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COMMON CURRENCY AND ECONOMIC INTEGRATION IN MERCOSUR

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COMMON CURRENCY AND ECONOMIC INTEGRATION IN MERCOSUR♦

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Abstract. Latin America has a long history of attempts to achieve regional integration, yet success has been modest. This paper contends that this is essentially due not so much to protectionist practices in the various countries, but to the lack of a common currency, or, at least, of a tightly managed exchange rate band. We reviewed the optimum currency area criteria that indicate it is prudent to increase economic integration before attempting to establish exchange rates coordination. Yet, we show that in the Mercosul there are already the minimal requirements to work on this direction. Diminishing exchange rate instability could encourage trade and investment flows across Latin American economies. We also performed a simplified exercise to understand how feasible would be the efforts to achieve exchange rate parity stability in the two larger economies in the region (Brazil and Argentina) and step forward toward adopting a common currency.

Sumário. A América Latina tem uma longa história de tentativas de alcançar uma integração regional, embora seu sucesso tenha sido modesto. Este trabalho procura mostrar que isso essencialmente ocorre não tanto pelas práticas protecionistas nos vários países, mas devido à falta de uma moeda comum, ou, pelo menos, de uma taxa de câmbio rigorosamente administrada. Os autores analisaram o critério da área ótima de moeda que mostra ser prudente aumentar a integração econômica antes de tentar implementar a coordenação das taxas de câmbio. Entretanto, nós mostramos que no Mercosul já existem as condições mínimas para começar a trabalhar nessa direção. A diminuição da instabilidade cambial pode encorajar a entrada de investimentos e o comércio nas economias latino-americanas. Os autores também desenvolveram um exercício simplificado para entender como poderia ser viável alcançar estabilidade da taxa de câmbio em nos dois maiores países da região (Brasil e Argentina) e avançar na adoção de uma moeda comum.

Key-words: exchange rate common currency parity Mercosur

Palavras-chave: taxa de câmbio moeda comum paridade Mercosul

JEL Classification: F33, F31, F15, F42

I- INTRODUCTION

Latin America has a long history of attempts to achieve regional integration, yet success has been modest. The only experience that may be credited a certain success is the Mercosur, but it is limited. This paper contends that this is essentially due not so much to protectionist practices in the various countries, but to the absence of a common

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exchange rate, or, in other words, the lack of a common currency, or, at least, of a tightly managed exchange rate band. For instance, to illustrate simply with trade integration of two countries, if in one country a good is protected with a 25% tariff, and its currency appreciates 20%, the effective tariff will be zero, taking into consideration the exchange rate variation. Thus, the huge relative instability of the various exchange rates makes tariffs meaningless and represents a major obstacle to increased trade within the region. The goal of a common currency seems to many too demanding to achieve and thus distant, but this paper argues that it would not be so difficult to reach an agreement on this subject. This could begin with agreement on a band that, after few years, would evolve into adoption of a common currency. Our assumption is that, in economic engineering problems such as economic integration, there are times when one must either chance a leap ahead or concede defeat and fall back. If the leap ahead is not as difficult as most imagine, it will be the obvious alternative to follow.

To discuss this problem we divide this paper in three main sessions. In the next session, we will present some selected stylized facts that could be helpful in understanding the suitability of the adoption of an exchange rate fluctuation band as a step forward towards a common regional currency. As we show there is a clear correlation not only between relative appreciations and trade-balance deficits or surpluses, but also between exchange rate instability and trade volume. We review past discussions of the subject in the region, and we discuss the necessary conditions for the establishment of a monetary band and its subsequently evolution into a common currency. The third section concentrates on the exchange rate arrangements in most LA economies, and we will show that after a long history of divergence, the economies converged to allowing floating exchange rates. In section four we will discuss how to arrive at the basic exchange rates that would provide the basis for the new currency, and how countries should manage their exchange rates to keep them within the band while the new currency is not actually created. Also in this section, we offer a discussion in broad strokes of the realistic and viable characteristics of a common currency, and of how the problems that might arise from it should be confronted and possibly resolved.

Throughout this paper, we support the idea that common currency can encourage economic integration, which is converse to the recommended policy of the conventional

optimal currency area approach. We are suggesting that in line with the experience in the European Union, because monetary and fiscal policies have also been much more credible and because of the region's converging exchange rate arrangements.

II - WOULD MERCOSUR ECONOMIES ADOPT A COMMON CURRENCY? STYLIZED FACTS

The balance of advantages and disadvantages of each exchange rate regime can be translated into Robert Mundell´s criteria for an Optimum Currency Area (OCA), as adapted by textbook discussions about the convenience of pegging local currencies *versus* letting them float. As the degree of economic integration with the rest of the world increases, so do the benefits of fixed exchange rates, whereas the advantages of flexible exchange rates tend to fall. This happens because of: larger potential gains in terms of lower transaction costs and currency risks; higher inflationary credibility and heavier weight of nominal anchor via hard pegs; and lower losses derived from the loss of monetary policy. According to this approach, full capital mobility implies that markets avail themselves of arbitrage or speculative opportunities whenever there is some misalignment between active monetary and exchange-rate policies. Therefore, one of these has to be given up, i.e. one policy has to follow the other.

As in Frankel (1999), it is possible to have something like "half" monetary independence and "half" discretionary exchange-rate policy. Bresser-Pereira (2004), in turn, rejects the "fix or float" or bipolar alternative, and says that the realistic option is to "manage" the exchange rate within the context a floating regime. As long as boundaries of coherence (alignment) among policy instruments and targets continue to be respected, a mix of monetary and exchange-rate policies can be (softly or loosely) pursued. Until 1999, Chile combined its inflation targeting (IT) monetary regime with broad exchange-rate bands. Most countries do not hesitate to manage or influence their exchange rate while keeping it floating. The "dirty float" concept is just a biased valorative concept ("dirty") to designate a common practice.

The main drawback in the conventional wisdom of most analyses on exchange rate regimes relative to the adoption of a common currency originates in the narrow cost-benefit analysis. In Mundell (1961) and McKinnon (1963), if the degree of factor

mobility between regions within a country or between countries is low, monetary union is undesirable. Economies with diversified industrial and export structures are expected to reap the benefits of a fixed exchange rate. Such criteria for the adoption of a common currency may be conflicting, since a country may present an open economy, suggesting joining a monetary union, but it may at the same time lack internationally mobile labor or productive diversification. Conventional wisdom comes out with formal models (Bayoumi and Eichengreen, 1994) that offer a theory of the optimum currency area based on maximizing the net benefits of a common currency[1].

In line with the conventional wisdom inspired in the OCA theory, De Grauwe (2005) lists three different factors that determine whether a monetary union would be a suitable alternative currency strategy. These are: 1. the degree of economic integration between the prospective members of the union; 2. the degree to which these countries' economies are subject to asymmetric shocks; and 3, the degree of flexibility in the labor markets. Hochreiter et al. (2002) also adds another, that is, a sound financial sector as a precondition. Berg et al. (2002) emphasize the co-movement of the economic variables assessed according to a well known Blanchard and Quah (1989) methodology. In this case, "To assess the desirability and feasibility of a common currency, supply shocks are clearly more relevant, as one might expect demand shocks (…) to become more correlated under a common currency"(Berg et all, 2002:7). Calderon et al. (2002), and Larrain and Tavares (2005) made similar remarks, and indicate that the degree of synchronization of output movements is quite low in the region. De Grauwe (2005) also points out the lack of credibility of the institutions as an additional reason why such a monetary strategy is unlikely to be embraced soon.

Edwards (2006) showed that the prerequisites for joining a currency union have increased significantly. According to him, these may include the following in addition to those discussed above: different (or diversified) composition of output and trade across countries; price and wage flexibility across members of the union; similar inflation rates across countries; absence of "fiscal dominance" in the individual countries; and low, and similar, levels of public-sector debt in the different countries.

[1] For details see Hallwood and MacDonald (2000), chapter 18.

The only conclusion of these works is that a common currency in Latin American economies, including the Mercosur, is remarkably undesirable. There is no sufficient degree of economic integration, either trade or financial; even their business cycles are not intra-regionally coordinated. The economies are far more susceptible to international (out-of-region) financial and economic shocks. Generally, the authors come out with comprehensive data to show that European Zone has a higher level of economic integration; but they use current data, and the Euro Zone was notoriously less integrated than it currently is. Before the adoption of the euro, predictions that it would be a failure were common in the specialized literature on the subject.

According to this same conventional economic literature, Latin-American economies had only two relevant choices in the matter of currency arrangement: fully dollarize or fully float. Dollarization was particularly suited to small economies with poor institutional records (such as Ecuador, Panama, and El Salvador), so that small and troubled economies might embrace the US Dollar and borrow the credibility of the North America monetary policies. Dollarization would work as a kind of shortcut to faster development of strong institutions. As in Berg et al. (2005), "Latin American countries would benefit from dollarization". By accepting the US Dollar as means of payment they also import the monetary stability provided by the US Federal Reserve. Nothing is said about the fact that by dollarizing the country is relinquishes control over the most strategic of macroeconomic prices – the exchange rate. Alternatively, bigger economies like Brazil and Argentina should combine flexible exchange rates and inflation targeting regimes. Fluctuations would indicate the surrender to the "fear of floating" (Calvo and Reinhart, 2002) – an expression heavily burdened of normative content.

Some authors assert that dollarization has the advantage of encouraging greater economic integration with the United Stated. We simply do not understand why a similar advantage is not present in the alternative policy of exchange rate coordination within the Mercosur. This aside, it is import to note that authors actually recognize that a monetary union provides benefits after adoption, but others reject the possibility as in Berg et al. (2002: 13), who stress: "As far as trade is concerned, there is some evidence that the use of a common currency is a factor that encourages bilateral trade among

countries that share a currency". This is an important point. According to the OCA theory, countries would only consider a common currency if they showed high levels of economic integration; however, there is reason to believe that exchange rate coordination and a step forward in the direction of a common currency could encourage economic integration inside the region.

Most importantly, an avenue of literature has shown that the criteria listed above as prerequisites for belonging to a currency union are endogenous to the monetary and exchange rate regimes (Frankel and Rose, 1998, Rose, 2000, Rajan, 2002, Fritz and Muhlich, 2006, and Agénor and Aizenman, 2008). According to these authors, the "trade-first" sequence lacks support in the experience of the countries' trade strategies. Generally speaking, regional trade arrangement could encourage industrial specialization and inter-industry trade, which could increase similarity and symmetry in terms of supply and demand shocks with its partners.

Second, gravity-based cross-sectional evidence indicates that belonging to a currency union more than triples trade with other members of the zone (Frankel and Rose, 2000). Moreover, every one percent increase in trade raises income per capita by roughly 1/3 of a percent over twenty years. Simply put, the benefits of the currency unions for economic performance come through the promotion of trade, rather than through a commitment to non-inflationary monetary policy.

Third, as properly pointed by Rajan (2002:3), practices like "competitive devaluations may generate a protectionist backlash which goes against the purpose of the regional trade arrangement and possibly even threatens its existence, as the recent experience of the Mercosur seems to suggest".

Ultimately, why could exchange rate coordination not precede regional trade arrangements? Why have currency union and regional trade arrangements not ever been established simultaneously? What really happened with the paradigmatic experience of the European Union? Did this experience really follow the "trade-first" conventional wisdom?

In the process of arranging common currency, previous exchange rates parity alignment across the region's economies wouldn't be expected. The European Union shows how

broad the constellation of local currency parities against the US Dollar was.[2] As a benchmark, European Union was built under those conflicts. Some economies were relatively open (for example, Belgium's openness ratio in the 1980s was near 70%), other ones were not (for example, Germany's ratio was about 25%). Most economies allow the free movement of capital among member states in the aftermath of stable exchange rates. Actually, "the stability of the exchange rate encourages the member states to press forward" (Neal, 2007:103). It seems that conventional wisdom prescribes certain criteria for an optimum monetary union, but the practice indicates that when stable exchange rates are reached, member states are encouraged to step forward in eliminating several kinds of trade and financial restrictions. Even the trade criteria (extension and diversification) are enhanced through lower trade costs, which are among of many benefits of belonging to regional trade and currency arrangements (Alesina and Barro, 2000)[3].

III - LATIN AMERICAN EXCHANGE RATE REGIMES

Latin America has had a wide variety of experiences with exchange rate regimes since the '80s – a decade in which the region experienced a major debt crisis and high rates of inflation. The spectrum goes from adoption of "hard pegs" (currency board, dollarization), to experiences with fixed, but adjustable, exchange rates or sliding bands, with these "soft pegs" ending up superseded by regimes with more flexible nominal adjustments of the exchange rate. The most common sequence begun with the adoption, at some moment, of either exchange rate "soft pegs" (fixed-but-adjustable rates, crawling bands) or "hard pegs" as a basis for inflation stabilization programs. Given residual rates of inflation – mostly from prices of non-tradable goods and services – and

[2] See the figures 5.1a and 5.1b in Neal (2007) pages 96 and 98.

[3] Many authors like Alesina and Barro (2000), and Edwards (2006), extend their analysis to the idea of giving up domestic currency and relate this policy to a cost-benefit analysis. Actually, they associate this problem with dollarization and its disadvantages and advantages. As generally known, a country that gives up its currency loses a stabilization device to target domestic shocks; on the other hand, it may gain credibility and thereby reduce undesired inflation. However, in this work, we use exchange rate coordination from a different perspective, including currency union, instead of the idea of "giving up" the local currency, and exchange rates as an instrument to enhance regional trade and investment. Therefore, costs and credibility issues are not considered relevant.

the tendency to exchange rate over-appreciation as a result of the growth with foreign savings policy, the Dutch disease and exchange-rate populism cycles (Bresser-Pereira 2008) overvaluation of local currencies usually took place. Loss of trade competitiveness often led to current-account deficits in the balance of payments, easily sustained by abundant capital flows to emerging markets in the first half of the ‘90s. Simultaneously, an excessive "dollarization of liabilities" tended to occur (both as unit-of-account and as means of payment), as well as a corresponding currency (and often maturity) mismatch in portfolios, given declining perceived exchange-rate risks.

After the ensuing balance-of-payments crisis in the 1990s and early 2000s – which tended to be more or less damaging depending on whether the pegs were “hard” (like the Argentinean currency board) or "soft”, like the Brazilian one – pegs were replaced by exchange rate fluctuation, usually after a period of overshooting of the local currency devaluation caused by the balance of payment crisis. Chile had the smoothest recent experience of change, replacing its band with a floating regime. In turn, Argentina's currency board was maintained during Mexico´s and Brazil´s soft peg exchange-rate regime upheavals, but it turned out to be unsustainable, sending Argentina into turmoil in the beginning of the 2000s and leading to a huge real and nominal depreciation of the Argentinean Peso. Since then, a deliberate policy to avoid re-appreciation of the Peso has met with success, while the Brazilian Real over-appreciates gradually from the 2002 crisis up until 2008, when the world financial crisis emerged the Real suddenly depreciated.

Table 1 illustrates how pegged exchange-rate regimes became widespread in Latin America until recently. With the exception of Panama, all hard pegged regimes disappeared. Therefore, the so-called "bipolar view" of surviving exchange rate regimes in emerging countries, according to which only extreme regimes are intertemporally sustainable when the emerging country is fully open to capital mobility (Eichengreen, 1999) (Fischer, 2001), is not sustainable. In the 1990s, each of the major balance of payment crises in emerging economies involved some local sort of exchange-rate soft peg at corresponding core countries: Mexico (1994), Thailand, Indonesia and South Korea (1997), Russia and Brazil (1998), Argentina and Turkey (2000); the main cause of the crises, however, was not the exchange rate regime but the growth with foreign

savings policy adopted by many developing countries since the early 1990s and the ensuing major current account deficits that these economies faced in the pre-crisis moment.

Table 1. Pegged Exchange Rate Regimes in Latin American Countries (1979-2008)

1979	1982	1985	1988	1990	1991	1995	1998	2008
Bolivia	Ecuador	Guatemala	Ecuador	Haiti	Argentina	Argentina	Argentina	
Chile	El Salvador	Haiti	El Salvador	Panama	Nicaragua	Brazil	Brazil	
Costa Rica	Guatemala	Nicaragua	Guatemala	Dom. Rep.	Panama	Panama	Panama	Panama
Dom. Rep.	Haiti	Honduras	Haiti		Mexico			
Ecuador	Honduras	Paraguay	Honduras					
El Salvador	Mexico	Peru	Nicaragua					
Guatemala	Nicaragua	Venezuela	Paraguay					
Haiti	Panama	Panama	Panama					
Honduras	Paraguay		Peru					
Nicaragua	Dom. Rep.		Venezuela					
Panama	Venezuela							
Paraguay								
Venezuela								

Note: Both softly and hardly US$-pegged regimes (inc. dollarization).
Source: IMF. *EAER Annual Report. (Several Issues)*

It is true, though, that either one or the other policy tends to remain subordinated. An example comes from an IT framework in which direct and indirect instruments of intervention in foreign exchange markets are used as a complement to interest rate policy, in order to prevent exchange-rate hikes from passing through to inflation. Even when there is some (implicit and temporary) exchange rate level target, interventions aim at the inflation rate, not the other way around.

The evidence is clear that Latin American countries moved from crawling and hard pegs to soft pegs or managed floating regimes, on the assumption that they are consistent with monetary policy and better able to cope with moderate balance of payment crises caused by the growth with foreign savings policy, loss of credit, and the consequent decision of foreign creditors to suspend debt roll-over. Crawling pegs and hard pegs were abandoned for managed floating, consistently with a relatively autonomous

monetary policy in a world of high capital mobility, practically rejecting either full hard pegs or full floating. The advocates of passive monetary policies argue for "hard pegs", whereas those who are skeptical about the capability of the real side of Latin American economies to appropriately adjust to shocks tend to recommend (re)active monetary policies and passive (flexible) exchange rates, but in fact these countries are following a middle of the road alternative.

Such a middle of the road alternative is a practical rejection of the “triangle of impossibility”, or the bipolar view. In fact, countries do not work on the sharp angles of the triangle. Instead, they rely on some combination of control of capital flows, monetary and exchange rate policy. This requires monetary authorities to play an active role in pushing ahead monetary and exchange rate policies. Critiques of this middle of the road alternative assume lack of monetary authority credibility to manage the exchange rate. This is just a prejudiced view. Balance of payment crises in Latin America were not a consequence of inability to manage the exchange rate, but of the recommended policy of growth with foreign savings (or current account deficits), or of using a nominal anchor to control inflation, or from “exchange rate populism”.[4] One must not forget, on the other hand, that this credibility will only be sustained once stabilization gains have been settled, and if the latter are followed by good performance in other macroeconomic criteria as well (such as growth, high employment, low default risks etc.).

Frankel (1999) draws attention to various possible hypotheses of what tends to occur over time with respect to income-correlation as cross-border trade rises. The only unambiguous conclusion is that there is "no single regime right for all countries or at all times". In this respect, the difficulties exiting hard peg strategies should be taken into account. The Argentinean experience on this matter was quite remarkable.

As concerns the current exchange-rate regimes in Latin American economies, at this point we propose the following intuitive observations: (i) there was a trend to switch from fixed to floating regimes, but there is nothing to allow any expectation that the

[4] For a critique of the growth with foreign savings policy, see Bresser-Pereira and Nakano (2002), Bresser-Pereira (2004), and Bresser-Pereira and Gala (2007); for the singling out of this policy as main cause of the balance of payment crisis of the 1990s, see Gonzales (2007).

present managed-float configuration will remain as such in the future, or converge towards either one or the other ends of the continuum; (ii) current levels of foreign trade among the Southern neighbors are relatively large – and sectorally important enough to support currency pegging among them. At the same time, those levels are perhaps high enough to undermine national currency pegs to outside regions; and (iii) notably in the case of the Mercosur countries, OCA trade-based criteria adapted to Optimum Exchange-rate Regimes disregard some relevant financial dimensions of macroeconomic interdependence. Contagion and other neighborhood financial effects could turn their interdependence into a more significant fact than it may appear from a trade perspective. These are the points to be discussed next.

Table 2 shows simple and important trade statistics for Argentina and Brazil. One of several criteria for ascertaining the feasibility of a common currency area relates to trade diversification, dissimilarity of commodity composition of production, and trade baskets. This is a fair concern, since monetary arrangements could be weakened on behalf of domestic monetary policy and even more flexible exchange rates as a means to face asymmetrical shocks in the region.

Table 2 also shows that, on the one hand, Argentina is very well integrated with the region and Brazil shows a ample trade with the rest of the world, although all Latin-American countries have an expressive share of Brazilian trade. On the other hand, Brazil-Argentina trades are significantly synchronized with commodity prices (primary products), since the share of primary goods in total exports reach levels as high as almost 31% in Brazil and 44% in Argentina. However, according to OECD (2008), using Herfindahl-Hirschman Index (HHI) to assess trade concentration in Latin American economies, Brazil and Argentina show relatively low concentration levels in terms of both destination and product. The HHIs by products are 0.033 and 0.0493 for Brazil and Argentina, respectively[5].

[5] The HHI by products averages 0.25 for the Latin American economies; Venezuela shows he highest HHI (0,776). HHI is a measure of concentration that takes into account the weighted average of each product and country. HHI ranges between zero and one; the higher the index, the more exports are concentrated in few products.

Therefore, even though the two economies show general differences in terms of international trade, they also present similarities in their trade patterns, implying relatively similar synchronism with the international business cycles. Their responses are just barely different during international shocks[6].

Table 2. Argentina and Brazil: Trade Statistics (2007)

	Brazil		Argentina	
	Exports	Imports	Exports	Imports
in US$	197,942	173,197	55,780	44,707
Partners (percent)				
Euro Area	18.62	20.87	15.92	14.41
United States	17.98	16.26	8.69	12.58
Other LACs	15.3	8.36	22.16	8.32
Argentina	8.52	8.82	---	---
Brazil	---	---	17.3	34.4
China	6.1	8.75	7.53	9.14
Japan	2.83	4.2	0.87	2.73
Others	30.6	32.7	27.5	18.4
Total	100	100	100	100
Trade Specialization				
Primary Products	30.6	19.04	43.97	6.02
Natural Resources Intensive Manufactures	23.59	18.5	25.12	15.2
Low Technology Intensive Manufactures	9.15	7.12	5.77	10.97
Medium Technology Intensive Manufactures	26.44	32.84	19.4	46.1
High Technology Intensive Manufactures	7.66	21.98	2.37	19.7
Others	2.56	0.52	3.37	2.01
Total	100	100	100	100

Note: Euro Area and Other LACs (Latin America and Caribbean Economies) include only countries with at least 0.5% share.
Source: IMF. *Directions of Trade Statistics on line* and ECLAC.

To summarize, over the last decade the major Latin American economies have moved away from fixed exchange rate regimes toward floating rates. Opposite solutions have also been adopted, such as hard pegging to US Dollar in Ecuador and El Salvador. However, allowing exchange rates to float was the way important LA economies found

[6] During the financial crisis of 2008, it is undeniable that even the Euro Zone's economy is strongly synchronized with the turmoil in the United States. It is not adoption of the Euro that intensified this, but rather more financial and trade globalization.

to deal with financial and currency crises. Since 2003, most important LA economies have converged to the same *de facto* flexible exchange rate arrangement and it is fair to ask if a common currency could work sooner for some of them. Some stylized facts can be considered to evaluate the feasibility of adopting a common currency in the Mercosur, and particularly between Brazil and Argentina. It is important to emphasize that exchange rate coordination in line with fluctuation bands should be considered as a first step in this direction.

The facts are as follows. First, as the largest Mercosur economies have experienced floating exchange rate regimes, they have allowed exchange rate to float much more broadly than predicted. However, fluctuations do not delivery stability. In nominal terms, by 2008 the Argentina Peso had depreciated more than 100% relative to the currency board period (1991-2001), while the Brazilian Real is over-appreciated by more than 25% relative to the average of the full floating regime period (1999-2008), as seen in graph 1. In the aftermath of the currency crises, even though the parities are somewhat out of equilibrium, it would be fair to state that short-term monetary agreements between these two countries would help them reach exchange rate stability much faster. This is particularly true for Brazil, since, the Argentinean exchange rate has been stable in recent years.

Actually, observing the real and effective exchange rates in both economies it's fair to say that the parities are closer than might appear at a first glance. The Brazilian Real has depreciated because of the recent international financial crisis, showing that it was in fact over-appreciated. On the other hand, the Argentinean Peso would be more appreciated than figure 1 indicates if one were to consider private inflation surveys instead of the official index.

Second, according to the selected macroeconomic indicators for selected Mersocur economies (table 4), far more similarities than differences exist. Inflation rates are the lowest ever seen; they are all relatively open economies, likely more convergent than European economies in the early stages of integration; the level of dollarization (deposits dollarization) in Argentina is no longer high. They are still marked by significant external vulnerability ratios. Exchange rates coordination could help deal with such vulnerability.

Third, graph 2 points out a very interesting role played by exchange rate stability. The intensity of trade between Brazil and Argentina only increased steadily when the exchange rate was relatively stable (1992-1998 and 2003-2007); otherwise, trade followed an unpredictable path. We are aware of the short duration and recent history of macroeconomic stabilization.

It is conventional to associate an independent common currency with a suitable degree of economic integration so that "an independent common currency does not seem appropriate for Latin America because the necessary degree of political and economic integration is absent" (Berg et al., 2003:27). As we see it, a challenge for Mercosur region would be to coordinate their exchange rates in a kind of widely discussed and regularly evaluated fluctuation band. This would be a step subsequent to the adoption of floating regimes and would enhance trade and financial integration in the region. Moreover, this political decision would help economies stabilize their local currencies.

How integrated are the Mercosur economies? Would increased trade and financial integration advance toward common currency? Would a peg to the US Dollar always mitigate cases of sudden exchange rate regime change (currency crises), exchange rate misalignment, high stock market volatility and financial turmoil?

Other experiences, such as the European Union's, testify to the difficulties in achieving currency agreement as described by Neal (2007), who regards the European Economic Community's (EEC) effort to achieve economic and monetary union as ambitious. In 1970, following the Werner Report, the EEC proposed to achieve the common currency by 1980 in three stages. The first stage would comprise coordination of macroeconomic policies in order to narrow exchange rate fluctuations among member currencies to within a smaller range than authorized by the IMF (then still ± 1%).

Regardless of the controversy as to whether a country should allow its currency to float, and how intensive should be such fluctuation, which exchange rate regime is better, or even when one economy should waive its own currency to adopt another's, the cornerstone of this work lies in the fact that developing economies need to control their exchange rates. According to Bresser-Pereira (2009, chap.4) developing countries show a tendency to exchange rate over-valuation as a result of structural causes, principally

the Dutch disease and the appeal that the higher rates of profit and of interest in these countries have for foreign capitals. Markets do not make national currencies fluctuate around an equilibrium point as economic theory assumes; instead, they gradually appreciate until they cause balance of payment crisis, followed by a sudden stop and a sharp depreciation. Thus, regional agreements aside, developing countries are supposed to neutralize this tendency in order to avoid cyclical financial crises associated either with the growth with foreign savings policy or with exchange rate populism. For countries that aim to integrate, the adoption of coordinated macroeconomic policies and an exchange rate band with a single currency in mind helps the participants keep their currencies competitive because, with one currency tied to another, policymakers will be able to do their job more effectively: overvaluation will only happen if the policymakers in all the involved countries accept it.

According to this approach, the central problems involved with the exchange rate are not choosing a regime – since the "float or fix" alternative is false –, or choosing between exchange rate volatility and exchange rate "misalignment", but a specific form of volatility and misalignment: overvaluation leading to balance of payment crises. Recurring financial crises in these countries do not derive principally of fiscal problems and the twin deficits hypothesis but of the inability of many countries to neutralize the tendency to exchange rate over-valuation. Bresser, Gonzales and Lucinda (2009) demonstrated this claim by studying the financial crises of middle income countries in the 1990s and early 2000s.

IV – EXCHANGE RATE COORDINATION IN PRACTICE IN MERCOSUR

In the Mercosur the endogeneity issue and also the tendency towards exchange rate overvaluation set serious limitations to the prerequisites of optimum currency area conventional wisdom. Theoretical and practical shortcomings exist. On the other hand, both should be considered if the Mercosur countries, principally Brazil and Argentina, decide to engage in building a common currency area. Let us suppose that this decision is a way to overcome structural causes of exchange rate overvaluation tendency in the Mercosur insofar as the "trade-first" sequencing no longer works.

Let's assume four important elements from a practical standpoint. First, that there is an *initial level* of the exchange rate in each economy, Argentina and Brazil, which could be considered reasonable. This is a difficult decision because the countries will have to consider (1) the relative ratio between the two currencies and (2) the initial level relative to a basket of other currencies. In this second decision, they should consider the Dutch disease that moderately but effectively plagues these countries. As an illustration, let's assume that these two decisions for the two countries led to an initial 3.5 Argentinean Peso per American Dollar and 2.5 Brazilian Real per American Dollar. Second, that there is a *band of fluctuation* of about ± 2.5 percentage points, with those initial levels as the center of the band. These two devices are quite similar to the European snake. For the sake of simplicity, we assume only two economies: Argentina and Brazil[7]. Some current statistics data may help us in our simulation. In 1999, Brazil implemented a floating exchange rate regime in the aftermath of the currency crises, while Argentina was still experiencing a pegged regime that it only dropped in 2001. From March 1999 to July 2007, just before the international financial crises, Brazilian Real appreciated over 65 percent in terms of the Argentinean Peso; the monthly nominal appreciation was about 0.92 percent with ± 5.9 percent on standard[8]. This is rather high appreciation for such a short period. However, from August 2007 to February 2009, the Brazilian Real devaluated about 54 percent in nominal terms. This means that most of the appreciation has been faded away recently. It seems that the *relation* between the two currencies has reached a reasonable level.

Let us use a very simple illustration to depict some form of exchange rate coordination with Brazil and Argentina. First, a *band of fluctuation* could be established at the current parity, according to the *ratio* of 1 to 1.5; that is, with the Brazilian Real appreciated against Argentinean Peso. As the annual inflation rate differential is about 5 percent and assuming purchasing power parity to keep the real exchange rate constant, in few years we could reach an exchange rate parity similar to the average of the 1999-

[7] As the monetary agreement develops, other regional economies could adopt similar exchange rate strategies.

[8] The basic statistics shown here are available upon request.

2003 period. In this simple exercise there is no productivity growth differential between the two economies.

The above makes two simple assumptions: 1. annual inflation rates are 5% and 10% in Brazil and Argentina, respectively; and 2. no dynamic association exists between changes in exchange rate and inflation over time, so that an appreciating Peso could help reduce inflation rates in Argentina. Most likely, the depreciation of the Real against the Peso would have irrelevant effects for the Brazilian inflation rate.

We now assume:

1. annual inflation rates of 5% and 10% in Brazil and Argentina, respectively;

2. disregarding periods of turmoil in both economies, such as data from November 2001 to February 2003, so that the average nominal appreciation drops from 0.92% per month to 0.15% per month, and the standard deviation drops from 5.9% to 2.5% (figure 2);

3. smooth depreciation of the Real against the Peso;

4. using the ± one standard deviation of the no-turmoil data sample (i. e., 2.5%);

5. medium-term target exchange rates within the *band of fluctuation*;

6. the same productivity growth in the two economies;

7. commitment to a common fiscal and monetary agenda; and

8. commitment to common trade agreements.

With these assumptions, the two economies agree on a *band of fluctuation* in order to balance exchange rate parity distortion and achieve equilibrium in a few years. To be coordinated, the band of fluctuation could be similar to the variability of the exchange rate thus far, that is, ± 1 standard deviation (2.5 per cent) around the target. Each target could remain in force for about a couple of years, so as to announce only a few targets. This amount to a very flexible alternative means of dealing with exchange rate instability in the region, and an intermediate situation could be adopted.

This basic exercise can fairly show the suitability of adopting common exchange rate policies for the two largest Mercosur economies. There are, indeed, two different fronts for such procedures. First, coordinate exchange rates according to a *band of fluctuation*, using the current exchange rate parities and the center of the band. Second, a medium-term agreement could be adopted in terms of a (soft) landing of the Real against the Peso according to moving target zones and ending in either a fixed target zone or a common currency.

Similar to the experience of European snake[9] we are proposing an ambitious effort to achieve monetary and exchange rate stability in the Mercosur as a response not only to exchange rate misalignment and volatility, but also, and mainly, to structural problems like the region's exchange rate over-valuation tendency. Stages of implementation are to be expected similarly to the European Monetary System's and, more importantly, so are strategies to avoid such problems as an appreciation *floor*. The stability of the exchange rate in the region and the neutralization of the Dutch Disease will encourage the member states to press forward with shared plans and macroeconomic policies.

V - FINAL REMARKS

For more than half a century Latin American economies have been aiming at economic integration, but Mercosur has been the only case of success so far. Is success was essentially due to the fact that it involved the two largest Mercosur economies, Brazil and Argentina, which already had a sizable trade between them and similar levels of economic growth. After the agreement, trade substantially increased between the two nations. Yet, the limits to economic integration are narrow if the integrated countries lack a common currency, or, to begin with, a managed exchange rate band. Conventional economic literature on the subject rejects this possibility on the grounds that Latin American countries lack enough integration, similarity, and macroeconomic coordination. It uses the troubled experience of the region in the last thirty years to reach to such conclusion. By doing so, the literature fails to realize, first, that in the

[9] According to Neal (2007:97), the snake was a "response to the acrimony generated over the realignment of the French and the West German currencies, which had been carried out bilaterally in 1969, the EEC launched an ambitious effort to achieve economic and monetary union".

1980s the region – and particularly the two major Mercosur countries that were the object of our paper – experienced a major debt crisis that develop into economic stagnation and high inflation; second, that in the 1990s they were the subject of conventional orthodoxy's experiments with exchange rate regimes (currency boards, exchange rate anchors); third, that they adopted the recommended growth with foreign savings policy that, together with the exchange rage regimes, caused over-appreciation of their respective currencies and major balance of payment crises.

Yet, from the analysis developed here, one should not conclude that the first step to be adopted by the Mercosur countries – a band of exchange rate fluctuation – is an easy job. It is not. First, Brazil and Argentina in particular must come to an agreement concerning the initial ratio between their real exchange rates. Second, a higher degree of macroeconomic policy coordination will be clearly required. Contrary, however, to what the conventional literature says on this matter, there is no reason to believe that the two requirements cannot be met. This literature bases its assessment on the two countries' recent past experience – one that was troubled by a major debt crisis followed by the adoption of misguided exchange rate policies. It is also based on a preconception that the governing capacity of Mercosur countries paralyzes economic integration – an integration that will only materialize when the countries involved reach a solid agreement on their real exchange rates.

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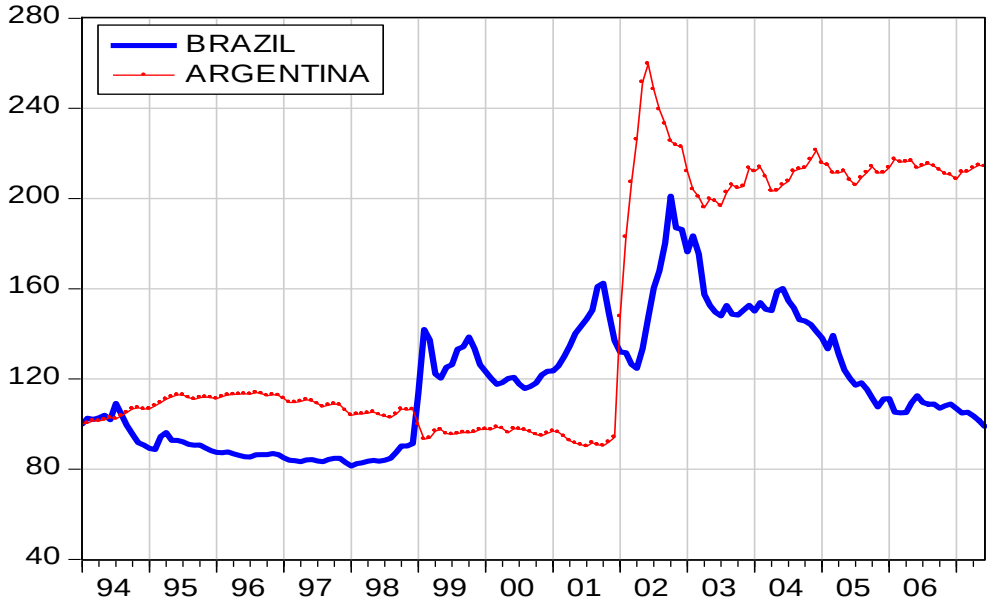
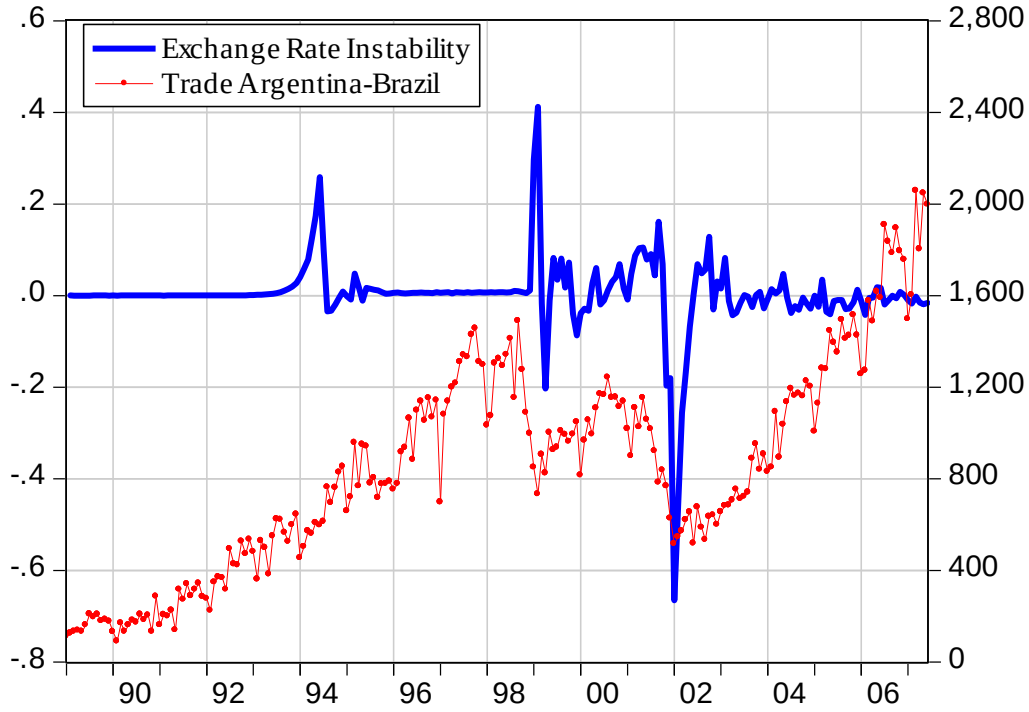
Graph 1. Real Effective Exchange Rate in Argentina and Brazil (1994-2007) - Jan 1994 = 100



Source: BIS

Graph 2. Trade Ratio and Exchange Rate Instability (1989:01-2007:06)



Source: Funcex and Ipea. Author's calculations.
Notes: Trade Argentina-Brazil = Total Export and Import between Argentina and Brazil (right scale); Exchange Rate Instability = variation (percent) of exchange rate Brazilian Real per Argentinean Peso (left scale).

Table 3. Argentina and Brazil: Selected Macroeconomic Indicators (1997-2007)

Country/Indicators	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007F
Inflation Rates											
Argentina	0.3	0.7	-1.8	-0.7	-1.5	41	3.7	6.1	12.3	10	9.5
Brazil	5.2	1.7	8.9	6	7.7	12.5	9.3	7.6	5.7	4.3	4
Trade Openness											
Argentina	23.3	23.3	21.3	22.4	21.7	40.5	39.2	43.4	43.7	46.4	46.9
Brazil	20.4	20.9	27.5	27.3	33.1	34.7	34.7	34.9	32	36.6	37.7
Dollarization Ratio											
Argentina	57.3	58.4	61.1	66.6	72.5	2.9	6.1	10.3	12.8	6,4	4,4
Brazil	0	0	0	0	0	0	0	0	0	0	0
Dollarization Vulnerability Indicator											
Argentina	92.2	101.8	112.1	122.6	213.2	4.4	10.4	16	15.6	NA	NA
Brazil	0	0	0	0	0	0	0	0	0	NA	NA
External Vulnerability Indicator											
Argentina	189.5	185	171.8	180.4	260	333.9	347.2	217.4	192.4	103.8	62.3
Brazil	117.5	105.3	206.2	182.1	164.9	144.5	117.2	104.6	144.4	73	53.9
Current Account Balance (US$ Bil.)											
Argentina	-12.13	-14.48	-11.95	-8.99	-3.29	8.69	8.04	3.3	5.44	4.32	2.91
Brazil	-30.45	-33.42	-25.33	-24.22	-23.21	-7.64	4.18	11.65	14.19	8	4

Source: Moody's Dataset.

Notes: (1) Inflation Rates = Consumer Price Index % Dec-Dec; (2) Trade Openness = Sum of Exports and Imports of Goods and Services/GDP; (3) Dollarization Ratio = Total Foreign Currency Deposits in the Domestic Banking System/Total Deposits in the Domestic Banking System; (4) Dollarization Vulnerability Indicator = Total Foreign Currency Deposits in the Domestic Banking System/(Official Foreign Exchange Reserves + Foreign Assets of Domestic Banks); and (5) External Vulnerability Indicator = (Short-Term External Debt + Currently Maturing Long-Term External Debt + Total Nonresident Deposits Over One Year)/Official Foreign Exchange Reserves.