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DISCUSSION PAPER

Between Two Poles: Matching Trade and Exchange Rate Regimes in Mercosur

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ABSTRACT

The paper reviews exchange rate options for Mercosur countries. We start from the observation that most of the countries in the region have a longstanding tendency to adopt fixed exchange rates, and ask how such a system could best be designed. The Argentine crisis has demonstrated that unilateral currency pegs imply the risk of serious misalignments with other trading partners and subsequent realignments. The standard basket peg is not a solution because of its limited transparency and credibility. We therefore discuss a proposal to create dual currency boards that could be a workable solution for the Mercosur countries.

Key words: Exchange Rate Regime, Currency Board, Latin America, Mercosur

JEL-Classifications: F 3, F 4

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1 Introduction

How should countries in Latin America, and most importantly Mercosur members among them, optimally structure their exchange rate policies in view of a variety of partially overlapping trade agreements?[1] How should countries deal with the fact that their trade is not exclusively directed to one major currency area, such as the United States or Europe, and that capital flows are typically denominated in foreign currencies? This question is particularly relevant for Latin American countries some of which have pegged their currencies to the dollar (sometimes even in the form of currency boards or full dollarization), and who face the problem that their trade with the euro area is affected by movements in the dollar-euro rate.

There are several reasons why countries in Latin America (and many other emerging markets and developing countries) traditionally have had a tendency to choose fixed exchange rates over free floats. First, exchange rate variability could be an impediment to trade, because changes in real exchange rates with respect to major trading partners can have significant effects on external trade flows. While most economists tended to be skeptical with respect to this argument, evidence in recent years has confirmed that there is a positive effect from fixed exchange rates on trade flows (Rose 2000, Rose and van Wincoop 2001, Taglioni 2002).[2] Stable exchange rates are also important for the sustainability of deep integration as the vulnerability of trade and investment flows to exchange-rate movements grows in line with rising interdependence among partner countries. Disparate exchange rate regimes may accordingly create incentives to deviate from an existing trade agreement, thereby endangering the positive effects from trade integration (Rojas-Suarez 2002). This was clearly demonstrated in 1999 when Brazil sharply devalued its currency against the US-dollar and thus enhanced economic problems in Argentina and created problems for Mercosur integration more generally.[3]

A second reason to adopt a stable exchange rate is the desire to "import" monetary stability. Lack of credibility in monetary policy leads to higher expected inflation and higher interest rates, which countries might be able to lower by credibly tying their

1 Members of Mercosur are Argentina, Brazil, Uruguay and Paraguay. Chile is associated.

2 For a review of the literature, see IDB (2002). Especially Rose (2000) has argued that a common money might increase bilateral trade by a factor of up to three. While this seems incredibly high and has been challenged by other authors, one could nevertheless conclude that a "very" fixed exchange rate might add more to trade, and thus be more conducive to regional integration, than a merely fixed rate (with its higher probability of collapse). According to Klein (2002), thus, dollarization in Latin America would not have the same positive effects on trade as Rose has established for monetary unions.

3 The story of the Argentina's economic turmoil is told by Edwards (2002). See also Gurtner (2004) and Bleaney (2004) for further details.

domestic currency to an anchor currency. While this view was very influential in the 1980s and 1990s, and prompted many countries in Latin America to behave accordingly, it has recently come under attack (Larrain and Velasco 2001). Today, it is often stressed that fixed rates provide a natural target for speculators whereas flexible rates, at least under (nearly) full capital mobility, appear less inviting to speculators. Therefore, fixed rates without an institutional commitment are now considered by many observers as inherently vulnerable to attacks (Fischer 2001).[4] Nevertheless, most available empirical evidence suggests that emerging and developing countries still frequently use fixed exchange rates to import monetary stability (Edwards and Magendzo 2003; Ghosh et al. 2003; Rogoff et al. 2004).[5]

A third reason why a peg to a major currency is pursued is that capital inflows to emerging markets are typically denominated in foreign currencies.[6] In Latin American countries, most of the long-term debt has been issued in US-dollar or the euro. In Argentina, for example, both currencies make up more than 90 per cent of long-term debt in 2002 (Table 1). The figures for other Latin American countries are similar, with up to 95 per cent in the case of Chile (where the US dollar dominates).

Table 1: Debt Composition of Mercosur Countries and Chile, 1995 and 2002

	Argentina		Brazil		Chile		Paraguay		Uruguay	
	1995	2002	1995	2002	1995	2002	1995	2002	1995	2002
Total debt stock (bill. US$)	98.8	132.3	160.5	227.9	22.0	41.9	2.6	3.0	5.3	10.7
Long-term debt (bill. US$)	71.3	103.1	129.1	183.7	18.6	38.2	1.8	2.5	4.0	7.3
Currency composition of long-term debt (%)										
- Euro		34.8		11.6		6.0		3.3		6.8
- Deutsche Mark	11.5		5.1		4.5		8.4		6.5	
- French Franc	1.3		6.0		0.7		2.5		0.7	
- Japanese Yen	9.4	5.3	8.6	8.7	9.5	2.8	21.0	14.3	6.4	4.3
- US-Dollar	59.3	56.0	68.2	73.7	42.3	89.0	34.2	63.1	53.8	81.1
- Multiple currency	13.1	2.8	9.5	5.1	38.0	2.0	32.0	18.5	30.7	7.2
- All others	5.4	1.1	2.6	0.9	5.0	0.2	1.9	0.8	1.9	0.6

Source: World Bank Global Development Finance 2004.

4 The underlying problem is that many developing and emerging markets are plagued by high policy uncertainties. One might conclude that the exchange rate regime is not really that decisive if other policies are stable, predictable and sound (Calvo and Mishkin 2003; Edwards and Savastano 1999).

5 One reason why many countries are still reluctant to float and show "fear of floating" is that no alternative monetary strategy is readily available. In Latin America, for instance, apart from Chile and Brazil, that are relatively successful with the concept of inflation targeting, it is not clear what monetary strategy "emerging" economies could reasonably employ to gain credibility.

6 The inability to issue debt in one's own currency, called original sin by Eichengreen and Hausmann (1999), extends to most countries in the world. More than 90 per cent of the outstanding securities issued internationally in 1999-2001 were issued in just five currencies (Eichengreen 2004).

With international capital flows and debt denominated in foreign currency, economies suffer strongly when their domestic currencies are devalued or depreciate against those in which their debt is denominated as the crises in Mexico and Asia have demonstrated. As a logical consequence, governments have a strong incentive to peg to the currency in which they are indebted. Moreover, in economies with weak currencies the private sector often begins to hold and use foreign currency in domestic transactions as well. Many countries effectively become dollarized as the public begins to use a foreign currency, mostly the US-dollar, as a means of payment as well, additionally making the defense of fixed exchange rates politically important.[7]

For these reasons, most countries in Latin America had opted for a peg to the US-dollar. But increasing trade relations with the EU may suggest a review of that decision and a likely reorientation toward the euro. Simply changing the anchor currency to the euro and to issue bonds and credits in euro, however, would not make much sense but recreate the same problems as before. Especially Mercosur member countries face the problem that they trade with two major currency blocs and need to find an arrangement that takes both of these foreign currencies adequately into account.

Under these circumstances, it seems promising to reconsider the idea of a parallel currency board, once advocated by former Argentine minister Domingo Cavallo who had even prepared the respective law for this new arrangement (Oppers 2000). Even if not in the form of a formally declared currency board, a peg to the dollar and the euro at the same time could be one solution to achieve a better match between trade and exchange rate orientation. A parallel peg would be a special case of a basket peg; consisting of only two currencies, it would also be more transparent and more credible than a standard basket.

In light of the current discussion about a closer integration among Latin American countries, it is evident that such a peg would need to be a joint decision by the major trading partners. The problems between Argentina and Brazil during the time of the Argentine Currency Board show that individual solutions could be highly unstable. A dual currency board could also contribute to the stabilization of exchange rates within Mercosur (and incidentally restrict to some extent the movement of the dollar-euro rate). We therefore develop this idea as a possible solution combining the long-standing tendency to peg with a stable and credible external peg that does not suffer from the difficulties of a standard currency board.

7 The process of financial dollarization is analyzed in Ize and Levy-Yeyati (2003).

The remainder of the paper is organized as follows. The next section shows how internal and external openness to trade has developed in Latin America and highlights the distinctive role of Mercosur member states in the region's trade relationship with the European Union and the United States. Section 3 reviews the discussion about the appropriate exchange rate regime for the region, rejecting most proposals that are currently discussed such as a monetary union for Mercosur. Section 4 presents the proposal of a dual currency board, highlighting that the Argentine crises might actually have been avoided with such an arrangement. Section 5 concludes.

2 Trade Links and Trading Regimes

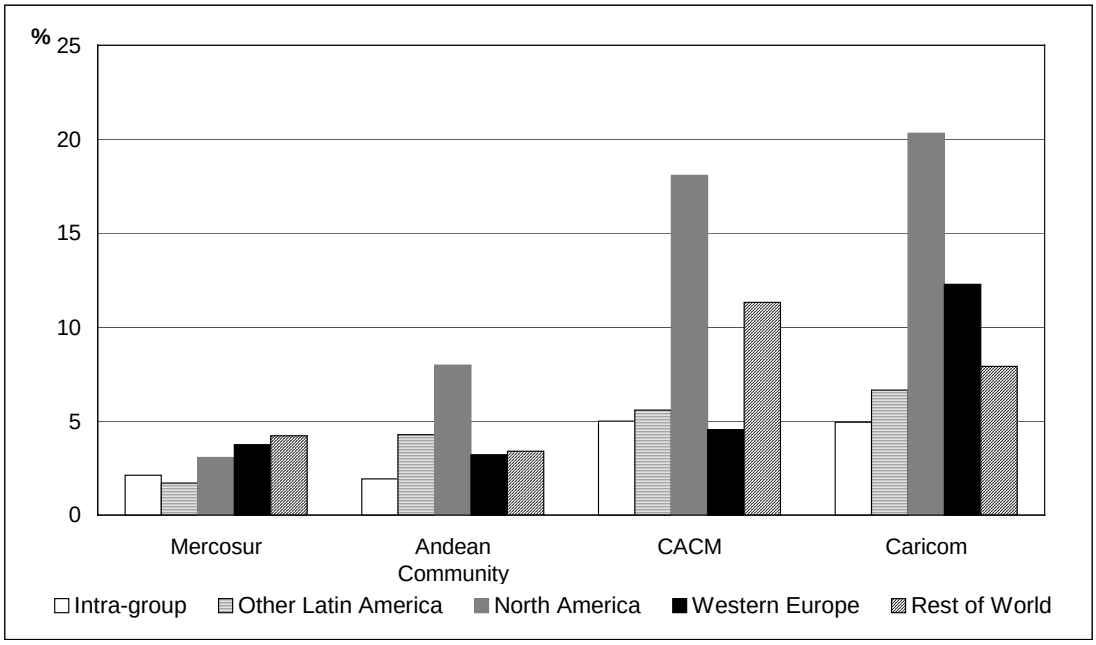
From the first wave of regionalism in the 1960s and 1970s, which basically was an attempt to reproduce domestic import substitution policies at the regional level, to the second wave that took off in the late 1980s, Latin American economies have significantly opened up to international trade. Tariff rates have fallen sharply, many non-tariff barriers have been removed, and multilateral disciplines have become integral parts of national trade policy regimes (Bouzas and Keifman 2003). Even so, the overall degree of trade openness remains rather low in Latin America compared with other regions. At the same time, the extra-regional component of openness in Latin America is much higher than its intra-regional part.[8] In 2003, Latin America traded just 4 per cent of its gross domestic product with itself as against 23.9 per cent with extra-regional trading partners. For comparison, the respective internal and external trade components of GDP in the European Union were 16.3 and 10.7 per cent in the same year. Nearly 12 per cent of Latin America's GDP was traded with North America (almost exclusively with the United States) while Western Europe (i.e. EU-15 and EFTA) accounted for 3.7 per cent (of which 3.3 per cent was trade with the EU).

The geographical trade pattern varies considerably between different sub-regional integration groups in Latin America, as is demonstrated in Figure 1. Whereas in the cases of the Andean Community, the Central American Common Market (CACM) and the Caribbean Community and Common Market (Caricom), trade links with the

8 Within Latin America, trade integration has been rather halting. This holds for region-wide integration schemes, such as LAFTA (Latin American Free Trade Area) and subsequently LAIA (Latin American Integration Association), as well as for sub-regional groupings. In the case of Mercosur, after a quick start, the progress of integration has clearly lost momentum. Similarly, rapid trade expansion within the Andean Community, following its renewal in 1989, came to a halt in the second half of the 1990s. Contrary to these "South-South" agreements in the Western Hemisphere, "North-South" integration in the area has produced a more sustained dynamics, as demonstrated by the strong growth of US-Mexican trade in the context of NAFTA (North American Free Trade Agreement) where the United States is the lead economy.

northern part of the continent are closer than with other parts of the world, the opposite is true with the Southern Common Market (Mercosur) where overseas countries on the whole are much more important trading partners than is North America (and the EU is a bigger partner than the US).

Figure 1: Openness to Trade in Latin American Integration Groups, 2003



Sources: IMF Direction of Trade Statistics, World Bank World Development Indicators, own calculation.

Note: Average of exports and imports in per cent of GDP, geographically decomposed.

Among Latin American countries, the Mercosur region is thus at the heart of trade relations with Europe, combining nearly 50 per cent of the region's total trade with the European Union (against only 10 per cent of its trade with the United States, which is heavily biased in favor of Mexico). With regard to Mercosur's own total trade (including internal trade), nearly one-fourth is trade with the EU. The United States is the second largest trading partner of Mercosur, accounting for about one-fifth of its overall trade. Among the individual Mercosur countries, the intensity of external trade links varies considerably with the size of the economy. They are strongest in the case of Brazil and weakest in the case of Paraguay. The reverse is true with the internal links. Even so, for each Mercosur member country (with the only exception of imports into Paraguay), the EU is the most important external trading partner (Table 2). This is in

sharp contrast to the other sub-regional groupings in Latin America, and its individual member countries, where the US clearly prevails.

Table 2: Trade Links of Mercosur Countries with the EU, the US and each other, 1990 and 2003 (per cent of overall trade)

		European Union		United States		Mercosur		World (bn $)	
		1990	2003	1990	2003	1990	2003	1990	2003
Argentina									
	Exports	30.8	19.8	13.8	9.7	14.8	22.5	12.4	32.1
	Imports	28.8	26.2	21.5	21.5	21.5	28.2	4.1	12.5
Brazil									
	Exports	32.5	24.7	24.6	22.4	4.2	5.8	31.4	77.1
	Imports	22.3	26	21.1	21.4	10.9	13	24.7	57.7
Paraguay									
	Exports	28.1	18.2	4.1	3.2	39.6	47.2	1	1.7
	Imports	15.3	6.7	12.3	20.9	30.8	53.9	1.3	2.6
Uruguay									
	Exports	24.5	21.4	9.8	9	35.4	31.7	1.7	2.7
	Imports	19.2	15.3	10.5	11.1	40.9	41.6	1.3	3.3
Mercosur									
	Exports	31.7	23.2	20.8	18.2	8.9	11.8	46.4	113.6
	Imports	22.7	24.9	20.3	20.9	14.4	18.1	31.4	76

Source: IMF Direction of Trade Statistics; own calculation.

The various trade agreements under negotiation or envisaged among Latin American integration groups and extra-regional trading partners, such as the European Union and the United States, are likely to reconfirm and strengthen this trading pattern.[9] This is particularly true regarding the triangular trade relationship between the Mercosur, the EU and the US. In this context, the planned Mercosur-EU Free Trade Agreement (FTA) stands out. The underlying reason chiefly is a high degree of trade complementarity or similarity of export supply and import demand structures between the two areas, with Mercosur showing a clear comparative advantage and strong competitiveness in agricultural products like meat and processed food (which face particularly high market access barriers in the EU) and the EU mainly concentrating on exports of manufactures with a high value-added like machinery (where import barriers in Mercosur are over-proportionate).

9 In the frame of the new (open) regionalism, the gradual shift during the 1990s from the traditional intra-regional focus of integration to growing interest in inter-regional agreements is seen as the perhaps most dramatic change in character (IDB 2002). In this context, the European Union and the United States seem to be the lead economies in their respective trade agreements with Latin American countries, whereas at the regional level, no single country appears economically mature and stable enough to fulfill this function (Van der Haegen and Viñals 2003).

Simulating the effects of a Mercosur-EU trading agreement with a dynamic CGE model that accounts for economies of scale and trade-linked externalities (such as efficiency gains in the production process as a result of increased trade), yields sizable trade and income/GDP growth figures for Mercosur member countries in the range of 10 per cent *plus* and nearly 5 per cent, respectively. This is significantly more than would result from a Mercosur-US FTA which for its part turns out to be clearly superior to other cross-regional arrangements such as FTAs of the Andean Community with the EU and US or a (regional) South American FTA encompassing Mercosur, Chile and the Andean Community (Watanuki and Monteagudo 2002).

The prospective trade agreements of Mercosur with the EU and the USA both provide for deeper integration which involves rising interdependence among trading partners and thus a higher vulnerability of trade and investment flows to exchange rate movements.[10] With high interdependence in trade/investment between two countries and highly variable real exchange rates, deeper trade integration between countries might therefore not survive the tensions arising from shifts in competitiveness due to exchange rate changes.

3 Exchange Rates and Their Consequences

Traditionally most countries in Latin America have only considered pegs to the US-dollar. Only relatively recently has attention been devoted to the (for now mostly theoretical) option of some kind of regional monetary integration.[11]

Up to the collapse of the Argentine currency board in December 2001, there was a clear tendency in most Latin American countries to have a formally declared or de-facto peg to the US-dollar, some going even so far as to dollarize completely (Ecuador, El Salvador).[12] In their assessment of the performance of exchange rate regimes in Latin America, Hausmann et al. (1999) accordingly stress the revealed preference of most countries to have fixed exchange rates, even if they had formally declared floating rates. They attribute this to the fact that flexible rates tended to be accompanied by higher interest rates, smaller financial systems, a higher sensitivity of domestic rates to

10 Deep integration essentially involves harmonization of economic policies „behind the border“ (mutual recognition of technical standards, services and investment liberalization, competition policy, protection of intellectual property rights, trade facilitation etc.) beyond a simple removal of border barriers such as tariffs.

11 See, e.g., IDB (2002), Eichengreen (1998)or Chang (2000).

12 In addition, Panama has been dollarized since 1904.

international rates, and a higher tendency for wage indexation.[13] Therefore, before 1998 most countries would not allow for large exchange rate movements, even in the presence of considerable shocks.[14] Hausmann et al. (1999) conclude that most of the countries that had nominally declared flexible rates actually operated as if being on fixed rates (but without their benefits). Hence the currency board solution that Argentina had chosen before its collapse in 2001 was generally considered as a success before 2001 (Ghosh et al. 2000).[15]

To conclude that fixed exchange rates have been useful for many countries in the region does not necessarily imply that a regional arrangement should be advocated. In fact, it is quite obvious that Latin American economies do not fulfill the standard criteria developed in the optimum currency area literature. Systematic studies that compare the region to the European example notice huge differences between Europe and the region. For instance, in a comprehensive study Temprano Arroyo (2003) looks in detail at all the traditional criteria, such as trade openness, asymmetric shocks, interregional financial integration and labor mobility, to conclude that the countries of Central America, the Andean Community and of Mercosur do not constitute an optimum currency area. Trade interdependence and intra-regional financial and labor market integration are low, implying as well that the potential for asymmetric shocks is high. Similarly, Larrain and Tavares (2003) show that the countries in Latin America have a higher degree of real exchange rate variability than could be expected, given their geographical closeness and economic characteristics. In comparison with other regions such as Europe or Asia, they conclude that the region is the least integrated and thus most vulnerable to asymmetric shocks and real exchange rate fluctuations.

Focusing especially on Mercosur, Belke and Gros (2002) show that these do not form a regional (or sub-regional) bloc. They also show that intra-regional exchange rate

13 The generally positive implications that Hausmann et al. (1999) derive in favor of fixed rates is contested by Larrain and Velasco (2001) who present countervailing evidence in favor of flexible exchange rates and stress their insulating properties in case of external shocks. Edwards (2002) even takes issue with the interpretation offered. He argues that the perceived "fear of floating" might actually be understood as representing "optimal floatation" in the sense that countries do not intervene with the aim to stabilize the rates but that their intervention reflects the optimal response to exchange rate developments.

14 This is confirmed for a larger group of countries by Calvo and Reinhart (2002) who establish a general „fear of floating" in emerging and developing countries. More generally, Reinhart and Rogoff (2004) point out a widespread mismatch between declared and de-facto exchange rate regimes. Levy-Yeyati and Sturzenegger (2000) confirm the general finding but group countries differently due to using another methodology.

15 After the collapse many observers have become more careful with interpreting Argentina's solution as a "real" currency board. Ghosh et al. (2003) describe how the Argentine solution diverged from a classic currency board.

movements are less important than those against the dollar and the euro and that those exchange movements, and the interest variability that accompanies them, have a negative influence on employment and investments in the region.

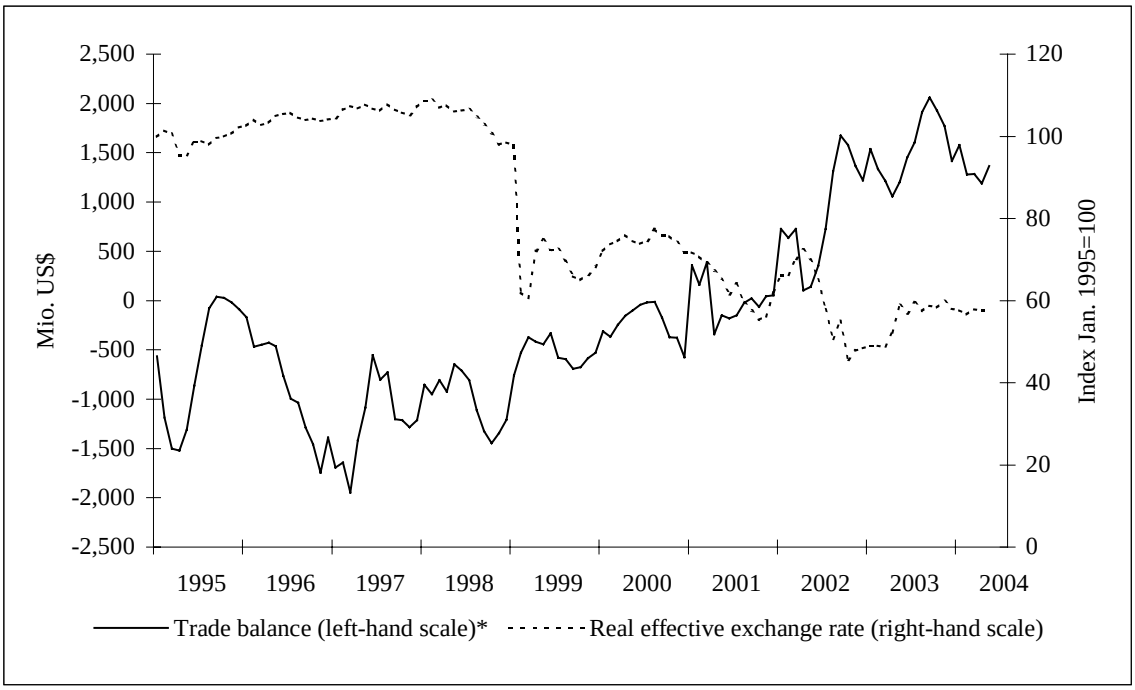
Temprano Arroyo (2003) in addition points out that any regional monetary integration arrangement would suffer from the absence of an established and credible low inflation anchor. Without a stable anchor, the danger of speculative attacks against the anchor currency and satellites would be high. Nevertheless, taking account of the high degree of financial dollarization and the crucial credibility aspect, he concludes that, at least for the Central American countries, a case can be made for a peg to the dollar if not full dollarization. For the Andean Community, this conclusion can hardly be drawn, given the lower degree of trade integration with the dollar area. If, however, the Andean countries should decide to peg to an outside currency, the case for a dollar peg would be stronger than that for a euro peg, simply because large parts of the sub-region are already dollarized.

Exclusive intra-regional pegs in Latin America therefore apparently make not much sense, nor do full monetary unions between the countries in the region, because they are too little integrated among themselves and rely too much on trade relations with third countries.[16] At the same time, one might conclude that financially dollarized countries are well off with a dollar peg. Accordingly, there appears to be no particular exchange rate regime that fits all Latin American countries, and especially Mercosur countries might not benefit from forming a regional monetary union among themselves.

Nevertheless, it remains a fact that dissimilar exchange rate regimes may not only have a significant impact on trade flows, they may also act as an impediment to deeper regional integration, as countries gain price competitiveness at the expense of their regional partners. This has become obvious within Mercosur, as the Brazilian real strongly depreciated by around 40 per cent in early 1999, whereas the Argentine Peso was pegged to the (then rising) US-dollar. As a consequence, Brazil's firms enhanced their price competitiveness and the trade balance improved significantly, though there has been a time-lag of one to two years before imports and exports responded to movements in the (real) exchange rate (Figure 2). Overall, Brazil's trade balance switched from a deficit of US$ 12.2 billion in 1998 to a surplus of US$ 2.1 billion in 2001.

16 This is the dominant opinion in the literature. See, e.g., Eichengreen (1998) or Larrain and Velasco (2001).

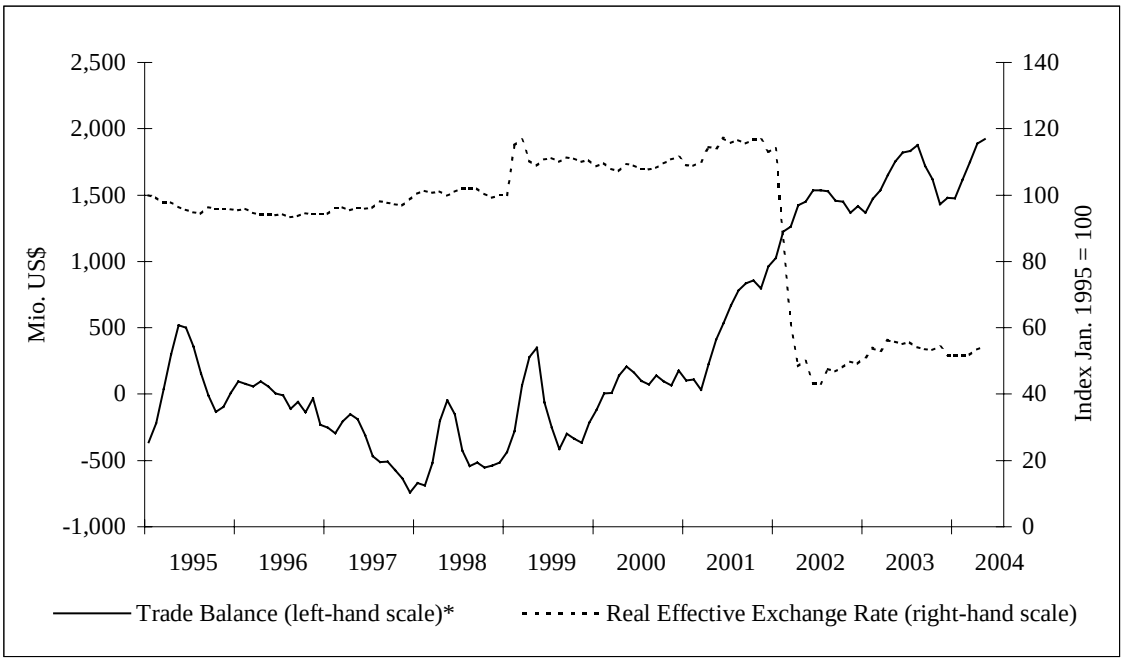
Figure 2:
Real Effective Exchange Rate and Trade Balance, Brazil, Jan. 1995 -May 2004



Source: Thomson Datastream and own calculations. *Three-month moving average.

The Argentine peso, on the other hand, bound by its dollar-peg rose during that period, which contributed to a erosion of Argentina's export performance in third markets and a loss of competitiveness of domestic firms vis-à-vis imported goods (Figure 3). Unlike Brazil, Argentina's trade balance remained roughly unchanged in the period 1998 to 2000, indicating that its exporters were not able to compete with Brazilian firms. Yet in 2001, even before the collapse of the currency board, Argentina's trade balance improved, as economic growth and thus imports collapsed drastically. Overall, during the severe economic crises, total imports declined by two thirds from 2000 to 2002, thereby boosting Argentina's trade balance.

Figure 3:
Real Effective Exchange Rate and Trade Balance, Argentina, Jan. 1995 - May 2004



Source: Thomson Datastream and own calculations. *Three-month moving average.

The loss of relative price competitiveness becomes more visible if we take a closer look at exports to the United States, an important trading partner of both Argentina and Brazil. As can be seen from Table 3, Brazil's exports to the United States rose by one third during the period 1999 to 2001, whereas the same figure for Argentina is much lower with an increase of only 7.4 per cent.

Table 3: Total Exports of Brazil and Argentina to the US, 1999-2001

Country	1999 (bill. US$)	2000 (bill. US$)	2001 (bill. US$)	Increase 1999-2001 (%)
Brazil	10.8	13.5	14.4	33.3
Argentina	2.7	3.1	2.9	7.4

Source: ITC (2004) and own calculations.

Moreover, Argentina's export to Brazil fell by 22 per cent from 1998 to 2001 (ITC 2004), thereby confirming the concerns of exporters in Argentina. The surge in Argentina's real effective exchange rate was compounded by a recessionary environment and a further reduction of tariffs in some sensitive sectors. As a consequence, a considerable number of disputes emerged between the two Mercosur

countries. Shortly after the Brazilian devaluation, Argentine firms were actively seeking protection, such as a compensatory tariff mechanism, to diminish the full impact of the exchange rate appreciation. Though the Argentine government did not fully comply with these requests, they encouraged various protectionist measures, for instance, voluntary export restraints for meat and iron and steel products or import license requirements for shoes (IDB 2002). In sum, Brazil's sharp devaluation of its currency in 1999 enhanced economic turbulence in Argentina and created economic and political tensions between the two Mercosur member countries.

4 A Dual Currency Board for Mercosur

The foregoing sections have shown that Mercosur would not be well advised to form a regional monetary area. Most observers argue that Mercosur countries should opt for floating because emerging markets with largely liberalized capital flows are too vulnerable to speculative attacks and "sudden stops" of capital inflows (Rogoff et al. 2004). However, Mercosur countries as well rely to a large extent on foreign currency in their external finance and are to some degree dollarized. Moreover, the conflict between Argentina and Brazil has again established strong political economic forces that require fixed rates to avoid trade conflicts. Accusations of "beggar-thy-neighbor" policy are often voiced when currencies depreciate, suggesting that an integrated market will have problems to deal with large exchange rate swings.[17] Therefore, we expect "fear of floating" to continue to remain an important factor in Mercosur and Latin America countries.

All this leads us to the conclusion that full floating is unlikely to be the preferred choice of Mercosur countries in the longer run. At the same time, it seems clear that a unilateral peg to the dollar does not make much sense. But neither would a peg to the euro make sense, given the dominant role of the dollar in financial flows. Furthermore, any kind of arrangement must ensure some degree of exchange rate stability between Mercosur countries to avoid tensions between them based on exchange rate movements.[18]

These arguments indicate that a basket-peg of individual countries, as advocated by Williamson (2000), could be a solution. If all countries would choose such a basket it would also indirectly stabilize the bilateral exchange rates, even if the countries would assign diverging weights to individual currencies. Differently composed and weighted

17 See also IDB (2002).

18 This can also be viewed as a precondition for a further integration with third countries. The EU has made clear in negotiations with countries in Latin America that it expects a significant degree of integration between the countries before negotiations can proceed.

basket would obviously allow some movement in bilateral rates but these would be restricted. Countries should, not necessarily openly declared, observe "monitoring bands" and thereby avoid the buildup of exchange rate misalignments. While a solution to some of the problems indicated above, we think this solution is not without problems when analyzed in detail.

One obvious problem is how and what weights should be assigned to individual currencies. Should they be based on trading weights the problem would arise how to deal with financial flows. While financial flows could also be taken into account, a broad basket would have the problem of periodic adjustment of weights to account for changes in trade and financial patterns. More problematic still would be the fact that such a basket would be intransparent and lack credibility. It would be hard to communicate to financial markets and the public how the basket is designed, how weights are assigned, and how they are changed over time. A crucial aspect of any peg, the credibility that it is supposed to give, would seriously be undermined by choosing a currency basket. Finally, since it would be difficult to find a solution acceptable to all Mercosur countries, even if not a formally coordinated decision, it is likely that discussions about the choice of currencies and their weights could become quite contentious.

A solution not likely to suffer from these drawbacks would be a currency board. The main advantage of currency boards is, of course, their transparency and that they are easy to understand by all market participants and the public.[19] While currency boards have become quite out of fashion after the Argentine debacle, one should not overlook that they continue to operate quite successfully in some (albeit smaller) countries, such as Estonia and Hong Kong. Moreover, the failure of the Argentine board is due to policy mistakes of the government and not to an inherent problem with currency boards.

Briefly before the collapse of the Argentine currency board, Domingo Cavallo suggested to introduce a dual currency board (Oppers 2000), which we also think could be an adequate currency regime especially for Mercosur countries.[20] Such a currency board would peg the domestic currency at the same time to two foreign currencies, in this case to the US-dollar and the euro. Two things should lend more credibility to such a currency board: First, it should be less vulnerable to exchange rate movements between the currencies of main trading partners, i.e. the dollar-euro rate, than a standard

19 A detailed discussion of currency boards can be found in Ghosh et al. (2000).

20 Oppers (2000) makes an explicit reference of this idea to the experience with the bimetallic currency system that some countries operated in the 19th century. Bimetallism is described in detail by, among others, Friedman (1990) and Flandreau (2004).

currency board. Second, it should restrict exchange rate movements between the members of Mercosur to a significant degree. Other than a standard basket peg, both anchor currencies would have the same importance and weight, making the system at the same time very stable, transparent and simple. Because both major international currencies would be chosen, there would also be no problem with financial flows. Thus, the trade and the financial dimension would to some extent be taken care of at the same time.

The main basis of this arrangement would be the central bank's declaration to exchange domestic currency at a fixed rate into the foreign currency, like in a standard currency board. But unlike in the standard case, this commitment would be made to exchange into either the dollar or the euro, at the discretion of the central bank. It would be up to the central bank to decide whether it would exchange, say, one peso against one dollar or against one euro.

The central bank would officially declare a fixed relation at which it would be willing to exchange dollars against euros. To avoid that market participants can arbitrage between the two anchor currencies whenever market rates would diverge from official rates, the central bank would use its discretion to participate only in one currency in the market. Defined by transaction costs, there would a (small) band around the official rate in which no arbitrage would take place. Nevertheless, as markets would exploit arbitrage opportunities, this could imply that the central bank would find itself frequently on being on only the dollar or the euro standard because reserves in one currency would frequently be exhausted if market and official rates diverge too much from each other. But given the central bank's right to redeem only one currency, such arbitrage could not bring the dual currency board under more pressure than a single currency board.

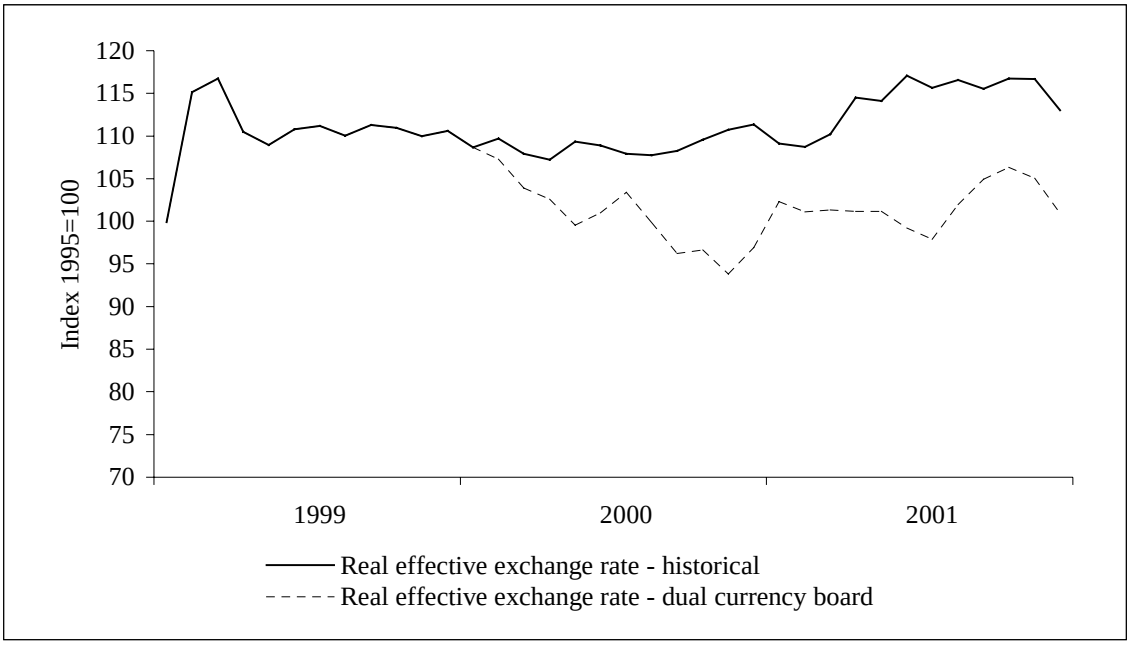
There is no reason to presume that the official rate would correspond to the market rate; in fact, most of the time the rates would differ. As already indicated, arbitrage would keep the market rate close to the official rate as long as the central bank has enough reserves. An increase in the demand of dollars vis-à-vis the euro would not lead to an appreciation of the dollar as long as market participants can obtain dollar reserves from the central bank. Continuing demand for the dollar would finally exhaust the reserves of the central bank, from which onwards it could hand out euros. There would no longer be any possibility to stabilize the rate between dollar and euro and the exchange rate would begin to move away from official rate.

Notice that the central bank would not incur losses due to the reserve switch. Because its reserves are always valued at the official rates and the bank would only sell at these rates, it would never report losses due to a switch of the reserve currency. Consequently,

the government would not incur fiscal costs from a change in the reserves. All that would happen is that arbitrage could drive out one currency from the reserves and be replaced with the other. Market pressure on the dollar would push dollars out of the central bank coffers and replace it with euros and vice versa. There would hence be no "run" on the reserves and there would be no "collapse" of the currency board. The total stock of reserves, valued at the official rate, would remain constant, only its composition would change.

Since the country would thus effectively always be pegged to the relatively depreciated currency, its real exchange rate would remain competitive throughout, avoiding the problem that Argentina had with having to follow the appreciated dollar. To illustrate the effects of a dual currency board for Argentina, we have computed changes in the real effective exchange rate for that country in the period 1999 to 2001. As can be seen from Figure 4, using a dual currency board with a conversion rate of $1 and €1, Argentina could have avoided the appreciation of its currency, partly caused by the strong dollar in that period. By late 2001, the Peso would have ended up 10 to 12 points below its level under the dollar peg. Moreover, a joint dual currency board with other Mercosur countries, including Brazil, would have prevented the sharp rise in the Peso in early 1999, as the Brazil real devalued, and decreased the intra-regional effects on trade flows.

Figure 4:
Real Effective Exchange Rate of Argentinean Peso Under Hypothetical Dual $/€ Currency Board, 1999-2001



Source: Thomson Datastream and own calculations. Note: Calculations assume no changes in consumer prices or trade flows. The dual currency board conversion rate was set at $1 and €1.

As long as the two anchor currencies are non-inflationary, the dual currency board would not lead to an increase in inflation due to this exchange rate effect. Also, the currency would have to follow the interest rate of the relatively depreciated currency, implying that the domestic interest rate would be relatively higher. While this might be considered a negative influence, it is likely that this negative effect would be more than compensated through a positive credibility effect due to the fact the country is not pegged to an overvalued anchor currency.

The crucial question in this setup is obviously to choose the right conversion rates into either the dollar and the euro, thus implicitly fixing also the bilateral rate of the two currencies. This bilateral rate should be set at "equilibrium", trying to avoid that overvalued rates are chosen, also between the two anchors. But the rates can also be chosen strategically to reflect for instance the fact that an economy is already to a large extent dollarized. Choosing the rate in a way that the economy is most of the time tied to the dollar would accommodate this. Only a very strong appreciation of the dollar would then lead to a switch to the euro. That way, the dual currency board could serve as a safety valve, avoiding too much of a loss of competitiveness.

Bilateral rates between countries in the region could obviously then be stabilized if they considered a joint decision to adopt such dual currency boards. If all Mercosur countries

decide to have a dual currency board with respect to the dollar and the euro, they would implicitly also stabilize bilateral rates. This would be clearly the case if all adopt the same bilateral dollar-euro rate. But even if the official rates between dollar and euro diverge across countries, there would be a maximum variation implicit for bilateral rates between Mercosur members. Hence, such a dual currency board could also be a first and significant step towards some regional arrangement, that could be extended by other forms of regional cooperation, such as a regional stabilization fund or other arrangements.

It is clear, however, that a dual currency board, much like a standard currency board, could obviously not be a "panacea" because it can not solve a country's macroeconomic problems (Edwards 2002). A currency board alone does not force politicians, as the Argentine example demonstrated, to run a prudent fiscal policy. It does not avoid that countries run up debts that are ultimately not consistent with a fixed exchange rate, and it does not solve the free-rider problems of fiscal federalism. Hence, currency boards will only survive if these problems can be solved. Moreover, creating a well functioning currency board is not a "trivial matter " (Ghosh et al. 2000). To avoid deflationary pressure, foreign exchange reserves must be sufficient to broadly cover base money, and the currency board needs broad political support to rule out self-fulfilling speculative attacks, and a reasonably healthy financial system to be able to do without a lender-of-last-resort. But if the underlying macroeconomic problems cannot be solved, any alternative exchange rate system is as likely to suffer as a currency board. Especially the dual currency board might have better chances to be successful as it should enjoy more credibility and better be able to avoid real overvaluation.

5 Conclusions

The exchange rate remains an important variable for emerging markets and at the same time it is clear that most of those countries, including in Latin America, do not seem to be willing to live with freely floating rates. At the same time, currency boards and other pegs have been discredited by the Argentine collapse of the currency board, that has led many observers to advocate a free float, arguing that fixed rates are inherently vulnerable to speculative attacks.

In this paper we have argued that this conclusion may be premature and that the benefits of fixed rates might be larger than argued recently. In particular the fact that financial flows and external debt are denominated in foreign currency and that exchange rate swings are a political-economic obstacle for trade integration still make some kind of fixed exchange rate arrangement attractive for emerging markets. In the case of

Mercosur, we argue for the introduction of a modified currency board that takes into account that Mercosur members are not exclusively tied to one currency in their trade and financial orientation. In making this case, we pick up the proposal of a dual currency board made by Argentine minister Cavallo closely before the collapse of Argentina's currency board. This arrangement could at the same time provide a stabilizing anchor to domestic policy, be credible, and solve the problem that trading patterns do not accommodate a single currency peg to either the dollar or the euro.

Such a solution could obviously only work if the mistakes that have been made under the original currency board in Argentina would not be repeated. Like in all other cases of a peg, this requires foremost a fiscal policy that does not imply the need for an eventual monetary bail out. After all, the fact the Argentine board collapsed is also a manifestation of the general problems and inconsistencies of the policy at the time and probably less a fundamental weakness of currency boards.

It is also clear that a dual currency boards is unlikely to be a general solution for all emerging market countries. It is particularly useful in the case of Mercosur, however, because these countries are at the same time oriented towards two major currency areas, their financial flows are based on one major currency, and they should have an interest to avoid that bilateral exchange rate between them vary too much.

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