

Solving the Currency Conundrum¹

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In recent months the debate over strengthening the international financial architecture has taken an unexpected turn. For more than a year that debate revolved around the causes of financial crises, the IMF's response, and the need to involve the private sector in crisis resolution. Little was said about the exchange rate problem.

Now one cannot open a financial newspaper without encountering yet another article on how to "fix" the exchange rate system. What has changed? Well, Brazil changed once the *real's* peg blew up in the face of the government and the IMF, providing one more illustration that fragile currency pegs are central to the problem of financial instability in emerging markets. Argentina changed as the government began exploring the possibility of replacing the *peso* with the dollar as a way of banishing exchange rate instability once and for all. The relationship between the world's leading currencies changed with the advent of the euro. To paraphrase Henry Kissinger, central bankers now know who to call when they need to telephone Europe. Moreover, for the first time there exists a rival capable of challenging the dollar's financial hegemony. Asia changed as green shoots of recovery sprouted and the crisis countries used their respite to ponder a common basket peg as a way of containing exchange rate instability in the region. And maybe, just maybe, Japan changed, as the Ministry of Finance (if not necessarily also

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the Bank of Japan) accepted the need for a more expansionary monetary policy, which could mean a significantly weaker yen-dollar rate and heightened trade tensions vis-a-vis the United States.

For all these reasons, the question of what to do about the exchange rate has moved to center stage. Recent events have also highlighted the absence of a consensus answer. For Brazil it is a more flexible exchange rate backed by inflation targeting. For Argentina it is an immutably fixed currency peg leading to dollarization. For Europe it is a regional central bank and a regional monetary union. For the U.S., Japan and the euro area it is floating between their respective currencies.

This paper reviews the debate over the exchange rate system and the choice of regime for countries in different economic, financial and political circumstances. It would be presumptuous to claim that it will bring to a close a debate that has riven the official and academic communities for the better part of a century. But it will at least attempt to provide a framework for thinking about the issues that should help readers and policy makers make up their own minds.

1. Going to Extremes

If there is anything approaching a consensus on the exchange rate problem, it is that high capital mobility has rendered problematic the operation of intermediate arrangements between the extremes of floating and rigidly fixed rates.² The premise underlying this conclusion is that rising

²The locus classicus of this argument is Crockett (1994) and Eichengreen (1994). It is fair to say that this consensus is now embraced by scholars at both ends of the economics profession's ideological spectrum. From one end come hard-core free-market economists who argue that only markets, not bureaucrats, can be counted on to get it right; the two *market* solutions to the currency conundrum are a floating exchange rate free of official intervention, and an immutably

capital mobility has undermined the viability of those intermediate regimes. The presence of large and liquid international capital markets makes it infinitely more difficult for the authorities to support a shaky currency peg, since the resources of the markets far outstrip the reserves of even the best armed central banks and governments. Effective defense of the exchange rate requires raising interest rates and restricting domestic credit, something that will have significant costs unless the economy is strong.³ If they detect a chink in the country's armor — be it high unemployment, a heavy load of short-term debt, or a weak banking system — that could render the authorities reluctant to raise interest rates in order to defend the currency, the markets will pounce, exposing the authorities' weakness. For most governments, the choice between raising interest rates and further aggravating domestic economic difficulties on the one hand, and not raising rates and allowing the currency to collapse on the other, is no choice at all; collapse is

fixed exchange rate in which the government again puts exchange-rate policy on autopilot. In their view, intermediate arrangements (pegged but adjustable rates, target zones, crawling bands) in which the government uses its discretion to manage the rate introduce damaging noise into the market mechanism. From the other end come economists less confident of the efficiency of markets, who they worry that intermediate arrangements are fragile, conducive to crises, and prone to problems of multiple equilibria. A free float may not be the only viable float, in this view, but the authorities should at all costs avoid framing their interventions with reference to an explicit exchange-rate target, which offers speculators an irresistible one-way bet that is ultimately paid for by society as a whole.

³In technical terms, the availability of reserves allows the authorities to undertake in sterilized intervention, in which they attempt to support the exchange rate by selling foreign exchange without at the same time altering the domestic money supply. But when speculative sales of the currency are large relative to reserves, this strategy will not remain feasible for long. A credible defense of the exchange rate will then require the authorities to buy the domestic currency that market participants sell, reducing the supply of domestic credit, raising interest rates, and tightening the screws on weak banks and corporates. The definitive analysis of sterilized intervention, which suggests that it can be effective in the short run as a way of signaling the authorities' intentions, but only if it is backed up subsequently by unsterilized intervention (changes in the money supply) that indicate their willingness to put their money where their mouths are, is Dominguez and Frankel (1993).

almost always the result.

What is new and different about the current environment is the growth of international financial markets and transactions. Table 1 shows that net inflows of portfolio capital (the kind of financial capital flows that make exchange rate management particularly difficult) rose between the mid-1970s and mid-1990s, in absolute-value terms, by a factor of 10 in the industrial countries and a factor of 20 in emerging markets.

Table 1. Portfolio and Direct Investment Flows, 1973-1996
(in billions of US dollars, annual averages)

	Gross outflows					Gross inflows					Net inflows				
	1973-78	1979-82	1983-88	1989-92	1993-96	1973-78	1979-82	1983-88	1989-92	1993-96	1973-78	1979-82	1983-88	1989-92	1993-96
Industrial Countries															
Direct Investment	28.6	46.9	88.2	201.3	259.6	17.9	36.6	69.3	141.9	173.0	-10.7	-10.3	-18.9	-59.4	-86.6
Portfolio Investment	11.8	35	126.5	274.6	436.4	24.4	51	139.1	343.0	549.9	12.2	15.9	12.8	68.4	113.5
Developing Countries															
Direct Investment	0.4	1.1	2.3	10.4	19.2	5	14.6	51.2	37.8	106.4	4.6	13.5	13.2	27.3	87.2
Portfolio Investment	5.5	17.8	-5.1	10.3	19.2	1.3	3.1	53.9	27.5	95.9	-4.2	-14.7	9.1	17.2	76.7

Source: Eichengreen and Mussa et al. (1998).

This growth of capital flows reflects the relaxation of statutory barriers to inward and outward financial transactions by industrial and developing countries alike, which itself reflects the operation of deeper forces. Above all is the fact of domestic financial liberalization. So long as domestic financial markets and institutions were tightly regulated, it was straightforward to restrain international flows. Tight limitations on the business in which financial intermediaries

could engage, together with strict oversight, limited the scope for evasion. But with the abandonment of domestic financial repression, it became harder to halt flows at the border. As it became easier for banks to channel international financial transactions through affiliates and subsidiaries and to disguise and repackage them as derivative securities, effective controls had to become increasingly draconian and distortionary and therefore less attractive to policy makers and their constituents. There is a logic, in other words, for why domestic and international financial liberalization have gone hand in hand.

Reinforcing this trend is the development of information and communication technologies. Computerized trading, the Internet and cheap telephonic communications have made it increasingly difficult for governments to segment national capital markets. Ensuring that capital controls are effective thus means clamping down on a wide range of economic activities and civil liberties. This is something that few governments are willing to contemplate in the age of democratization.

But the fundamental implication of democratization is that few governments can credibly attach priority to defending a currency peg above all other goals of policy. The prototypical dilemma is that of a government just willing to bear the pain of high interest rates and other policies of austerity in return for enhancing its reputation for following policies of exchange rate and price stability, whose benefits accrue later. But if the markets attack the currency, forcing the government to raise interest rates to defend it, the game may no longer be worth the candle. The costs of austerity now, in the form of higher unemployment, more financial and commercial failures and a weaker economy generally, having risen relative to the benefits accruing down the road, the authorities may now prefer to let the currency peg collapse. And the markets, knowing

that the authorities attach importance to other aspects of economic performance in addition to exchange-rate stability, have an obvious incentive to force the issue.⁴ Prior to democratization, governments enjoyed insulation from pressure to use their policy instruments to minimize unemployment and foster economic growth. They could credibly assign priority to the maintenance of exchange rate stability over and above all other economic goals. In our modern world this is no longer the case.

Thus, the changes making for greater exchange rate flexibility are not just financial and technological but also political. They render currency pegs increasingly fragile, since they rob governments of the capacity to defend them and at the same time give the markets more ammunition with which to attack them.

Maintaining an exchange rate peg or band in the face of open capital markets is especially difficult for developing and emerging-market economies. Developing countries are often dependent on exports of a few primary commodities, rendering them especially vulnerable to terms-of-trade shocks. Their financial systems are small relative to world markets and even to the assets of a handful of hedge funds and investment banks. Their delicate banking systems are incapable of withstanding sharp hikes in interest rates. Their political systems are ill designed to deliver a broad-based, stable consensus in favor of exchange-rate stabilization over and above all other economic and social goals.

Moreover, while the devaluation of a previously-pegged currency may enhance

⁴This is a simple illustration of how problems of multiple equilibria can arise in foreign exchange markets. Note that if the markets attack the currency peg collapses, but if they do not it can persist indefinitely. Thus, there are two equilibria, one in which the peg collapses and one in which it does not.

international competitiveness and even stimulate economic growth (or so the cases of the UK and Italy in 1992-3 suggest — see Gordon 1999), the Mexican and Asian crises suggest that currency devaluations in developing countries can be strongly contractionary. Because developing countries borrow in foreign currency, depreciation increases the burden of debt service and worsens the financial condition of domestic banks and firms. Because those banks and firms don't hedge their foreign exposures, they get smashed when the currency band collapses.

The previous statement begs two questions: why don't banks and firms hedge if doing so is in their interest, and why don't the authorities abandon the peg before it collapses? Taking the second question first, there is always an incentive to leave the exit problem for another day. If the government has built its entire monetary policy operating strategy around the maintenance of the band, abandoning it can be a sharp shock to confidence. To keep the exchange rate within its band, the authorities have to reiterate that this is their intention. Exiting means going back on this promise. If monetary credibility is anchored by the peg, then credibility is inevitably lost when the peg is abandoned. It is not possible (in the presence of open capital markets, anyway) to pre-announce that the peg will be abandoned tomorrow, or currency traders will start betting against it today.

This is why so few banks and firms hedge their exposures when the authorities operate a currency band or peg. For that arrangement to be credible, the authorities have to commit to preventing the exchange rate from moving beyond certain limits. They have to assert their willingness and ability to do so, or the exchange rate will not behave as desired. To defend the peg, the government is inevitably forced to insist that there is absolutely no prospect that it will

change. How many CFO's will then be rewarded for purchasing costly exchange-rate insurance before the fact? A pegged rate thus provides an irresistible incentive for the private sector to accumulate unhedged foreign debts. And unhedged foreign debts imply a crisis if the band or peg collapses.

Indonesia illustrates the consequences.⁵ For some time prior to the outbreak of the Asian crisis, the country had been operating a crawling band allowing for fluctuations of plus-or-minus four per cent against a basket of currencies. As is typical for many emerging economies, it had relatively high interest rates, which made it attractive for international investors to place their money there. These large capital inflows worked to push the rupiah toward the strong end of its band. Because the authorities were committed to limiting exchange rate fluctuations (and because the strength of the currency lent credibility to that commitment), domestic banks and (especially) corporations accumulated large unhedged foreign exposures.

When Thailand devalued the baht, capital flows reversed direction. On August 13th, 1997 the exchange rate went from the strong edge of the band (which had been widened to six per cent) to the weak edge of the band in one day. This 12 per cent depreciation was a sharp shock to Indonesian corporations with unhedged exposures, whose solvency was cast into doubt. Now openly questioning the stability of the economy, investors scrambled out of the rupiah. Further interest rate increases to defend it were out of the question, given the financial distress of the corporate sector and banking system. Instead, the authorities abandoned the band, allowing the exchange rate to drop further. Given the damage already done to the economy, it

⁵I choose this example because Williamson (1998) cites it as an example of the benefits of having a crawling band. For an account by an informed insider running parallel to mine, see Goelthom (1999).

dropped like a stone, falling by as much as 10 per cent a day. This is a stylized version of recent Indonesian history, to be sure, but it makes an essential point about the fragility of currency bands and the high costs of their collapse.

Figure 1 summarizes the consequences. It shows that in developing countries, where these financial, technological and political changes have been particularly pronounced, the removal of exchange restrictions has been dramatic. Capital-account liberalization has been accompanied by the decline of pegged exchange rates in favor of greater flexibility. At the same time, some countries — most recently in Western Europe but also West-Central Africa and other outposts including Argentina, Estonia, Bulgaria and Hong Kong — have moved in the other direction, seeking to eliminate the exchange rate problem by eliminating the exchange rate -- by installing a currency board or going one step further and dollarizing the economy.⁶

2. The Backlash

Fairness forces one to admit that the theory of the disappearing middle is not unanimously embraced. The skepticism has both theoretical and empirical strands. On the empirical front, Frankel (1999) observes that reports of the missing middle are greatly exaggerated. Of the 185 countries for which the IMF classifies the exchange rate regime by degree of flexibility, 47 were categorized at last count as independently floating and 45 as having rigid pegs (currency boards or monetary unions, including the franc zone in Africa),

⁶At the time of writing, dollarization is still at the “contemplation” stage, even in countries like Ecuador in the throes of a most serious crisis. Note that for present purposes I use dollarization as shorthand for the adoption of a foreign currency, whether the latter is the dollar, the euro, or another unit.

leaving 93 still operating some kind of intermediate regime. Masson (2000) constructs transition matrices for exchange rates regimes for the past two and a half decades and upon examining their properties finds little support for the hypothesis of disappearing middle. Calvo and Reinhart (1999) note that official IMF categorizations of member countries' exchange rate regimes tend to overstate the actual flexibility of their rates, so that the conclusions of these previous authors are, if anything, rather conservative. Williamson (1996a), in a tract written in reaction against the theory of the shrinking middle, observes that countries like Chile, Colombia and Israel have long succeeded in operating crawling pegs, crawling bands and other hybrid systems.⁷

Other evidence is not so obviously consistent with these claims. For one thing, the process of evacuating the unstable middle is still underway. The trend is clear in Figure 1, not to mention from recent events in countries like Brazil and Ecuador. In addition, many countries that continue to inhabit the middle are able to do so because they continue to restrict capital inflows and outflows. There is nothing in the thesis of the disappearing middle that denies the ability of countries to occupy this space so long as they continue to restrict capital movements, though there are reasons to believe that effectively controlling capital flows will become more difficult as market development proceeds. These pressures are evident in the tendency for countries operating crawling bands to widen the range of permissible fluctuations. And the point is directly applicable to Williamson's three counter cases. Chile widened its band from plus-or-minus 0.5 per cent in 1984-5 to plus-or-minus 2.0 per cent in 1985-7, plus-or-minus 3 per cent in

⁷In fact, as I describe below, both Chile and Colombia abandoned their crawling band regimes in 1999.

1988-9, plus-or-minus 5 per cent in 1989-91, plus-or-minus 10 per cent in 1992-7, and plus-or-minus 12.5 per cent since February 1997. Finally last September, a year after eliminating its last remaining taxes on capital inflows, it dropped the peso's fluctuation band entirely. Colombia widened its band from 14 per cent from early 1994 through mid 199 to 20 per cent in the third quarter of 1999, before abandoning the band, also in September of last year. Israel widened its from plus-or-minus 0 in 1986-8 to plus-or-minus 3 per cent in 1989-90, plus-or-minus 5 per cent in 1990-5, plus-or-minus 7 per cent in 1995-7, and to plus-or-minus 29 per cent since June 1997.⁸ Other examples could be cited. They all illustrate the growing difficulty of reconciling domestic priorities with narrow exchange rate bands. Quibbles over the accuracy of IMF categorizations of exchange-rate arrangements and transition probabilities derived from past history notwithstanding, the evidence is overwhelming.

At the theoretical level, the question is why the sufficient conditions for the smooth operation of floating rates and rigid pegs are not also the prerequisites for the smooth operation intermediate regimes. For a floating exchange rate to be well behaved -- that is, to display limited volatility and provide a framework conducive to economic growth -- fiscal policy must be strengthened, debt management and prudential regulation must be upgraded, and a coherent and credible monetary policy operating rule must be installed. In the absence of these prerequisites, the floating rate is likely to fluctuate erratically and perform to no one's satisfaction. Similarly, for a currency board or dollarization to be conducive to stability and growth, it is also the case that fiscal policy must be strengthened, financial policy must be

⁸This is only a brief summary description of the complex arrangements operated by these countries. For more information, see Eichengreen and Masson et al. (1998), Appendix 3.

upgraded, and a coherent and credible monetary policy rule must be adopted (this time by pegging to or adopting the currency of a country that itself follows a sound and stable monetary policy). Otherwise the rigid peg will only bequeath high unemployment and high inflation, undermining public support and therefore the credibility of the monetary rule, while heightening the risk of debt and banking crises.

I elaborate on the importance of these prerequisites for a well-functioning float and a politically sustainable currency board in subsequent sections of the paper. The question here is why these same prerequisites cannot also support a crawling peg, a narrow band, or a target zone. To pose the question in traditional fashion, is it not sufficient for the indefinite maintenance of an intermediate regime simply for fiscal, financial and monetary policies to be consistent with the exchange rate target and vice versa? Countries which have failed to successfully operate adjustable or crawling pegs and succumbed to crisis, in this view, have done so because their monetary and fiscal policies have been too expansionary — they have been incompatible with the currency peg. They have failed because lax debt management and prudential supervision have rendered their financial systems too fragile to survive the requisite level of interest rates. The proper diagnosis is not that countries attempting to operate intermediate regimes but succumbing to crisis have done so because of the lack of viability of the model, but because implementation has been inadequate.

From this perspective, the key difference between the polar extremes and intermediate regimes would appear to be the following. If the country commits to either abandoning or hardening the currency peg, there will be strong incentives for policy makers and market participants to bring their affairs into conformance with the new regime. Consider for example

the behavior of the banking system. If the exchange rate floats, banks will have an object lesson, on a daily basis, of the need to hedge their foreign currency exposures. If the exchange rate is pegged once and for all, they will be well aware of the need to raise capital standards to compensate for the much more limited lender-of-last-resort capacity of the monetary authorities. Adaption may not be immediate, as explained in the next section, but there will be strong incentives for it to get underway.

Under an intermediate regime, in contrast, the incentives for adaptation are less. Neither markets nor policy makers have an irresistible incentive to adjust to the imperatives of currently prevailing rate. Banks will have limited incentives to raise their capital standards or risk management practices because they think that any exchange-rate-related limits on the capacity of the authorities to act as lenders of last resort are only temporary. Debt managers will not shun short term debt because they will be aware that the authorities retain the capacity to adjust the exchange rate and monetary policy so as to backstop the market. Fiscal policy makers will have mixed incentives to eliminate excessive deficits, because they will have reason to suspect that the revocation of the inflation tax is only temporary. For all these reasons, adaptation will be limited. And in turn that will make it correspondingly harder for the authorities to defend the exchange rate when it comes under attack.

Thus, the failure of markets and policies to conform to the imperatives of a temporary peg — where the temporariness of the level of the exchange rate is the essential definition of an intermediate regime — is more than a manifestation of suboptimal policy; it is an integral feature of this sort of hybrid system.

3. Which Alternative?

For which of the extremes — floating or a hard peg — should countries opt? This question being nothing more than the long-standing debate over the merits of fixed versus floating rates, it cannot be definitively resolved here. Still, it is useful to review the terrain.

The choice is typically framed as a credibility/flexibility tradeoff. Floating rates maximize the flexibility with which the authorities can use monetary policy for stabilization policies. They leave the central bank free to intervene as a lender of last resort to financial markets. The value of these merits is disputed. Some dispute the stabilizing value of exchange rate changes when shocks are real rather than monetary and when the country's external obligations are denominated in foreign currency. They similarly question the capacity of the central bank to act as an effective lender of last resort when domestic banks and firms incur foreign-currency denominated debts.⁹

The less the benefits of monetary policy flexibility, the greater the appeal of the additional credibility imparted by the currency board/dollarization option. With domestic monetary policy now dictated by the United States, it immediately acquires all the credibility Alan Greenspan has accumulated over the last 15 years. The commitment to the currency peg is enshrined the adoption of a constitutional amendment (or by requiring a super-majority vote in the parliamentary) mandating that the central bank or the government defend the rate.¹⁰ These

⁹ See Hausmann et al. (1999) and Buitier (1999) for two discussions that question the value of monetary autonomy under most circumstances.

¹⁰In the currency board case, the government or the central bank is required to maintain a fixed rate of exchange between the domestic currency and a specific foreign counterpart, a commitment which is operationalized by permitting the monetary authorities to issue additional currency notes only upon acquiring a matching amount of foreign exchange (and to

barriers to exit, by buttressing credibility, will minimize the kind of speculative pressures described in the previous section. By ensuring greater exchange rate stability, they should in turn enhance the economy's access to foreign capital.¹¹

mechanically remove domestic currency from circulation when reserves are lost). Dollarization goes one step further by removing the domestic currency from circulation and redenominating domestic assets and liabilities in dollars; even more than a currency board, it raises the bar to the restoration of domestic monetary autonomy. Turning the domestic currency into mulch creates additional barriers to exit from the dollar link. Devaluation is even more difficult for a dollarized economy like Panama than for a currency-board country like Argentina. In Argentina, the only technical requirement is for the central bank to buy financial assets using pesos from its vaults. In Panama, the authorities would have to inject the domestic currency into circulation, force the banks to redenominate their deposits, and force employers to pay their workers in that currency. Knowing that these additional difficulties would have to be overcome, the markets are less likely to challenge the monetary regime. Even if investors remain skeptical of the government's financial intentions, they no longer have an instrument with which to act upon their doubts -- that is, there is no domestic currency to sell. Investors can sell government bonds if they fear that the authorities may ultimately be unable to service their debts, but that debt run or even the fact of default can no more affect the relative price of cash in Panama and cash in the United States than Orange County's default in the mid-1990s could affect the exchange rate between California and the other 49 states.

¹¹The operation of this factor is evident in the strikingly low correlation of savings and investment in particular regions of larger countries (within which a single currency circulates), compared to the much higher correlations for countries as a whole. Bayoumi and Rose (1993) provide evidence of this for the regions of the UK, while Bayoumi (1997) does the same for the regions of Canada. It is prominent by its absence in Puerto Rico, a dollarized economy which has succeeded in importing more capital than the rest of Latin America and the Caribbean and in adjusting more smoothly to external shocks (Ingram 1962; Eichengreen 1990). (Skeptics of dollarization would counter that interest rate convergence between Puerto Rico and the U.S. mainland reflects not just the absence of currency risk but also the fact that Puerto Rico is subject to the U.S. legal system.) Another example is Panama which, having eliminated exchange risk by dollarizing and locking in low inflation, is the only Latin American country that has succeeded in developing a 30-year mortgage market. To be sure, it is not clear how to interpret this fact. A problem with attributing it to dollarization is that the growth of Panama's financial sector and the development of an active 30 year mortgage market post-dated dollarization by 60 years. The growth of the Panamanian banking sector only began following the adoption of Law No. 18 of 1959, which enhanced secrecy and opened the way for numbered bank accounts. Cabinet Decree No. 238 of 1970 then reorganized the country's banking system, adding flexibility in bank licensing and further refining secrecy provisions to lure foreign banks to Panama. This made Panama attractive as an offshore banking center (and some would say as a center for money laundering). Through this mechanism as much as dollarization, Panama was

These benefits do not come for free.¹² In the case of dollarization, the immediate cost is seigniorage forgone. A currency-board country holds U.S. treasury bills or equivalent foreign assets to back the domestic currency and earns interest on the backing. In Argentina this amounts to some \$750 million a year, assuming an interest rate of 5 per cent on the \$15 billion of US treasury bills that back the \$15 billion of pesos in circulation.¹³ This is a not insignificant cost for a government already under budgetary strain.

The other cost, which is incurred with both dollarization and a currency board, is the loss of monetary policy flexibility. To repeat, there is no consensus regarding the value of this sacrifice. But even if one believes that there are significant costs associated with the sacrifice of monetary autonomy, against which credibility gains must be weighed, those costs will be less if the economy adapts quickly to the absence of the monetary instrument. Given that there is now essentially no prospect of a change in the exchange rate or of a domestically-controlled monetary policy, there will be additional incentive to adapt to the newly inflexible monetary conditions. Labor markets will adapt to the absence of the exchange rate as an instrument of adjustment, as unions acknowledge the need for additional labor-market flexibility, wage flexibility in

able to grow a banking system with the resources to support a 30 year mortgage market.

¹²If they did, we would observe everyone dollarizing.

¹³It can be argued that a treaty with the United States in which the US gives Argentina fraction of that \$750 million as a grant could render both countries better off. Say the transfer was \$600 million per annum. (The example and the arithmetic are from Calvo 1999.) The US would then save \$150 million a year. The Argentine government could turn around and use that \$600 million as collateral for a commercial credit line with foreign banks, something it already does to a limited extent. But having eliminated residual currency risk, it would be charged a lower commitment fee and more attractive interest rates and be able to obtain more credit. It would have more resources with which to intervene, if necessary, on behalf of distressed financial institutions.

particular. Banks will adapt to the more limited lender-of-last-resort capacity of the authorities, raising their capital standards and strengthening their risk management practices. Fiscal policy makers will adapt to the disappearance of the inflation tax by strengthening their fiscal self-discipline and eliminating excessive deficits. Financial managers, recognizing the absence of a domestic central bank to backstop short-term markets, will rely less on easily accessible short-term debt. Together, these adaptations will make it easier to live with the absence of exchange rate flexibility.

If one believes that such adaptations will occur quickly, then the currency board/dollarization option becomes more attractive, both because structural reform makes it easier to live with the absence of monetary-policy flexibility, and because reform is desirable in its own right. Unfortunately, theory does tell us how quickly the requisite reforms are likely to take place. Consider for example labor market reform. While there are assumptions under which labor market reform will accelerate as a result of dollarization, there are also models in which dollarization will slow it down. In particular, insofar as labor market reform no longer promises lower inflation in a dollarized economy, the incentive for labor market reform is correspondingly less.¹⁴ Similar ambiguities arise in models of hard exchange rate constraints and fiscal consolidation (e.g. Tornell and Velasco 1995). If exit from the currency peg is still an option,

¹⁴Calmfors (1998) obtains this result in a Barro-Gordon model of optimal monetary policy. He extends the Barro-Gordon framework to include in the government's loss function not just inflation and unemployment but also the amount of (costly) labor market reform, where equilibrium unemployment is declining in the level of reform. In the standard one-shot game, there is an optimal amount of labor-market reform whose costs are just matched by the benefits in terms of the reduction in equilibrium unemployment (and hence expected unemployment) plus the benefits of the reduction in inflation (because lower equilibrium unemployment reduces inflationary bias). With dollarization, labor market reform no longer results in a lower average rate of inflation. Hence, labor market reform following dollarization is less, not more.

then there is absolutely no presumption that adoption of the peg will speed fiscal consolidation. While dollarizing (which, for present purposes, I take as analogous to eliminating all possibility of exit) will encourage fiscal consolidation by eliminating the inflation tax, it will not at the same time eliminate all possibility of debt default. So long as default remains an option, it is not clear at a theoretical level that progress toward fiscal consolidation will accelerate significantly.

What of the evidence?¹⁵ Observers of Argentine convertibility will be skeptical that a hard exchange rate constraint guarantees rapid labor market reform. Reform there has been, but it has been halting and partial. The same conclusion flows from the experience of Europe, where monetary union implies a similar reduction in monetary policy flexibility for the individual member states. Taking the OECD's quantitative measures of the extent of labor market reform, it does not appear that countries which have been in the ERM for longest, or those which have been among the founding members of Europe's monetary union, have made the most progress in reforming labor markets.¹⁶

What about the argument that the adoption of a hard currency peg will lead banks to strengthen their risk-management practices? In Europe, there is little evidence that investors, bank managers and regulators have responded to the impending reduction in lender-of-last-resort services in the short run by raising capital standards and limiting risk taking. European banks were in the vanguard of lending to East Asia in the period that culminated in that region's

¹⁵Dollarized economies tend to be special: historically, they have been very small and have had a highly unusual economic structure. Inferences of general applicability regarding the speed and extent of reform are hard to draw from their exceptional circumstances. This is why in what follows I focus on "near dollarizers," that is to say, countries that have adopted currency boards, like Argentina, and those which have formed monetary unions, as in Europe.

¹⁶I present the evidence in Eichengreen (1999).

financial crisis. Their exposure to the crisis countries was considerably greater than that of U.S. banks, prospects of a more limited safety net or not. The best way to understand this is as gambling for return in the effort to survive in an increasingly brutal competitive environment. If dollarization leads to an intensification of competition in the financial sector and forces some scaling back of the financial safety net, Europe's experience suggests, it may lead to less rather than more risk taking in the short run.

What about pressure for fiscal consolidation? There is some evidence that removing the inflation tax from the hands of Europe's more inflation-prone governments intensified the pressure for consolidation. Budget deficits in the euro area fell from 4.8 per cent of GDP in 1996 to 2.1 per cent in 1998 and are projected to fall further. But Europe's experience also provides indirect support for the point that monetary union and dollarization do not rule out the possibility of default. The fear that fiscal profligacy could precipitate debt-servicing difficulties explains why the Maastricht Treaty features an extensive set of procedures designed to avert excessive debts and deficits along with penalties for countries failing to comply. Given the deep political links tying together the members of Europe's monetary union, there is reason to think that a debt crisis will be met with an inflationary debt bailout of the crisis country by the ECB. The Maastricht Treaty and the Stability Pact negotiated subsequently are designed to limit this danger.

In summary, neither theory nor evidence suggests that eliminating all scope for an independent monetary policy will dramatically accelerate the pace of labor market reform, financial-sector reform, and fiscal reform. Dollarizing will not automatically deliver the complementary reforms needed in order for the new regime to operate painlessly; those reforms will be completed only with the passage of time. Some countries with histories of erratic policy

(one thinks of Argentina) may still opt for a currency board or dollarization on the grounds that the benefits associated with the additional credibility will outweigh the losses from the reduced flexibility. Others with particularly strong ties to a large partner (one thinks of Mexico) or extensive dependence on foreign capital (one thinks of Panama) may opt for a currency board or dollarization in order to solidify these links. Some countries with a desperate need for structural and policy reform (one thinks of Ecuador) may still opt for a currency board or dollarization on the grounds that, even if this new regime provides no guarantee of quick progress, it nevertheless ratchets up the pressure for reform. But for the foreseeable future, at least, the majority of emerging markets are likely to continue to prefer the other alternative, namely, greater exchange rate flexibility.¹⁷

4. Monetary Union

A scenario in which all of Latin America goes over to the dollar is far-fetched. More plausible is that some countries, say Argentina, will dollarize while others, say Brazil, will not. This raises the specter of trade and exchange-rate tensions within Mercosur, the Southern Cone's

¹⁷Dollarization will progress more rapidly if the United States supports it. So far, the attitude of the U.S. Treasury has been, shall we say, ambivalent. Its worry is that placing the monetary fate of the entire Western Hemisphere in the hands of a small number of U.S. citizens working in Northwest Washington will create strains on the Federal Reserve. Dollarization by Panama is one thing, but dollarization by Argentina, Mexico and Brazil would be another. The larger the number of individuals outside U.S. borders for whom the Fed makes monetary policy, the more intense the pressure will be for it to tailor its decisions to conditions beyond those prevailing in the 50 states. And the larger the number of such individuals, the greater the danger of a political backlash if the Open Market Committee neglects the impact of its policies south of the border. The Fed could be placed in the position of the Bundesbank in the 1980s and early 1990s, when the German central bank effectively set monetary conditions for the entire set of countries participating in the European Monetary System but was criticized for neglecting the impact of its decisions on its European partners.

free-trade area. The two countries' trade links are substantial: Brazil absorbs more than 30 per cent of Argentina's sales abroad. Thus, Brazil's depreciation of the *real* in early 1999 dealt a heavy blow to Argentina. Argentine producers demanded protection from cheap imports from Brazil, while exporters demanded compensation for their loss of competitiveness. Mercosur came under threat. If Argentina dollarizes while Brazil continues to float, this volatility could become an everyday event. It is not clear that the free trade agreement would survive the resulting tensions.

For those who see regional free trade agreements in Latin America's Southern Cone and elsewhere as the wave of the future, this provides obvious motivation for regional monetary unification. In fact, the idea of a single currency for Mercosur has been under discussion for some time. Argentine President Menem raised the idea in December 1997 and again at a regional summit in June 1998. Argentina's former finance minister Domingo Cavallo mooted the idea in the spring of 1999.

Does monetary unification make sense as a corollary of regional commercial and economic integration? Europe's experience — and the Western Hemisphere's own — suggests that whether Mercosur needs a common currency depends on what kind of regional market its architects are building.¹⁸ A free trade area like NAFTA in which integration is limited to the removal of barriers at the border and which therefore produces a limited rise in cross-border trade can be sustained in the presence of exchange rates that fluctuate against one another. A free trade area like Mercosur can survive exchange rate fluctuations because, while Brazil

¹⁸I elaborate this argument in Eichengreen (1998), on which the remainder of this paragraph draws.

absorbs 30 per cent of Argentine exports, exports account for only 8 per cent of Argentine GNP. Integration in the Southern Cone is limited to trade integration; it has not yet extended far beyond the border. Deeper integration, encompassing to the harmonization of domestic regulations of all kinds, a la the European Union, implies more open domestic markets, more rapid growth of international transactions, and more intense cross-border competition, rendering exchange-rate changes more disruptive. If South American policy makers are prepared to stop at the customs-union stage, then limited exchange-rate fluctuations should be tolerable. But if they intend to push ahead to deeper integration, then they, like their European predecessors, will want to contemplate monetary integration.

Brazil would be the 400 pound gorilla of any South American monetary union. For Argentina, however, trading monetary stability for the uncertainties of monetary cohabitation with Brazil is unattractive. This has led Cavallo to suggest that the single Mercosur currency should be anchored to a fixed currency basket with positive weights on the dollar, euro and perhaps the yen (Bronstein 1999). A common peg would deliver many the benefits of monetary unification by eliminating exchange rate fluctuations within the economic and commercial zone; at the same time, relying on a basket rather than a single currency would better accommodate the diverse trading patterns of countries in the region.¹⁹ A common basket peg would relieve countries of rigid dependence on the Federal Reserve, while the peg's currency-board structure would ensure monetary discipline. Such an arrangement would lack the transparency of a single-currency peg, however, which would lessen its credibility. In any case, this proposal

¹⁹John Williamson has made similar arguments in advocating the adoption of a common basket peg by the countries of East Asia (Williamson 1996a).

assumes that Brazil is prepared to put in place the economic and financial prerequisites for the adoption of a currency board, something that it has not been willing to do to date.

This leaves the option of regional monetary union. Monetary unification is a theoretically impeccable solution to the financial instabilities and economic and commercial strains created by distinct national currencies. And the European Union has shown that what works in theory can also work in practice. Unfortunately, a monetary union limited to the Mercosur countries with a single currency that floats, a la the euro, against the U.S. dollar is unlikely to be attractive to South America; while the countries of the Southern Cone trade with one another and are likely to do so increasingly over time, especially if they eliminate the volatility of the exchange rates between them, they continue to import capital from the rich countries, mainly the United States. Even if a Mercosur currency is attractive on trade-related grounds, it is unlikely to be attractive on financial grounds. For a monetary union to be attractive to the Latins, it would have to include the United States.

Here enters another lesson of European experience: that monetary unification is likely to be feasible only as part of a larger political bargain. Monetary unification is a concession for the large, strong-currency country that dominates financial conditions throughout the region absent the creation of a single currency; it would want to obtain something in return, which implies an ability on the part of the partners to make binding political commitments. Thus, the German government sacrificed monetary autonomy and accepted a greater degree of uncertainty about inflation by agreeing to European monetary unification, in return for a commitment by its partners to pursue political integration in whose context Germany hopes to obtain a greater

foreign policy role in the context of an EU foreign policy.²⁰ This commitment to political as well as economic and monetary integration allowed Europe to build truly transnational institutions like a European Central Bank to formulate the common monetary policy and a European Parliament to hold it accountable, however imperfectly. Not only does the euro, as part of this larger political bargain, insulate the 11 members of Europe's monetary union from intra-European exchange-rate fluctuations, but one can imagine that it will provide monetary and exchange rate stability over an even wider zone as the holdouts join and the countries to the east, already regarded as integral members of the European polity, become members first of the EU and then of its monetary union.

This interpretation of Europe's recent monetary history underscores why this path will be difficult to trod in the Americas and East Asia, two popular candidates for monetary unification. NAFTA is not seen in Canada, Mexico and United States as a platform for political integration. There is little desire in any of these countries for Canada and Mexico to become the 51st and 52nd U.S. states. And there would be strong resistance in the United States to giving a sovereign Argentina, Mexico or Canada votes on the Federal Reserve Board. Absent deeper political links, this would be seen as an unacceptable compromise of U.S. economic and monetary sovereignty. The same is true in Asia: given the history of tensions between Japan and Korea and between Japan and China, it is hard to conceive of them moving toward significantly deeper political integration any time soon. To be sure, circumstances can change; Europe emerged from World

²⁰This is my favored interpretation of the political economy of EMU, as developed in Eichengreen and Ghironi (1996). The case of political unions that disintegrated, leading shortly to the disintegration of existing monetary unions (the Austro-Hungarian Empire after World War I, Czechoslovakia after the Cold War), are equally revealing.

War II riven by equally deep divisions. But the fact that it took Europe 50 years of effort -- and this in the context of an integrationist tradition stretching back over centuries -- suggests that this transition takes many years to complete even under favorable circumstances. Europe is *sui generis*; its approach is unlikely to provide a solution to Asia and the Americas' currency conundrum any time soon.

5. Achieving Greater Flexibility in Emerging Markets

Saying that most emerging markets should adopt policies of greater exchange rate flexibility is easy; creating a framework and incentives that make it attractive is harder. As emphasized above, where the currency peg has been the cornerstone of the government's entire economic policy strategy, abandoning it will come as a sharp shock to confidence. If investors already harbor doubts about the government's commitment to the pursuit of sound and stable policies, jettisoning it will be seen as the equivalent of an obese man announcing that he has stopped going to Weight Watchers; the markets will fear that the government is about to revert to its bad old ways of monetary and fiscal excess. Capital will flee, undermining economic and financial stability. Fearing the consequences, the authorities have an obvious incentive to postpone the transition to greater exchange rate flexibility to another day.

Emerging markets therefore need to create a framework within which the transition to greater flexibility can occur smoothly, while the IMF needs to provide incentives for them to lay the requisite institutional foundations sooner rather than later. Specifically:

- Governments should initiate the transition to greater flexibility when global market

conditions are favorable and not wait until financial sentiment begins to turn. Historically, emerging markets have been reluctant to move to greater flexibility when foreign capital is freely available; instead, they have held onto their currency pegs in order to maximize their access to cheap foreign finance. In fact, when the markets are flush is best the time to undertake the transition. Since investors have a favorable view of emerging markets and since the country is not being forced to abandon its peg under duress, the shock to confidence will be least. The fact that the exchange rate will begin its more flexible life by appreciating should reassure investors in domestic-currency-denominated assets that greater flexibility does not necessarily imply capital losses. Moreover, greater exchange rate flexibility is helpful for moderating the domestic-credit booms and asset-market bubbles that tend to cause small-open economies to overheat when large amounts of capital are flowing in.

- Investors will be reassured that abandoning the currency peg does not mean that the government has lost all monetary and fiscal discipline if the authorities substitute an alternative monetary policy operating strategy. The classic substitutes are monetary targeting and inflation targeting. Targeting the money stock is unlikely to be credible and effective in emerging markets, which are undergoing rapid structural change which disturbs the relationship between the monetary aggregates and inflation rates.²¹ Inflation targeting, in which the authorities specify a target for inflation and explain how they plan to alter their policies if they miss it, is a more feasible and credible alternative.

²¹In other words, because the money-stock target may not produce a reasonable inflation outcome, the authorities will have an incentive to modify that target ex post, so it will not be credible ex ante.

- Domestic corporations can better cope with exchange-rate flexibility when there exist currency forward and futures markets on which to hedge their exposures. Financial liberalization and deepening, including opening the financial sector to entry by international banks, is therefore important for fostering the growth of an interbank market in foreign currency forward contracts. Similarly, the adoption of transparent and effective securities-market regulations can encourage the growth of exchange-traded futures products.
- Even if greater flexibility is in the social interest, it may not be in politicians' interest, since they are not certain of being in office in the future when the returns on their investment are reaped. This creates a role for the IMF to tip the balance by signaling that it will not help to prop up shaky currency pegs and that it stands ready to assist countries that adopt policies of greater flexibility.

The recommendation that emerging markets abandoning their currency pegs consider inflation targeting is especially controversial. Inflation targeting has been attempted by only a relatively small number of advanced-industrial countries like Canada, the UK, Sweden and New Zealand. Moreover, the economic and political conditions that have supported its operation there are unlikely to be present in many emerging markets. In emerging markets, the pace of structural change introduces additional uncertainty into the link between the authorities' policy instruments and the inflation rate they are seeking to target. It being harder for them to articulate a model of those linkages, it is more difficult to convince the markets that a certain monetary stance today implies a certain inflation rate tomorrow. Perhaps most importantly, the authorities cannot credibly commit to targeting low inflation when the government budget

deficit is out of control. This problem of "fiscal dominance" implies that the pressure for the central bank to help finance (monetize) government budget deficits will prove irresistible. Knowing this, inflation targeting will not be credible. Investors will not be reassured, and neither capital flows nor the exchange rate will be well behaved.

These are valid objections, but it is worth asking (as always) "what are the alternatives?" While emerging markets may find it difficult to make inflation targeting work, there is good reason to think that they will find alternatives like monetary targeting more difficult still. And the only thing that is worse than an imperfect monetary-policy operating strategy is no strategy at all. While excessive fiscal deficits are a problem for inflation targeting, they are an equally serious problem for any alternative monetary-policy strategy that the authorities might contemplate. Fiscal dominance is a critique of excessive deficits, not a critique of inflation targeting.

Brazil's recent experience lends credence to these arguments. It is the first case where an IMF program embraced inflation targeting as the framework for post-devaluation monetary policy. Although questions about the budget remained, the exchange rate stabilized and interest rates came down faster than the consensus forecast once the central bank adopted this operating strategy. This gives reason to hope that what has worked for Brazil might also work in other emerging markets.

The IMF's principal shareholders, led by the United States, have signaled that Fund resources will no longer be used to prop up shaky currency pegs.²² If this commitment is

²²This was the theme of then-Treasury Secretary Rubin's speech on April 21st, 1999, in which he laid out the U.S. agenda for reforming the international financial architecture. See Rubin (1999).

credible, it will create strong incentives for emerging markets, no longer able to count on IMF support, to adopt policies of greater flexibility. But simply saying that the IMF will no longer prop up shaky currency pegs will not make it so. Once a currency is attacked, worries that its collapse will inflict a recession on the crisis country and fears that its distress might spread contagiously to other emerging markets may still impel the IMF to intervene, its reluctance to do so to the contrary notwithstanding. And knowing that the Fund is likely to give in, the emerging markets in question will have no incentive to embrace greater currency flexibility as a precaution.

Lending credibility to this new IMF commitment not to prop up shaky currency pegs requires institutional innovations to minimize the recessionary impact of devaluations and minimize the incidence and effects of contagion. The policy community's new emphasis on transparency and data dissemination is designed to address the contagion problem by making it easier for investors to distinguish weak and strong economies. As for recessions, devaluations are especially recessionary in emerging markets, because, as noted above, they inflate the cost of servicing short-term foreign-currency-denominated debts, potentially to unsustainable levels. The recessionary impact of devaluation can thus be minimized if countries limit their banks' and corporations' accumulation of short-term foreign-currency debts. The holding-period taxes used by Chile in the 1990s to lengthen the maturity structure of the external debt are the obvious means to this end.²³

²³The Chilean authorities discovered, *inter alia*, that limits on bank borrowing abroad simply encouraged the mining companies to borrow for the banks and on-lend the proceeds. There is an enormous debate over the effectiveness of these taxes. Some critics complain that evasion remains a problem. Others observe the lack of evidence that Chile's taxes limited the overall level of foreign borrowing. The second objection can be dismissed on the grounds that the

In addition, a credible commitment by the IMF not to run to the rescue of a country that would otherwise find it impossible to keep current on its obligations presupposes the existence of other mechanisms for dealing with problems debts. It is easy to *say* that the Fund should no longer bail out governments and their creditors, but it is hard not to *do* so as long as there do not exist other way of addressing financial problems when they arise. The shortcoming of existing arrangements is that they make debt restructuring excessively difficult. Since many international bonds include provisions requiring the unanimous consent of bondholders to the terms of a restructuring agreement, there is an incentive for "vultures" to buy up the outstanding debt and hold the process hostage by threatening legal action. Unlike syndicated bank loans, most such bonds lack sharing clauses requiring individual creditors to share with other bondholders any amounts recovered from the borrower and thereby discouraging recourse to lawsuits.

Those who believe that countries may have to take occasional recourse to suspensions and subsequent restructurings argue that these provisions in bond covenants should be modified. Majority voting and sharing clauses would discourage maverick investors from resorting to lawsuits and other ways of obstructing settlements beneficial to the debtor and the creditor

goal was never to limit the overall level of foreign borrowing but to alter its maturity structure, and on the maturity front the evidence is compelling. See Hernandez and Schmidt-Hebbel (1999) for the definitive analysis. More generally, Calvo and Reinhart (1999) find in a 15 country panel, including Chile, that the presence of capital controls is significantly associated with a lower share of portfolio plus short-term capital flows as a percentage of total flows. That they do not find the same when they look at portfolio flows alone suggests that the impact on short-term flows is doing most of the work. As for the first objection, it is important to recall that such a measure, to effectively lengthen the maturity structure of the debt, need not be evasion free. The last word on this subject should go to Chile's finance minister, who has asked (I paraphrase), "If these capital-import taxes are so easily evaded, then why do we have so many non-interest-bearing foreign deposits at the central bank?"

community alike. Collective-representation clauses, which specify who represents the bondholders and make provision for a bondholders committee or meeting, would allow orderly decisions to be reached. This was suggested in 1996 by the G-10 and echoed by the G-22 and G-7 in a series of subsequent reports and declarations. In February of this year the G-7 placed the issue on its work program for reforming the international financial system.

If implementing this change is such a good idea, then why have the markets not done so already? The obvious answer is adverse selection. It is intrinsic to capital markets that lenders know less than borrowers about the latter's willingness and ability to pay. For the same reason that only patients who anticipate succumbing to a fatal disease buy expensive life insurance, only countries that anticipate with high probability having to restructure their debts may wish to issue securities with these provisions. Left to its own devices, neither market may function. The danger is that adverse selection would render the market in these modified bonds illiquid and thereby impair the ability of emerging economies to borrow.

The G-10's 1996 report, where the idea of collective action clauses was first mooted, said little about this dilemma. While acknowledging the first-mover problem and suggesting that official support for contractual innovation should be provided "as appropriate," it failed to specify concrete steps to be taken by the authorities. The G-22 subsequently recommended that unnamed governments, presumably those of the United States and United Kingdom, should "examine" the use of such clauses in their own sovereign bond issues. The G-7 recommended that its members should "consider" them. Treasury Secretary Rubin, in a speech designed to set the tone for the Interim Committee's April 1999 meeting, reiterated that the international community should

“encourage” their broader use.²⁴ But the official community needs to do more than examine, consider and encourage. Given the adverse selection problem, progress is unlikely without the introduction of legislation and regulations in the creditor countries. And without progress on this front, the international community will lack credibility when it insists that it will not automatically run to the rescue of crisis-stricken countries.

6. G3 Target Zones

Authors like Bergsten and Henning (1996) and Volcker (1995) suggest that the advanced industrial countries have options not always available to their developing brethren. Their banking systems and political systems are stronger, their economies more diversified. They possess the currency forward and futures markets (interbank markets in the first case, exchange-based markets in the second) needed for financial and nonfinancial firms to hedge their exposures and protect themselves from exchange rate volatility, and on which investors seeking to act as stabilizing speculators can take positions. Moreover, a durable system of target zones for the dollar, the euro and the yen with fluctuation bands of, say, plus or minus 15 per cent, would help to avoid the misalignments between major currencies that make life so difficult for developing countries (like the weak dollar-strong yen problem that helped to set the stage for the Asian crisis in 1996-7).

"Durable" is the key word here. For target zones for the dollar, yen and euro to solve problems and not create them, they must be credible and defensible. Unless the markets believe that the authorities are committed to their maintenance, they will speculate against them. This is

²⁴See Rubin (1999).

problematic. Few observers would believe that Alan Greenspan, Lawrence Summers and the U.S. Congress to which they are accountable would be prepared to sacrifice domestic objectives like full employment and the control of inflation in order to defend an exchange-rate target zone. Can we really imagine Alan Greenspan, seeing the dollar strengthen and inflation heating up as a result of fast US economic growth, *reducing* interest rates to keep the dollar in its band at the cost of additional inflation? Or some future Alan Greenspan, seeing the dollar weaken and the economy slow, *raising* interest rates to keep the dollar from falling despite rising unemployment?

A target zone bug would respond that if the credibility of the commitment to defend the band can be established, this tradeoff between domestic and international objectives will disappear. It will still be possible, they argue, for the authorities to direct monetary and fiscal policies at inflation and unemployment without driving the exchange rate beyond the edge of its band. This free lunch is the so-called "honeymoon effect" (Krugman and Miller 1993) that arises when the commitment to defend the target zone is credible. It derives from the fact that, *assuming* sufficient credibility, speculation will be stabilizing — that is, it will tend to drive the exchange rate back toward the center of its band, or at least prevent it from diverging further as the limit of permissible fluctuations is reached. The argument goes as follows. Say that, absent the target zone, an increase in the money supply designed to stimulate growth and reduce unemployment would also weaken the exchange rate. But if the markets believe that the authorities are committed to preventing the exchange rate from continuing to weaken beyond a certain point, which they will do by reducing the money supply down the road, investors will buy the currency now in anticipation of its subsequent recovery, which will limit its current weakness. It is this credibility which creates an expectation of future policy adjustments that

keeps the exchange rate from falling out of its band. The expectation that the central bank will lean against the wind to prevent the exchange rate from drifting outside its band in the future works to stabilize it in the present. The fact that the current exchange rate depends not just on the current money supply but on the entire expected future time path of money supplies relaxes the tradeoff between the exchange rate and other policy targets today. In technical terms, the elasticity of exchange rate with respect to the current money supply is less than in the absence of the target zone commitment.

Economists view free lunches with suspicion. In the present context, Clarida (1999) provides a catalogue of reasons for questioning whether the honeymoon effect will obtain.

- Even in the presence of the honeymoon effect (indeed, in order for the target-zone honeymoon to obtain), the central bank must attach priority to supporting the exchange rate and disregard all other goals of policy when the edge of the band is reached.²⁵ The tradeoff between competing objectives may be attenuated when the level of the exchange rate is a nonissue, but it reemerges with a vengeance as pressure on the rate intensifies.
- If central banks instead follow Williamson (1993) by adopting “soft buffers” and allowing the currency to drop out of its band when pressures build, then the honeymoon effect will weaken or disappear, and the tradeoff between internal and external objectives will reemerge earlier.
- If they adopt another Williamson suggestion and never let the exchange rate bump against

²⁵As Clarida puts it, “when an exchange rate weakens to the edge of a target zone band, the objective function of the central bank must collapse to a lexicographic ordering in which price stability and the exchange rate receive no weight. It is not sufficient for the central bank to place some, or even a lot of, weight on stabilizing the exchange rate. Rather, when the exchange rate is at the edge of the band, the central bank must place *all* the weight on the exchange rate.”

the edge of its band, instead adjusting the location of the band to prevent the accumulation of speculative pressure, then the honeymoon effect will again be attenuated. Indeed, as the markets come to anticipate this behavior, the target-zone honeymoon may give way to a “separation” or “divorce” effect. If the markets expect the authorities to adjust the band downward when the exchange rate moves downward, then the elasticity of the exchange rate with respect to the money supply may rise rather than falling as it nears the edge of the band. Target zones with adjustable bands then create the possibility of “vicious spirals.”

- When the dollar reaches the bottom of its band against the euro, the euro reaches the top of its band against the dollar. There is then the need for an assignment of responsibilities between the Fed and the European Central Bank for keeping the rate within its band. If the country with the weak currency has sole responsibility, then exchange rate tensions will always be resolved by reductions in money supplies, which will be deflationary. It is not plausible that the markets will believe that the authorities are really prepared to countenance the indefinite pursuit of deflationary policies. If the country with the strong currency has sole responsibility, on the other hand, then exchange rate tensions will always be resolved by increases in money supplies, which will be inflationary. The markets will similarly disbelieve that the authorities are really prepared to tolerate the resulting inflationary bias. A credible target zone therefore requires a commitment for joint intervention by both countries whose bilateral rate the system is designed to stabilize. They will have to agree on what share of the intervention burden each of the two countries will shoulder. Thus, a credible system requires not just modest adaptations in domestic

policies but systematic policy coordination between the partners. This sacrifice of autonomy is not something that central bankers are prepared to give lightly and therefore not something that the markets would be prepared to assume.

These are fundamental criticisms. They constitute serious grounds for questioning the feasibility of G-3 target zones.

7. How the International Monetary System Will Look in 20 Years

How then will the international monetary system look in 2020? My analysis rules out radical changes like a single world currency and three regional monetary unions centered on the dollar, the euro, and the yen. It rules out pegged-but-adjustable exchange rates, crawling bands, target zones, and other intermediate arrangements in which governments try to have their cake and eat it too. But neither is a floating exchange rate likely to be attractive for small economies that are highly exposed to international trade and financial flows.

The three principal regions of the world economy, Europe, Asia and the Americas, are likely to square this circle in different ways. In Europe, where integration is a political as well as an economic and financial project, the euro and its associated institutions should provide the basis for an ever larger zone of monetary stability. Greece wants to join. The countries of Eastern Europe want to join. Turkey wants to join. Others could follow in their train.

In the Americas, in contrast, the United States will not accede to the formation of an EU-style monetary union anytime soon. Dollarization is likely to be the solution for countries like Argentina, Costa Rica and El Salvador with strong financial links to the U.S. and who find it difficult to run an autonomous monetary policy. Other countries may adopt currency boards as a

half-way house while they contemplate this final step. Meanwhile, larger, more diversified economies like Canada and Brazil may make a strategic decision to live with the costs (and, one hopes, benefits) of a floating exchange rate.

Asia's dilemma is the particularly difficult. Its trade and financial flows are regionally diversified: neither the dollar nor the yen is an attractive currency-board anchor for most of the smaller countries of the region. Basket-backed boards are conceivable, but they lack transparency and therefore credibility. Moreover, countries would have to agree on the composition of the basket in order for it to minimize intra-region currency fluctuations. This requires a degree of political comity that does not exist. Moreover, basket-backed boards with positive weights on the dollar, the yen and conceivably the euro do not offer the promise of a subsequent transition to monetary union. That is to say, it is not clear whether such a country would logically proceed to monetary unification with the U.S., Europe or Japan. Hence, while Europe is likely to solve the currency conundrum through monetary unification and the Americas through dollarization, the plausible outcome in Asia, given the obstacles to the alternatives, is continued floating. One must hope that the countries of the region succeed in putting in place the institutional and political prerequisites necessary to effectively manage their managed float.

This vision of the international monetary architecture in the year 2020 suggests that the currency conundrum will not be solved by some grand design adopted at a new Bretton Woods Conference. It will be solved in an evolutionary fashion, with arrangements evolving in different ways in different parts of the world. Looking even further down the road, it is possible to envisage more radical outcomes. But that is something for future generations to write papers

about.

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