
Where Do Currency Boards Help?

Evaluation

Since there are several powerful advantages and also a number of disadvantages in adopting a currency board, it seems likely that they will be a good idea for some countries and a bad idea for others. Is it possible to draw any general conclusions about the circumstances in which a currency board would provide a desirable solution?

There is no very compelling reason for arguing that three of the four advantages of currency boards will differ systematically depending on any obvious country characteristics. Convertibility, fiscal discipline, and the confidence they engender are always desirable, although there may sometimes be questions about how quickly they can be achieved without sacrifices that outweigh the short-run benefits.

Payments adjustment is another matter. Fixed exchange rates are a much better idea in open economies than in closed ones, for the reasons explained above. Since there is a strong tendency for small economies to be more open than large ones, the latter are likely to pay a higher price for a currency board. It may make good sense for the European Union to aim for monetary union, but that does not mean that it would be sensible to fix the exchange rate between the ECU and the dollar. The adjustment problem analyzed in chapter 2 is thus a much more important consideration for large and less open economies than it is for small and more open economies. Likewise, the transition problem referred to the danger that a country's currency would become over-

valued after it had fixed its exchange rate because of inflationary inertia; the lower impact of the exchange rate on the internal price level implies that this too is a more serious danger in relatively large and closed economies.

Consider next the various disadvantages identified in the preceding chapter, starting with the issue of seigniorage. It has long been held that a country wishing to maintain a fixed exchange rate needs to maintain reserves equal to three or four months' worth of imports (see, e.g., Williamson 1973). A country with a relatively closed economy that imports goods and services equal to 10 percent of GDP will therefore wish to hold reserves equal to only about 2.5 to 3.5 percent of GDP. In contrast, a country with a relatively open economy whose imports equal, say, 50 percent of GDP will wish to hold reserves equal to 10 to 15 percent of GDP. In practice, countries' ratios of reserve money (M_0) to GDP vary widely, from about 4 to 40 percent (with no obvious relationship to country size), but the average is in the range of 10 to 15 percent. This means that a relatively open economy will wish to hold reserves more or less equal to a typical level for the monetary base, even if it has no desire for a currency board, whereas more closed economies would have to increase their holdings of foreign reserves above the level they would otherwise choose in order to institute a currency board. As a currency board imposes a seigniorage cost only if it requires a country to increase its average reserve holding, this cost is likely to be zero or minimal for open, and therefore for small, economies but is much more likely to be a significant burden for less open, and therefore for larger, economies.¹

Because small countries find it more natural to keep a high level of reserves relative to the money supply than do large countries, they are also less likely to encounter a major problem in assembling enough reserves to launch a currency board (the start-up problem).

Can one also argue that the crisis problem is likely to be less potent in small economies? There may be some tendency this way, as a small economy is probably more likely to have an important presence of for-

1. I am indebted to J. J. Polak for suggesting this analysis, which can be expressed algebraically as follows. Let $R = aM$ and $M = bY$, where R is foreign reserves, M is annual imports, and Y is GDP. Then $R = abY$. Also, the monetary base $M_0 = \alpha Y$. Then the monetary base even without a currency board will tend to be at least as great as reserves, implying that there will be no seigniorage cost to establishing a currency board, if $ab > \alpha$. Since seigniorage lost is the opportunity cost of holding reserves (the difference between the yield on reserves and the yield on the alternative investment that would be possible) multiplied by the increase in the level of reserves and b tends to be larger in small countries, the cost of a currency board is small, or zero, in small countries, but this is much less likely to be the case in large ones.

eign banks, but this is perhaps a regularity on which one would not wish to place a great deal of weight. Similarly, it is not clear whether large countries are less likely to be willing to have their fiscal policies disciplined.

Even if one allows nothing for the latter two issues, however, there appear to be two powerful reasons for concluding that currency boards are more likely to be attractive to small (and therefore open) economies than to larger (and therefore more closed) ones. First, the opportunity cost in terms of forgone seigniorage of operating a currency board will be zero or small. Second, the gold-standard adjustment mechanism will be less costly and may indeed be optimal.

How far can the criterion of country size go in explaining why several countries are now using currency boards? Fifteen years ago it would have seemed to work perfectly: as table 1 shows, all the surviving currency boards—Bermuda, Brunei, Cayman Islands, Falkland Islands, Faroe Islands, and Gibraltar—served territories with tiny populations and economies. Since then, four more currency boards have been established: in Hong Kong, Argentina, Estonia, and Lithuania.

Hanke and Schuler (1994, 88) argue that Hong Kong, although geographically tiny, actually has a rather large economy by the standard of developing countries. That is true, but the reason that one expects small countries to be suitable candidates for currency boards is that they tend to have open economies. Hong Kong, despite its relatively large economic size, may well be the most open economy in the world, with a ratio of exports to GDP of more than 100 percent.² Hence there is no counterexample here. Similarly, Estonia and Lithuania are small economies by any standard other than that of the size of the territories with currency boards prior to 1983.

The interesting case is Argentina. With a population of 34 million and a GDP of over \$250 billion, Argentina is not a particularly small country. And the economy is certainly not very open: the ratio of imports to GDP was 8 percent in 1992 (and that of exports to GDP was even lower).

Why then did Argentina establish a currency board arrangement (and bimonetarism)? The answer is quite clear: Domingo Cavallo, the finance minister, concluded that hyperinflation had caused a collapse of confidence in the Argentine government so complete that there was no chance of reestablishing credibility with less drastic measures. It might not be a particularly welcome arrangement, but it did reassure the Argentine public that the government's fiscal hands were tied and that it would be possible to maintain convertibility.

2. Admittedly that figure includes reexports, but there is nonetheless no doubt that the economy of Hong Kong is exceptionally open.

The impact of the currency board on confidence was immediately evident in a massive fall in peso interest rates, from a monthly rate of over 12 percent to under 2 percent within a month (Bennett 1994, chart 4). But because Argentina is such a closed economy as to be an unnatural candidate for a fixed exchange rate, inflation fell only gradually, and the peso ended up apparently overvalued. Despite this, the government has concluded (in my view rightly) that it is better to face the pain of the gold-standard adjustment mechanism than to devalue the peso and thus jeopardize the stabilization that has been achieved, and the currency board arrangement has presumably been helpful in resisting the pressures on the peso that were unleashed by the Mexican crisis at the end of 1994.³ (I say “presumably” because of the possibility, noted above, that a currency board might actually intensify pressures during a financial crisis because it precludes a lender of last resort.) Hence a second circumstance in which a currency board is justified is during a phase of reconstruction following the complete collapse of confidence in the government’s economic competence or integrity.

There is a third situation in which it would seem natural to resort to a currency board, and that is where a country plans to use the exchange rate as a nominal anchor in stabilizing inflation. Such an intention presupposes a willingness to allow the gold-standard adjustment mechanism to work. Since that mechanism is likely to involve a period of overvaluation, it is not possible for the international community to focus surveillance on the avoidance of overvaluation, as I would argue is normally desirable. Hence international support of a country committed to the nominal anchor strategy (should such help prove necessary) requires an alternative basis for assurance that its policies merit international support. A currency board seems a natural way of providing such assurance. An additional virtue is that a currency board might add enough credibility to give the nominal anchor strategy a sporting chance of working.

Thus we have identified three types of circumstances in which it is sensible to adopt a currency board system: where the economy is small or open, where there seems no other way of restoring confidence in economic policy, and where a country plans to use its exchange rate as a nominal anchor.

In the first of those three cases, there is no reason a currency board should not provide a permanent monetary regime. But in the second (and perhaps the third) circumstance, a currency board is an unnatural arrangement and hence is likely to prove temporary. Hong Kong is al-

3. Other factors that placed Argentina in a more favorable position than that of Mexico were the absence of a large mass of short-term government debt that needed rolling over and the smaller size of the current account deficit relative to GDP.

ready following the Singapore model in gradually adding features that allow it to address a central bank's normal concerns with defending the banking system, resulting in a progressive erosion of the automaticity that is a key attribute of a currency board. Argentina tried to move in the same direction when the Mexican crisis first broke, by reducing reserve requirements instead of allowing interest rates to rise as it had done in 1992, but it soon discovered that it still had not built up sufficient credibility to allow it to bend the rules of the currency board system. If and when it does develop sufficient credibility, it too will be able to follow the example of Singapore. It would seem altogether more prudent to adopt such an incremental approach, growing out of its currency board, than to revert to the postcolonial practice of throwing out the currency board lock, stock, and barrel.

Current Cases

The advocates of currency boards have urged vociferously that several relatively large countries—notably Mexico, Russia, and Ukraine—adopt currency board arrangements (Bartley 1995; Hanke 1995; Hanke, Jonung, and Schuler 1993). This is in addition to discussions in which smaller countries such as the Kyrgyz Republic, Namibia, and Palestine have been engaged. The preceding analysis concluded that currency boards are quite a good idea for such small countries (and might indeed be especially suitable for Palestine in view of its ambiguous status as a “country”). But the analysis also cast doubt on their long-run suitability for large countries, so we turn to specific examinations of the three large countries that have been mentioned.

Mexico

Mexico, with a population of some 93 million and a GDP of more than \$500 billion, is a large country by most standards other than comparison with its neighbor to the north. The impetus to the proposals for adoption of a currency board came from the crisis that broke in late 1994. One of the complaints against Mexican policy that would have been addressed directly by having a currency board in place is that the Banco de México sterilized the reserve outflow during 1994, thus preventing the gold-standard adjustment mechanism from operating and in that way dooming the fixed exchange rate.⁴ My own view is that this is

4. Actually, the peso was fluctuating within a fairly wide band that was itself moving modestly in a predetermined way, so it is not quite true that the exchange rate was fixed, but the policy was explicitly to use the exchange rate as a nominal anchor.

superficial. The basic problem was that Mexico's exchange rate policy had led to the peso becoming overvalued, resulting in a current account deficit of 8 percent of GDP despite growth that was only anemic. This placed Mexico in an extremely vulnerable position in which the only real questions were the date a crisis would occur and the trigger that would precipitate it. The even slower growth that would have resulted from following the gold-standard rules of the game would have transferred the tensions elsewhere rather than resolved the problem.

How much importance should be attached to the other advantages of a currency board in the Mexican case? One can agree that it would help to lock in fiscal discipline. Payments adjustment is happening anyway, through the depreciation of the peso and the recession, and in a way that gives far more hope of Mexico emerging from the crisis as a new Chile than would have been conceivable if it had been subjected to the long agony of recession at a fixed exchange rate. And maintaining convertibility, at least without far larger reserves than Mexico had, would have threatened to provoke a financial crisis. The point was developed in a letter to the *Financial Times* on 28 February 1995 by a colleague of mine, William R. Cline:

The principal problem of feasibility is that Mexico's monetary structure is highly leveraged, and so any credible pledge to convert pesos at a permanently fixed rate would require massive foreign reserves. When Argentina adopted the Convertibility Plan in 1991, its external reserves were larger than its money base and also larger than its M1 (currency plus demand deposits) and amounted to three-quarters of the wider aggregate M2 (which adds savings and time deposits).

In contrast, while the \$11 billion reserves figure suggested by Professor Hanke for Mexico would cover the money base, because Mexico's money multiplier is high and bank reserves are low this amount would cover less than half of M1 and only one-sixth of M2. For credibility comparable to that in the Argentine arrangement, Mexico would need as much as \$50 billion in foreign reserves.

Without such a high level of reserves to start the system off, a determination to honor convertibility at a fixed exchange rate would have precluded the Banco de México acting as lender of last resort, and it seems quite likely that this would have provoked a financial crisis.

Of the other potential problems with a currency board, one can note that the seigniorage problem would be nonexistent if Steve Hanke were right in arguing that reserves of \$11 billion would suffice (since Mexico was voluntarily holding more reserves than that before the crisis broke) but that it would be quite significant if Cline is right in arguing that \$50 billion would be needed to establish the credibility of a currency board (since Mexico's reserves peaked at \$29 billion). In my view, Cline is right.

The two most serious other problems would seem to be the transition problem and the adjustment problem. Mexico had almost lowered inflation to industrial-country levels by the end of the Salinas government, but the crisis has pushed it up again, and experience since 1987 has suggested that Mexican inflation contains a lot of inertia. Thus it is likely that, even if the exchange rate were fixed with complete credibility by a currency board arrangement, the peso would again become overvalued. If Mexico succeeded in overcoming that problem and deflating its way back into competitiveness, it would still face the loss of the exchange rate as an instrument of economic policy to help it adjust to future real shocks, such as changes in the price of oil (which remains of some significance, though vastly less than a decade ago—oil now generates some 10 percent of export revenue). A study by Bayoumi and Eichengreen (1993) revealed that shocks to the Mexican economy have a very low correlation with those to the US economy, thus violating another important requirement of an optimum currency area, since this low correlation implies that US monetary policy cannot be relied upon to be appropriate to the needs of the Mexican economy as well.

It is thus difficult to believe that Mexico would be well-advised to establish a currency board arrangement.

Russia and Ukraine

Consider next the positions of Russia and Ukraine. Stretching over 11 time zones, with the largest area of any country on Earth, and with the world's sixth largest population of around 150 million, Russia does not strike one as the sort of small country for which a currency board provides a natural monetary arrangement. Guessing its GDP is something of a parlor game, but once Russia begins to resolve its problems one would expect to see a figure closer to a trillion dollars than to the derisory estimates of less than \$100 billion that circulated during the early period of reform, when the exchange rate was chronically undervalued as a result of capital flight.

Ukraine is much smaller: 4 percent of the land area of Russia (but still, the size of France), just more than one-third of the population of Russia (but comparable to the other European countries, except united Germany, that like to think of themselves as economic powers), and with a GDP per head now only a fraction of that in Russia and thus a total GDP at market exchange rates of around \$30 billion. But this is again a vast underestimate of its potential size if and when reform comes to fruition, when GDP may be expected to be on the order of \$250 billion. Ukraine is, again, hardly a small country. And neither Russia nor Ukraine is particularly open except when GDP is measured on the basis of current undervalued exchange rates.

The main argument in favor of Russia and Ukraine adopting currency boards is that they desperately need sound money. Because of the high rates of inflation and capricious swings in real interest rates from the highly negative to the prohibitively positive, local currencies have already been displaced by foreign currencies, primarily the dollar but also the deutsche mark. It is believed that about 50 percent of the deposits in Russian banks were denominated in foreign currencies in the first half of 1995. Far better to have a currency board that would persuade the public to start holding the local currency again than to see the local currency competed out of existence. If those are indeed the true alternatives, the seigniorage argument probably goes in favor of a currency board rather than against it because the present arrangements result in Russians and Ukrainians holding large stocks of \$100 bills that yield no interest whereas a currency board would tend to centralize the holding of dollars and could invest them in interest-earning assets.

This is a more persuasive argument than that advanced in the case of Mexico, where financial collapse has not gone far enough to rule out the option of maintaining the existing system and simply operating it better. Nevertheless, one must still consider the issues that were previously identified as posing potential problems with a currency board system.

First, do Russia and Ukraine have enough reserves to start up currency boards? Hanke, Jonung, and Schuler (1993, 95–96) estimate Russian M0 and use the market exchange rate to calculate that in December 1992 Russia would have needed \$5.2 billion to launch a currency board. They go on to note that Havrylyshyn and Williamson (1991, 40) had estimated that a currency board would cost something on the order of \$50 billion for the old Soviet Union, an estimate that I increased to \$100 billion in a subsequent publication (Williamson 1992, 27). Hanke, Jonung, and Schuler translate these estimates into a range of \$30 billion to \$60 billion for Russia alone. They deride these estimates as relying on “statistical or judgmental estimates which treat the rouble as a mere medium of exchange and neglect the function of money as a store of value” and therefore fail to recognize that the ruble’s loss of credibility had caused its market value to collapse. They do concede that a credible promise to establish a currency board might cause an appreciation of the ruble sufficient to bring the true need for reserves closer to my figure than to theirs.

The estimates of Havrylyshyn and Williamson were based on a fairly crude back-of-the-envelope calculation; nothing better seemed to be available then. Estonian experience now provides a far more reliable basis for forming such an estimate and therefore for choosing between our figures and those of Hanke et al. Estonia has a population of 1.5 million

as against Russia's 150 million, while its per capita income was estimated as being about 20 percent above that of Russia in 1988, before the Soviet collapse began (IMF et al. 1991, table 33, 231). Hence one might expect its demand for monetary base to be 1.2 percent of that in Russia. The Estonian currency board started with M0, and thus required reserves of 754 million kroons, or \$58 million (Bennett 1993, 462). Grossing up to Russian needs, one gets an estimate of just under \$5 billion, which is essentially the figure of Hanke et al. and an order of magnitude smaller than that of Havrylyshyn and Williamson.

However, the point that we were trying to make was that the need would be much larger once confidence recovered. It is therefore relevant to look at the present level of required reserves in Estonia. By March 1995 the monetary base had risen to 4.2 billion kroons, some \$372 million. The grossed-up equivalent for Russia is \$31 billion—essentially the Havrylyshyn-Williamson estimate.⁵ Equivalent figures for Ukraine would be an initial need of some \$1.5 billion and a longer-term need of some \$10 billion.

The stabilization funds that the IMF has promised to make available to Russia and Ukraine (\$5 billion and \$1.5 billion, respectively) if and when they undertake stabilization programs sufficiently convincing to be worth complementing with a pegged exchange rate are just the right size to match the initial needs indicated by Estonian experience. There is also by now sufficient flight capital owned by Russians and Ukrainians potentially available to return once confidence in the currency is reestablished so as to permit a buildup to a normal level of money supply without domestic credit creation. Hence it might appear that the start-up problem need not be an obstacle. That is probably true with respect to Ukraine, where the real exchange rate remains extremely undervalued, but not of Russia, where the real exchange rate has already appreciated a lot and the real wage is now closer to that of Estonia than that of Ukraine.

Even if these countries have enough reserves to start the system off and enough money returns to meet the increase in the demand for money as confidence recovers, there is the question as to whether it would be an economic use of resources to accumulate reserves equal to 100 percent of the money supply. One has to be convinced that the commitment to a currency board is a necessary condition for capital repatriation to occur before that looks like a prudent use of scarce foreign exchange. Some of us tend to be skeptical when told that the best way to establish credibility is to abandon prudence for the sake of impressing the markets. Moreover, recent reports (July 1995) suggest that flight capital is already returning.

5. However, it is clear that my subsequent increase of that figure was mistaken.

Second, are Russia and Ukraine likely to face what I have called the transition problem—that is, to become significantly overvalued before inflation can be brought down to the level in the West? One might take some heart here from the fact that a simple quantity theory of money seems to provide a reasonably good explanation for inflation in Russia (Sachs 1995). On the other hand, one cannot help reflecting that inflation did not stop in its tracks when Poland used a fixed exchange rate as a nominal anchor as a part of its “big bang.” It eventually had to move to a crawl, as continuing inflation threatened to make it uncompetitive and cause a balance of payments deficit so large as to lead to crisis. Nor can one take comfort from the course of events in Estonia, where inflation is still over 30 percent per year despite the country having had a currency board and a fixed exchange rate for three years (table 3). Admittedly there are no obvious symptoms of overvaluation of the kroon as yet because the initial exchange rate implied a vast undervaluation, and it may be just that the fixed exchange rate has so far acted as a nominal crane rather than a nominal anchor (as described above). Perhaps, as the kroon approaches a competitive level, the nominal anchor effect will take hold and inflation will slow to the level consistent with productivity bias. Let us hope so. All one can say at this stage is that the evidence for such a benign outcome is not yet in.

So far as the adjustment problem is concerned, Russia and Ukraine are the sort of large countries for which a flexible exchange rate would seem more appropriate than a fixed rate. They will surely face balance of payments shocks from time to time, and a fixed exchange rate would hobble them in reacting efficiently to such shocks. Similarly, it would seem *prima facie* unlikely that their cyclical ups and downs will coincide with those in any country to whose currency they might peg, and therefore the loss of the ability to run their own contracyclical monetary policy will impose a cost.

Then there is the crisis problem: both countries have monetary systems that seem all too likely to need bailouts in the next few years. Here, however, Hanke and Schuler (1994, 86) make the counterpoint that a central bank also gives the often-abused opportunity of bailing out enterprises that it would be better to confront with a hard budget constraint, which is, unfortunately, a perfectly valid point.

Finally, one has to ask the central question: would fiscal indiscipline be cured by the creation of a currency board? Perhaps the biggest weakness of the pro-currency board literature is that it takes the answer to this crucial question for granted. It is one thing to say that a political resolve to respect fiscal discipline can be consolidated and institutionalized by creating a currency board; it is another to assume that if there is no possibility of financing a deficit through the inflation tax then it is

guaranteed there will be no deficit. Most governments that resort to the inflation tax have not completely exhausted the possibility of bond finance. They use the inflation tax instead because they judge further monetary expansion to be a lesser evil than continuing to issue debt until the government goes bankrupt. If one is not sure that the governments and parliaments of Russia and Ukraine would be able and willing to secure fiscal reforms with a currency board that they would be unable to agree on in its absence, then one should at the very least tone down the rhetorical claims made for currency boards.

Indeed, one should also ask the question as to whether, if one could secure fiscal discipline, a currency board would be necessary to create moneys that Russians and Ukrainians would be prepared to hold and use. A currency peg might be almost as good as a currency board in terms of securing a renewed willingness to hold the national currency. If it is correct to argue that a currency board will not work in the absence of fiscal discipline and is unnecessary in its presence, then the only question is whether a currency board is necessary to establish fiscal discipline. Perhaps that is overstating it; a currency board can surely help to establish credibility more quickly, which is worth something and may be important in extreme cases such as Argentina and conceivably Russia. But the case for a currency board in Russia and Ukraine still looks tenuous.

Concluding Comments

If with the benefit of hindsight we could go back to 1960, I do not think we would advise every newly independent African country to replace its currency board with a central bank. On the other hand, if we could go back to the redesign of West Germany by the allies in the 1940s, I cannot imagine that we would choose to put in place a currency board rather than the precursor of the Bundesbank.

Similarly, I find it possible to say simultaneously that a currency board was the right solution for Estonia and may be a good idea for the Kyrgyz Republic, Namibia, and Palestine and also to advise against trying to foist currency boards on Mexico, Russia, and Ukraine. It is not obvious that they could command enough foreign exchange to start the system off (at least without abandoning any pretense of providing a lender of last resort); nor is it certain that they could attract enough capital repatriation quickly to prevent excessive deflation, or that following the rules of the game would prevent an overvaluation from developing, or that a fixed exchange rate would not hobble them in adjusting to future shocks. In the cases of Russia and Ukraine, though perhaps not Mexico, one

also has to wonder whether their fiscal authorities would accept the subservient role that would be needed to make the system work.

This study has focused on the economics of currency boards, but it should be recognized that there is also a political dimension to the issue. A national currency has traditionally been an attribute of national sovereignty, just like a flag and a national anthem. It is proper to inquire into the price tag attached to such symbols, and as I have argued here, for small countries that price is sufficiently high as to make monetary sovereignty as dysfunctional as most other aspects of this curious social institution called national sovereignty. I have also argued that monetary sovereignty is likely to provide a net economic benefit to large countries, except when there is no alternative way of reestablishing a measure of credibility for economic policy. But even in those cases one should not be too surprised if countries prove willing to pay the price of sovereignty: many peoples have paid a much higher price, in terms of blood rather than money, for the same cause.