

Establishing an East Timorese National Currency via a Currency Board

by

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Abstract

This paper argues that a currency board anchored to the Australian dollar is the mechanism through which East Timor can secure a national currency that is most appropriate to its long-term development. Currency boards are relatively simple and transparent institutions that can provide stability, predictability and credibility to an emerging economy's currency and exchange rate. Adopting another country's currency is an even more simple strategy, but one that lacks the flexibility a currency board allows in both creating an important symbol of national sovereignty, and in providing the base from which to construct an indigenous financial system. Though currency boards impose certain policy constraints on government, the advantages they bring in establishing confidence in the currency outweighs these limitations in countries, such as East Timor, where the primary task must be the establishment of the sound foundations of a market economy.

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The 'Currency Board' arrangement is a plan desperately needed in a country rebuilding itself, and where there had been a widespread mistrust of government and the banking system.

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Introduction

In the wake of the orchestrated devastation that followed East Timor's independence ballot on August 30th 1999, the economy of the world's newest nation was functionally destroyed. In economic terms, East Timor suffered an adverse 'supply shock' that saw its GDP shrink by around a half.¹ Such a disaster can be more starkly appreciated, however, in physical and human terms. It is estimated, for example, that 70 percent of East Timor's physical infrastructure has been destroyed. Few buildings stand, crops remain ungathered in the field, civil services no longer function, telecommunications barely operate and a banking and payments system no longer exists outside of United Nations and relief agencies. In human terms the cost has been even greater. Many East Timorese were killed or injured in the weeks following the ballot, and 75 percent of the population were displaced from their homes.

Even before the violence and destruction that followed the independence ballot, East Timor was desperately poor. A predominantly subsistence economy with 90 percent of its population living in rural areas, GDP per capita was \$US 431 in 1996 (compared to an average of \$US 1,153 for Indonesia as a whole). Thirty percent of East Timor's households had an income below the absolute poverty line of \$US 1 per day. Other measures tell a similar story. Average life expectancy in East Timor was 52 years in 1996 (Indonesian average, 61.5), malnutrition was rife and the territory was tormented by malaria and tuberculosis. Treated as a colonial outpost by successive outside rulers, East Timor has enjoyed very little in the way of participatory governance. Investment in human capital has been extremely low and illiteracy is commonplace. East Timor currently has only one significant export crop (coffee) and, prior to the ballot, greatly depended on transfers from Indonesia for administrative expenditure and investment.² At

¹ This, and all of the following data relating to East Timor, is sourced from the report of the joint assessment mission to East Timor made by officials of the World Bank, the Asian Development Bank, United Nations agencies, bilateral donor countries and members of the East Timorese community, in November 1999. The report of this mission was subsequently published by the World Bank and is referred to throughout this paper as 'Joint Assessment Mission 1999'. The report can be found at the World Bank's official website, <www.worldbank.org>.

² Rampant corruption meant that only a small portion of these brought about any real benefits to the people of East Timor (Joint Assessment Mission 1999).

the time of the independence ballot, in short, East Timor had little in the way of the institutional, financial and human capital with which to build a nation state.

Humanitarian aid and short-term reconstruction is currently the priority of the United Nations Transitional Administration in East Timor (UNTAET), the Conselho Nacional da Resistencia Timorese (CNRT, the main representative body of the East Timorese), and NGOs.³ Consistent with the lessons from other conflicts, however, this priority will soon shift towards longer-term reconstruction and development. It is to this longer-term objective that this paper is addressed.

It will be taken as an assumption in this paper that the establishment of a national currency will be an objective in nation building in East Timor. In fact, the efficacy of national currencies is not unquestioned, but equally their near ubiquity suggests that, for most countries, the benefits national currencies bring (tangible or otherwise) are seen to outweigh their costs.

Establishing a credible and stable East Timorese currency will be greatly aided by the use of a currency board. Relatively simple structures, currency boards can be used in the place of a central bank. Unlike a central bank though, their purpose is narrowly and simply defined to that of being the issuer of currency. What further distinguishes currency boards, however, is that they can only issue the domestic currency to the extent that it is backed by a foreign 'anchor' currency, to which the domestic currency is freely convertible at an exchange rate fixed by *law*. In a pure currency board system the stability of the domestic currency thus (ideally) becomes that of the anchor currency.

Unlike a central bank, a currency board has no control over the domestic monetary base, which fluctuates according to the reserves of the anchor currency, and therefore cannot determine a discretionary monetary policy. Currency boards cannot allow for the monetisation of government debt either, which puts some constraint on the use of fiscal policy too. In the context of a newly emerging country such as East Timor, whose government is likely to come under pressure to spend in excess of its ability to tax, this will be no bad thing and will do much to foster international and local investor confidence. Lender-of-last-resort facilities and other contingent financial support for local banks is also problematic in a currency board system. This will likely be offset in East Timor's case, however, by the opening up of the economy to foreign financial institutions and by the encouragement of the microcredit schemes that have been so successful in other emerging economies.

One of the most attractive features of a currency board for East Timor is that it can provide for a sound and stable currency during a period in which an indigenous financial system can be established and developed. Because of their relative simplicity, currency boards do not require complex financial markets and central banking tools in order to be effective. Moreover, by linking its national currency to that of a country such as Australia, East Timor's broader economy becomes linked to a host of institutional

³ UNTAET was established by the United Nations Security Council in October 1999 following the deployment, in September, of a multinational force to bring about an end to the violence in the country.

attributes - laws, markets, conventions, organisations, 'the rules of the game' - that have come to be recognised as the requisite foundations for economic growth and prosperity.

The paper will proceed by first examining some recent experiences with currency boards in a number of emerging and transition economies. The remainder of the paper will be spent in examining currency boards themselves, their essential features and their implications for macroeconomic policies. The paper will highlight throughout the specific circumstances of East Timor, and the potential benefits a currency board, anchored to the Australian dollar, could bring.

Recent Currency Board Arrangements

Although an idea dating back to the nineteenth century, currency boards have come back into vogue in recent years.⁴ There are currently 14 currency boards (or currency board-like systems) in operation around the world in countries with widely varying economies. Though down on the 50 or so that were in place at the beginning of the 1950s, it is a substantial increase on the few residual colonial systems that were the sole remaining examples of currency boards in the early 1980s (Enoch and Gulde 1998, p.40). For many years out of intellectual fashion, the disappointing performance of central banks, especially in developing countries, has seen the idea re-emerge in a 'new wave' of currency boards established in the last decade or so.⁵

The most relevant of these to East Timor, and the primary reason for the resurgence of interest in currency boards, have been the experiences in the 1990s of a number of transition and/or inflation-prone countries in introducing currency board systems. Argentina, Estonia, Lithuania, Bulgaria and Bosnia-Herzegovina are all examples of such countries and their experiences have been extremely positive in delivering currency credibility and stability.

Perhaps most instructive for East Timor of all the 'new wave' currency board arrangements, however, is that of Bosnia-Herzegovina. A country devastated by civil war (and foreign interference), Bosnia-Herzegovina's currency board was mandated by the

⁴ The intellectual genealogy of currency boards can be traced as far back as the 1820s, and the controversies in the United Kingdom surrounding the transition from the era of 'free banking' to that of the Bank of England as the monopoly issuer of currency. For more on the early history of currency boards, see Hanke and Schuler (1993).

⁵ The first of these new wave currency boards was that of Hong Kong, installed in 1983 in the wake of the negotiations over the handing back of the territory to China. Hong Kong's currency board, formally the Hong Kong Monetary Authority (HKMA), anchors the Hong Kong dollar to the US dollar. The HKMA is not a 'pure' currency board, and has a number of central bank-like discretionary powers. Notwithstanding the expectations of its critics, Hong Kong's currency arrangements proved extraordinarily robust in the face of Asia's recent financial turmoil. For details of the HKMA, see the official website at <<http://www.info.gov.hk/hkma/>>. Pre-dating the Hong Kong arrangements are the range of currency board systems in the small territories that remain dependencies of the United Kingdom and France. Such systems are in place in Gibraltar, Djibouti, the Falkland Islands, Bermuda, the Cayman and Faroe Islands and a number of even smaller territories. There are also a number of Caribbean countries, members of the East Caribbean Central Bank (ECCB) that are, through this institution, subject to a currency board-like system (Enoch and Gulde 1998, p.40).

Dayton Peace Accord. Bosnia-Herzegovina's currency board, formally known as the 'Central Bank of Bosnia and Herzegovina (CBBH)', was established in August 1997 and has the sole task of safeguarding the currency. The CBBH is a *pure* currency board. The domestic currency, the Konvertible Marka (better known by its acronym, KM) is backed 1 to 1 by reserves of German marks (and implicitly now by an equivalent level of *euros*). The CBBH is not allowed to lend to the government nor take up any of its bonds nor any other public or private sector liabilities. The CBBH does not provide lender of last resort facilities to the banking system.

The CBBH has proved to be a remarkably successful institution, maintaining a stable currency in the face of a global financial crisis, a neighbouring war and the country's first free elections. Throughout Bosnia-Herzegovina the KM is the dominant currency and it is convertible, in practice as well as in theory (within the country and on foreign exchanges), without discount against the German mark. Foreign currency reserves have been anything but a problem for the CBBH. Reserves doubled in 1999 and are expected to exceed 1 billion German marks in 2000 - providing in the process a healthy margin above the only liabilities of the system, the KM on issue. The CBBH is also highly active in sponsoring rule-based economic policies generally in Bosnia-Herzegovina, and in attempting to coax an indigenous financial system into life. Bosnia-Herzegovina has a long way to go before it can be adjudged an economic success, but its currency board arrangement has given the country a stable and credible currency upon which much might be built.⁶

A Currency Board as an Exchange Rate Regime

Having determined in favour of a national currency, the next fundamental monetary question facing an emerging economy is deciding upon an exchange rate regime. The following is a *brief* survey of the main alternatives. It is argued that a currency board will provide East Timor with an exchange rate regime best suited to its immediate and longer-term needs. The argument is a limited one, however, and its prescriptions relate exclusively to the requirements of a small, open economy.

Though there are variations within each, countries have essentially three exchange rate regimes to choose from. Currencies can be fixed rigidly against another or against a precious metal (or other commodity), they can be more loosely fixed to the same by an adjustable 'peg', or they can be market-determined via a floating exchange rate regime.

⁶ For more detail on the Central Bank of Bosnia and Herzegovina, see the official website at <<http://cbbh.gov.ba/>>. For more on the background to its establishment, see Hanke (1997). This brief survey of recent experiences in the use of currency boards can be supplemented by recent empirical investigations undertaken by the IMF and others. Formal econometric analysis undertaken for the IMF by Ghosh, Gulde and Wolf (1998) found that the existence of a currency board historically results in an inflation rate 3.5 percent below that of the average outcome under alternative exchange rate regimes. They also found that currency boards achieved this without any apparent negative effects for economic growth. Similar superior macroeconomic performances for currency boards are claimed in Schuler (1996) and Hanke (1998a). The latter are works that, while scholarly, are from two of the most prominent currency board advocates. For a more balanced, though now somewhat dated, account of the macroeconomic performance of currency boards, see Williamson (1995).

Different regimes will allow for varying degrees of sovereignty in national policy-making, and impose varying constraints on particular policy measures.

Deciding which of these to choose is not easy and, as the Deputy Managing Director of the IMF recently noted, it's 'a topic over which economists have argued for a century without reaching any firm conclusion' (Fischer 1999). In the case of small, open and emerging economies, however, the choice according to the conventional wisdom on the topic is narrowed down to a 'two-cornered' one - between the two extremes of a floating exchange rate, and one that is rigidly fixed to another (via a currency board or, even, a common currency).⁷ In recent years, and especially since the various financial crises that engaged much of Asia and many emerging economies in 1997, fixed but adjustable peg regimes have fallen out of fashion. This is not so surprising perhaps, and the IMF's comments that it was 'surely no coincidence that the countries that experienced the major external crises - Thailand, Korea, Indonesia, Russia and Brazil - all had...essentially pegged exchange rates', refers simply to the long-held understanding as to the difficulties of such arrangements in a world of high capital mobility (Fischer 1999). In such a world, the expectations of investors and speculators become self-fulfilling and the exchange rate becomes ultimately beyond the control of national monetary authorities, however much they might seek to second-guess speculators.⁸ It is an unfortunate fact, moreover, that confidence in the ability of monetary authorities in emerging economies to maintain the official exchange rate is likely to be less than complete - leading to the increased likelihood that they will be the subject of speculative attacks.

Orthodox economic theory has invested much in floating exchange rates, whose supposed virtue is that of providing a self-correcting mechanism whereby balance of payments disequilibria are corrected by a currency appreciation or depreciation. Thus, in theory, problems of external balance are solved by an external 'price' mechanism, rather than by disruptive internal adjustment. Monetary policy is also freed for use in ensuring domestic objectives such as full employment and price stability. Of course, under a pure floating exchange rate regime, there is also no need for the national monetary authority to maintain external reserves.

Such is the theory. In reality, floating exchange rates are often manifested in excessive exchange rate volatility, robbing the story of its equilibrating mechanism via relative prices. Such volatility is especially prevalent in emerging country currencies, for which 'thin' markets ordinarily prevail. This volatility increases risk and uncertainty and

⁷ This 'conventional wisdom' is backed by powerful and official support. Deciding that a key cause of the Asian turmoil was exchange rates *pegged* unrealistically against the dollar, the (then) US Treasury Secretary, Robert Rubin, declared in April 1999 that currencies should either be floating or '*credibly* fixed via an institutional arrangement such as a currency board', if they were to enjoy any financial assistance from the United States. Press Release, US Department of Treasury, 15 April 1999, <www.ustreas.gov>.

⁸ If, for example, investors or speculators believed that a currency was overvalued, they will engage in transactions (short selling and other strategies) that will only be profitable once a devaluation has occurred. For a short period of time a country could sustain its peg by buying the local currency with its foreign reserves or by raising interest rates. Depending on the magnitude of the capital flows, however, such reserves are likely to be quickly depleted. The country will be forced to devalue, speculators have enjoyed a 'one way bet' and, in the meantime, higher interest rates will have damaged the 'real' sector of the economy.

complicates, even discourages, trade and investment. Hedging and other strategies are sometimes available, though by no means always in thin markets, and can be extremely costly and distorts prices. Also, unlike fixed exchange rates (of all types), floating exchange rates imply no externally imposed discipline with regard to monetary policy - a factor that all too often has led to inappropriate monetary expansion and cycles of inflation and depreciation.

The financial crisis in Asia, which has been so devastating to the case for pegged exchange rates, is no advertisement for the volatility floating exchange rates permit either (as the example of Indonesia, forced to abandon its pegged regime for a floating one, amply demonstrates).⁹ In the wake of the exchange rate volatility actually experienced, many erstwhile supporters of floating exchange rates have recanted in recent times, particularly with regard to emerging countries. Archetypal of these is the former Chairman of the US Federal Reserve, Paul Volcker, who recently declared that experience had revealed that under floating exchange rates:

Volatility is both extreme and inconsistent with smooth and orderly economic adjustment. In fact, few if any, economically small and internationally exposed nations find freely floating exchange rates a feasible system (Volcker 1999, p.14).¹⁰

In contrast to an adjustable peg regime, currency boards provide a highly credible mechanism for maintaining a *fixed* exchange rate. Unlike the pegged exchange rate system, a currency board arrangement is explicitly founded upon the certainty of a balance of payments adjustment mechanism, thus removing any incentive for speculators. This mechanism, which is none other than the price-specie-flow story of the classical gold standard, ensures that were a country to have a balance of payments deficit, its monetary base would fall. This, in turn, would cause interest rates to rise and prompt an inflow of capital. At the same time, the increase in interest rates will reduce national

⁹ For details of the wild fluctuations of the rupiah, see Asian Development Bank (ADB) 1999.

¹⁰ As noted, Volcker is by no means the only prominent economist to give up the idea that all countries are best served by floating exchange rates. Another economist of note to have gone down the same path is Rudiger Dornbusch, whose best-selling textbook (co-authored with Stanley Fischer) probably introduced the majority of today's economists to the standard way the profession thinks about exchange rates. According to Dornbusch (1999, p.7):

Most emerging markets dream of having New York or Frankfurt interest rates. Surely, the easiest way to get there is to close their central banks and eliminate the costly option of debasing the currency by devaluation surprises. After enough bad experience, the good equilibrium is the commitment to not having a central bank, something far easier to understand and believe than the nth (sic) commitment for the central bank to be good, this time. In emerging markets, the share of capital in cost is high and, therefore, great attention should be focused on low and stable capital costs. Full monetary integration is likely to promote just that and, along with it, a much better credit culture... The fact that capital markets today are deeply integrated and command formidable experience and leverage relative to the lone central bank and its poorly equipped staff goes even further to highlight the desirability of putting aside the exchange rate.

A currency board falls short of '*full* monetary integration' but, as this study will argue, delivers most of its benefits without many of its attendant costs.

income, leading to a decrease in the absorption of imports. Exports, whose price should fall (to the extent that prices are flexible in the country concerned), would become more competitive and would increase in volume. Taken together, these automatic movements explicit under a currency board system should ensure national output returns to its original position, with the balance of payments deficit now erased. Of course, various real-world imperfections means that the story will not be quite as smooth as this, but the citizens of a currency board country, and investors outside it, are assured that an automatic adjustment mechanism that approximates it will operate free from government interference. This, in turn, should do much to inspire confidence that the exchange rate is credible, and thereby insulate the country from the worst of the speculative attacks that beset pegged exchange rate countries.

As noted, floating exchange rates also contain an automatic adjustment mechanism for balance of payments equilibrium but, in a *small* and *open* economy such as East Timor, this is likely to be a mechanism that is less than optimal. In such an economy, where trade occupies a large share of the country's GDP (in the first instance due to the small size of the domestic economy as much as anything else), exchange rate movements will impose high, and disproportionate, adjustment costs. This is because changes in the nominal exchange rate will have a large effect on the level of domestic prices but, conversely, will mean that the *real* exchange rate varies by less than it would in countries in which trade occupied a smaller share of the economy. This means that for any given required movement in the real exchange rate (and hence the balance of payments), a larger proportionate change in the nominal exchange rate is required – with all the requisite costs this imposes. Of course, where exchange rate movements occur because of speculative capital flows, rather than because of trade 'fundamentals', their effects on the economy could be *wholly* inimical. By contrast, the very 'openness' of an economy such as East Timor's will greatly facilitate the operation of the automatic adjustment under a currency board - delivering equilibrium in the balance of payments via *smaller* proportionate fluctuations in output.¹¹ Though a vast literature that it is not the purpose of this paper to survey, much recent work on 'optimal currency areas' suggests that exchange rate fluctuations impose costs on small and open economies that are simply too great. Such economies, a consensus of this literature suggests, are much better placed by rigidly fixing their currency to that of their major trading partner.¹²

The obvious and healthy survival of all existing currency boards during the 1997 global financial crises gave the case for their implementation in emerging economies an enormous boost. The events of 1997 also provided economists with an opportunity to revisit the issue of capital flows – the not-so-welcome short-term speculative flows, and the much more important flows of long-term investment. With regard to the latter, a new literature has emerged that is positive to the use of currency boards. Representative of these is Eichengreen and Hausmann (1999), who argue that governments and private enterprise in emerging economies find it difficult to borrow long-term *or* abroad in their

¹¹ For a more detailed discussion of why currency boards are especially suited in the case of small, open economies, see Williamson (1995).

¹² For more on the issue of optimal currency areas, see Branson (1995) and McKinnon (1996).

own currency.¹³ The reason for this is that global investors are unwilling to be exposed to the risks associated with the volatility of exchange rates of these countries (pegged or floating) and against which, as noted above, it is often impossible to hedge. The result of this is a potentially perilous mismatch between investment projects whose returns are denominated in the domestic currency, but which are financed via foreign currency loans. Should the exchange rate change, an investment project that was intrinsically worthwhile could suddenly become non-viable. A currency board would remove the risk of such a mismatch by allowing investors to borrow in what is effectively, in terms of exchange rate risk, the local currency. According to Meyer (1999, p.12), under such an arrangement a 'country might be able to reduce its risk premium, lower its vulnerability, and increase its access to long-term and foreign finance'.

Features of Currency Boards

As noted in the introduction to this paper, the most distinctive feature of a currency board is that the currency it issues is backed by reserves of a foreign anchor currency. In a 'pure' or 'orthodox' currency board, these reserves should be at least 100 percent of the issued currency.¹⁴ The rate at which the domestic currency is exchanged is fixed by law, and the currency board must be ready to exchange the domestic currency on demand. In the interests of reserve cover though, the currency board should not convert bank deposits into the local or anchor currency. Similarly, a pure currency board is prohibited from acquiring domestic government or private commercial securities. Pure currency boards are essentially passive institutions that issue and destroy currency according to movements in anchor reserves, and do not engage in any other activity. Such currency boards are the most simple, but also the most restrictive in terms of policy. They are also the most credible.

In practice, as well as in theory, a number of alternative systems to 'pure' currency boards are possible. A less than pure arrangement, for example, could be one in which there was less than 100 percent anchor reserves for the amount of currency on issue. This would allow for greater room to pursue discretionary monetary policies, and/or allow for the provision of lender of last resort facilities to the banking system, but has the obvious pitfall of clouding the transparency and credibility of the system. Until recently, Argentina has maintained less than 100 percent reserves under its currency board arrangement, but has suffered from market doubts as to its credibility and from resultant speculative attacks against the exchange rate.¹⁵

Though a currency board holds reserves denominated in the anchor currency, these need not be in actual notes and coin. Indeed, by far the substantial component should not be - since by holding anchor currency denominated government securities (zero risk, like

¹³ Eichengreen and Hausmann note (1999, p.11), that '[e]ssentially all non-OECD countries have virtually no external debt denominated in their own currency'.

¹⁴ Currency boards in the past have usually held greater than 100 percent reserves - for the most part the product of accumulated seigniorage (more of which below). Such a buffer provides a margin to allow for fluctuations in the value of the anchor currency denominated securities.

¹⁵ Which is why, as shall be examined later, the idea of 'dollarisation' is being considered by Argentina.

currency), the currency board country can yield substantial seigniorage revenues (more of which below).¹⁶

The provision of sufficient reserves of the anchor currency, the 'start-up' problem, should not provide any difficulties in *establishing* a currency board in East Timor (Williamson 1995, p.20). A tiny proportion of the funds pledged by international donor countries and international agencies for the relief and reconstruction of East Timor, which totalled \$US520 million in various forms by December 1999, will be more than sufficient for these purposes.¹⁷ In the longer term such reserves will come from export earnings and investment flows, and from more general assistance from international agencies such as the IMF, World Bank, the ADB or from other countries. The former sources will be dependent on East Timor's trade and investment performance, a performance that is likely to be enhanced by a stable and realistically-priced exchange rate established under a currency board. Nor should the latter source present any difficulties. Currency board reserves are not at risk to the lender so long as an appropriate exchange rate to the anchor is chosen and the board is properly run. At worst, the lender is exposed to holding an equivalent amount of local currency. An example of the assistance currently available in this context can be seen in legislation passed in 1992 by the United States Congress, which 'directed the IMF to use U.S. quota contributions to establish currency boards, if appropriate'.¹⁸

Implications for Monetary and Fiscal Policy

A currency board system is rule based. In its pure form neither it, nor any other institution of government, has any discretionary control over monetary management. A currency board can have no control over the domestic rate of interest, nor be in a position to conduct open market operations or any other activity typically employed by central banks to influence domestic monetary conditions. The activities of the currency board rather, are passive and automatic, and limited to the issuing or destruction of domestic currency in response to changes in its stock of the anchor currency.

Discretionary fiscal policy is likewise limited in a currency-board system. A pure currency board cannot accept any other liabilities save that of the currency on issue. This means that a currency board cannot accept government bonds nor lend to the government in any way. Significantly, this means that a budget deficit cannot be 'monetised'.¹⁹

¹⁶ The reserves should therefore be a mix - of highly liquid short-term anchor country government securities, anchor country bank deposits and cash, and higher yielding but less liquid longer-term government securities of the anchor country.

¹⁷ World Bank Press Release, 17 December 1999, <www.worldbank.org>.

¹⁸ United States Statutes at Large 106:1636, cited in Hanke (1998a), p.5.

¹⁹ This is the principle reason why their advocates claim that currency boards bring with them a superior performance on inflation than alternative monetary regimes. It is not the only one. Another is the idea that under a currency board, domestic inflation is bound to that of the anchor currency country through arbitrage. So long as relative purchasing power parity holds between the anchor currency country and the currency board country, arbitrage should ensure that (within limits) domestic prices do not diverge from the prices prevailing in the anchor country. In practice these 'limits' can be quite wide. There are, after all, a very wide range of goods that are not 'tradable' and, therefore, not subject to the price discipline arbitrage

Government spending under a currency board arrangement, therefore, is limited to taxation receipts plus whatever can be raised by the sale of government securities to the private sector. The political pressures to spend vastly in excess of their ability to raise funds is, as Judy (1995) notes, often 'overwhelming in nascent democracies undergoing difficult economic and political transitions'. Currency boards can provide something in the way of a counter to these pressures.

The principle virtue of a currency board then is precisely the same as its policy limitations. By imposing more transparent and rule-based monetary and fiscal policies, currency boards bring with them the expectation that accompanying policies must likewise be responsible and rule-based. Above all, a currency board symbolises a country's serious intent to maintain a sound currency and a stable exchange rate. The credibility that a currency board brings to this intention in the eyes of international and domestic investors is its greatest promise.

Choice of Anchor Currency

The choice of the foreign anchor currency is one of the most difficult but crucial questions faced by the architects of a currency board. Of most relevance to the selection of the anchor currency, however, are the following considerations:

- 1) The anchor currency must be one that is widely accepted and traded in world financial markets. Of the fourteen currency boards currently in operation, ten use the US dollar as the anchor currency, three use the German mark (euro) and one the Singapore dollar (Enoch and Gulde 1998, p.40).
- 2) Since a currency board will act to pin internal prices to those of the anchor currency country (and can do little to protect against importing inflation from it), the anchor chosen should be one from a country from which a good inflation outcome can be expected in the future. It is reasonable to presume that such an expectation could only reasonably be formed on the basis of good *past* and *present* inflationary performances.
- 3) The anchor currency should be one in which a substantial proportion of the trade of the country concerned is denominated. An anchor currency divorced from the trade of the currency board country poses the risk that exchange rate changes will damage competitiveness. Under a currency board this issue is given added importance when we consider that future growth in money base must come from external sources, including a positive trade balance. In the case of East Timor, principal exports are likely to remain commodities (principally coffee and oil) and, hopefully, tourism.
- 4) A related consideration to the above is that the anchor currency ideally would be one in which the currency board country could expect flows of foreign investment. As

will impose. Nevertheless, the idea is clearly not without foundation given the increasing integration of markets.

with the issue of trade, the importance of this simply relates to the fact that the currency board should be able to count on an intertemporal growth in money base.

There are four currencies that could be regarded as contenders for the anchor of a currency board for East Timor. These currencies, the Indonesian rupiah, the US dollar, the Portuguese escudo and the Australian dollar, have various strengths and weaknesses according to the criteria above. The suitability of each of these currencies are considered below:

The Indonesian rupiah is included in the list of possible anchor currencies on the basis that, prior to independence, it was the currency in circulation in the (then) territory, and because it was the currency in which much of East Timor's trade was written. The rupiah continues to circulate in East Timor, particularly outside of the capital, Dili.

The case for the rupiah is, however, the weakest of the four currencies considered here and can be regarded as an unlikely candidate at best. Beset by instability on the back of a barely recovering economy and ongoing political turmoil in Indonesia, the rupiah itself has been the target of advocacy for replacement by a currency board.²⁰ The strengths of the case for the rupiah, its existing circulation and its prior dominance in trade, is not likely to last beyond the period of relief and reconstruction in East Timor. Of course, political symbolism, and the possible desire for close collaboration with the government of the anchor currency country, also significantly tells against the rupiah.

The US dollar is included in this list simply because it is the world's *de facto* reserve currency. But while the US dollar amply fulfils the first and second of the criteria above, it falls short on the others. The United States is not likely to be a large trader with East Timor nor a likely source of investment. The US dollar is also not a commodity currency, which means that movements in it are not likely to be in sympathy with the needs of countries (such as East Timor) whose exports fit mostly into this category. This has been a considerable problem for Argentina, whose currency board is anchored to the US dollar but for which commodities make up 45 percent of exports. The ongoing 'strength' of the US dollar in recent years has significantly eroded the competitiveness of Argentina's producers of tradable goods, and acted as a brake on the economy.²¹ The strength of the US dollar relative to other currencies in this region is also a possible obstacle to its use in East Timor. Not least amongst the difficulties that precipitated the financial crises in countries such as Thailand in 1997 was the growing uncompetitiveness of their exports, on account of currencies being pegged to a rising US dollar. Of course, as noted below, it is also likely that the main source of tourism for East Timor will come from Australia and other countries of the region. This potentially dynamic sector of East Timor's economy will not be helped by a fixed link to a currency that is regarded as 'expensive' to tourism's primary markets.

The case for the Portuguese escudo is a superficially enticing one, and rests upon the foundations of Portugal's high profile pledge to underwrite a large proportion of East

²⁰ See, for example, Schuler (1998) and Culp *et al* (1999).

²¹ Banco Central de la República Argentina (1999), p.3.

Timor's financial needs for the reconstruction period. The exact nature of this pledge is unknown at the time of writing. Initial reports immediately before and after the independence ballot suggested Portugal was going to be very generous indeed. Figures of \$US 250 - 300 million (per annum) for a broad range of development projects were liberally quoted. Later there were suggestions that Portugal would underwrite East Timor's balance of payments for five years.²² Other reports said that Portugal was willing to pay the wages of the East Timor's civil service for *two to three* years.²³ As is unfortunately often the case in these matters, the pledges seem to shrink in size the closer they come to likely redemption. What *is* certain, however, is that Portugal pays the pensions of former public servants in its colonial administration in escudos and that a Portuguese bank, Banco Nacional Ultramarino, has established a branch in Dili.²⁴ What is also certain, is that Portugal is very keen to have its currency adopted - not just as an anchor to a currency board - but seemingly as the circulating currency in East Timor.

The case for the escudo in the long term, nevertheless, must be thought of as a political one rather than an economic one. There is no reason, for example, why Portugal's contributions to East Timor's reconstruction could not be paid through trust funds established by the United Nations for this very purpose (and the usual device for such assistance), and converted to whatever currency was deemed appropriate to the country's needs.²⁵ There are also substantial risks from an escudo anchor. A currency itself attached to the euro, the escudo is now a 'strong' currency that is not prone (as per the objections to the US dollar) to move in sympathy with East Timor's likely exports. It is hard, indeed, to think of a currency whose movements are more inimical to the interests of a primarily commodity exporter. In the short-term Portugal is a likely investor in East Timor, but its own economic weakness and its long-term absorption into the European Union suggests a path in the future that will likely diverge from its former colonies. The escudo, in short, almost certainly fails criteria three and four above, and such an anchor could pose the very real danger of locking East Timor into a regime that will progressively reduce its competitiveness.

In the view of this author, the strongest case for an anchor currency to an East Timorese currency board can be made for the Australian dollar. The Australian dollar adequately fulfils all four of the criteria above. Traded in world financial markets greatly beyond Australia's importance as a trading nation, the Australian dollar is both widely accepted and a very reliable source of liquidity. Australia's inflation rate is on the low side of the OECD average and, relative to most developing countries, has been historically at levels eminently acceptable for criteria two.

²² *Sydney Morning Herald*, 3 December 1999.

²³ See, for example, the interview with Constancio Pinto, CNRT representative to the United Nations and North America, *Asia Today*, 28 October 1999.

²⁴ This Portuguese-owned bank is based in Macau. Few details have yet emerged as to the extent or nature of its activities in East Timor.

²⁵ Two trust funds have been established for East Timor - one to cover reconstruction, and one to focus on governance and capacity-building as well as to finance the civil service. The trust funds will be administered by UNTAET, East Timorese representatives and, where warranted, the World Bank and the ADB. World Bank Press Release, 17 December 1999, <www.worldbank.org>.

In terms of criteria three, the Australian dollar has significant advantages over the other currencies under consideration here. The Australian dollar has famously been long regarded as a 'commodity currency' and as such, since it was floated in December 1983, its close tracking of commodity prices has protected the domestic economy from the very large price fluctuations that are the norm in commodity markets.²⁶ As noted, East Timor too will rely on commodity exports for the foreseeable future. Coffee has long been East Timor's staple, but can be developed further in a more stable macroeconomic environment.²⁷ Oil is an export commodity of great promise for East Timor, sovereignty over which will shortly be achieved when the country takes Indonesia's place under the 'Timor Gap' treaty with Australia. It is not clear yet precisely how much oil the Timor sea will yield, but a small amount of revenue is likely in the short term, with larger returns expected beyond.²⁸ The benefits to East Timor in anchoring to the Australian dollar in terms of its commodity profile are then, two-sided and simultaneous. With an Australian dollar anchored currency board, East Timor can enjoy the protection that Australia's floating exchange rate will provide against commodity price fluctuations. At the same time, an Australian dollar anchor will provide East Timor with the wherewithal to establish its own national currency on a credible basis.²⁹

Likewise under criteria four, anchoring to the Australian dollar could yield significant advantages. Though it is very early days, it is likely that Australian firms will be amongst the largest investors in East Timor. Indonesia's impoverished province of West Timor aside, Australia will be East Timor's closest neighbour and its most likely source of tourists. Tourism is an industry of much promise and even greater hope in East Timor and, it can be reasonably presumed, is a sector in which Australian investors are likely to have both expertise and inclination. Of course, Australia is likely to be the source of much of the material support required for the reconstruction of East Timor's physical infrastructure. Investment and aid from outside Australia, which constitutes the bulk of the latter, will not be endangered by an Australian dollar anchored currency board. The acceptability and liquidity of the Australian dollar means that it is an ideal medium through which to transform financial wealth in any form, and in whatever original denomination.

Exchange Rate

If the choice of the anchor currency is a crucial decision in the establishment of a currency board, then clearly so too will be the rate at which the local currency is fixed against it. Fixing at too high a rate will damage East Timor's export and foreign investment prospects, and will reduce the credibility that the exchange rate can be maintained. Fixing at too low a rate will stimulate local production, will attract capital inflow and be less of a problem generally, but *could* lead to inflation through the

²⁶ For more on the close relationship between the value of the Australian dollar and commodity prices, see Gruen and Kortion (1996).

²⁷ Joint Assessment Mission (1999).

²⁸ Press Release, 16 January 2000, Agence France-Presse

²⁹ It is also likely, given East Timor's distance from other markets and its undeveloped transport and commercial infrastructure, that Australia will be a likely entrepot for East Timorese trade – further enlarging the role the Australian dollar might play.

subsequent expansion in money base and the higher price of imports. That said, fixing at a margin below what might be regarded as the long-term equilibrium rate, and giving East Timor a competitive edge at inception, is a likely best policy.

'Dollarisation'

Given that, under a pure currency board, the domestic currency must be fully backed by foreign reserves, a question that naturally arises is why a local currency is required at all. Why not simply circulate the anchor currency? This is a question currently under consideration in Argentina, a country whose domestic currency has had a long history of poor credibility.

Notwithstanding the surety that might be yielded by using the anchor currency in circulation, a number of reasons stand out for maintaining a domestic currency in a country such as East Timor.

The first of these is simply the recognition that a national currency is important symbolically as a statement of independence and national unity. Ephemeral notions perhaps, but no less powerful for that if the controversies in Europe over the introduction of the euro are any guide. For a new nation such as East Timor, this issue is likely to be even more important.

Another reason why East Timor should have its own national currency, but one backed by foreign reserves, is more tangible and concerns seigniorage. As noted above, a currency board in East Timor would not back the local currency against foreign notes and coin, but against anchor currency denominated government securities. These securities, the assets of the currency board, are interest bearing. Its liabilities, currency on issue, are not. The seigniorage income from this, less the costs of actually operating the currency board, adds to the stock of anchor reserves or, alternatively, can be income passed on to the government.³⁰

By having a national currency, East Timor can also maintain a degree of flexibility with regard to the anchor currency. Not with the exchange rate against the anchor - but with regard to the choice of the anchor itself. This could be important in the (unlikely) event that the anchor currency country became a source of serious inflation. This issue could also become important if East Timor was to find that its trade and investment was increasingly to be written in a currency other than the anchor (or East Timor wanted its trade and investment to move in that direction). So long as this other currency was as stable as the previous anchor, there is nothing in principle to disavow such a move. Of course, confidence that the currency could continue to be exchanged against the old anchor would be critical during the transition period of such a move, and it would not be a decision to be entered into lightly. Because the issue of anchor flexibility could only

³⁰ The issue of the seigniorage benefits of national currencies is comprehensively argued in Fischer (1982).

become important in the longer term, it is not something that should feature prominently in the initial design of the currency board.³¹

By creating a currency board, East Timor also gives itself the option of ultimately creating its own central bank if, at some time in the future, this is seen as desirable. Simply circulating another country's currency, on the other hand, locks the country out from *ever* being able to run an autonomous monetary policy short of once more changing the currency. A country that has established a currency board will have already established a sound currency, and has in place rudimentary central banking operations upon which more could be built with minimal disruption. Of course, a currency board could also provide the institutional framework from which to develop an indigenous financial system more generally. This is a policy which, as noted above, is being attempted by the currency board in Bosnia-Herzegovina.

Banking Policy

As noted above, the operation of a pure currency board arrangement necessarily precludes the provision of lender-of-last-resort (LLR) facilities to the financial sector. When bank failure occurs under an LLR facility, the central monetary authority (usually a central bank) is effectively forced to acquire a proportion of the liabilities of the failed institutions. But the liabilities of a pure currency board (otherwise simply the notes and coin on issue) must be fully backed by reserves of the anchor currency. The provision of an LLR facility, therefore, could result in the erosion of reserves and places in jeopardy the operation of the entire system. It also potentially undermines the transparency and independence of a currency board arrangement.

Should a currency board be established such that it holds anchor reserves in excess of 100 percent of the currency on issue, then clearly this would leave a margin to provide for an LLR (or like) facility. The Bank of Estonia and the Bank of Bulgaria have attempted something along these lines. Both are divided into two departments - an 'issue department' that contains the currency boards, and a 'banking department' that undertakes a range of traditional central bank activities, including the provision of limited assistance to the financial sector in the case of acute liquidity crises. It is the banking departments in both cases that hold the 'excess reserves' of the currency board, and their activities are limited to the extent of these. In each case, monthly accounts of both the departments are published, providing assurance that the reserves for the currency board are being maintained while detailing the funds available to assist banks in times of crisis (Bennett 1993, pp.456-467, Gulde 1999, pp.171-172).

To a large extent modern bank supervision practice has, in any case, moved beyond LLR facilities as the appropriate guarantors of financial system stability. Indeed, to the extent that they create moral hazard, they have come to be regarded as more of a problem than a

³¹ Williamson (1995, p.16) is sceptical that a change in anchor currencies could take place without prompting a severe lack of confidence in the currency, and a financial crisis.

solution, especially amongst developing and transition economies.³² Should East Timor develop substantial indigenous financial institutions they could be supervised, by the currency board or (ideally) by an institution established for this purpose, in accordance with a strict observance of the international Basle Accords.³³ Such a supervisory framework does not require LLR facilities, or any other financial exposure.

An immediate policy which should be adopted upon the establishment of a currency board in East Timor, is to open the country to foreign banks. In times when the absence of LLR facilities *was* regarded as a systematic problem, it was foreign banks (with their risk dispersed and, in any case, somebody else's problem) in currency board systems that were regarded as the pillars that ensured financial stability. In a country as poor as East Timor, and with the time it is likely to take for a properly functioning indigenous financial sector to emerge, it is foreign banks that could once more fulfill this function. Already subject to appropriate supervision and bringing with them relevant expertise and product innovation, foreign banks will also give East Timor access to international capital markets.³⁴ Of course, in this context, it is especially important that East Timor be open to the operation of banks from the anchor currency country - the least risky sources of foreign capital. In order to ensure this, bank regulation (Basle Accord) and other policies concerning banks (taxation, licensing and so on) should be as close as possible to that of the anchor currency country.³⁵

An even more useful immediate financial strategy to adopt in East Timor will be to encourage the type of 'microcredit' schemes that have been so successful in many other poor and emerging economies. These schemes, which were pioneered by the Grameen Bank in Bangladesh, seek to extend credit to small-scale entrepreneurs too poor to qualify for traditional loans from banks. By enabling access to capital, microcredit is aimed at generating productive self-employment, and in tapping the latent potential of people often excluded from the formal sector of the economy. As the United Nations General Assembly noted in December 1997, microcredit schemes 'have proved to be an effective tool in freeing people from the bondage of poverty, and have led to their increasing participation in the mainstream economic and political process of society'.³⁶ It should also be noted that microcredit schemes have no need for LLR or other facilities, enjoying a level of loan delinquency for which any formal banking system, anywhere in the world, would be envious.³⁷

³² But not limited to them, as the 'savings and loans' crisis in the United States in the late 1980s amply demonstrated.

³³ That is, the comprehensive set of principles for banking supervision determined by the Basle Committee on Banking Supervision. This committee is organised under the auspices of the Bank for International Settlements (BIS) and its recommendations are adhered to by most OECD countries. For more details, see the BIS website at <www.bis.org>.

³⁴ Such benefits have been apparent in the case of Argentina, which has allowed foreign banks to compete on an equal footing with domestic banks since 1994. In June 1998, foreign banks held over 63 percent of all deposits in privately owned commercial banks operating in Argentina (Hanke and Schuler 1999, p.5)

³⁵ For more on this idea, see Osband and Villaneva (1993), p.211.

³⁶ General Assembly Resolution 52/194, United Nations.

³⁷ For more information on microcredit generally, as well as on lending performance, see the Grameen Bank website at <www.grameen-info.org>. A number of books and articles have appeared on microcredit,

Extending microcredit into saving schemes, business services and other financial instruments will create a bridge to the more traditional financial sector, and could provide the basis for the creation of a self-sustaining indigenous financial system. In the meantime, microcredit is a favoured instrument of the World Bank, IMF and other institutions of the United Nations system, together with various NGOs, and should be able to attract their support during the period of reconstruction in East Timor.

Access

Conversion of the domestic currency into the anchor currency should be automatic, but this does not imply that individuals (or individual enterprises) must have access to the currency board for the purposes of exchange. Public access to exchange could be limited, for example, to the commercial banks, whatever form these might ultimately take. For reasons of administrative costs, this is the practice of some of the existing currency board arrangements. In other countries, Bosnia Herzegovina and Estonia notably, public access to the currency board is allowed (Bennett 1993, p.453).³⁸ In the case of East Timor, there seems to be little reason *not* to allow for direct public access to the currency board for the purposes of exchange. East Timor's small geographic size should limit the costs of administration (there will be little need for multiple branches), and physical access could do much to establish confidence in the system. The Reserve Bank of Australia has had many years of experience in dealing directly with the public over currency matters via state branches, and presumably could be called upon for advice in the physical and institutional infrastructure required.

Exchange/Capital Controls

The operation of a pure currency board does not allow for exchange or capital controls on outflows since it guarantees the exchange of the domestic for anchor currency. Less than pure arrangements will allow the possibility for controls on capital outflows, but clearly the currency board will be compromised in proportion to the extent that they are applied. Experience of other emerging economies, especially in Latin America, also suggests that controls on capital outflows tend to be 'inefficient, widely circumscribed and a barrier to future borrowing' (Fischer 1999, p.3). Most existing currency board arrangements have no exchange or capital controls in place.

Openness to foreign capital is not an end in itself, but a vehicle for the enhancement of economic growth and the transfer of modern technologies and techniques. For this reason, there is no reason to restrict long-term capital inflow, especially when it is in the form of foreign direct investment in local enterprises. There is, however, something of an

but for one of the best, see Khandker (1998). There are currently over 80 microcredit schemes around the world that use the Grameen Bank methodology.

³⁸ In Argentina too, anyone can exchange pesos for dollars at the central bank but, according to Hanke and Schuler (1999, p.4), in practice only commercial banks have yet done so.

acceptance, even from those who would otherwise hold to the 'Washington consensus',³⁹ that controls on the *inflow* of (potentially destabilising) short-term capital could be profitably employed. In this context the 'market based' restrictions imposed by Chile are often cited and these could be examined by a future East Timorese government.⁴⁰

Colonialism

One possible psychological obstacle to the establishment of a currency board, particularly for a country such as East Timor, is their background as institutions of European colonialism. Currency boards were particularly prevalent amongst countries and regions locked within the British Empire. Established in order to provide for a stable and familiar currency in countries far from the imperial centre, while at the same time protecting the gold stocks of the Bank of England, currency boards were first employed, in Mauritius, in 1849. As noted by Schuler (1992), they 'became the monetary arrangement of choice' for British colonies thereafter. The present array of currency board arrangements, however, are not institutions of colonialism. They exist purely to establish credibility in the currency they issue, and are in no way subservient to institutions of the anchor currency country.

No Panacea

Both in theory and in terms of recent experience, there is much to suggest that currency boards can greatly assist in 'locking in' responsible economic policies. In general, countries that employ currency boards have played by the 'rules' they impose and there have been no examples yet of systematic breakdown, or of attempts to appropriate their anchor currency assets by desperate governments.

Nevertheless, it is important that the potential benefits that a currency board can deliver not be oversold. Currency boards are not a panacea, and by themselves do not guarantee that sound economic management will be pursued. This, in the end, is a political decision that only the new government of East Timor can make.

Conclusion

A currency board is a useful device for establishing a credible national currency for East Timor in a relatively simple way. A currency board will bring with it certain costs, particularly in the constraints it will impose on policy activism, but in the case of East Timor these will be outweighed by the greater need for the institutional credibility and transparency a currency board will bring. A critical decision in establishing an East Timorese currency board is that relating to what anchor currency to choose. This paper has argued that, of the feasible alternatives, it is the Australian dollar that best combines

³⁹ That is, the collective term used to describe the generally 'market friendly' views espoused by the IMF, World Bank and United States Treasury.

⁴⁰ For more details on Chile's arrangements, see Neely (1999), and the official website of the Banco Central de Chile at <www.bcentral.cl>.

credibility and stability, with the trade competitiveness East Timor will need as an independent nation.

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