
Dollarization

We come next to the hardest of the hard pegs, namely, a formal decision by an emerging-market economy to replace its national currency with the currency of another country—almost always one of the three major reserve currencies. I call it dollarization for short. I will not discuss here so-called informal or unofficial dollarization, by which I mean a de facto decision by residents of a country to hold most of their wealth in foreign currency even though foreign currency is not legal tender.¹ I will also assume that the official decision to dollarize is a unilateral one rather than a multilateral decision to join a currency union (because the former seems the more relevant choice for most emerging economies).²

Although proponents of dollarization see it as the preferred regime for a wide variety of developing countries, experience to date has been confined to a relatively small group of tiny developing countries. The largest emerging-market economies with an officially dollarized regime are now Ecuador and El Salvador, both with a GDP (in 2000) of approximately \$13

1. The US Senate's Joint Economic Committee also refers to "semi-official" dollarization as the situation where foreign currency is legal tender and may dominate bank deposits but plays a secondary role to domestic currency in paying wages, taxes, and everyday expenses; US Senate, Joint Economic Committee, *Basics of Dollarization*, Staff Report, Washington, July 1999.

2. Bayoumi and Eichengreen (1994) analyze potential monetary unions based on, inter alia, the pattern of shocks across countries and find that very few emerging-market economies are good candidates for monetary unions. Kenen (2001) argues that a monetary union may afford less protection against currency crises than does formal dollarization because a currency union still has an exchange rate (even though its members do not) and needs to decide what sort of exchange rate regime to adopt.

billion—less than 5 percent the size of Argentina’s economy.³ Next in economic size among officially dollarized economies is Panama, with a GDP of less than \$3 billion. Suffice it to say that trying to generalize from the experiences of these tiny economies for the Chinas, Brazils, and Mexicos of the world constitutes a speculative exercise.

Advantages of Dollarization

Those who favor “going all the way” on fixed rates stress three advantages of dollarization. First, dollarization will provide more of a boost (or less of a hindrance) to international trade than other currency regimes. In this regard, three conclusions emerge from the existing empirical literature: (1) there is no reliable link between short-run exchange rate variability (or uncertainty) and the volume of trade for industrial countries,⁴ (2) exchange rate variability does seem to negatively affect foreign trade in developing countries,⁵ and (3) the presence of a common currency appears to have a much bigger effect on the volume of trade than the degree of exchange rate variability per se, with some recent studies suggesting that, other things being equal, countries sharing a common currency trade three times as much with one another as they would otherwise.⁶

In a recent paper, however, Persson (2001) presents results that suggest that the huge (positive) trade effect associated with currency unions in earlier studies is much reduced when the proper methodology (which corrects for selection biases) is employed. Nevertheless, if subsequent empirical work were to confirm the more favorable trade effects of a common currency, this could appeal to those emerging-market economies that are presently relatively closed to foreign trade (e.g., Argentina, Brazil, and India).

A second selling point for dollarization is that by eliminating the exchange rate between the domestic currency and the (dominant) foreign reserve currency, it simultaneously eliminates currency mismatching. After dollarization, income streams, financial assets, and liabilities would be

3. The populations of Ecuador and El Salvador are 12 million and 6 million, respectively—again, much smaller than Argentina’s population of approximately 37 million.

4. See Goldstein (1995) and Frankel (1999). In Goldstein (1995), I conjecture that the growth of hedging instruments and the expansion of multinational corporations have much to do with the absence of a link between exchange rate variability and trade for industrial countries.

5. E.g., see the studies reviewed in Calvo and Reinhart (2001).

6. See Rose (2000); the findings of Engel and Rogers (1996) and McCallum (1995) lean in the same direction.

denominated in the same currency (save for transactions with countries outside the dollar area). And because there would be no exchange rate to attack, there could not be a currency crisis. Because currency mismatching—via the adverse balance sheet effects of a large devaluation—is often regarded as at the heart of the large output losses observed during many currency crises (see the discussion below), this attribute of dollarization should not be taken lightly.

As Chang and Velasco (2000) and Roubini (2001) argue, however, dollarization does not mean that increased debt-carrying costs and balance sheet effects would not occur in response to external shocks. If a real depreciation is called for, it will occur under dollarization via a gradual fall in nominal prices (rather than mainly via a rapid change in the nominal exchange rate under floating). At the end of the day, the real value of debt service will have increased relative to the price of nontradable goods, and this also will lead to strains on bank and corporate balance sheets. The adjustment may take longer under dollarization, but it will take place.

Some analysts (e.g., Caprio et al. 1996) have argued that dollarization could reduce the risk of banking crises because it would reduce the frequency of large interest rate spikes (induced by sudden, heightened expectations of devaluation)—thereby in turn reducing the threat of sudden, large declines in bank assets and subsequent bank runs aimed at converting domestic currency deposits into foreign currency. With bank assets and liabilities denominated in the same currency, no currency conversion problem would exist for banks. As has been emphasized by Rojas-Suarez (2000) and others, dollarization would not eliminate sudden interest rate spikes induced by heightened perceptions of credit risk. In addition, dollarization would likely make it harder to get out of a banking crisis because the option of reducing the real value of bank liabilities by inflation or devaluation would not be available.⁷

Some dollarization enthusiasts go farther yet and maintain that dollarization would reduce maturity mismatches as well, because lenders—no longer concerned about currency risk—would be willing to make commitments for longer time periods.⁸ In this connection, it is frequently noted that Panama is the only country in Latin America with a 30-year (unsubsidized) mortgage market.⁹ Ortiz (2000), however, provides a relevant counterexample: the composition of capital flows has shifted toward longer maturities and toward foreign direct investment in the period since Mexico has moved toward a more flexible exchange rate policy.

7. See Mishkin (1998) for further elaboration of this argument.

8. E.g., see Eichengreen and Hausmann (1999).

9. See US Senate, Joint Economic Committee, *Basics of Dollarization*, Staff Report, Washington, July 1999.

Several emerging economies with managed floating regimes (e.g., Chile and South Korea) have government bonds denominated in local currency with maturities extending to 20 years.¹⁰ At this point, I am unaware of any systematic (multicountry) analysis between currency regimes and the average duration of funding; instead, the relative scarcity of long-term finance in developing countries seems to be related, *inter alia*, to high inflation and unstable macroeconomic policies of the past.¹¹

A third claimed advantage for dollarization is that it would reduce borrowing costs. Lower interest rates in turn are said to initiate a virtuous circle, reducing the fiscal cost of servicing public debt and buoying investment and economic growth. The weak version of this argument is that because the currency risk premium in interest rates would be small or zero under dollarization, the total risk premium on emerging-market borrowing would fall; that is, only credit risk would remain. The strong form of the argument is that lower currency risk would also reduce the credit risk premium because dollarization would simultaneously reduce prospective insolvencies attributable to big depreciations combined with large unhedged dollar liabilities.¹²

In support of this latter proposition, it is noted that measures of currency risk and credit (default risk) usually move together over time, that interest rate spreads have declined dramatically for formerly high interest rate borrowers (e.g., Italy, Portugal, and Spain) since (and even before) the inception of Economic and Monetary Union, and that Panama has one of the lowest interest rates in Latin America. Berg and Borensztein (2000) observed that the risk premium on Argentina's dollar-denominated eurobonds averaged 330 basis points during 1997 and 1998 and estimated that eliminating currency risk would reduce those spreads by slightly less than half.

Others are more skeptical about the prospective reduction in borrowing costs that would be associated with dollarization. To start, departures from a common currency or from dollarization, though relatively rare, are not unknown; as such, dollarization might not eliminate currency risk. As noted by Frankel (1999), Liberia ended its experiment with dollarization and both the ruble area and Czechoslovakia broke apart in the early 1990s. Credit risk would remain even in an area where there is no threat of devaluation. Goldstein and Woglom (1992), for example, document that spreads on general obligation bonds can vary 85-170 basis points

10. In Chile's case, these bonds are inflation-indexed.

11. See Caprio and Demirgüç-Kunt (1997) and the discussion in chapter 7 of the present volume.

12. A related argument on why credit risk may be linked to currency risk is that governments attempting to avoid currency crises may take actions that increase the risk of default, e.g., the issuance of too many foreign currency-denominated bonds; see Berg and Borensztein (2000).

across US states, even though there is essentially no currency risk for the borrowing entities. The observed comovement of measures of currency and default risk could reflect either the influence of a common external factor or an influence running from credit risk to currency risk (rather than the other way around).

As Berg and Borensztein (2000) have argued, a shock that induces a flight to quality, for example, would normally be expected to increase both currency risk and default risk for emerging-market bonds. To Rojas-Suarez (2000), the high interest rate spreads of many Latin American sovereign borrowers are best explained by fiscal and debt problems—not by currency vulnerabilities. These fiscal and debt fundamentals often generate capital flight that in turn increases currency risk; in other words, credit risk may be driving currency risk (rather than the other way around). Edwards (2001) points out that the country in Latin America with the lowest (external) borrowing cost is Chile, with its managed floating regime—not dollarized Panama.¹³

Disadvantages of Dollarization

The case against dollarization is quite similar in many respects to that against currency boards. But there are also some arguments specific to dollarization. Like economies with currency boards, dollarized economies have their monetary policy made abroad. This lack of monetary policy independence, along with the constraints imposed on countercyclical fiscal policy in situations of high debt burdens or large fiscal deficits, could well leave dollarizers with no effective means of dealing with significant asymmetric shocks. Dollarized economies are also relatively disadvantaged in dealing with strains in the domestic financial sector, because the absence of a domestic monetary authority precludes printing money, be it for official lender-of-last-resort operations or otherwise.

In principle, the reserve currency country could act to compensate for these potential drawbacks of dollarization. But when questioned about their attitudes toward dollarization in Latin America, senior US economic officials have stated that they would not be prepared to so act. For example, former US Treasury Secretary Lawrence Summers (1999), commenting on the interest of Argentina (and perhaps some other Latin American countries) in dollarization, emphasized that would-be dollarization candidates should recognize that the stance of US monetary policy would

13. Larrain and Velasco (2001) are similarly skeptical of the argument that “hard fixes” lower borrowing costs relative to flexible rate regimes. Looking at various pairwise comparisons of borrowing costs as between floaters and hard fixers (e.g., Costa Rica vs. Panama, Singapore vs. Hong Kong, Chile and Mexico vs. Argentina), they do not find support for the proposition that floaters pay more to borrow in the market.

not be altered to accommodate the particular circumstances of emerging-market economies—nor should dollarizers assume that US banking supervision would be extended to their banks or that their banks would have access to the Federal Reserve’s discount window.¹⁴ Critics argue that it is misleading to equate a multilateral currency (monetary) union—like Economic and Monetary Union—with a unilateral decision by an emerging economy to dollarize: small countries have a potentially larger influence on (common) policies in a monetary union than in a (unilateral) dollarization block; also, monetary unions generate a stronger sense of solidarity than looser common currency arrangements.

Proponents of dollarization see it differently. As was suggested above, they do not regard floating rates as delivering in practice much monetary policy independence.¹⁵ More important, they maintain that monetary policy independence should not be regarded as an objective in itself in emerging-market economies because discretionary monetary policy has had such a poor track record in controlling inflation. What is lost by the inability to respond to an occasional asymmetric shock would be more than made up under dollarization by importing a sound monetary policy over an extended time period. Furthermore, dollarization would provide better incentives for disciplined fiscal policy by preventing the monetary financing of deficits. Once (medium-term) fiscal discipline has been restored, the scope for (short-term) countercyclical fiscal policy measures would increase as well. And with dollarization-imposed macroeconomic stability, lower interest rates, higher investment, and better economic performance should follow in train.

Moreover, even in the absence of dollarization in Latin America, the United States has supported large-scale rescue packages for emerging-market economies in Latin America (including Argentina, Brazil, and Mexico); even if a *de jure* official safety net with the United States is not in the cards for dollarized emerging economies, the US Treasury, along with the IMF, will provide the *de facto* line of credit when push comes to shove.

The most comprehensive examination of the relative economic performance of dollarized economies is a recent study by Edwards (2001). His main findings are that dollarized economies

- have grown—as a group—at a (statistically significant) lower rate than nondollarized nations,

14. Lawrence Summers, “Testimony before the US Senate Banking Subcommittee on Economic Policy and Subcommittee on International Trade and Finance,” *US Treasury News*, 22 April 1999. US Assistant Treasury Secretary Truman also reaffirmed this US policy toward dollarization in February 2000; Edwin Truman, “Testimony before the US Banking Committee Subcommittee on Economic Policy,” *US Treasury News*, 8 February 2000.

15. E.g., see Robert Barro, “The Dollar Club: Why Countries Are So Keen to Join,” *Business Week*, 11 December 2000.

- have recorded lower average inflation rates than their nondollarized counterparts,
- have not run more prudent fiscal policies than nondollarized countries, and
- have had current account behavior no different from that of nondollarized ones.

Given the frequent reference to Panama as a poster boy for dollarization, Edwards also provides a separate analysis of that country's relative performance. In short, he finds that whereas inflation has been significantly lower in Panama, there have been no significant differences in growth behavior between Panama and other groups. Of particular interest, he also shows that the median fiscal deficit has been significantly higher in Panama than in other Latin American nations. Indeed, between 1973 and 1987—a period of continuous IMF programs—Panama's fiscal deficit averaged a remarkable 7 percent of GDP. In the end, Edwards (2001, 13) concludes from his empirical analysis that “the recent push for dollarization is a typical case of misleading advertisement.”

A second widely cited disadvantage of dollarization is that the dollarizing economy would lose the government revenue it currently enjoys from “seigniorage,” that is, the profits the monetary authority makes from its right to issue non-interest-bearing debt in the form of legal-tender currency. The loss of seigniorage can be measured in both stock and flow terms. The one-time “stock” cost is the cost of replacing the existing stock of domestic currency with dollars.

If, for example, the country currently has enough dollars in international reserves to make the currency switch, the cost might be calculated as the interest earnings forgone on the reserves used to replace the domestic currency. If some of the dollars have to be borrowed, the interest cost on the borrowed dollars (including any increase in the risk premium associated with increased government borrowing) would need to also enter the calculation. If the dollars cannot be borrowed, the cost of running a current account surplus to earn those dollars would be an appropriate metric.¹⁶

Many analysts have approximated the stock costs of (lost) seigniorage by simply taking the product of the average monetary base and either the domestic interest rate or the domestic inflation rate. The “flow” cost is typically expressed as the future loss of seigniorage linked to the annual increase in currency needed to meet the increase in money demand.

16. See Fischer (1982) and Berg and Borensztein (2000). Some analysts also include in the costs of seigniorage any loss of government revenue associated with dollar-denominated reserve requirements for banks held at the central bank (assuming these earn less than a market rate of interest).

Recent research suggests that industrial countries have relied less in the past on seigniorage (for government revenue) than have emerging-market economies, that seigniorage has been much higher in Latin American than in Asian developing countries, and that seigniorage—particularly in emerging economies—has fallen substantially from the levels of the 1970s.¹⁷ For example, Fischer (1982) estimated the stock cost of dollarization for an average country in the 1970s as roughly 8 percent of GDP; the US Senate's Joint Economic Committee reckons that a similar calculation of the stock cost done for the 1990s would yield an estimate of roughly 4-5 percent.

The IMF (*World Economic Outlook*, May 2001) estimates of seigniorage for emerging-market economies during the 1995-2000 period (calculated in flow terms as 3-year moving averages of annual change in reserve money divided by annual nominal GDP) cluster in the 1-3 percent range.¹⁸ Escude (2001) estimated that if Argentina went to full dollarization, the seigniorage cost would be roughly \$650 million a year; using a 7 percent discount rate, this translates into a once and for all loss equal to 3.3 percent of Argentina's GDP.

Because the United States would earn additional seigniorage from official dollarization in emerging-market economies, it has sometimes been proposed that the United States share some or all of these seigniorage gains with emerging economies—to compensate for the latter's seigniorage losses and to encourage official dollarization.¹⁹ Such an arrangement would not be unprecedented. South Africa shares seigniorage revenues with three states that use the rand (Lesotho, Namibia, and Swaziland).²⁰

Consistent with his view that dollarization would be good both for the United States and for developing countries, former US senator Connie Mack proposed that the United States rebate to dollarizing countries 85 percent of the accumulated seigniorage 10 years after full certification (by the US Treasury) of full dollarization; thereafter, 85 percent of forgone

17. The research is summarized in the IMF's *World Economic Outlook*, May 2001; and in US Senate Joint Economic Committee, *Basics of Dollarization*, Staff Report, Washington, July 1999.

18. Masson, Savastano, and Sharma (1997) obtain similar results for the flow calculations of seigniorage for emerging-market economies.

19. The US Senate's Joint Economic Committee estimated that the US government earns about \$25 billion a year in net seigniorage revenues and that foreigners hold approximately 55-70 percent of the total value of dollar notes in circulation. If the United States had to issue an equivalent amount of short-term Treasury bills to replace the holding of US currency abroad, the annual interest cost would be small—less than 0.025 percent of US GDP; US Senate, Joint Economic Committee, *Basics of Dollarization*, Staff Report, Washington, July 1999. Also see Balino, Bennet, and Borensztein (1999).

20. See Berg and Borensztein (2000).

seigniorage revenues would be rebated quarterly.²¹ Robert Barro has suggested that the United States encourage official dollarization by providing joiners of a dollar zone with a one-time allotment of the dollars needed to make the currency switch.²² Under Barro's plan, the US Federal Reserve would hold as collateral for the dollar allotment an equivalent amount of non-interest-bearing domestic currency; if the dollarizing economy went off the dollar standard, the domestic currency notes would become redeemable one to one for US dollars.

Clearly, the Mack and Barro plans would greatly reduce the (seigniorage) cost to emerging-market economies of dollarizing. The rub is that there has been no official action in the United States to move on any such "seigniorage-sharing" plans. As such, most developing countries still would face a nontrivial loss of seigniorage if they were to adopt official dollarization.

Summing Up

To sum up, dollarization provides emerging-market economies with a shortcut to eliminate the currency mismatching problem and to secure a reliable nominal anchor against inflation. In exchange, dollarizing economies subject themselves to greater vulnerability to an "Argentina-type" real crisis—that is, to a crisis characterized by large asymmetric shocks and by a lack of viable policy instruments to deal with a domestic recession and real exchange rate overvaluation.

If I thought that the currency mismatching and nominal anchor problems of emerging-market economies (with heavy capital market involvement) could not be addressed adequately by any other currency regime choice, then I would vote for dollarization as the best overall choice (despite the Argentina-type problem). However, because I think that "managed floating plus" can deal adequately with currency mismatching and nominal anchor concerns in most emerging economies *without* the additional baggage of heightened vulnerability to Argentina-type real crises, I regard dollarization as running well behind the winner in the currency regime horserace.

Before moving on to discuss managed floating plus in the next chapter, one caveat about my rejection of fixed rate regimes ought to be noted. I do *not* rule out fixed rate currency regimes for developing countries *not* heavily involved with private capital markets. Because these economies

21. Connie Mack, *Encouraging Official Dollarization in Emerging Markets*, US Senate, Joint Economic Committee, Staff Report, Washington, April 1999.

22. Robert Barro, "Let the Dollar Reign from Seattle to Santiago," *Wall Street Journal*, 8 March 1999.

do not have to worry about large, sudden shifts in private capital flows, a wider menu of regime choices is appropriate. In choosing among those options, I agree with Mussa et al. (2000) that a fixed rate regime is likely to be more successful in a developing country if the following conditions are satisfied: (1) a high share of trade is conducted with the country to which it is pegged; (2) the country faces shocks similar to those faced by the reserve currency country to which it is pegged; (3) the country is willing to forsake monetary policy independence to benefit from the reserve currency country's monetary credibility; (4) high inherited inflation makes exchange rate-based stabilization attractive;²³ (5) the economy and financial system are already highly reliant on the reserve country currency; (6) the country's labor markets are flexible; (7) fiscal policy is sustainable and flexible; and (8) the country has high international reserves.²⁴

23. In this connection, Mussa et al. (2000) present evidence suggesting that the track record of exchange rate-based stabilization plans since the late 1980s has been better than is often assumed.

24. Using a formal model, Alesina and Barro (2000, 41-42) come to much the same conclusion about the factors that make it more likely that a country will choose to give up its own currency. Specifically, they conclude that "the type of country with the strongest incentive to give up its own currency is a small country with a history of high inflation that is close (in a variety of ways) to a large and monetarily stable country."