

One Country, One Currency?

Dollarization and the Case for Monetary Outsourcing

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At midnight on September 9, 2000, the Ecuadorian sucre went out of circulation, to be replaced by the U.S. dollar. Ecuador thus became the second dollarized country in Latin America. The first was Panama, which has used the dollar as its official currency since 1904.¹ Until the late 1990s, Panama's dollar-based monetary system was regarded as an historical curiosity, an artifact of U.S. presence in the Canal Zone. Yet most of the world's currencies were pegged to the dollar throughout the Bretton Woods era, and many countries continued to peg to the dollar in the non-system that followed. Moreover, unofficial use of the dollar as a unit of account and store of value is a long-established if often illegal feature of inflation-ridden economies around the world. It is therefore surprising that the further step to official dollarization until recently attracted no more than footnote acknowledgement in the abundant literature on foreign-exchange regimes.

Dollarization joins the menu of exchange-rate options

Discussion of dollarization as a policy option sprang to life in January 1999. With the Argentine peso under speculative attack following Brazil's devaluation of the *real*, President

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¹ Ecuador is by far the largest of the dollarized economies. In January 1999, the U.S. dollar was also the official currency in seven other countries around the world, all very small in population and GDP, as well as several U.S. possessions, most notably Puerto Rico (U.S. Joint Economic Committee, 1999).

Carlos Menem asked the finance minister to study the feasibility of a move to full dollarization. Financial markets interpreted the news as evidence Argentina remained committed to defending its dollar peg, even at the higher cost implied by devaluation of the *real*. Within a remarkably short period, dollarization emerged as a policy alternative deserving serious attention--a topic now worthy of academic discussion papers, pronouncements from top government officials, and Federal Reserve Bank conferences.²

The focus of the initial discussion was of course Argentina, which has maintained a “hard peg” to the dollar through a currency board since 1991.³ The currency board brought Argentina almost immediate relief from the high inflation rates that had repeatedly sabotaged its domestic performance in earlier decades. Yet the 1999 contagion crisis made it evident that even the rigid rules and reserve requirements of a currency board could not protect Argentina’s fixed rate from the attention of speculators.⁴ Under the currency-board arrangement, Argentina was thus bearing most of the costs of full dollarization,⁵ but it was not obtaining the most significant benefit--immunity from speculative attack on its exchange rate. Although Argentina was ultimately able

² Dollarization gained its own heading under “Hot Topics” in the mid-2000 updating of Nouriel Roubini’s web site. The listings reveal that both press and professional literature on the subject took off in early 1999. Although International Monetary Fund researchers had already been studying unofficial dollarization--currency substitution--for some time, the earliest listed paper on full dollarization as a policy option (for Hong Kong) was written in late 1998. Not included by Roubini is a 1995 proposal for dollarization of the Venezuelan economy in the *Wall Street Journal* (Faria 1995). “Radical as it may sound,” Faria wrote, “the best way to avoid a catastrophe would be to abandon the idea of a central bank and embrace a monetary unification with the U.S. economy à la Panama.”

³ Among academics, the most active supporter of dollarization for Argentina has been Guillermo Calvo (e.g., Calvo 1999 and papers cited there). Under Calvo’s proposal, Argentina would sell the U.S. treasury bills now held as reserves and use the proceeds to buy back the entire domestic monetary base. Calvo’s plan includes negotiation with the United States to retain at least part of the revenue now going to Argentina in the form of interest on the Treasury bills. In the Washington policy community, dollarization by Argentina and other countries has also been embraced by Senator Connie Mack, Chairman of the Joint Economic Committee of the U.S. Congress (e.g., Joint Economic Committee 1999).

⁴ Hong Kong’s dollar peg, also maintained through a currency board, was likewise subject to speculative attack in the wake of the Asian financial crisis. However, given that Hong Kong is part of the People’s Republic of China, official dollarization is most likely beyond the range of politically feasible options even under crisis conditions.

⁵ The exception is loss of seigniorage, as discussed below.

to resist the attack, borrowers saw a significant widening of the spread between interest rates on dollar liabilities and on otherwise comparable peso-denominated liabilities.

As the dollarization option began to be discussed widely, additional candidates were proposed, particularly Mexico and Canada.⁶ Unlike Argentina, these are countries whose trade in goods and assets is dominated by transactions with the United States, thus enhancing the likely efficiency benefits from use of a common currency. For all three countries, however, the case for dollarization was put forward in terms of longer-run benefits and costs and in the context of current performance that was acceptable if not optimal. In particular, the final decision was seen to hinge partly on the willingness of the United States to rebate the resulting seigniorage. In sharp contrast, Ecuador's surprise move in January 2000 was the perceived best *immediate* response to crisis conditions, including high inflation, repeated large devaluations, turmoil in the banking system, and civil unrest. With unofficial dollarization already accelerating, foregone seigniorage was at best a second-order concern for Ecuador.

Dollarization versus a regional common currency

At the same time that official dollarization was moving from non-option to actual policy choice in Latin America, another unprecedented development was taking place across the Atlantic. On January 1, 1999, a subset of European Union members locked national currencies irrevocably to the new Euro that is scheduled to replace them in 2002. Thus was born the first Europe-wide monetary system of modern times. But unlike dollarization, which seemed to appear suddenly from nowhere, the Euro had a decades-long gestation period; discussion of a

⁶ E.g., Mendoza (2000), Buitier (1999), Grubel (2000 and papers cited there). While Mendoza's paper deals with dollarization, Buitier and Grubel evaluate the related but distinct proposal for a North American monetary union.

European common currency goes back as far as the European Union itself (Johnson and Swoboda 1973 and sources cited there).

The two events differ in important ways. By adopting the U.S. dollar in place of a discredited national currency, Ecuador has ceded its monetary function to another country and has thus eliminated the most significant responsibility of its central bank. In contrast, the members of the European Monetary Union (EMU) have together created a common regional currency and have replaced individual national monetary authorities by a regional central bank responsible to the union's members. Perhaps the most important difference is that dollarization is essentially a unilateral act on the part of a single nation, requiring no elaborate advance arrangements or even the approval of the United States.⁷ Ecuador's dollarization went from first wild proposal (by a controversial president deposed only twelve days later) to full implementation in less than a year.

Yet there are important similarities also, similarities that may reflect an underlying change in the perceived scope of discretionary macroeconomic policy. In both cases, countries must forego the option to change key parities—for Ecuador, relative to the dollar as well as the large number of countries currently pegged to the dollar; for the EMU, relative to one another. Moreover, in both cases the new regime explicitly restricts the scope of national monetary and fiscal policy, a choice that is more reasonable if the benefit of active macroeconomic management is in doubt.

⁷ Federal Reserve Chairman Alan Greenspan has in fact shown a distinct lack of enthusiasm for dollarization, perhaps anticipating that dollarized nations will become yet another interest group seeking to influence U.S. monetary policy. Nonetheless, dollarization advocates clearly hope that the United States will share the additional seigniorage arising from official use of the dollar in other countries. The International Monetary Stability Act, introduced by Senator Connie Mack in February 2000, would empower the U.S. Treasury Secretary to rebate most of this seigniorage to dollarized countries. In the case of Panama, no such arrangement is currently in effect.

Ecuador's choice

Dollarization has reduced Ecuador's seigniorage gains from money creation to the minimal revenue generated minting of *centavo* coins.⁸ Because Ecuador no longer controls the supply of money within its borders, future changes in key (dollar) interest rates will emanate mainly from Washington. However, developments in Quito and Guayaquil will still affect the risk premium imposed on Ecuadorians issuers of dollar-denominated liabilities. This premium applies not only to the private sector but also to the government of Ecuador. The country's fiscal policy will henceforth be constrained by the need to finance deficits through market borrowing; the option to monetize government debt does not exist under dollarization. Thus, Ecuador has at a stroke abandoned some of the most important levers of government power.

To emphasize the drastic nature of the choice, one critic alludes to the "straightjacket of dollarization" and also compares official dollarization to dieting by having one's teeth wired together (Mann 1999). Why would any country make such a choice? The short answer could be that dollarization was the only choice left, or at least so it seemed to Ecuador's besieged president and his successor. The economy in January 2000 was in shambles, the government's credibility nil. Real income had dropped by about 8 per cent over the previous year. With domestic inflation running at an annual rate estimated to be as high as 100 per cent, the sucre had lost three-quarters of its international value in the previous two years. Low world prices for key exports, including oil, shrimp, and bananas, added to the nation's woes. Dollarization thus represented a last resort in a desperate situation, a gamble that might "provide the country with

⁸ This coin-based seigniorage is likely to be more important in Ecuador than in Panama because Ecuador is a poorer country—even prior to the recent crisis, Panama's GDP per capita was about twice that of Ecuador—where a larger percentage of typical transactions are carried out using coins only.

its best chance yet to snap the cycle of political instability, discontinuity and policy drift” (Emerging Markets Economics Ltd. 2000).⁹

What immediate benefits did Ecuador’s leaders hope to achieve through dollarization? The foremost goal, and also the most realistic, was a rapid transition from high inflation to a rate close to that of the United States. High inflation disrupts the process of economic planning by private sector and government alike. As with Argentina prior to its adoption of a currency board in 1991, Ecuador had a dismal track record in reducing inflation and keeping it down. Any conventional stabilization policy was therefore bound to encounter a highly skeptical public. At least with respect to inflation expectations, dollarization is indeed “credibility in a bottle.” Dollars are dollars, regardless of Ecuador’s other problems (and there are many). For the same reason, dollarization means an immediate end to exchange-rate crises and perhaps also reduced vulnerability to international contagion of the sort experienced by Ecuador during the 1990s.¹⁰

Beyond these gains, dollarization is no panacea, but there are still reasons to expect that it could help the government to make necessary improvements in the policy environment. The early evidence from Ecuador has been largely favorable. In most dimensions, economic performance improved beyond the modest expectations of the International Monetary Fund

⁹ In contrast, the birth of the Euro represented an optimistic leap of faith. By the mid-1990s, European integration had in many ways surpassed even the vision of the EU’s founders. As national markets for goods and factors merged into a single EU market that could rival the United States, individual currencies came to be seen as an obstacle to completion of the process. Although unemployment remained high in some European countries, few policy makers any longer believed that monetary expansion could effect a longer-term solution to malfunctioning labor markets. Rather, national inflation rates were reduced to the low German level, and national monetary policy was increasingly used to maintain a target exchange rate, usually vis-a-vis the German mark. Likewise, fiscal-policy limits ensured against future inflationary pressures arising from monetization of government debt. In this policy environment, the remaining benefits from maintaining separate national moneys appeared small, the efficiency gains from a single European currency and a fully integrated European financial market significant. The steady descent in the Euro’s international value was not part of the dream scenario.

¹⁰ As discussed below, investors may still lose confidence in Ecuadorian liabilities. Should this happen, although there is no possibility of a foreign-exchange crisis, the resulting run on banks and financial intermediaries may be equally disruptive to the economy. Perhaps because confidence was already so low in Ecuador, the immediate effect of announcing dollarization was to improve investor confidence.

(IMF) and even the more optimistic hopes of the government. An IMF review completed in late August 2000, as the six-month transition to dollarization was about to be completed, found fiscal performance significantly stronger than anticipated and the liquidity of the banking system improved (IMF 2000). The report also noted recovery in economic activity and renewed confidence in the government and the economy. As a consequence of the review, Ecuador became eligible to draw on IMF stand-by credit of about \$37 million. In the short run, Ecuador's leaders have also encountered a bit of good luck; the nation's recovery has benefited from increased oil prices and associated government revenue. However, Ecuador's past economic problems stemmed in part from over-reliance on revenues generated by oil exports. Thus, the turnaround in oil prices may allow authorities to postpone once again the implementation of needed improvements in fiscal policy.

Dollarization and the cost of capital

Many advocates of dollarization anticipate that reduced inflation and elimination of exchange-rate risk will mean increased capital inflows and lowering borrowing costs for both government and private firms. However, this conclusion is problematic in general, and for Ecuador in particular.¹¹ A low and stable inflation rate and immunity from speculative attack on the value of its currency can be seen as facilitating but not sufficient conditions for improvement, i.e., for reduced capital flight and increased inflows of investment from abroad. Although lenders are concerned about the possible erosion of returns through unexpectedly high inflation and devaluation, they are also concerned about probability of repayment, new taxes levied on

¹¹ With regard to Argentina, the favorable effect of devaluation on the cost of capital is usually expressed in terms of eliminating the current spread between peso and dollar interest rates. However, this means lower cost of capital

assets and their returns, and, in the case of foreign investors, imposition of new capital controls. Because a government deprived of seigniorage is likely to look for other sources of revenue, the likelihood that such policies will be implemented in the near future is increased by the move to dollarization.¹²

Dollarization provides no insurance against default and may in some circumstances make repayment more difficult. On the other hand, it is significant that Ecuador did not initiate dollarization from a situation in which all assets and liabilities were denominated in *sucre*s. Pervasive dollarization of *liabilities*, especially liabilities to foreigner lenders, was already well established in Ecuador, as in many other emerging markets, prior to official dollarization. Thus, a move to full dollarization meant better matching of Ecuador's dollar assets and liabilities, and therefore reduced vulnerability to default brought about by exchange-rate realignment.¹³ A further benefit, although of uncertain magnitude, arises from Ecuador's integration into broad and deep dollar financial markets. This larger market facilitates matching of the needs of lenders and borrowers and development of mutually advantageous new financial products that may not be available in smaller markets.

Future movements in Ecuador's interest rates will thus reflect both developments in U.S. financial markets and also investors' expectations concerning developments in Ecuador. Dollarization does eliminate completely one element of risk to investors, i.e., that of devaluation relative to the dollar, and reduces a second, i.e., that of unexpectedly high inflation. However,

only *ceteris paribus*, i.e., only if other determinants of the interest rate charged to a particular borrower remain unchanged.

¹² The net contribution of such factors to the market interest rate is termed political risk (e.g., Aliber 1975).

¹³ The devaluations brought about by the Asian financial crisis were followed by defaults due at least in part to the reduced dollar value of domestic-currency assets. Ecuador's move to full dollarization eliminates the risk of default arising from depreciation of the *sucre* and should therefore eliminate the associated risk premium on Ecuadorian *dollar* borrowing.

some other risks may rise, so the *net* effect on the cost of borrowing, whether by the government or the private sector, cannot be predicted in advance.¹⁴

Currency outsourcing and brand-name money

Harry Johnson observed that governments of newly independent countries are apt to confuse the results of economic development with its causes. Scarce resources are thus diverted from activities of likely comparative advantage (e.g., agriculture, labor-intensive manufacturing) and instead used to nurture infant steel mills, auto assembly lines, and national airlines. In consequence, the country loses twice: first from high cost to buyers of the domestic product, and second from access only to an inferior product. When the inferior product is in turn a purchased input to a downstream industry, the international competitiveness of that industry is also sabotaged. This situation applies especially to smaller countries, whose domestic markets do not provide adequate opportunities for capturing potential economies of scale and scope.

Issuing national money is likely to be among the first acts of a newly independent government. Yet this may well be another industry where many less-developed countries would be better off satisfying local requirements through imports rather than relying on inefficient domestic production. Like heavy manufacturing, central banking has high fixed costs, and a poor product has the potential to impede performance throughout the economy. In making the case for monetary outsourcing, Dornbusch (2000) wonders, “Why would these economies

¹⁴ Sims (2000) relates the effect of dollarization on the cost of (Mexican) government borrowing to a firm’s decision between equity and bond financing. In his analysis, fiat government debt is state-contingent debt with a real return that depends on random inflation fluctuations and comparable in its characteristics to privately issued equity; indexed government debt or dollar-denominated debt is more like privately issued debt. A comment by Sargent (2000) points out that proponents of dollarization usually appeal to associated improvements in government credibility but rarely offer a model to support this link.

propose to run on their own the most delicate economic operation of all, [to] manage a central bank?”

Official dollarization can be seen as the logical extension of a process already under way in many countries, especially those with monetary authorities whose own operations fall well below the standards of competing name-brand money available from abroad.¹⁵ In the absence of strong legal deterrents, citizens of inflation-ridden countries opt to protect themselves by holding and contracting in U.S. dollars or another name-brand currency. When governments rely heavily on seigniorage, holdings of local currency shrink to avoid the local inflation tax. Seigniorage in high-inflation countries thus declines, and with it the quality and quantity of “monetary services” provided by the national money. In the extreme of hyperinflation, the economy reverts to the inefficiency of barter, with little or no seigniorage and little or no monetary services provided. When the quality and quantity of locally provided monetary services is sufficiently low, a country may benefit from outsourcing a better brand even in the absence of any seigniorage-sharing arrangement. Thus, Ecuador did not wait for the International Monetary Stability Act to become law before implementing the dollarization plan.

Fixed rates, currency boards, and monetary outsourcing

Regardless of the official designation of their exchange-rate regime, most less-developed and transition economies have opted for rates that are more or less pegged to a major currency or to a currency basket dominated by a major currency. Fixed or quasi-fixed rates facilitate trade and provide a climate of apparent stability conducive to capital inflows. Indeed, the stability of

¹⁵ “As we are seeing now in the monetary area, brand identification of standards of value—money—also becomes more pervasive as falling costs of information and communications technologies make it increasingly easy to compare the quality dimension of standards of value” (Jordan 2000). Taylor (2000) compares money to software that exhibits network externalities.

the Mexican peso and the Thai bhat were sufficient to be interpreted as an implicit exchange-rate guarantee, encouraging investors to take returns in local currency to be equivalent to the same return in dollars. However, given the turmoil and costs associated with the 1994 depreciation of the Mexican peso and the Asian financial crisis that began less than three years later, countries seeking the benefits of a peg must now consider ways to minimize the risk of exchange-rate crisis, especially crisis via contagion.

The crises of the 1990s demonstrated that neither sound fundamentals nor adequate reserves and credit lines¹⁶ offered reliable protection against determined speculators. Even a currency board was not enough to prevent speculative attacks, although both Hong Kong and Argentina were ultimately able to resist a forced change in parity. An alternative approach to crisis prevention has thus emerged: making a fixed rate entirely credible, and thus entirely uninteresting to speculators in search of targets for attack, through official dollarization. Contagion and currency crises have thus shifted the debate concerning the choice between fixed and flexible exchange rates to new ground.

While the classic question considers whether there are net gains from maintaining the degree of freedom that a flexible exchange rate offers, recent experience suggests a second and equally important question: Is a fixed exchange rate even feasible in a world of internationally mobile capital? Friedman's (1953) case for flexible rates rests on the assumption that direct controls are used to sustain inappropriate pegs. The case is thus a negative one; allowing the market to determine exchange rates avoids costs from exchange controls and other distortionary policies. In fact, recognizing the importance of efficiency gains from a common currency,

¹⁶ At least “sound” and “adequate” as viewed ex ante. Following the crises there has been no lack of finger-pointing to contributing factors that somehow remained obscure beforehand, or even factors that seemed to be sources of strength rather than weakness.

Friedman endorses a continued sterling area *if* fixed rates within the area can be maintained without trade restrictions. Mundell's (1961) optimum currency area analysis takes for granted that a fixed-rate system will be subject to periodic crises and focuses instead on the role of exchange-rate adjustments in active macroeconomic management when regions are subject to asymmetric shocks.¹⁷ The first-best response, improving factor-market efficiency, is implicitly ruled out. Moreover, while Mundell's analysis assumes the value of a flexible exchange rate will move to restore balanced trade, decades of experience underscore that capital rather than trade flows are the principal driver of flexible rates. The key role of internationally mobile capital implies that, rather than assuring full employment in the face of asymmetric shocks, flexible rates may themselves be a significant source of such shocks.

Advocates of a common regional currency, including Mundell himself,¹⁸ make no claim that the European Union satisfies the Mundellian criteria for an optimum currency area. They emphasize instead the efficiency advantages of a single currency over many national currencies in terms of reduced transaction and information costs, and potential scale economies in the financial services sector. These efficiency benefits are seen to outweigh gains from retaining the option of national exchange-rate realignment as an element of macroeconomic management (Eichengreen 1997).

¹⁷ Mundell (1961) makes no distinction between the case of a common regional currency and that of a fixed exchange rate linking two national moneys and does not consider the problem of speculative attack on a fixed rate.

¹⁸ Although his 1961 analysis is central to the main academic case *against* a common European currency, Mundell (1973a, 1973b) was an early supporter for reasons centering on currency speculation and its implications for capital-market development. Johnson (1969) thus summarizes the reason why Mundell could find himself on both sides of the question: “[T]he simplicity and charm of the [optimum currency area] concept...derive from its balancing of two opposing considerations—the geographic immobility of labor and rigidity of wages, which suggests minimizing the currency area to maximize the ease of monetary adjustment, and the requirements for maintaining the ‘moneyness’ of money, which suggests maximizing the currency area.”

Another element of the fixed/flexible question is the need to gain monetary credibility. A central bank instituting a new low-inflation policy may be able to gain credibility by pegging to a strong anchor currency.¹⁹ In principle, adoption of a fixed exchange rate is sufficient to rule out discretionary monetary policy. However, the message is more persuasive when linked to an exchange-rate mechanism such as currency board, which comes close to adoption of a simple rule for monetary growth.²⁰

Once a country decides against a floating rate, it faces a second choice between some type of fixed exchange rate mechanism and the more drastic and permanent solution of adopting another country's currency or a common regional currency. The large and highly responsive capital flows in modern markets call into question the stability of any fixed but changeable rate (Obstfeld and Rogoff 1995, Frankel 1999). Recent theoretical work surveyed by Flood and Marion (1998) suggests that speculative attacks on fixed but changeable rates will be difficult to predict. Moreover, given the self-fulfilling nature of such attacks, a small country may be unable to avoid them—although this conclusion depends on the availability and efficacy of policy tools such as capital controls and global lending facilities. The recent examples of Argentina and Hong Kong show that even the rigid rules and reserve requirements of a currency board cannot protect a fixed rate from the attention of speculators. Likewise, as discussed below, even a decades-long record at the same par value could not protect the CFA franc from coming under speculative attack.

¹⁹ Future stability of the adopted currency is thus a central consideration. As Bordo and Schwartz (1999) observe, the Fed has made low inflation its primary goal only since 1979. In an earlier era, central banks used reestablishment of a link to gold to signal their resolution to end inflationary money growth or even tighten money enough to reduce the price level.

²⁰ In practice countries with currency-board-type arrangements maintain some limited flexibility with regard to monetary policy.

Precisely because financial markets recognize the possibility of a parity change, fixed exchange rate systems, even those with a currency board, can be subject to dramatically higher interest rates during attacks, and, as discussed above, may also sustain higher interest rates over the long term. At their peak during the 1994-5 crisis in Mexico, Argentine peso 30- to 60-day time deposit rates were nearly 10 percentage points higher than comparable dollar rates (Velde and Veracierto 1999). From 1997 to 1999, interest rates on Argentine peso-denominated deposits averaged nearly 1½ percentage points higher than on their dollar-denominated equivalents, with the spread widening to more than 4 percentage points on occasion (Summers 1999). To avoid the risk premium associated with even the remote possibility of devaluation, a next logical step is to adopt the dollar (or another outside currency).

Although advocates of dollarization put primary stress on implications for capital markets, less volatile and possibly lower interest rates are not the only likely benefit. Empirical research suggests that trade-enhancing effects of a shared currency are surprisingly large (McCallum 1995, Rose 1999). A significant further benefit is increased policy transparency, thanks to a reliable monetary unit and the implied repeal of the inflation tax. Further benefits arise from saving of the skilled labor otherwise required to manage domestic monetary growth and the exchange-rate mechanism. Relieved of the need to staff these areas, developing and transition countries could deploy their limited supply of appropriately trained personnel to enhancing economic performance through improvements in factor-market, fiscal, and trade policies. In smaller less-developed countries, the staff of the central bank often absorbs a large percentage of the nation's entire supply of Ph.D. economists.

A final advantage is feasibility. Dollarization requires the action of just one (for unilateral) or two (for negotiated bilateral) countries. It is thus an option that can be

implemented quickly—as the case of Ecuador illustrates—in contrast to ambitious and complex schemes for a "new financial architecture" requiring the assent and ongoing cooperation of many nations with divergent interests.

Costs of Dollarization

Before a country adopts another's currency, policy makers will have to make a strong case. The highly visible sacrifice of national sovereignty is sure to arouse opposition for purely symbolic reasons. In the context of optimum currency areas, Mundell (1961) observes, "it hardly appears within the realm of political feasibility that national currencies would ever be abandoned in favor of any other arrangement." Ecuador's recent move to official dollarization, along with the EU's adoption of a regional currency, demonstrate that dollarization can no longer be written off as a political nonstarter. On the other hand, purely political factors may continue to rule out a move to dollarization even where the economic case is strong, as we have already suggested in the case of Hong Kong.

Currency outsourcing also raises significant economic issues. In addition to the loss of seigniorage in the absence of a bilateral agreement for sharing revenues discussed above, a second concern is the possible loss of the lender of last resort function of the domestic central bank. However, the quality of lender-of-last-resort services in many less-developed countries is far from high even—or perhaps especially—under an independent monetary policy, as the case of Ecuador illustrates. Moreover, the potential conflict between issuing domestic money freely to stabilize the banking system and following a monetary policy that will control inflation is already a consideration for a country adopting a currency board or another restrictive monetary rule. To assure stability of the domestic financial system in the absence of the ability to issue

money freely, the central bank could create a fund to bail out ailing banks or establish international credit lines similar to those Argentina has put in place to defend the peso. Private-sector initiatives to provide lender of last resort function and/or deposit insurance could perhaps offer adequate protection, especially for smaller countries (Mann 1999).

How significant are the costs of dollarization associated with lost seigniorage and impaired ability to act as a lender of last resort? Buiter (1999) concludes that Canada would benefit, primarily via integration of national financial markets, from a symmetric monetary union with the United States. However, he rejects the option of unilateral dollarization because of seigniorage considerations and the loss of lender of last resort.

A last issue is the possibility of conflict with the currency-issuing nation (Panama's experience is described below). Reliance on another country's currency implies enhanced vulnerability to a type of monetary warfare. A dollarizing country therefore needs safeguards such as holding funds in off-shore accounts beyond the reach of the currency-issuing country.

Experience with monetary outsourcing

The case of Ecuador, discussed above, is in its early stages. Here we summarize the experience in three other cases of monetary outsourcing.

Panama.²¹ Panama adopted the U.S. dollar as its official currency in 1904, soon after gaining independence. Unlike its neighbors, Panama has maintained low inflation and interest rates; it is the only Latin American country with an active 30-year fixed rate mortgage market (Summers 1999). The National Bank of Panama (NBP) has experienced none of the credibility crises that plague other countries in the region. But while dollarization brought monetary

²¹ Juan Luis Moreno-Villalaz (1999) summarizes the Panamanian experience. See Andrew Zimbalist and John Weeks (1991) for more details.

stability, it did not prevent poor choices in other policy areas, including import substitution in the 1950s and agrarian "reform" in the 1970s. GDP growth rates have remained in the moderate 3 to 7 percent range.

Use of the U.S. dollar and relatively flexible banking laws fostered Panama's development as an international banking center—and for the same reasons also as a center for the laundering of drug money. In the late 1980s, U.S. officials began actions against Panama and specifically President Manuel Noriega that included freezing \$50 million of NBP deposits held in New York banks. The objective was literally to starve Panama of cash. Though the NBP had large cash reserves due to money-laundering operations, many local banks were forced to close and general panic ensued. Panamanian GDP fell by 17 percent in 1988.

Panama's experience demonstrates that the dollar can indeed provide a stable monetary base for a country, giving it a low-inflation anchor, but this cannot assure model policies to promote growth and development. Dollarization also puts a country at greater risk for economic sanctions imposed by the United States. While other types of economic sanctions are often ineffective, monetary restrictions on a dollarized economy have considerable potential to disrupt the country's monetary and banking systems. However, a country can reduce its vulnerability to this kind of pressure through safeguards in the form of off-shore accounts, i.e., Eurodollar accounts in banks not controlled by U.S. officials—precautions Panamanian officials had not seen as necessary prior to 1988.

CFA franc zone.²² Two groups of countries in sub-Saharan Africa, most former colonies of France, use a currency that until 1994 was “almost” the French franc. Under the

²² For more details of franc-zone arrangements and problems, see Gray and Duesenberry (1996) and Hadjimichael and Galy (1997).

closest thing to a permanently fixed exchange rate since World War II, the CFA²³ franc remained fixed to the French franc from October 1948 until January 1994. For most of that period, the CFA franc was completely and freely convertible into French francs at the rate fixed in 1948. However, even this long-fixed rate ended in a protracted period similar in character and costs to the crises that typically precede the devaluation of a currency with a much shorter record at its current parity.

Like Panama, members of the franc zone avoided the rampant inflation that plagued most of their neighbors. Perhaps for this reason, until the 1980s they also enjoyed higher average growth rates than similar countries outside the zone. However, CFA members gradually lost international competitiveness due to a combination of adverse terms-of-trade movements, wage increases not matched by productivity gains, and appreciation of the French franc; most CFA countries experienced declining per capita income during the 1980s. Despite the zone's decades-long success in maintaining the peg, capital flight added to members' problems as devaluation began to seem possible, and then probable. Consistent with Friedman's (1953) assessment, CFA countries piled on direct controls rather than accepting necessary adjustments such as reduced real wages.²⁴ A 50 percent devaluation in 1994, along with implementation of structural reforms overseen by the IMF, was followed by much-improved growth performance in the second half of the 1990s.

As with Panama, the CFA experience shows that a firm peg to a low-inflation currency is an effective way to maintain low inflation but not insurance against poor policy choices. It is notable too that its long history at an unchanged peg did not prevent the CFA franc from coming

²³ Communauté Financière Africaine, originally Colonies Françaises Africaines.

²⁴ Dean, Desai, and Riedel (1994) describe trade restrictions imposed by Franc-zone members in an effort to cope with overvaluation of the CFA franc.

under speculative attack. However, the countries' continuing poor economic performance, rather than the speculative attacks, was the ultimate reason for the decision to change the par value.

Had the zone been a "franc-ified" region, would the outcome have been different? The zone might then have avoided the capital flight that began in the late 1980s, although slow or negative growth also undermined the area's ability to attract investors. But there would have been no way to roll back excessive real wages and restore international competitiveness in a single stroke, as was accomplished through the long-delayed devaluation. A country that relies on a currency whose value is externally determined needs to have labor-market mechanisms that ensure adequate flexibility of domestic wages and prices. The members of the franc zone lacked such mechanisms.

Argentina.²⁵ With a long history of disastrous macroeconomic policy and serial hyperinflation, Argentina was the perfect customer for a fresh start with untainted name-brand money. In 1991, after a succession of failed "stabilization" plans, Argentina instituted a fixed exchange rate with the U.S. dollar. Under the "convertibility law" of 1991, the fixed exchange rate is maintained by a currency board, thus strictly limiting growth of the domestic money supply. The law also prevents the central bank from lending to the government, thereby eliminating one traditional source of excessive monetary growth. Along with the new monetary regime, the Argentine government implemented fiscal reforms, privatized many state-owned industries, liberalized trade, and deregulated the banking sector. Under these policies, domestic prices stabilized and economic growth resumed. In comparison to a prolonged contraction at an average annual rate of 1 per cent from 1980 through 1990, Argentina's economy grew at an average rate of 4.3 per cent from 1991 through 1998.

²⁵ Velde and Veracierto (2000) provide a detailed account of Argentina's experience before and after 1991 and of the case for dollarization. Calvo (1999) gives a stronger endorsement of official dollarization.

However, Argentina's currency peg has not been immune to speculative attack. Domestic performance was disrupted in 1994-95 by contagion from the Mexican crisis and again in 1998-99, when Brazil was forced to devalue by contagion from Russian markets. Brazil is Argentina's most important trading partner and has preferential access to Argentine markets through MERCOSUR. Thus, Brazil's devaluation has put competitive pressure on Argentina's tradable-goods producers and slowed the economy's growth. Financial markets therefore remain uncertain about whether the monetary regime will last and if not, what new arrangements might replace it.

As we noted earlier, the current plan leaves Argentina with most of the disadvantages of dollarization yet without its most important benefit, i.e., immunity to speculative attack on the exchange rate and thus a more favorable interest rate for borrowers. After nine years of low inflation, do Argentines and global capital markets have enough confidence in the central bank to allow Argentina to devalue and resume an independent monetary policy? Putting this another way, given Argentina's longer-run track record, are the benefits from monetary independence worth risking yet another currency debacle?²⁶ If not, official dollarization is the next logical step.

Concluding remarks

On the menu of regime choices faced by less-developed and transition economies, dollarization can be an appealing option, particularly when the need to bolster credibility of an anti-inflation policy is high. For many countries the value of the active monetary policy

²⁶ Velde and Veracierto examine the case for dollarization in terms of the size of the implied insurance premium Argentina must pay to prevent currency-related crises. They estimate an expected benefit equivalent to one percent

permitted by a floating rate is small compared with the enhanced price stability offered by a fixed rate or common currency regime.²⁷ Once a country has decided on a fixed rate or currency board, adopting a name-brand currency looks attractive, especially if seigniorage is shared. Intermediate policies are likely to be subject to instability and entail extra costs related to these risks.

The same logic could perhaps be extended to make a theoretical case for a global currency. However, few major countries seem ready to cede sovereignty in this area to an inclusive international organization, and it is far from obvious that even less-developed countries would prefer this arrangement.²⁸ This is essentially the same problem that sabotaged the IMF's Special Drawing Rights plan to enhance global liquidity, but with far larger stakes. Feldstein (1997) argues that monetary union [in Europe] and joint management of regional monetary policy provides a strong impetus for political union. If so, development of a global currency should proceed in tandem with global government, a prospect that seems remote at best. Alternatively, the economic forces described in this paper could lead to a world of a few growing, and perhaps competing, currency blocks. If issuers of brand-name currencies see benefits from becoming the hub of a currency block, competition among competing brands might solve the problems of allocating seigniorage and providing lender-of-last resort services.

of GDP. Thus, an actually fair insurance premium would have the same magnitude. Above we suggest other benefits that may be significant.

²⁷ Mendoza (2000) summarizes the case in the title of his paper: "On the Benefits of Dollarization when Stabilization Policy is not Credible and Financial Markets are Imperfect."

²⁸ Feldstein (1997) argues that monetary union [in Europe] and joint management of regional monetary policy provides a strong impetus for political union.

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