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So Far from God and So Close to the US Dollar: Contrasting Approaches of Monetary Coordination in Latin America

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Introduction

The current international monetary system is commonly characterized as divided into three great currency blocs, with one key currency (the US dollar, the euro and the yen) playing the crucial role in each region. If these currency blocs are defined as regions with lower exchange-rate variability within each of the groups than across groups,[1] this doubtlessly applies most particularly to Euroland, where the creation of the euro simply did away with intra-regional exchange rates. The western hemisphere, however, clearly does not meet this criterion. Exchange-rate variability between countries of North and South America is very high, dramatically highlighted by frequent exchange-rate crises of the Latin American economies.[2]

Therefore, in terms of currency blocs, the western hemisphere can best be seen as an informal dollar bloc (Jameson, 2001, p. 6). There is no doubt that the US dollar is the absolutely dominant key currency in Latin America. In the Latin American economies, *de facto* dollarization as the result of a market-driven process of currency substitution, measured as the proportion of foreign currency deposits in the domestic financial system to total deposits, is high, albeit with significant intra-regional differences.[3] The degree of dollarization is also evidenced by another indicator. The United States Treasury (2000) puts the value of all Federal Reserve notes in circulation abroad – the bulk of which presumably is to

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be found in Latin America – at between 50 and 70 per cent of the total US dollar stock (Porter and Judson, 1996; United States Treasury, 2000). Furthermore, several countries, namely Panama, El Salvador and Ecuador, have opted for full and formal dollarization, abandoning their national currencies, and a number of other countries are considering the idea (even if the enthusiasm for this has diminished somewhat with the dramatic end of the Argentinean currency board regime).

This paper, however, is centred on the argument that dollarization is not the only option of regional monetary integration to be considered in Latin America. For this, we will single out the two most striking, yet greatly contrasting cases of Mexico/NAFTA and of Mercosur. The Mexican case is particularly interesting because, as we argue, even if NAFTA fails to include any formal agreement for monetary coordination, the past ten-year experience has shown that there is good reason to interpret it as a case of implicit monetary coordination (pp. 127–32). In the case of Mercosur, the Southern Cone's free trade agreement covering Brazil, Argentina, Uruguay and Paraguay, the ambitious plans for monetary coordination have found their maximum expression in the project of a common regional currency (popularly labelled the 'merco', in obvious allusion to the euro). In analysing the prospects of a common Mercosur currency as a case of South–South monetary coordination (pp. 132–40), we will particularly focus on first, the lack of internal hierarchies in terms of currency quality which, in our view, severely limits the stabilization gains to be obtained by a regional common currency; and second, on the question as to how far the differing debt structures in the Mercosur economies constitute an obstacle to establishing common exchange-rate regimes; and third, on the importance of a common regional exchange-rate policy due to increased symmetries with regard to external shocks. In the Conclusions (pp. 140–1) we will draw a preliminary balance of the diverging prospects of monetary regimes within the informal dollar bloc of the western hemisphere.

NAFTA as North–South trade integration with no monetary coordination

NAFTA is a paradigmatic case of a North–South regional integration, bringing together economies with no or low 'original sin' – the United States and Canada (the 'North') – and a net foreign-currency debtor economy, Mexico (the 'South'). The North American Free Trade Area (NAFTA), established in 1994 between the United States, Canada and Mexico, had intensive effects in terms of regional integration of the

participating economies. With 50 per cent of foreign trade staying within the free trade zone, the degree of integration is much higher than in the case of other Latin American free trade agreements (data for 2000; IDB, 2002, p. 26f.). However, the NAFTA agreement does not include any kind of macro-economic or monetary coordination. While, against the original intention, efforts are underway in some areas to move from the free-trade zone towards a common-market scheme (Gratius, 2002), there are as yet no such initiatives for institutionally coordinated monetary or exchange-rate policies. The only exception is the so-called swap line, an agreement between the central banks of the three countries to dedicate a quite limited sum of money to supporting transnational payments.[4] Since Mexico on its own – being a country afflicted by original sin – can manage exchange rate fluctuations only to limited degree, and at high economic cost, the lack of supra-national monetary coordination within NAFTA is problematic for the economy. The country has to undertake great efforts to achieve comparable levels of competitiveness if it wants to avoid major economic losses due to integration, while there is no coordinated support or effort to stabilize its currency from the US central bank. Effectively, there are no indications that the United States should be willing to actively promote an explicit integration of Latin American economies into its currency area, as would be achieved by admitting the Mexican central bank as the thirteenth member of the Federal Reserve. An explicit, institutionalized and rules-based extension of the Fed's lender-of-last-resort function to Mexico's financial system, which would enable a lowering of its interest rates due to substantially decreased devaluation expectations, does not seem to be in the offing in the foreseeable future (Cohen, 2004; FitzGerald, 2001). As a consequence, Mexico seems stuck between a rock and a hard place. While on the one hand the project of bilateral, coordinated dollarization seems unrealistic in the short and medium term, on the other, the Mexican government rules out – for good reason (see Chapter 1) – the option of unilaterally dollarizing the Mexican economy.[5]

Since the 1970s, with the breakdown of Bretton Woods and the turn towards an international currency regime based on flexible exchange rates, various types of informal or implicit forms of monetary cooperation have emerged. In the past decades, repeated short-term cooperation agreements have marked the relationship between the key currency blocs. However, in general current policies are essentially based on implicit monetary coordination, in which central banks, for the planning and definition of their policies, take into account the manifest or expected actions of other central banks (Muchlinski, 2002, p. 23f.).

Our hypothesis is that a form of monetary coordination has evolved between Mexico and the USA that is not rules-bound and formalized, but marked by a series of discretionary ad hoc policies. In a first step, we analyse the way the United States dealt with the Mexican currency crisis in 1994–5, arguing that economic actors could read the strong US commitment as a signal that the Mexican peso in fact could rely on backing from the US monetary and fiscal authorities – or, in other terms, that within the NAFTA framework, the United States and Mexico were moving towards an implicit monetary coordination arrangement. To support our argument, we will briefly recall the measures taken by the US authorities in response to the crisis as well as the major pros and cons of the debate over the US intervention in favour of the peso. In a further step, we analyse the course of Mexico's monetary policy after the crisis, which gave priority to bringing down inflation quickly, even at a potentially high macroeconomic cost.

The US reaction to the Mexican currency crisis of 1994–5: defending the US economy's southern flank

The series of currency crises in emerging markets in the 1990s in most cases led to sharp economic contractions with severe social consequences. In Mexico, too, the economy suffered a sharp decline, with GDP shrinking by 6.2 per cent in 1995. However, the following years (until the beginning recession of the US economy in 2001) were marked by an impressive growth of an average of 5.4 per cent annually in real terms.

The Mexican economy's 'soft landing' is partly explained by the privileged access to US markets, which permitted an increase in exports – on the basis of significantly reduced real wages[6] – by almost 50 per cent in only two years; this included both *maquila* and other industries (data from *Informe de Gobierno*, 2003). Beyond this, however, the quick and strong US response in favour of stabilizing the Mexican peso certainly was of fundamental significance, since it allowed the Mexican central bank to avoid an extremely restrictive monetary policy in the wake of the peso's collapse.

Within a few days after the spectacular collapse of the Mexican peso, the Clinton administration had achieved three things: it had provided an official US credit line of $20 billion,[7] it had convinced the IMF to extend a similarly large loan of $17.8 billion, and it had mustered additional support from the Bank for International Settlements (BIS) in Basle funded by European central banks. The explanation given for these highly unusual steps is instructive. President Clinton argued that Mexico's financial troubles were not only a problem for the United States' southern

neighbour, but also a danger for the future prospects of the US economy (Weintraub, 2000, p. 139).

The critics, mainly from the conservative side of the US political establishment, rejected this intervention as a mere bail-out of investors who had underestimated the risks of their business dealings, and advocated leaving the resolution of the currency crisis to market forces. In fact, there is little doubt that the losses US investors would have had to face in the case of Mexico's insolvency was a driving force behind the government's action.[8] In contrast to most South American countries, US–Mexican trade and financial relations are intensive also from the US viewpoint, in whose currency the great majority of its debt is denominated. This is an advantageous situation to the extent that the US hence must have a genuine interest in maintaining the Mexican economy's fundamental functioning and solvency. In line with this, the USA conditioned its credit guarantees on, among other things, the mortgaging of Mexican oil revenues.

This rapid and large US credit line was essential for the consolidation and reactivation of the Mexican economy, since it reestablished the country's solvency thus enabling its return to the international capital market within a very short time. What it did not prevent, however, was a profound crisis of the Mexican banking sector that has had devastating consequences for Mexican growth during the following years. Even years after the crisis, non-export-oriented Mexican companies continue to suffer from a chronic lack of credit opportunities, which severely affects their international competitiveness. As the ratio of credit to GDP decreased from 49 per cent in 1994 to 17 per cent in 2002 (Martínez *et al.*, 2004, p. 295f.), the credit sector turned into a bottleneck for the productive sector oriented towards the domestic market, as most firms in this sector suffer from restricted access to international finance (Krueger and Tornell, 1999). The reasons for these shortcomings are to be sought partly in the financial crisis itself, that created strong balance-sheet effects for most banks and deteriorated the loan quality, as a large number of Mexican companies and consumers faced insolvency. But in addition to crisis effects, there are also structural reasons for the growth-limiting functioning of the Mexican banking sector. Bad privatization in the early 1990s laid the basis for the crisis, as the government failed to create adequate institutions to promote prudential rules and to adequately supervise the sector. Moreover, after the crisis, the problem was further aggravated as bad credits in the banks' books were recognized only gradually, leading to high fiscal costs and highly prudent behaviour by the banks; also, such institutional reforms as an effective

insolvency law have remained incomplete to this today (Haber, 2004; Martínez *et al*., 2004).

Mexico's monetary policy after the crisis: the dilemma of unilateral exchange-rate stabilization

Mexico is no longer seeking monetary convergence with the US through the pegging of its exchange rate, but rather through a policy of inflation-targeting. Nevertheless, the country still suffers from a problem typical of developing economies with no formal integration into regional monetary coordination schemes and with open capital accounts. As Flassbeck points out (Chapter 4), even a slightly diverging inflation trend between two open economies is sufficient for short-term interest-rate-differential-driven capital flows to force the central bank of the country with higher inflation to let its currency appreciate – or face severe fiscal costs of sterilization. However, such appreciation reduces the international competitiveness of the country's production, creating balance-of-payment problems in the medium term.

Mexico is a prime example of this dilemma. In 2001, the Mexican central bank established inflation targets of 6.5 per cent for 2001, 4.5 per cent for 2002, and 3.0 per cent for 2003 (Ortiz, 2001),[9] allowing a margin of deviation of one percentage point in each direction. So far, this highly ambitious policy can claim remarkable success, with actual inflation rates not far off the mark (see Table 7.1).

The flip side of this success in inflation control was a contractive monetary policy that accentuated the US recession and let Mexican growth rates decline from 2001 through 2003. In addition, and in part due to a historical low of inflation rates in the US, Mexican inflation remained above that of the US. The result was a strong real appreciation of the Mexican peso, due to interest rate-driven capital imports.[10]

According to official Mexican data, the real exchange rate, on the basis of 1990, in May 2002 was overvalued by 37.5 per cent (*Informe de*

Table 7.1 Mexico: selected data, 1995–2003

	1995	*1996*	*1997*	*1998*	*1999*	*2000*	*2001*	*2002*	*2003*
Real growth (annual change)	−6.1	5.4	6.8	5.1	3.6	6.7	−0.3	0.7	1.2
Annual inflation in %	52.0	27.7	15.7	18.6	12.3	9.0	4.4	5.7	4.0
Real exchange rate (1990 = 100)	117.3	103.1	86.0	84.8	77.8	69.0	63.0	59.0	n.a.
Current account	−0.6	−0.8	−1.9	−3.8	−2.9	−3.1	−2.9	−2.1	−1.4

Sources: *Informe de Gobierno* (2003); and CEPAL (2004)

Gobierno, 2002, p. 289). This was even higher than the real exchange rate value prior to the 1994–5 currency crisis – a crisis widely explained as a consequence of a non-sustainable overvaluation of the Mexican currency. In this context, the rigid pro-cyclical policy of the Mexican central bank met with harsh criticism. However, strict adherence to orthodox recipes as a signal to the US government and central bank would provide the best possible argument for renewed intervention in favour of the peso, in the case of the peso again being interpreted as an overvalued currency, since the causes for crisis could then hardly be seen in domestic policy errors, but rather in external shocks.

If in fact the United States accepts such a role, including the willingness to repeat a similarly comprehensive intervention as in the 1994–5 crisis, Mexico would be in a unique and privileged position among the uncoordinated dollar-bloc countries of the western hemisphere. Mexico would not be left alone in its attempt to stabilize its exchange rate, but could count on the lender-of-last-resort facilities of the US central bank in a more or less explicit manner. The consequence most probably would be increasing confidence in the stability of the peso, permitting lower interest rates and higher domestic investment, and resulting in higher growth rates.

At present however, US acceptance of such a role as the *de facto* lender of last resort for the Mexican peso is anything but certain. If it were to come about, such an implicit regime of monetary coordination could induce speculative attacks aimed at testing the interventionist commitment of the Federal Reserve. Therefore, to gain the full benefits of monetary coordination, the implicit coordination scheme should at some point give way to a formal monetary arrangement within NAFTA.

A common currency for the Mercosur: narrow limits – better than nothing

The proposal for a common currency in Mercosur has been launched on several occasions and by very different actors over the past ten years (see Chapter 6 of Carvalho in this book). The Argentinean and Brazilian presidents, Néstor Kirchner and Lula, have both repeatedly declared the deepening of the Mercosur integration process a high political priority, and they have underscored their political will to establish a common currency. Although these declarations have not yet materialized in practical policy, this fact should not be an argument against advancing the academic debate on the issue.[11] According to the World Bank's criteria for grouping debtor economies, Mercosur unites a group of economies

which are not able to borrow abroad in domestic currency, but which instead are highly indebted in foreign currency. Therefore, all of them are rated as economies with a maximum index of original sin (Eichengreen, Hausmann and Panizza, 2003, p. 43). This means that any regional monetary coordination within Mercosur, ranging from ad hoc exchange-rate coordination all the way to a common regional currency, would suffer from the fundamental limitations of an SSC agreement. The introduction of a 'merco' would not be able to fundamentally change the rather low stabilization capacity which is the result of the member states' common status as net external debtors in foreign currency, and their consequent problems of currency mismatches and limited lender-of-last-resort facilities, except that the effects of an increased size of the currency area could provide international investors with an incentive to include the 'merco' in their portfolios, as Panizza argues in his chapter in this book.

Most existing literature ignores these limitations, both in the general treatment of currency unions (i.e. Alesina and Barro, 2000; Bayoumi and Eichengreen, 1994; De Grauwe, 1994) and in the cost-benefit evaluations for a common Mercosur currency. Comparing the project of a common Mercosur currency with that of the euro – by now the natural reference for all common currency projects – most of the literature mainly emphasizes the disciplining effects of a type of Maastricht Treaty for the Mercosur countries (e.g. Giambiagi, 1999; Zahler, 2001). Some authors point out specific problems of the EMU process which the Mercosur should avoid repeating (Eichengreen, 1998, p. 31; Arestis *et al.*, 2003). The only exceptions to be found are those of the IDB (2002, p. 194) and Levy Yeyati and Sturzenegger (1999, p. 86f.). These commentators do indeed point to the lack of credibility gains due to the absence of a regional key currency.

The following analysis of the Mercosur's common currency project will – along the lines of arguments drawn in Fritz/Metzger in this book – focus first on the problem of the lack of internal hierarchies within Mercosur, second on the additional problem of differing debt structures of the member states; and third on the question of symmetries with regard to external monetary and financial shocks.

Lack of internal hierarchies

Argentina and Brazil, Mercosur's two main economies, show certain differences in the level of external indebtedness (liability dollarization), the most striking one being that Argentina has been in default for part of its external debt since 2001, whereas Brazil is making major efforts to

maintain its payment capacity (for external as much as for internal public debt), receiving continued IMF liquidity assistance. However, this certainly is not sufficient to enable the Brazilian real to serve as a regional anchor currency. Even if the Brazilian economy is considered to be in better shape than the Argentinian, at least since the Argentinian default, the Brazilian central bank cannot intervene to stabilize the Argentinian currency *vis-à-vis* the US dollar, if needed, as this would require large quantities of foreign currency. Brazil itself, however, suffers from a severe foreign currency shortage, making continued IMF assistance and an extremely tight monetary and fiscal policy necessary to preclude any doubts regarding its ability to service its debt.

Furthermore, in almost none of the macroeconomic indicators conventionally taken as references is Brazil's performance convincing enough to place it in the role of a regional leader. Since the beginning of the 1990s, Brazilian inflation rates have been constantly higher than those in Argentina (the only exception is 2002, due to the maxi-devaluation of the Argentinian peso). Based on the criterion of the nominal result of the public budget, both countries are currently running moderate fiscal deficits. Where Brazil in fact stands out with significantly better results is the stock of public debt in relation to GDP; while in Brazil this at present is approximately 60 per cent, the net public debt in Argentina has reached 140 per cent of GDP (Dec. 2003; all data from GMM).

Except for the fact that accepted supra-national rules for monetary and fiscal policy could contribute to minimizing the influence of political pressure groups at the national level pushing for inflation-financed public expenditure, and that the merco would represent an increased currency area that could in the long run possibly help to reduce original sin, the core problems of macroeconomic instability in the Mercosur countries stemming from original sin would remain, at least in the short run.

Implications of different debt structures

Even if there is no significant difference in the level of international original sin between Argentina and Brazil, the monetary regimes of the two economies have differed markedly. As Fernández-Arias *et al*. (2002, p. 24) state:

> Differences in the structure of liabilities may lead countries to respond to common shocks with different policies. A country where most financial liabilities are short-term and denominated in domestic currency is more likely to respond to a shock with a devaluation than a country where most liabilities are denominated in foreign

> currency… Different debt structures may therefore generate important exchange-rate disagreements. Should countries take into account the potential divergence in exchange rates when choosing partners for regional integration agreements?

Debt structure in terms of currency, maturity and coupon (fixed or indexed rate) has been differing widely between Argentina and Brazil. Dollarization of the domestic financial system in Argentina until the mid-1990s was below 40 per cent, climbing to more than 70 per cent, in terms of deposits, in 2001 (Mecon, cited in Hujo, 2002, p. 263). In Brazil, however, dollarization during the 1990s has been below 20 per cent,[12] leaving much more room for financial contracts in domestic currency.[13]

The difference in the level of dollarization helps to explain the differences in the exchange-rate regime options followed by both countries during the 1990s (see Fritz, 2000). Both opted for a peg, seeking to fight inflation by stabilization import. After its traumatic hyperinflationary experience at the end of the 1980s, Argentina in 1991 opted for a very strict peg in the form of a currency board with an extreme fix on the exchange rate. The conventional explanation focused on the credibility import aspect, by tying the national politicians' hands. However, seen from the perspective of a highly dollarized economy, the Argentinian convertibility plan can also be understood as a strategy of market-driven de-dollarization, and of the re-establishment of the domestic currency, by subjecting both currencies to equal conditions on the domestic market.

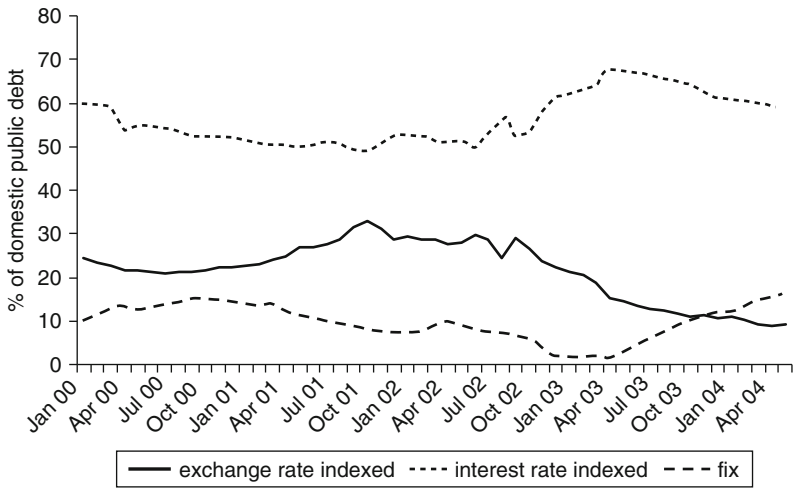
On the other hand, the Brazilian *Plano Real*, implemented in 1994 with a quasi-fixed exchange rate, should not be understood as an 'easier version' of exchange-rate-based stabilization requiring less efforts in terms of fiscal adjustment and productivity gains, but as an attempt to combine the coordination advantages for the price level by a fixed exchange rate with the reduction of incentives for dollarization by loosening the exchange-rate peg (Fritz, 2002, p. 162ff.). Part of this strategy was the introduction of a fictitious unit of account, called URV (*unidade real do valor*), prior to the introduction of a new currency. This step served to reestablish the relative price equilibrium which had been severely distorted by the highly sophisticated system of indexation which operated until the beginning of the 1990s. Dollarizing the economy would have had a similar effect for relative prices, as Gustavo Franco, then president of the Brazilian Central Bank, pointed out (Franco, 1996, p. 8). It may be an exaggeration to say that the plan 'avoided the dollarization process following exactly the opposite path' (Franco, 1996, p. 11), but the Brazilian authorities certainly made it an

important goal of their monetary policies to limit effective currency substitution.

While it is important to note these differing inclinations towards a specific exchange rate regime, their consequences for the question debated here should not be overestimated. Even if, during the 1990s, Brazil at first glance appeared more inclined towards a more flexible regime than Argentina, because its lower degree of dollarization reduced currency mismatch costs in case of exchange-rate devaluation (Fanelli and Gonzáles-Rosada, 2003, p. 10), this does not hold true in the broader sense. And even if, compared to Argentina, Brazil's economic crisis after the maxi-devaluation was less dramatic; a closer look shows that the devaluation still had severe consequences for the country's economy.

First, the proportion of financial contracts in domestic currency in Brazil has always been higher, but most internal credit relationships are short-term and often not fixed, but are rather indexed to the interest or the exchange rate; second, the Brazilian government stands out as the major debtor of the Brazilian economy in domestic currency. The composition of public bonds varies over time (see Figure 7.1): with increasing uncertainty, maturities shorten and the share of interest-rate or exchange-rate-indexed bonds increases. The latter especially gain weight in periods with high devaluation expectations. In the pre-devaluation

Figure 7.1 Currency and quasi-currency mismatch of Brazil's public sector debt



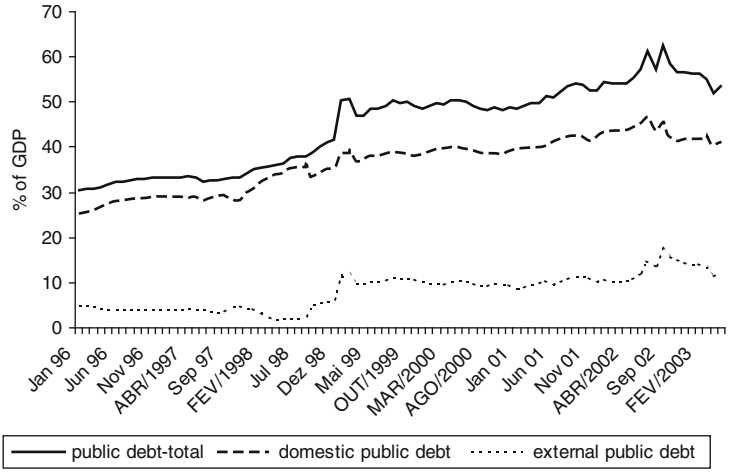
Source: Banco Central do Brasil, Séries temporais

period of 1997–8 for example, these increased from 9.4 per cent of public internal debt in December of 1996 to 21 per cent in December of 1998 (data from the Banco Central do Brasil), with demand coming primarily from private debtors in foreign currency in the form of hedging against devaluation. This means that in the case of a currency devaluation, the Brazilian state is not only exposed to the negative wealth effects due to its own foreign debt denominated in foreign currency, but also to costs of quasi-currency mismatch, as exchange-rate-indexed bonds are to be honoured not in foreign but in domestic currency – only that their nominal value has significantly increased. To this must be added the maturity mismatch, as expressed in the increase of real debt stemming from interest-rate-indexed bonds, in consequence of tightened monetary policy aimed at avoiding the spillover effects of devaluation upon the price level.

As a result, in the case of the Brazilian maxi-devaluation of 1999, real income reduction was initially limited, because the costs of currency mismatch mainly affected the state, whereas the private sector as a whole was largely shielded from these costs, as the sum of exchange-rate-indexed public bonds equalled more or less the value of recently accumulated private foreign debt.[14] In consequence, due to the devaluation, the stock of public debt increased dramatically within a very short time, from 41.7 per cent of GDP in December 1998 to 50.5 per cent in January 1999. In spite of the government's continuous austerity policy since then, public debt has never fallen significantly below 50 per cent, due to very high real interest rates. Consequently, in 2001, and especially in 2002, rising uncertainty about the Brazilian state's capacity (or willingness) to fulfil its extremely high debt-service obligations led to a new increase in the share of exchange-rate and interest-rate-indexed bonds. As a result, in combination with a large nominal devaluation and another tightening of monetary policy, public debt temporarily increased to more than 60 per cent of GDP in September of 2002 (all data from the Banco Central do Brasil, Annual Reports; see Figure 7.2). As uncertainty about Brazil's public payment capacity persists to this day, and prospects for a decrease in the stock of debt are rather long-term, total costs stemming from devaluation must be considered very significant.

This means that even when the timing and sectoral distribution of devaluation-related effects has been markedly different in Brazil and Argentina, with more weight given to maturity and quasi-currency mismatches in the case of Brazil,[15] in principle, both are economies marked by fear of floating: taking into account all macroeconomic consequences, their exchange-rate-regime preferences should not be significantly

Figure 7.2 Brazil: public debt as a percentage of GDP



Source: Banco Central do Brasil, Séries temporais

different. Neither of the two economies will quickly return to fixed exchange rates, so that perspectives for regional monetary coordination will probably encounter fewer barriers than in the past. However, it seems to be a precondition for a common monetary and exchange-rate policy that both countries agree on a similar policy towards their creditors, especially the IMF.

Symmetric reactions to external shocks

Even if a 'merco' would not *per se* reduce the regional economies' exposure to international financial volatility, a system of bloc floating towards the rest of the world still could make sense as a tool for facing common external shocks. Of course, the advantage might not consist so much in the elimination or full absorption of these shocks; nonetheless, stabilization or even elimination of intra-regional exchange-rate variability could prevent beggar-thy-neighbour-policies with their potentially highly negative effects for the entire region. Furthermore, it could to a certain extent elevate the efficiency of regional monetary policy in response to external shocks, as it would minimize diverging and potentially conflicting macroeconomic responses.

There is broad agreement that the volatility of international capital flows has grown greatly over the past decades, due to increasing capital account liberalization; that the level of volatility has been constantly

much higher in southern than in northern economies; and that financial shocks have come to outweigh terms-of-trade shocks, and have gained in significance. This holds true, too, for regional economic arrangements (IDB, 2002, p. 153): volatility of capital flows towards South–South free trade areas, including Mercosur, has always been significantly higher than capital flow-related volatility towards the European Union, and it has been increasing constantly since the 1970s. Empirical studies on the reaction to these volatile capital flows within the Mercosur member economies confirm the symmetry hypothesis. Carrera (1998) found that external shocks did hit the Mercosur economies in a more symmetrical manner than did internal shocks. Fanelli and Gonzáles-Rozada (2003), by calculating the trend growth rate of the real GDP of three Mercosur economies (Argentina, Brazil and Uruguay), found a very strong correlation between the Mercosur common cycle and the weighted average of country risk premium that signals the volume and direction of capital flows. By contrast, Carvalho (see Chapter 6) argues that even if the Mercosur economies show a rather symmetrical behaviour in relation to capital inflows (as both Brazil and Argentina did receive large amounts of capital from the early to mid-1990s), shocks related to capital outflows have been more idiosyncratic. Indeed, net capital flows to Brazil did turn negative from 1997 to 2000, and almost did so again in 2002 (data from Banco Central do Brasil, Balanço de Pagamentos). The first period was marked by increasing devaluation expectations and, from January 1999 onward, by the crisis in the wake of a maxi-devaluation; 2002 was marked by a high level of uncertainty over the Brazilian public and international payment abilities, while in Argentina, net capital flows turned negative only from 2000 onward (CEPAL, 2004). The divergence in capital outflows thus can be understood as a result of diverging exchange-rate regimes during the 1990s, due to diverging debt structures.

Between 1999 and 2001, Brazil's flexibilized and strongly devaluated real contrasted sharply with Argentina's currency board and its fixed exchange-rate regime. This extreme divergence in exchange-rate regimes caused a serious setback in the real integration of both countries, with Argentina resorting to strong protectionist reactions against the Brazilian maxi-devaluation.[16] Here, Mercosur became a paradigmatic case for the importance of beggar-thy-neighbour problems related to exchange-rate disagreements in regional free trade agreements (Fernández-Arias *et al.*, 2002; Bobik, 2002). As real integration within Mercosur has been rather low, with intra-regional trade barely surpassing 20 per cent of the total foreign trade of its members (data for 2000; IDB, 2002, p. 26f.), this

episode also contrasts with the widespread wisdom[17] that only an advanced degree of integration requires intra-regional exchange rate coordination. This argument may be valid for monetary coordination projects that involve a northern economy. But if we assume highly symmetrical external shocks, which in southern economies cause rather large macroeconomic volatility, the sum of external shock and intra-regional devaluation[18] within an SSC will probably damage regional integration, even if intra-regional trade is at a rather low level.[19] This leads to the conclusion that if members are able to reach an agreement on a common exchange-rate regime, symmetry with regard to reaction to external shocks will increase, facilitating coherence in regional monetary policy-making and endogenously increasing regional integration, fairly independently of the original level of intra-regional trade.

Conclusions

As we have seen, the US dollar's 'sphere of influence' in the Americas forms anything but a monolithic bloc. Taking a closer look at monetary strategies in Latin America, diversity is the game of the day. While some – mostly small Central American – countries are still considering the option of unilateral dollarization, the three major economies of the region, Argentina, Brazil and Mexico, are pursuing alternative options.

NAFTA failed to include any formalized agreement on monetary coordination, and as we have shown, Mexico still has little to expect from NAFTA in terms of *explicit* monetary coordination. However, on the basis of the analysis of the United States' dealing with the Mexican currency crisis in 1994–5 and of the Mexican central bank's monetary policy after that crisis, we argue that Mexico is seeking an implicit regional monetary coordination with the United States. After overcoming the turmoil of the maxi-devaluation, the Mexican central bank in the late 1990s sought monetary convergence with the US at the cost of significantly revaluing the exchange rate. Although this strategy indeed seems to be running some risk of a new currency crisis, it shows some plausibility: only strict adherence to such a rigid market-oriented policy course can hope to convince US authorities to intervene a second time in favour of the Mexican peso, thereby establishing an irregular and informal – but effective – implicit regional monetary coordination within NAFTA. If such coordination were to materialize, it probably would bring fewer gains for Mexico in terms of exchange-rate stabilization and interest reduction than an explicit, formal arrangement. Nevertheless, it would still put Mexico in a privileged position, compared to the rest of Latin

America, as no other economy can count, even if in a reduced and hidden form, on US lender-of-last-resort facilities.

After the traumatic outcome of the Argentinian currency-board experience, the Mercosur economies today are far from considering unilateral dollarization as a viable option; at the same time, however, they are also far from being able to benefit from the Federal Reserve, even as an occasional lender of last resort, in moments of crisis. In this context, and given the member countries' evident difficulties in unilaterally maintaining the domestic currencies' value at a given level and the weight (economic as much as political) given to sub-regional integration by the current governments, there is good reason to look into the prospects for regional monetary coordination. Our analysis shows that due to the lack of an internal hierarchy among currencies all marked by high original sin, only rather limited stability gains can be expected. The main benefits of increased regional monetary coordination will likely consist in a certain reduction in the degree of original sin by creating a common currency with an enlarged area, compared to the existing national currencies, and in eliminating beggar-thy-neighbour policies that can be highly damaging for the whole region. The latter argument, the experience of extremely divergent exchange rates between 1999 and 2001 and their serious negative consequences for regional trade and growth (as well as for the political commitment to the integration project) serves to argue that, against conventional wisdom, exchange-rate coordination in South–South regional integration is necessary, even in cases of a relatively low degree of regional economic integration.

In fact, regional monetary coordination requires rather substantial efforts to make it successful. But in a global financial environment that is expected to continue to be highly unstable at least in the medium term, a regional option will have some attraction, even if its stability gains may be limited.

Notes

1. See Frankel and Wei (1995); Mundell (1995, p. 27f.). The definition is valid independently from the causal nexus between increasing economic regionalization and intra-regional exchange-rate stabilization.
2. Canzeroni (1995, p. 156) estimates exchange-rate variability of the Western Hemisphere at twice the world average. Berg *et al*. (2002, p. 10ff.), evaluating the prospects of a common Latin American currency, do not find more symmetries in exchange-rate variations between Latin American economies than between emerging markets in general.
3. Berg *et al*. (2002), based on IMF data for 2000, distinguish three groups: the first, with dollarization under 20 per cent, includes Chile, El Salvador (prior to

its full dollarization) and Mexico; the middle group (dollarization between 20 and 70 per cent) is made up of Argentina, Costa Rica and Honduras; in the third group of highly dollarized economies (dollarization over 70 per cent) we find Bolivia, Nicaragua, Peru and Uruguay. Brazil and Guatemala are not listed, because foreign-currency deposits are not permitted. Colombia and Venezuela have negligible foreign-currency deposits. Of course, the participation of foreign-currency deposits is not the only – and for certain countries, probably not the most adequate – way of measuring de facto dollarization, but it has the advantage of relying on comparable data.

4. Since the 1940s, the United States and Mexico have a bilateral agreement on a limited central bank credit to support bilateral trade. In the context of the NAFTA agreement, this *swap-line* has been institutionalized while at the same time limited to a total sum of US$6 billion. The statute of this agreement explicitly rules out using this line of credit for the stabilization of the Mexican currency (United States Treasury, 1999). A similar *swap-line* was established between Canada and Mexico, limited to a maximum of US$1 billion.
5. The option of unilateral dollarization for Mexico is critically discussed in Ibarra and Moreno-Brid (2001a und 2001b); FitzGerald (2001). Berg et al. (2002), however, consider Mexico a candidate for unilateral dollarization.
6. As elsewhere, so also in Mexico, the crisis had a negative effect on income distribution. Due to the inflation surge as a result of the peso devaluation, real wages decreased by about 20 per cent between 1994 and 1996, and did not recover their 1994 level until 2001.
7. The government initially planned to ask the US Congress for a credit guarantee of $40 billion, but in the face of resistance there, it chose a different path not requiring congressional approval, and drew on the Exchange Stabilization Fund administered by the US Treasury.
8. An example are the numerous US pension funds that held large-scale investments in Mexican bonds, putting at risk the savings of many small depositors (Stern, 1995, p. 2).
9. The first years after the peso crisis of 1994–5 (with one of its consequences being the return of inflation) were marked by a new monetary regime officially labeled as 'free floating', but largely regarded as insufficient and non-transparent (Mishkin and Savastano, 2002). At the same time, inflation was gradually but steadily brought under control, falling from 52 per cent in 1995 to 9 per cent in 2000.
10. As Flassbeck shows in Chapter 4, Mexico is one of the economies that offers the highest rates of return to international investors; a fact that the author interprets as indicating an unsustainable exchange rate in the medium or long term.
11. Illustrative is the case of the 'Instituto de la Moneda del Mercosur'. Heralded as the embryo of a regional central bank, it has initially been designed as a centre for academic research on the topic. However, even as such it has not yet moved beyond the drawing board (*La Nación*, 15 January 2003). The most important practical advance to date is the formation of a 'Grupo de Monitoreo Macroeconómico' (GMM: Group for Macroeconomic Monitoring for the Mercosur).
12. Data from Freitas (1999, p. 46); since dollar accounts are not permitted in Brazil, we are here using the measure of dollar liabilities in relation to total liabilities of the domestic financial sector.

13. Hausmann and Panizza (2003) define a series of indices for domestic original sin that captures different types of domestically-traded public debt. Therefore, they look first only to the currency in which domestically-traded public bonds are issued (DSIN1), and in a second and third step expand the domestic original-sin index towards short-run and interest-rate-indexed public bonds (DSIN2) and bonds indexed to the price level (DSIN3). Consequently, for 2000, Brazil is computed with an index of DSIN1 of only 0.309, but with a DSIN2 and DSIN3 of respectively 0.915, whereas Argentina's DSIN1 is 0.644, and its DSIN2 and DSIN3 are both at 1 (0 indicates the lowest and 1 the highest index for original sin; Hausmann and Panizza, 2003).
14. Carvalho (1999). The only costs to be covered by the private sector were those of hedging, as exchange-rate-indexed bonds offered lower yields than non-indexed bonds.
15. See the first definition of original sin in Hausmann (1999) that – in addition to the currency mismatches resulting from foreign currency debt – includes maturity mismatches, because it assumes that finance in domestic currency will be exclusively for the short term. By quasi-currency mismatch we mean costs related to exchange-rate-indexed debt.
16. For a detailed description of trade-related disputes and protectionist measures, see Rozemberg and Svarzmann (2002).
17. Eichengreen (1998) has stated this explicitly for the case of Mercosur.
18. Of course the impact of intra-exchange-rate volatility depends on the relative economic weight of the devaluating country within the regional agreement, as Eichengreen also emphasizes (1998, p. 11).
19. This may help to explain why until the 1990s South–South regional integration efforts have not advanced significantly (Schelkle, 2000), and why South–South monetary coordination projects have surged mainly within the context of regionally expanding financial crises.

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