. Each such estimate has two components: inflation component and real balance component. Even if we take the upper bound measure, we find only in the case of Solomon Islands that its seignorage revenue is slightly above one per cent of its GDP; in all the other three countries it is less than one per cent of their GDP. If we go by the lower bound, the revenue estimate is less than one per cent for all four countries. It is of interest to note that in the case of Solomon Islands and Papua New Guinea, both the inflation and real balance components of seignorage revenue are higher than in the cases of Fiji and Vanuatu, reflecting higher inflation and fiscal imbalances as given in table 1.

If MSG countries decide to form a currency union by adopting a common currency and establishing a common central bank, we can visualize seignorage revenue for the union as a whole under two possible scenarios. One is an initial period of say five years, known as formative years; and, two, in the long run. In the formative years, it is assumed that all four MSG countries would aim at maintaining the past 10-year average rate of economic growth and inflation experienced by each of them. It is also assumed that the currency/GDP ratio and high-powered money/GDP ratio for each country will be equal to the averages of 1990-99. These averages are indicated in table 1. In the long run, while the currency/GDP and high-powered money/GDP ratios for each country are assumed to remain the same, the currency union will aim at a GDP growth rate of 3 per cent and inflation at 2 per cent, as common goals. Incidentally, it will be of interest to note that these two rates were also the respective average rates for Australia during 1990-99.

Table 7 provides various estimates of seignorage revenue under these two scenarios. Taking the upper bound figures in the long run, with targeted GDP growth and inflation at 3 per cent and 2 per cent, the seignorage revenue estimates for all four countries are much lower, all falling below 0.5 per cent of GDP, except for Vanuatu being 0.6 per cent of GDP. The reason is obvious: low inflation under a credible policy environment of sustainable fiscal deficits and stricter monetary discipline.

The seignorage revenue of the currency union with a common currency goes to the common central bank, which can then be shared by the member countries. In the case of currency union or an independent country adopting a foreign currency as legal tender, such sharing is unlikely. This is one of the arguments put forward by Worrell (2001) against the use of the US dollar as common currency by the Caribbean region. The benefits of earning and retaining seignorage revenue of the currency union with its own common currency have to be weighed against the transaction costs involved in conducting trading and other transactions with the union's major trading partner. The four MSG countries' major trading partner is Australia. The economic transactions conducted by agents (households, firms and the Governments) in each MSG country with Australia involve conversion costs. The foreign exchange transaction costs are categorized into two: (a) financial costs, which cover bid-ask spread,

**Table 7. Seignorage in the melanesian group of countries after formation of currency union (per cent of GDP)**

Countries	Pre-Union (Average: 1990-1999)		Regional currency union				Currency union with Australia <sup>3</sup> or adopting Australian dollar	
	Lower bound	Upper bound	Formative years <sup>1</sup>		Long run <sup>2</sup>		Lower bound	Upper bound
			Lower bound	Upper bound	Lower bound	Upper bound		
Fiji	0.324	0.648	0.396	0.892	0.225	0.450	0.225	0.450
Papua New Guinea	0.471	0.629	0.354	0.475	0.177	0.239	0.177	0.239
Solomon Islands	0.780	1.073	0.542	0.751	0.274	0.379	0.274	0.379
Vanuatu	0.302	0.608	0.575	1.159	0.290	0.585	0.290	0.585

Source: Author's calculation.

Note: <sup>1</sup> In formative years, it is assumed the MSG countries would aim at 10-year (1990-99) average rates of real GDP growth and inflation experienced by each of them.

<sup>2</sup> As an ultimate goal, each country will aim at a 3% real GDP growth rate and not more than 2% inflation each year.

<sup>3</sup> In case of currency union or dollarization, each MSG country will target same rates of GDP growth (3%) and inflation (2%) as Australia averaged during 1990-1999.

commission fees and other costs including administrative costs, to be paid to commercial banks and foreign exchange dealers; and (b) in-house costs, which are resource costs involved in accounting and relevant departments in central bank dealing with foreign exchange management, payment procedures and payment delays and sub-optimal returns on cash management-which firms have to face (Anthony and Hughes-Hallett, 1999).

Employing the methodology used by Anthony and Hughes-Hallett (1999), we focus on financial costs associated with the Australian dollar and MSG currency transactions. These costs are determined by the volume of currency transactions and by the prices that foreign exchange dealers charge the economic agents for the conversion. Transaction costs are estimated as follows:

$$T = P \cdot K / \text{GDP} \quad (1)$$

Where, T = transaction costs (as per cent of GDP)

P = average charges for Australian dollar-MSG currencies conversion

K = volume of Australian dollar-MSG currencies transactions

Since MSG countries' transactions in financial assets denominated in Australian dollars are negligible, K relates only to current account trade and

non-factor services transactions in the balance of payments. Thus,  $K$  represents the sum of exports and imports of goods and services. Transaction costs charges depend on the size of transactions, the type of foreign currency transactions such as spot, forward and future, the nature of economic agent, household or firm and specific forms of payment such as bank transfers. In order to overcome these constraints, Anthony and Hughes-Hallett (1999) suggest a simple way out. By utilizing the seignorage ( $S$ ) estimate (as per cent of GDP) and the volume of transactions in Australian dollar-MSG currencies, the value of  $P$  is estimated, say  $P^*$ , which would make one indifferent to the use of either the union's common currency or the Australian dollar.

Thus setting  $S = T$  and using (1),  $P^*$  is calculated as follows

$$P^* = S/K^* \quad (2)$$

Where,  $K^* = K/GDP$

The estimated  $P^*$  for each MSG country is compared to a benchmark market estimate,  $P^b$  of the average transactions in MSG countries to check whether or not the latter values are larger than the former. If  $P^*$  is smaller than  $P^b$ , it could be concluded that there is a net benefit in using the Australian dollar in the currency union of MSG countries. If  $P^*$  is higher than  $P^b$ , the conclusion is that there is a net benefit for the currency union in using its own currency.

**Table 8. Estimated transaction costs (per cent of GDP) necessary to make MSG countries indifferent to the use of new regional currency or the Australian dollar**

<i>Countries</i>	<i>Regional currency union in formative years<sup>1</sup></i>	<i>Regional currency union in the long run<sup>2</sup></i>	<i>Currency union with Australia or dollarization<sup>2</sup></i>
Fiji	0.039	0.019	0.019
Papua New Guinea	0.028	0.014	0.014
Solomon Islands	0.034	0.017	0.017
Vanuatu	0.059	0.030	0.030

*Source:* Author's calculations.

<sup>1</sup> It is assumed each MSG country would aim at maintaining its annual respective average rates of real GDP growth and inflation experienced during 1990-1999.

<sup>2</sup> It is assumed each MSG country would aim at 3% real GDP growth rate and 2% inflation each year which are also the respective annual average rates experienced by Australia during 1990-1999.

The European Commission estimated the average currency transaction cost ranging from 0.3 per cent to 0.35 per cent of the value of the underlying transaction. Anthony and Hughes-Hallett (1999) in their study on the Caribbean currency union used the lower estimate, namely 0.3 per cent. Estimates of  $P^*$  for each MSG country are estimated and presented in table 8. The values of  $P^*$  for Fiji, Papua New Guinea, Solomon Islands and Vanuatu are 0.019 per cent, 0.014 per cent, 0.017 per cent and 0.030 per cent. As they are less than the benchmark figure of 0.3 per cent, the message is clear: MSG countries would do well by adopting the Australian dollar as their common currency rather than having a regional currency of their own.

## V. SUMMARY AND CONCLUSIONS

An examination of the case for a currency union for the four MSG countries shows that the optimum currency area (OCA) criteria in terms of large pre-union volume of trade, factor mobility, downward wage and price flexibility and fiscal transfers are not fulfilled. As regards the convergence criteria relating to exchange rate stability, import cover and external debt/GNP and debt service ratios, no MSG country has made the grade.

However, if monetary integration were desired in terms of the ever-elusive fiscal and monetary discipline, which is expected to be imposed by a more independent central bank free from political control, one would suggest dollarization as an alternative. Adopting a strong currency known for its stability under an efficient central bank known for its inflation targeting (such as the Australian dollar) as legal tender, would free MSG countries from the worries of currency and exchange rate management and enable them to enjoy low inflation and exchange rate stability. Further, elimination of transaction costs would be a major gain as well, since Australia has been the dominant trading partner for all MSG countries.

The "agency of restraint" solution would, however, mean loss of seignorage revenue. Further, there is no likelihood of any assurance of liquidity support in times of crisis for domestic commercial banks. During recent negotiations between Argentina and American Treasury officials in regard to the Argentine proposal for dollarization, the United States Government rejected the Argentine requests for a share in seignorage revenue and liquidity support to Argentine commercial banks, when needed (Latibeaudiere, 2001). There are no indications to suggest the Australian stand would be any different from that of the US.

In these circumstances, it is essential to forge vigorous coordination and cooperation among the central banks of four MSG countries (Hou and Jayaraman, 2002). Such cooperative efforts would help monitor any progress in reaching convergence on targeted criteria relating to exchange rate stability, fiscal deficits, international reserves and external debt. Close monitoring would contribute to laying down a firm basis for the monetary integration of MSG countries, enabling them

eventually to adopt a regional currency of their own. The latter alone would ensure that there would not be any loss of seignorage revenue and that a common central bank could continue its lender of last resort function.

Monitoring progress in reaching convergence would eventually take more time but would facilitate the monetary integration process, since intra-MSG trade volume during the waiting period is bound to grow and prepare the MSG countries to be in better shape for monetary integration. In the meanwhile, the political situation in the Solomon Islands, which has been a great source of concern for the past three years, is expected to improve. There have been notable joint efforts by Melanesian countries towards bringing an end to the country's inter-island and ethnic rivalries. Further, with the return of democracy in Fiji in 2001, there are encouraging signs of political stability emerging in the region. This would contribute to creating an appropriate environment for fostering political solidarity among MSG countries, which is an essential ingredient in economic integration attempts. The MSG countries have proved to be a more cohesive unit in the past. With a quick restoration of stability, the four island countries could strive for a higher degree of political cooperation in the region, which is critically required for regional progress.

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