



# Should Papua New Guinea adopt a stronger exchange rate regime?

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Given the likelihood of further fiscal and monetary indiscipline in the future, the authors look at what exchange rate regime may best reduce the scope for such indiscipline in Papua New Guinea. They argue that a 'strongly-fixed' regime such as a currency board or, preferably, changing to the Australian dollar would be best—to the benefit of reductions in currency, interest rate and inflation risks.

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In the 1990s there was a serious deterioration in the fiscal and monetary discipline of national government administrations in Papua New Guinea. As a result, the average rate of inflation in the 1990s was more than double the average rate in the 1980s. The government was compelled to float the national currency—the kina—in late 1994, and since then the nominal exchange rate relative to Papua New Guinea's major trading partners has fallen by around two-thirds. Four central bank governors have been dismissed during the past three administrations; in some instances, it seemed, with the purpose of interference with monetary policy. Thus, the independence of

the central bank (the Bank of Papua New Guinea)—a vital ingredient for the effective operation of pegged or floating exchange rates—seems to have been substantially undermined. These circumstances give rise to the question: in such a climate of poor policy discipline, what is the most effective exchange rate regime?

This paper looks at the pros and cons of the different exchange rate regimes and considers their appropriateness for Papua New Guinea given its domestic policy conditions. While there has been considerable optimism about the effectiveness of the new (Morauta) administration, we take a more pessimistic view based on our perception



that it will be difficult to change the political instability that underlies the lack of discipline in fiscal and monetary policy. We have come to the view that, as a means of reducing the high costs of policy indiscipline, Papua New Guinea should move from the present 'managed float' of the kina to a strongly fixed rate system, that is, a currency board arrangement, or adoption of the Australian dollar as the national currency. Our preference is for adoption of the Australian dollar.

### History of exchange rate regimes since independence

Following independence, Papua New Guinea pegged its kina exchange rate to a basket of currencies of its major trading partners (most importantly, Australia) as part of a so-called 'hard kina' policy package.<sup>2</sup> Given Papua New Guinea's high import dependence, the importation of inflation was to be limited through appreciation of the kina against the currencies of trading partners that had higher inflation. Thus, the exchange rate was adjusted at irregular intervals and, except for 1980, up to 1994 the annual inflation rate was held well below 10 per cent. However, because wages were indexed to the cost of living until 1992 and there was very limited productivity growth, the low inflation was achieved at the cost of an over-valued real exchange rate, with substantially adverse effects for the long-term development of Papua New Guinea's export industries (Duncan et al. 1998). The fixing of the exchange rate to a major currency in this way can be seen as a variant of the nominal exchange rate anchor policy used in trying to stabilise high inflation in South American countries and others.

In late 1994, the kina was floated in the wake of a fiscal crisis that resulted in international reserves falling close to zero. Since 1994, the kina has essentially been a

'managed' float. In part, this has been necessary because of the thinness of trading in the currency. But there has also been a tendency on the part of the government to try to fix the rate in response to the pressures from interest groups. The value of the kina against the US and Australian dollars has fallen substantially since the float. This, together with the deregulation of the labour market in 1992 and the less-than-full pass through of the devaluation into prices, has meant a substantial real depreciation of the kina (King and Sugden 1997; Duncan et al. 1998).

The economic costs of the deterioration in policy discipline appear to have been very large. As outlined in Xu (1999), average annual real GDP growth between 1985 and 1993 was 5.3 per cent and the average inflation rate was 5.1 per cent. By comparison, over the 1994–98 period average GDP growth was less than 1 per cent and the inflation rate averaged 11.2 per cent. The inflation rate in 1998 was 20 per cent and likely even higher in 1999. Underlying these indicators is the fiscal and monetary behaviour of the government. This can be captured in indicators such as public debt outstanding and the level of international reserves. The ratio of outstanding public debt to GDP rose steadily from less than 40 per cent in 1989 to over 60 per cent in 1998. International reserves measured in terms of months of imports were well above four months throughout the 1980s but collapsed to near zero in mid 1994. They rose to over four months in 1996 as government creditworthiness and exports improved but collapsed again in 1998 and 1999. (See also Economic Insights (1999) for a discussion of the deterioration in fiscal and monetary discipline in the 1990s.)

Given the poor performance of the government and the economy under the previous nominal anchor regime and the present floating rate regime, we should look to improving the operation of the existing regime or to an alternative that may assist in



improving fiscal and monetary discipline in Papua New Guinea.

## Exchange rate options

Duncan et al. (1998) discussed the appropriateness of four exchange rate options for Papua New Guinea. These four options were

- *a nominal anchor*, where the nominal exchange rate is fixed to a key foreign currency or a basket of foreign currencies. However, the level at which the rate is fixed may be changed, usually without warning
- *real exchange rate targeting*, where the nominal rate and monetary policy are adjusted so that the real exchange rate is maintained around a predetermined level
- *a currency board*, where, as with a nominal exchange rate anchor, the domestic currency is fixed to a major foreign currency. But under a currency board arrangement the country holds reserves of the foreign currency equal to at least 100 per cent of domestic base money, and preferably the fixed rate is enshrined in law to demonstrate commitment to the rate
- *a pure floating rate*, where the nominal exchange rate is allowed to be determined by the market. In a pure float the central bank would target a constant base money growth rate or an inflation rate. In 'managed float' situations there may be direct interventions in the foreign exchange market by the central bank or indirectly through its actions affecting the interest rate.

Duncan et al. (1998) did not discuss use of a common currency, such as the Australian dollar. Use of a common currency is considered here as a separate option.

It can be argued that with consistently effective fiscal and monetary policies any exchange rate regime will be effective.

However, while it is important to have effective fiscal and monetary management whatever the exchange rate regime, the adoption of regimes other than a pure float (and possibly a common currency) may be seen to be justified when it is necessary to constrain fiscal or monetary policy freedom in some way.<sup>3</sup> For example, the argument made in favour of the adoption of a nominal anchor within the hard kina policy package was that it forced the government to recognise that fiscal discipline was essential to controlling inflation and maintaining external balance. A sharp decline in foreign reserves would act as a signal for a tightening of government expenditure.

In the three managed exchange rate regimes—nominal anchor, real target and currency board—the central bank or monetary authority sets a target for the nominal or real exchange rate. The stability of these target regimes is dependent upon whether the fiscal and monetary policies are consistent with the targets chosen. The advantage of the currency board over the other managed rate regimes is that the issuance of base money is strictly limited to the amount of foreign reserves held. The adoption of a currency board thus removes all degrees of freedom over monetary policy and gives strong signals about any lack of fiscal discipline as the government cannot borrow from the currency board and is obliged to issue bonds to cover fiscal deficits. By comparison, the problem inherent in the nominal anchor and real target regimes is that the adoption of the regime does not by itself bring about stable monetary and fiscal policy. It is the lack of these mechanisms in the latter two target regimes that has been the cause of the collapse of such regimes in so many countries.

The recent East Asian financial crisis demonstrated in a particularly harsh manner the substantial problems associated with a weakly fixed exchange rate in an environment of poor fiscal and monetary



management. A major problem in the case of the East Asian economies was that many investors believed that the rates were indeed strongly fixed, that is, as the governments had maintained the rates for long periods, investors believed that they were effectively guaranteed. Thus, there was a widespread belief, as shown by actual practice, that there was no need to hedge the risk of a change in the rate fixed against the US dollar.<sup>4</sup> As history has shown, such pegged rates are in fact changed from time to time, without warning, often to a large extent, and are therefore inherently uncertain.<sup>5</sup> Thus there is no market in which to hedge against the risk of a change in the rate.

It is now widely agreed that the days of weakly fixed or adjustable fixed rates are over, especially given the volume and speed of capital flows and the difficulty of hedging against the non-negligible probability of a change in the rate. The key questions for a country with such regimes are when and how to exit from the regime and where to exit to in terms of the viable options, viz., a strongly fixed rate (a currency board arrangement or a common currency, which is henceforth called 'dollarisation') or a pure floating rate.

On the evidence available at the time, Duncan et al. (1998) considered that either a floating rate or a currency board arrangement would be appropriate for Papua New Guinea, but on balance favoured a floating rate over a currency board. However, it was argued that for the floating rate to be effective, the government would have to take actions to ensure the independence of the central bank and deepen the currency market. They also saw the historical fiscal discipline of PNG governments and the downwards flexibility recently introduced in wages as reasons for not favouring a nominal anchor policy. Since that report was written, however, fiscal discipline has continued to deteriorate and the independence of the Bank of Papua New Guinea has been considerably undermined.

Duncan et al. (1998) argued that Papua New Guinea did not appear to need a fixed rate as a nominal anchor to reduce inflationary expectations. Inflation of a kind that gave rise to the use of a nominal anchor in other cases, that is, persistently high inflation rates, had not occurred in Papua New Guinea. Higher inflation rates have followed devaluations of the fixed rate or significant depreciation of the floating rate, but they have had a short life. Moreover, during these short periods, the inflation rate only increased into the 10–20 per cent range. However, inflation in 1999 looked as though it would exceed 20 per cent. Until recently, nominal interest rates were also in excess of 20 per cent.

Recent economic management problems in Papua New Guinea giving rise to the 1994 float and more recently to significant exchange rate depreciation, have been associated with periods of loss of fiscal and probably monetary policy credibility. In such cases, no exchange rate regime is credible. Undermining of central bank independence, problems with fiscal control and deficit financing (including corruption of the sterilisation function of the Mineral Resources Stabilisation Fund)<sup>6</sup> suggest that a strong fix of some kind is needed. A 'managed' float, such as Papua New Guinea has had since 1994, cannot solve any of these problems as a managed float tends to degenerate into a single currency peg with all the attendant problems of a weakly fixed rate in a world of rapidly moving capital flows, as well as being susceptible to political pressures. The likelihood of the development of the economic environment demanded for the effective operation of a floating rate regime has diminished rather than improved since Duncan et al. (1998) made their recommendations. Rather than affirming the independence of the central bank and making attempts to deepen the foreign exchange market, government actions have made people even less keen to hold kina.



Lack of confidence in holding kina makes monetary policy largely ineffective.

These arguments point to the need for a strongly fixed exchange rate regime of some kind. Looking across the various exchange rate regimes, we can see that the options are a currency board arrangement or dollarisation. A pure float is by definition not fixed, and involves the lowest level of government intervention—usually through central bank monetary policy operations. Real exchange rate targeting and a nominal exchange rate anchor are weakly fixed regimes in terms of the level of confidence that the public can have that the rate will be held.

The choice between a currency board arrangement, where there can still be some risk of change in the rate and therefore speculation against the rate,<sup>7</sup> and dollarisation which has become topical with the discussion of Argentina moving from a currency board arrangement to US dollarisation.<sup>8</sup> In a recent paper, Xu (1999) reports the results of an empirical analysis to see whether Papua New Guinea can be considered to be part of an optimal currency area with Australia. This may be seen as a necessary condition for a currency board in Papua New Guinea with the kina fixed to the Australian dollar. It could also be seen as a necessary condition for Papua New Guinea to have a common currency with Australia. Xu's results suggest that, subject to substantial caution due to the poor quality of PNG data, Australia and Papua New Guinea are part of an optimal currency area.<sup>9</sup> However, there are several other issues that should be considered in determining an appropriate exchange rate regime for Papua New Guinea.

### **Currency board arrangement**

Under a currency board arrangement, the government backs up its pledge to redeem its domestic currency at the fixed rate by holding reserves of the 'host' currency equal to 100 per cent or more of the value of its outstanding base money. If there is capital

outflow in the event of speculation against the currency, the government sells foreign reserves of equivalent amount in exchange for outstanding currency. The domestic money stock is thereby reduced and the domestic interest rate rises, acting to reverse the outflow and restore the equilibrium.

Under a currency board arrangement, however, monetary independence is forgone and inflation is closely tied to that of the anchor currency (the inflation rates will not be the same as the prices of non-tradables can differ across the countries). Further, in a pure currency board, the monetary authority cannot act as a lender of last resort to the financial sector in the event of a liquidity crisis. If there is a financial system crisis, the government would have to issue bonds to perform lender of last resort functions. The forgoing of monetary independence—which should be backed by legislation limiting the actions of the monetary authority—should be a positive factor where central bank independence is in doubt for political reasons.<sup>10</sup> A key question is whether central bank independence will/can be regained under the present PNG administration. On that issue we take a pessimistic view.

An issue that Arndt (1971) canvassed with respect to Papua New Guinea having its own currency was whether the creation of a central bank was going to run up against the problem of the limited supply of skilled human resources. The availability of skilled people for the central finance agencies remains a problem in Papua New Guinea. Even the Bank of Papua New Guinea, which had been able for many years to maintain a core of well-trained staff, is suffering from shortages of skilled people according to the new Prime Minister. Adoption of a currency board arrangement or dollarisation could free most of the Bank's staff to work in other key finance areas.

Adoption of a strong fix, such as a currency board arrangement or dollarisation, also means that instead of changes taking



place in the exchange rate in response to external shocks, all other prices in the economy have to adjust. However, if as Xu's (1999) results suggest, Papua New Guinea and Australia are part of an optimal currency area, fixing to the Australian currency would ensure exchange rate responses to most external shocks. But responses to other shocks would have to be made through prices, notably wages. Under a currency board arrangement or dollarisation, wages policy and productivity movements will effectively determine the real exchange rate. Papua New Guinea's real exchange rate was over-valued for many years largely due to the urban minimum wage rate being fully indexed to the inflation rate. With the 1992 Wages Board decision resulting in the effective deregulation of the labour market (Levantis 1997), wages are now free to adjust to shocks. It is important, therefore, that Papua New Guinea maintains the downwards flexibility in wages that it now has, regardless of the exchange rate regime.

Another concern raised with respect to the use of a currency board arrangement is that defence of the fixed rate—through the automatic increase in the domestic interest rate with the buying up of outstanding currency—is the stress that the usually sharp interest rate increases can place on the financial system. The less robust the financial system, the greater the difficulties that could arise, for example, with over-extended lending institutions. In Papua New Guinea's case, however, the banking and other financial institutions are largely part of the Australian financial system and are unlikely to experience difficulty as the result of sharp interest rate increases in Papua New Guinea.<sup>11</sup>

It is important to recognise that pressures for intervention, with the resulting likelihood of damaging speculative activity, would still exist with a currency board arrangement. Recent government willingness to undermine PNG central bank independence gives rise to

concern about whether a currency board arrangement would be allowed to remain independent. Even an administration that has shown such strong economic policy discipline as Hong Kong, gave in to temptation. As Kwan et al. (1999) demonstrate, the credibility of Hong Kong's currency board arrangement suffered when the Monetary Authority engaged in discretionary behaviour before and during the recent financial crisis. Market pressure and public criticism have seen it go back to a rules-based regime with positive results in terms of reduced risk premia.

### Use of the Australian dollar

Dollarisation of the PNG economy would have all the benefits of a currency board arrangement with respect to reducing the scope for discretionary monetary and fiscal behaviour. Monetary independence would be forgone and the inflation rate would be closely tied to that of Australia.

Unlike a currency board arrangement, a floating rate, or weakly fixed rate regimes, dollarisation would completely remove speculation against the PNG currency. There would remain the possibility of speculation against the Australian dollar because of internal or external factors affecting the Australian economy. Thus, as far as currency risk is concerned, Papua New Guinea would be entirely dependent on Australia's fiscal and monetary policies remaining as effective as they have been in recent years. Sudden capital outflows from Papua New Guinea could still occur under dollarisation, but because of the relatively small size of the PNG economy this would have very limited impact on the Australian currency. It would be a concern for PNG fiscal policy and the government's creditworthiness, however, if it were the government's credibility that had led to the outflow.

As with a currency board arrangement, dollarisation would also remove a significant part of the currency risk from both private and public dealings involving foreign



currencies. With the sharp depreciation of the kina over the past five years, debt denominated in foreign currency, particularly the US dollar and the Japanese yen, has significantly increased in kina terms. This has been a particular burden for the government and government instrumentalities such as the electricity authority (ELCOM) and Air Niugini.

As PNG nominal interest rates would also be largely determined in Australia, interest rate risks would also diminish because of the much smaller interest rate volatility in Australia. Reduction of the currency and interest rate risks facing the mining and export crop sectors should improve the climate for investment in Papua New Guinea. However, any fiscal indiscipline on the part of the PNG government could still lead to capital flight, and interest rates would rise, just as with a currency board arrangement.

Dollarisation could lead to debate over Papua New Guinea's loss of sovereignty. On a global basis, this issue appears to be generating much less concern than in the days when many countries were gaining their independence from colonial powers. The adoption of the euro currency within the European Union shows that considerations other than sovereignty can become more important. Indeed, Paul Volker has recently argued for worldwide movement to only one or two major currencies. However, this advice seems to pre-empt the need to establish whether such exchange rate regimes would be consistent with optimal currency area considerations.<sup>12</sup>

The loss of seigniorage from a country no longer issuing its own currency is an issue raised with respect to currency substitution through dollarisation. This problem could be resolved through agreement between the Australian and PNG governments over the sharing of seigniorage from Australian currency used in Papua New Guinea. It should be recognised, however, that any loss

of seigniorage and the costs of the changeover to the Australian dollar will likely be more than outweighed by the gains to the PNG economy from having lower real interest rates due to the lower levels of country/currency risk. The agreement over sharing seigniorage should be such as to ensure that the possibility of changes in the agreement could not be used as a form of leverage by Australia.

## Conclusions

A strongly fixed currency regime could play a significant part in reducing the huge economic costs that Papua New Guinea has been suffering from the loss of fiscal and monetary policy discipline. These benefits should considerably outweigh the costs of the change in regime. The erosion of central bank independence has increased the difficulties facing the kina market in becoming more liquid. Given these circumstances, it will be difficult to encourage the major exporters to hold more kina than they find absolutely necessary. Hence, the government will likely continue to find it necessary to try to force exporters to bring foreign currency onshore under the present regime. This will only make it more difficult to build the liquid market necessary for a pure float. Thus there will be no opportunity for currency-hedging instruments to develop and little opportunity to develop the range of skills needed to utilise a floating currency effectively.

As a pure float and a return to a weakly fixed rate regime do not appear to be feasible options, a strongly fixed exchange rate regime appears to be the preferable policy for Papua New Guinea to follow. Thus the choice is between a currency board arrangement and dollarisation. In either case a decision will have to be made on the 'host' currency. Xu's (1999) analysis suggests that it should be the Australian dollar. This conclusion would need to be subject to further consideration.



Adoption of a currency board arrangement should reduce criticisms over loss of sovereignty that would likely arise with dollarisation, especially involving the Australian dollar. It is important to recognise, however, that pressures for intervention, with the resulting likelihood of damaging speculative activity, still exist with a currency board arrangement. Recent government willingness to undermine PNG central bank independence gives rise to concern about whether a currency board arrangement would be allowed to remain independent.

Thus, it appears that adoption of the Australian dollar could be the preferred fixed rate regime in Papua New Guinea. The issue of the perceived loss of sovereignty involved may well make such a policy difficult to adopt. Loss of sovereignty has become a catch-cry of groups resisting economic reforms, although they do not apply the same logic to UN treaties that lock countries into actions with which they agree.

The dollarisation of other small economies of the South Pacific with strong trade ties to Australia should also be considered. Some already use Australian currency, for example, Nauru, Kiribati and Tuvalu. The issue of Australia and New Zealand adopting a common currency has been raised. On a wider scale, therefore, the adoption of a common currency for Australia, New Zealand and the Pacific island countries with close trade ties to these two relatively large countries is worthy of consideration. This would make even more sense if a trade bloc were formed between Australia and New Zealand and the other countries of the South Pacific.<sup>13</sup>

If Papua New Guinea does adopt the Australian dollar, the questions of when and how to make the shift arise. Because high inflation has not been endemic in Papua New Guinea, there has been no currency substitution, which may have made a conversion easier. But because persistently high inflation is so far not a concern, the

matter of timing is not so important as it would be if dollarisation were seen as necessary to bring inflation under control. Thus, the main issue is how to carry out the changeover.

After the changeover, the Bank of Papua New Guinea would no longer be needed and the staff could be assigned to other parts of the public service, except staff who would carry out Reserve Bank of Australia activities in Papua New Guinea, such as note issue and currency exchange. Kina currency issue would cease and Australian currency would be exchanged at the rate fixed at the time of the changeover. Prices would also be pegged at that rate. Prices would likely be quoted in dual terms until the kina currency was fully withdrawn. Institutional prices, such as minimum wage rates, would also be converted at the fixed rate. Importantly, this should not be taken as an opportunity to raise minimum wages. (Schuler (1999) discusses the mechanics of the transition to dollarisation.)

As noted, an agreement would need to be reached between the governments of Australia and Papua New Guinea on the share of seigniorage to be paid to the PNG government. Foreign currency earnings would be deposited with the Reserve Bank of Australia and earn interest at Australian bond rates.

As a final note, it is important to stress again that the currency regime *per se* is not the core problem. The question of the appropriate regime arises because the regime itself can, in some circumstances, impose constraints on the discretionary behaviour of government with respect to fiscal and monetary policy.

Because of the difficulties that recent PNG governments have experienced in exerting fiscal control and, relatedly, in implementing quality public investments and in carrying out essential public services, it also appears desirable to have some kind of extra-parliamentary body to try to ensure





better fiscal discipline. This will only be achieved through improved transparency about government activities and better government decision making. To achieve these goals, it has been suggested that the PNG National Economic and Fiscal Commission could be converted into a body similar to the German Council of Economic Experts, which is composed of a small group of eminent economists and serviced by an independent secretariat (see ANUTECH Pty Ltd 1995; Duncan and Temu 1995). The Council reports to the German Parliament, not to the government, and reports publicly. Its reports cover the fiscal performance of the government, both retrospectively and prospectively. An institutional change such as this, which ensures transparency and public discussion about the government's fiscal performance, appears to be highly desirable for Papua New Guinea to assist in achieving better governance.

## Notes

- <sup>1</sup> The helpful comments of Satish Chand, Graeme Dorrance, Rod Duncan and Ross McLeod are gratefully acknowledged. However, none of the views expressed in this paper should necessarily be attributed to them. The financial support of AusAID is also gratefully acknowledged.
- <sup>2</sup> For a discussion of the hard kina policy and its rationale, see Garnaut and Baxter (1984).
- <sup>3</sup> It may also be judged that the government should reduce the risk of currency volatility for international traders by fixing the exchange rate.
- <sup>4</sup> The risk of fluctuations against other major currencies could and more than likely would be hedged in the US dollar derivatives market.
- <sup>5</sup> Uncertain in the Knightian sense of being uninsurable, as opposed to risk that can be insured against. Insurance markets only develop where the risks are truly random, such as with weather-related events, not in the case of government actions such as changes in policy.
- <sup>6</sup> See ANUTECH Pty Ltd (1995).
- <sup>7</sup> As evidenced by the speculation against the Hong Kong currency at the beginning of the Asian crisis, and the continuing discussion about the pressures on the fixed rate from a depreciation of the Chinese yuan.
- <sup>8</sup> Ecuador has adopted US dollarisation as a means of curbing policy indiscipline. Schuler (1999) discusses the costs and benefits of dollarisation for Indonesia.
- <sup>9</sup> Xu (1999) tests the extent to which fluctuations in the output of the different productive sectors in the two countries are subject to common external shocks. He finds that 70 per cent of the fluctuations is explained by common external shocks and only 30 per cent by country-specific shocks. While both countries rely heavily on primary commodity exports, some may argue that the export baskets are not the same. However, we know that there is substantial autocorrelation among primary commodity prices, even though the markets appear to be unrelated. Thus, the Australian dollar and the kina can be thought of as primary commodity currencies, which can help to explain the high degree of commonality in their external shocks.
- <sup>10</sup> See Gulde (1999) for a description of the implementation of a currency board in Bulgaria.
- <sup>11</sup> Ross McLeod contrasts the PNG situation with that in Indonesia where foreign banks were allowed to take up only a small share of the market. The currency crisis there has resulted in the collapse of almost the entire banking system.
- <sup>12</sup> Kwan et al. (1999) suggest that there is a need to carry out optimal currency area analysis to see whether the US dollar fix is optimal for Hong Kong. They point out that the Hong Kong economy has become more integrated with China and it is no longer clear that it shares the same shocks as the United States.
- <sup>13</sup> See Scollay and Gilbert (1998) for a discussion of the economics of a regional trade agreement between the Forum island countries other than Australia and New Zealand, and Stoeckel and Davis (1998) for a discussion of a trade bloc between these countries and Australia and New Zealand.



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