Regional Integration: Reflections on the Mercosur Experiment

Maria Luiza Falcão Silva, Joaquim Pinto de Andrade*
Departamento de Economia, Universidade de Brasília

Thomas S. Torrance
Department of Economics, Heriot-Watt University

Abstract

The emergence of new regional blocs will certainly greatly affect developing countries' future patterns of growth and development. Among the more important events of the 1990s, in this context, has been the attempt of Latin American countries to strength relations among themselves. In short, what is happening today is that many developing countries are seeking "national salvation" by positioning themselves as members of regional economic blocs which, it is hoped, will be able to exercise more international influence than the separate members could exercise individually. However, problems related to the process of economic and monetary integration are magnified when countries are, in addition, pursuing disinflationary stabilisation programmes, against a background of regional integration and world globalisation. This paper examines alternative scenarios for MERCOSUR regional integration process dealing with the main problems that the region may face when selecting economic policy targets and instruments.

1. Introduction

In the 1990s the international order underwent a transformation that would have been unimaginable even a few years earlier. With the collapse of the Soviet Union, the dissolution of the Warsaw Pact and the termination of the threat posed to the planet by the US-USSR nuclear balance, a new world scene has established itself. In economic terms, a world-wide globalised trade and financial market has appeared, dominated by the United States, the European Union (EU) and Japan, but with China and the new Russian Federation waiting in the wings as important players and power-brokers of the near future. All these tumultuous changes have proved deeply unsettling to many countries, who had been accustomed to operating within the previous East-West polarised world. In particular, many developing countries, frightened of losing identity and effective sovereignty, have sought to carve out a clearly defined role for themselves by becoming members of newly formed regional economic blocs. "Stimuli from global markets causes the formation of regional markets, and the eventual success or failure of these markets" (Thorstensen and Lozardo, 1995, p.3). In short, what is happening today is that many developing countries are seeking "national salvation" by positioning themselves as members of regional economic blocs which, it is hoped, will be able to exercise more international influence than the separate members could exercise individually. These economic blocs involve trading agreements, and, in a number of cases, involve ambitious plans for full economic and monetary union. Those developing countries that see their own

future as an integral part of a thriving regional bloc, are also hoping to enjoy the many economic benefits that seem to have accompanied the creation of economic blocs involving developed industrialised countries.

The emergence of new regional blocs, following the example of the European Union, will certainly greatly affect developing countries' future patterns of growth and development. Among the more important events of the 1990s, in this context, has been the attempt of Latin American countries, aware of the new international economic situation, to strength relations among themselves. The main agreement, signed in 1991, involving Argentina, Brazil, Uruguay and Paraguay, created the Common Market of the South (Mercado Comun del Sur, or MERCOSUR). The final outcome is intended to be, as with the EU, the formation of a full economic union, including monetary union.

In the case of Latin America the economic integration process has the unusual aspect that the members of MERCOSUR have accepted, as far as monetary policy is concerned, that their currencies, or their common currency, are or is likely to be linked to an outside currency, the US dollar, in a fixed-rate or a target-zone type arrangement, for instance. If this occurs as expected, the greatly diminished role of national monetary policies immediately raises the question of the appropriate role for national fiscal policies within the MERCOSUR union. This question is of special significance because MERCOSUR consists of countries which to date have a record of chronic budget deficits. And the problem of these deficits remains to be solved, and may involve some MERCOSUR members in painful and unpopular adjustments.

De Grauwe (1992) has suggested how complicated these processes of economic integration are, and he describes the problems involved in the transition to monetary unification and the workings of incomplete monetary unions inspired by the example of the European Monetary System (EMS) case.This new political momentum requires co-operation among nations. The theoretical case for international co-ordination of economic policy is now well established. A world in which domestic policies have significant spill-over effects on other economies, where economies are to different degrees sensitive to external shocks, and where governments typically have more policy targets than instruments, co-operation is required to reach an efficient outcome. A comparison of outcomes under non co-operative and co-operative policy-making, developed by Hallet (1989), working with a sample of seven models, suggests that they are more uniform across models in the co-operative

case. However, he points out that:

> the major criticism of recent work aimed at designing co-operative policies for the industrialised economies, and at identifying the sources and extent of those gains, has been that the results are thought to be highly model dependent. [Hallet,1989]

This is a major obstacle since policymakers are typically uncertain about the policy responses of the economies which they are attempting to steer: if the actual economic structure is imperfectly understood, the models used will be subject to a large degree of uncertainty and to errors. These potential errors impose substantial risks on the policy-making process. "Feldstein (among others) has argued that countries should not co-ordinate their policies rather than run the risk that model errors will turn all the co-ordination gains into co-ordination losses." As we can infer, the co-ordination of macroeconomic policies deserves a more profound analysis than has been offered by modern theorists.

The problems related to the process of economic and monetary integration are magnified when countries are, in addition, pursuing disinflationary stabilisation programmes, against a background of regional integration and world globalisation. It is inevitable that these countries will soon have to face a number of key questions on competition policies, foreign exchange-rate policies, labour and capital market organisations and controls, and on a number of other critical issues that the integration process will bring to the fore. Policymakers cannot neglect major transnational asymmetries, and the need for co-ordination will rapidly lead to discussion revolving around the considerable differences among preferences and technology between members. The precise economic role of formally sovereign national states during the period of transition, and immediately thereafter, is still not at all clear.

This paper concentrates on examining the Latin American regional integration experience, and specifically the MERCOSUR experiment. It aims at focusing on central macroeconomic co-ordination topics and to address related conjectured problems:

1. Fiscal harmonisation: the need for fiscal co-ordination;
2. The macroeconomic limits to economic integration;
3. Exchange-rate regimes versus monetary arrangements.

The period that we empirically examine comprises the years between 1990 – 1997.

Furthermore, the exchange-rate regimes within MERCOSUR are evaluated from the prospective of alternative "thought experiment" scenarios based on a variety

of different macroeconomic shocks. In this case, no specific period is considered.

2. Latin American Regional Integration Experience: Macroeconomic Co-ordination Issues

Given Latin America's previous integration efforts, and the small degree of economic interdependence among the countries in the region, analysts, in the second half of 1987, seemed very pessimistic about the success of the integration experiment. Regardless of this initial scepticism, the growth of exchange among the countries that comprise MERCOSUR and the rapid progress of the regional integration process surprised Latin American theorists as well as policymakers .

Fiscal harmonisation: the need for fiscal co-ordination

During the 1980s the world economy was subject to large and unsynchronised changes in fiscal policies, high and volatile real interest rates, large fluctuations in real exchange rates, and significant variations in private-sector spending. As Frenkel and Razin (1992) point out, during this period national fiscal policies have exhibited large divergences. When monetary autonomy is relinquished within a monetary union, the fiscal stance then acquires fundamental importance.

One conventional argument favouring fiscal co-ordination among countries engaging in ambitious schemes of economic integration has to do with international externalities. In fact, market and political interdependence among countries is one expected result from growing economic integration. Indeed, by tightening the constraints of each national economy, integration puts implicit and explicit bounds on ultimately irresponsible fiscal behaviour of any one of the partners. This is why it is generally assumed that economic integration restricts the scope for permanent and/or large public deficits. The theoretical argument here has to do with the international spill-over of domestic fiscal policies. Since the latter affects other economies' activity levels it follows that fiscal policy should be co-ordinated in order to internalise the corresponding third party effects. A second conventional reason to seek fiscal co-ordination is to limit tax/subsidy competition among possibly non co-operative governments that may try to lure corporations from neighbouring jurisdictions by lowering effective tax rates or by increasing the supply of effective subsidies.

In the context of MERCOSUR there is plenty of room for effective tax harmonisation. Both, in the area of domestic consumption taxes (mainly VAT and a few excise taxes), and also of income taxes. The study of national legislation is still under way, and at this point in time no progress has been made in implementing steps

to avoid price distortions due to domestic indirect taxes that interfere with intra-regional trade. The experience of the European Union teaches us the important lesson that this process can take many years and that, politically, it is not an easy business to re-structure taxes that affect historic patterns of relative prices.

The elimination of indirect taxes on primary and semi-manufactured products will improve their competitiveness and will affect one third of the main tradable products. Instead of changing the exchange rate there would be a change in the internal-tax system. According to several analysts' estimations the elimination of these taxes would correspond to a devaluation of 7 per cent approximately.

Macroeconomic limits to integration

Part of the procedures for economic integration in MERCOSUR is the development of a common target-band foreign exchange regime among the members. This commitment could not be fulfilled, however, due to disagreements between Argentina and Brazil about the nature of the band limits. The former has supported nominal bounds while the latter has insisted on real bounds. This dispute since the early 1990s reveals the importance of macroeconomic convergence for economic integration.

Two propositions dealing with the sustainability of the integration process can be examined:

- A weak proposition: There should be a minimum level of macroeconomic convergence.
- A strong proposition: There should be stability of prices and equilibrium in government budgets.

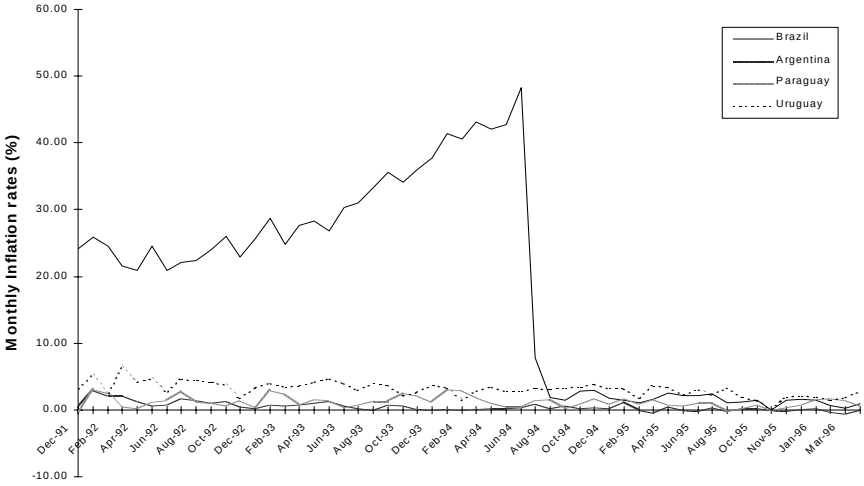
As a matter of fact some macroeconomic convergence seems to be necessary for the stabilisation of the real exchange rate. It is doubtful whether the strong proposition of price stability and budget equilibrium will ever be met as a prior condition to integration. It is also controversial whether such a step should be even a necessary condition to foster integration. What should be the optimal degree of fiscal discretion among (country) members of an economic area is a fundamental question. Misalignments of real exchange rates, due mainly to inflation differences, especially when nominal exchange rates are pegged, may produce severe and damaging effects on trade. Exchange-rate volatility is also related to exchange-rate misalignments. Also, persistent deviation from long-term equilibrium parities affects the allocation between tradables and nontradables. On the other hand, persistent disequilibrium in

trade balance may induce serious uncertainty and enhance speculative behaviour.

The evidence on current macroeconomic stabilisation attempts

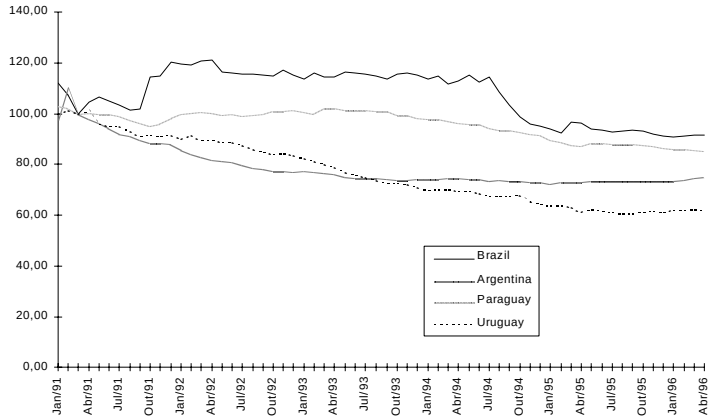
Looking at the data on inflation, real exchange rates and fiscal deficits it becomes evident that some progress has been made as far as the convergence of some of these economic variables (inflation rates and real exchange rates) are concerned.

Figure 1 - MERCOSUR: Inflation Rates of Member Countries



Source: Data base of the Central Banks of the different member countries.

FIGURE 2 - MERCOSUR: Real Exchange- Rates of Member Countries *



(1991=100)

*Deflated by consumer price indices of each country

Source: Data base of the Central Banks of the different member countries

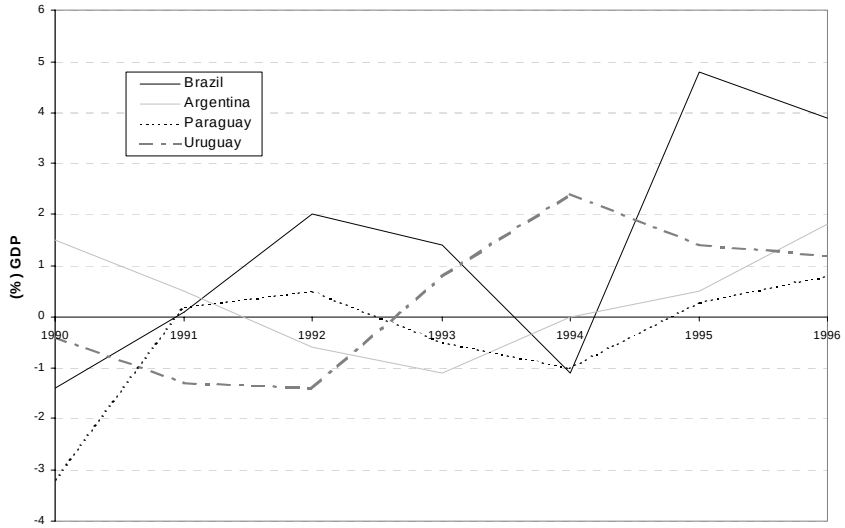


FIGURE 3 - MERCOSUR: Public Sector Borrowing Requirements

Sources:BID - Progresso Sócio- Econômico na AL - ed. 1990 e 1995
FMI - *International Financial Statistics - ed. Yearbook- 1993*, nov/93, may/94, jun/94 and aug/95.

In the mid-1990s, the performance of all member countries has improved, with the exception of Brazil that has only had better results since the implementation of the *Real Plan* in 1994. Figures 1, 2 and 3 displayed above illustrate this conclusion.

Observing Figures 1,2 and 3, and drawing on the works of several specialists it is interesting to distinguish some characteristics of the stabilisation processes implemented within MERCOSUR's member countries:

The main features:

1. Significant drop of inflation rates
2. Use of nominal anchors,
3. Overvaluation of the exchange rate with repercussions upon the countries' trade balances,
4. Weak fiscal adjustment,
5. Large inflows of foreign capital.

Basic Macroeconomic Scenario:

1. Economic stabilisation without fiscal adjustment,
2. Foreign capital inflows,
3. Monetary policy: currency- board type of arrangement in Argentina, and moving-target-zone type in Brazil.

1+2+3 defines the "fundamentals" for the exchange-rate behaviour.

The main implications of these stabilisation approaches can be presented as follows:

1. growing indebtedness $\rightarrow$ effects on the interest rate, growth and employment;
2. dependence on foreign capital inflows $\rightarrow$ divergence between domestic and foreign interest rates, and increasing vulnerability;
3. instability effect $\rightarrow$ speculative attack;
4. contagious effects.

Summarising, it should be noted that stabilisation (low inflation rates) was attained basically with nominal anchors, leading in all cases to overvaluation of the exchange rates. Continuing disequilibria in the trade and current account balances were made possible by large inflows of foreign capital. The data confirms the presumption that the stabilisation experience of these countries still lacks fiscal adjustment, especially in the Brazilian case (Figure 3).

The implications of individual exchange-rate-based stabilisation programmes (ERBSP) have been the growing levels of external and internal debts, reinforced by high interest rates.

On the other hand, the weak fiscal adjustments and current account deficits make these economies extremely vulnerable to speculative attacks .

3. The empirical evidence of recent monetary policy in Argentina and Brazil

Argentina and Brazil are the main countries to be examined when dealing with the integration process within MERCOSUR. This process increases the macroeconomic interdependence between the two countries. It has to be recognised that policy co-ordination is not only desirable in itself but is a requirement for the sustainability of the integration effort. And regardless of the remarkable improvement in commercial relations between the two countries, it is necessary that they continue to pursue policies in the direction of a better co-ordination of their monetary and exchange-rate arrangements. The analysis below suggests that there is much room for improvement in minimising the uncertainties related to the interdependence between these two countries.

3.1. Argentina's recent experience with a quasi-currency-board arrangement

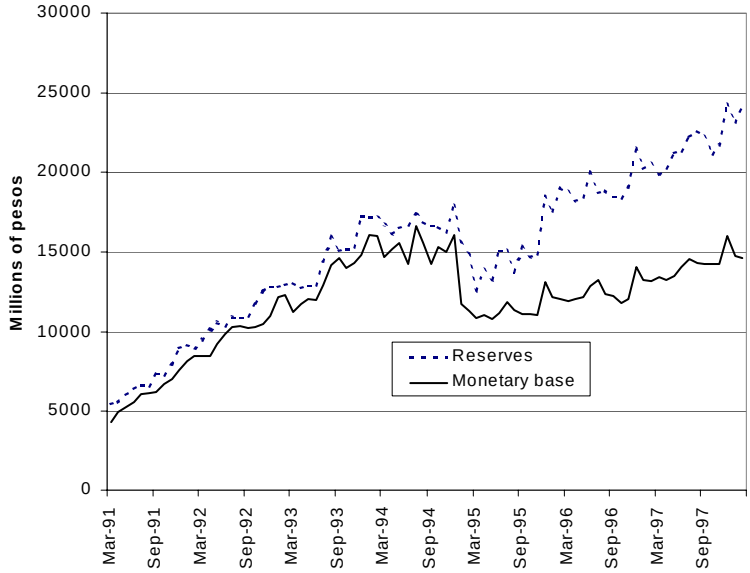
On 1st April 1991, Argentina's Congress approved a convertibility law (Law number 23.929), institutionalising a quasi-currency-board rule for monetary base creation. This law embodied the basic aspects of a currency board:

- it forced the central bank to issue domestic currency (the peso) almost exclusively against the dollar value of foreign reserves ;
- the official rate established between the peso and the US dollar, the anchor currency, was the fixed parity of one-to-one;
- the Central Bank of Argentina committed itself to guarantee with its foreign exchange reserves the convertibility of "peso notes and coins" into the anchor currency at the official rate.

The departure from the classical-currency-board arrangement, that qualifies Argentina experiment as a quasi-currency board, can be depicted in Figure 4. The Figure shows the evolution of the monetary base and foreign reserves in Argentina between March 1991 and February 1998.

Figure 4 - Argentina: Monetary Base and Foreign Reserves

March 1991 - February 1998



(In millions of pesos)

Source: Banco Central de la República Argentina, *Bulletins*, several issues.

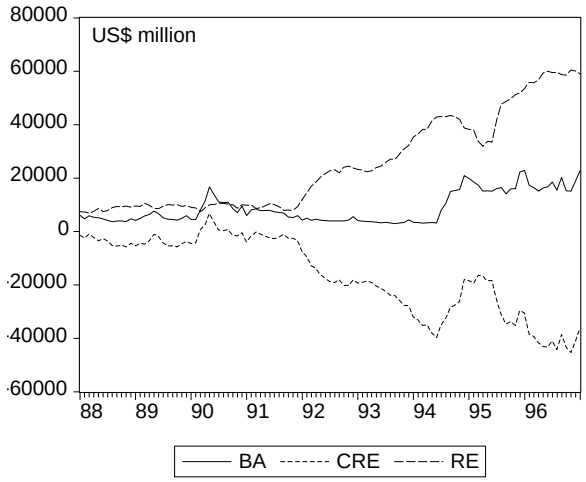
During several periods the amount of foreign reserves approached the amount of the monetary base such that the ratio of the monetary base (MB) to the foreign reserves amount (FR) was very close to one, and Argentina's monetary rule for money creation approached a pure, classical, currency board rule. However, the fact that the two lines cross do not overlap since April 1991 (Figure 4), suggests that the

Argentina's convertibility law only resembles a pure (orthodox) currency board.

3.2.2 Brazil's Sterilisation Policy

The *Real Plan* was officially introduced on 1st July 1994 with the The main goal of the recent stabilisation programme has been the achievement of price stability. The principal element of the *Real Plan* was the exchange-rate nominal anchor. An upper limit to the exchange rate of one-to-one was announced and the lower limit, regardless of no explicit written commitment, was perceived by the market as lying around R$ .85 per unit of dollar. However, initially the authorities permitted the exchange rate to float below the upper limit. This was identical to the establishment of an upper limit, or of a regime having just a one side band. With the exchange rate appreciation (around September of 1994) that followed the plan and the increase in trade deficits, the economic agents started to face monetary authority's intervention on the foreign-exchange market. In October the Central Bank informally indicated that it was willing to buy dollars at a minimum rate of R$.82/US$, and sell at a maximum rate of R$.86/US$, characterising the adoption of an informal system of target zones that evolved to a formal regime of exchange-rate bands in March of 1995. From that period until January 1999, from the exchange rate started to float, the Central Bank announced, formally, the band limits, realigning from time to time – a system that resembled moving target zones. Intra-band interventions did occur, as well, regardless of not being officially announced, leading analysts to associate that system with some sort of crawling peg. What is clear is that in the Brazilian case, the monetary base, did not follow the foreign reserves pattern during the period being examined (Figures 5). In particular, it should be noticed that the monetary base was kept almost constant during the critical period between January 1995 and April 1995. Analysing the conditioning components of the monetary base it is noteworthy that open market operations tried to offset the negative pressure of the decline in the foreign reserves (Andrade *et al.*). On the other hand, during the improvement of the foreign reserves position, in the second half of 1996, the monetary base was kept more or less constant. The insulation of the monetary base from the movements of the foreign reserves, depicted in Figure 5, is remarkable. However, what is noticeable is the absence of co-movement between the two series confirming the *discretionary* character of the Brazilian monetary policy. Examining the evolution of domestic credit (CRE) and foreign reserves (RE) reveals clearly the nature of the open market policy towards sterilisation (Figure 5).

Figure 5 - Brazil: Monetary Base, Domestic Credit and Foreign Reserves



(1988-1996)

Source: Authors' elaboration based on data published in *Boletim do Banco*

Central do Brasil, several issues.

3.3 Some Examples of Regional Vulnerability to External Shocks and Contagious Effects

3.3.1 Argentina's Case

The Mexican crisis of 1994

When the panic spread throughout Latin America in the aftermath of Mexico's currency crisis of the 20th December 1994, the quasi-currency board was not sufficient to insulate Argentina against speculative attacks on its currency. The effects of the Mexican peso devaluation led the Central Bank of Argentina to take several measures to reduce the shortage of liquidity, and avoid the systemic character of the crisis. The main instruments used were: a reduction of reserve requirements, incentives to redistribute liquidity among the banks through inter-bank lending, an insurance system for retail bank deposits, and more flexibility in its discount-window policies. Indeed, the Central Bank used its discount window to reduce the effects of the financial panic. The amount of lending was kept to a minimum in the last quarter of 1994. But, on the 20th December, when the Mexican crisis was explicitly recognised in the world financial markets, and the Mexican currency devalued, more flexibility was attached to Argentina's central bank discount window policies. Loans to banks facing liquidity problems jumped to US$ 62.5 million by the end of December 1994, and reached US$ 292.5 million at the end of January 1995. The development of liquidity crisis of the financial system led the discount window to a balance of US$ 1,234.6 million in March, and US$ 1,634 million in April of the same year. The degree of flexibility in the monetary policy to handle the crisis is reflected in the deviation of the monetary base from the foreign reserves following the first two quarters of 1995, as is evident in Figure 4. It was not sufficient, however, and the drain of bank deposits during the first quarter of 1995 was monumental (Silva, 1997). By the end of April 1995, Argentina's financial system had lost 18 per cent of the deposits it had before the Mexican peso devaluation. As a measure of the severity of this contraction, Argentina experienced in just three months the same proportional contraction in deposits as the United States did during the first two years of the Great Depression (Zarazaga, 1995, p.17). The run against the banks became a run against the domestic currency leading to capital flight, and a sharp decline in foreign reserves. The effects upon the monetary base are clearly depicted in Figure 4.The monetary

rule implied by the fixed exchange rate with a currency-board arrangement establishes that the monetary base should follow closely the amount of reserves. Currency-board arrangements imply an abdication of an independent monetary policy. Nevertheless, it is not evident that a long-run relationship prevails for two reasons: i) Argentina is a case of quasi-currency-board arrangement with some monetary policy flexibility; ii) there was a threat of speculative attack in the beginning of 1995, following the Mexican crisis.

The South-East Asian crisis

The Mexican crisis was followed by several crises arising from South-East Asia around October 1997. The contagious effects of the Asian crises of October 1997 affected Argentina less than the Mexican crisis because the country had re-structured its financial system in the period post-Mexican crisis. At the same time using the small degree of freedom that the quasi-currency-board arrangement permitted Argentina's Central Bank acted, as pointed out above, in a way that international reserves grew in a faster rate than the monetary base (Figure 4).

3.3.2. Brazil's Case

Mexican crisis

A fundamental test of the stability of the Brazilian programme was the Mexican crisis of December 1994 . The government resisted a maxi-devaluation but in March 1995 introduced a system of "expressly stated" bands, with the possibility of periodic revisions to avoid a misalignment of the exchange rate. In other words, a moving target-zone regime. Credibility was challenged, with all the consequences that the recent literature has raised about this important issue. The size of the effects on the financial system, particularly on the foreign assets from one side, and on the monetary policy on the other, is of great importance for understanding the current Brazilian monetary regime and its commitment to limit discretionary actions.The increase in the demand for reserves that characterised the spill-over of Mexican crisis (*the tequila effect*) is displayed in Figure 6.

The total loss of reserves from December 1994 to March 1995 reached around US$ 7 billion. The spill-over of the Mexican crisis seriously affected the net inflow of capital, particularly portfolio capital. According to Silva and Torrance (1998), between January 1995 and March 1995 there was a net capital outflow of US$ 2,052 million. This was a high figure considering the fact that in the first six months following the implementation of the *Real Plan* there was a net inflow of US$ 677

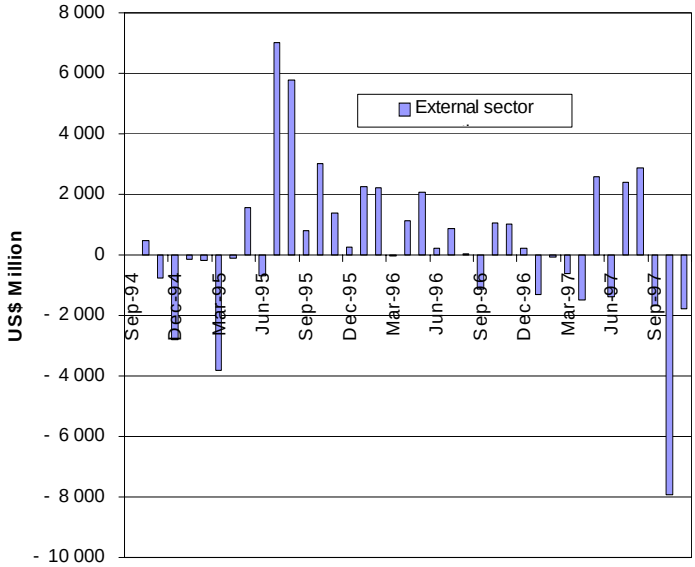
million. Brazil lost reserves due to the speculative outflow of portfolio capital, and also due to a substantial deficit in the trade balance. The latter can be explained partly by the speculation in the trade of visible goods (postponement of exports and anticipation of imports *a la* Calvo's 1994 explanation) but the main cause flowed from the overvaluation of the exchange rate.

To reduce liquidity, several decisions were taken by the monetary authorities: an increase in reserve requirements for time deposits, an increase in the tax rate on financial operations involving bank loans (from 6 to 18 percent), a prohibition on financial intermediation involving commercial paper by banks, and a mandatory 60 percent deposit with the central bank on bank assets used for collateral guarantees and selected loans. Several measures were taken on the foreign front, as well, to act directly upon the outcome of the current balance. The results of this set of policies were: a slow down in the economic growth performance and, as expected, a recovery of the trade balance as the result of the recession and the currency devaluation. In August 1995, the country presented a trade surplus that remained until October 1995. This trade balance improvement was mainly due to the temporary recession, and disappeared in the second half of 1996 with the slight recovery of the economy (Silva and Torrance, 1998).

The evidence presented by Calvo *et al.* (1993) showed that capital inflows into emerging markets in the 1990s were motivated mostly by the relatively low interest rates in industrialised economies rather than by broadly-based economic reform in emerging markets. The reaction of the Brazilian economy to the Mexican crisis, however, suggests the importance of the interest rates differential to reduce the wave of the contagious effects.

Figure 6 - Brazil: External Sector Operations (US$ million)

(1994-1997)



Source: Authors' elaboration from data published in *Boletim do Banco Central*, several issues.

The South-East Asian Crisis

The repercussions of MIT economies' (Malaysia, Indonesia, Thailand) crises starting around October 1997 on Brazil have been very similar to the spill-over of the Mexican crisis. The data on external sector operations of the Central Bank shows a loss of reserves more severe than the one that occurred in the aftermath of the Mexican crisis, around US$ 10 billion (Figure 6). The tightness of monetary policy pushed interest rates to high levels, though lower than the ones that prevailed in the Mexican episode.

These facts suggest that contagious effects are indeed embodied in speculative crises even when the economies are far away, are structurally different and present minor direct economic linkages.

It is an interesting exercise to examine alternative scenarios for exchange-rate regimes for a regional bloc, using as a framework the basic elements of the stabilisation mechanisms currently in operation in Latin America economies. The

exercise will take into consideration, basically, the two leading members of MERCOSUR, Argentina and Brazil (See Gonçalves, Mollo and Silva (1994), for a slightly similar experiment.).

4. Exchange-Rate Regimes within MERCOSUR

Alternative Scenarios

Let us consider three scenarios (or "thought experiments") with three hypothetical economies (we can imagine A to be Argentina , B, Brazil, and C, United States or the Rest of the World).

Before discussing the alternative scenarios we follow Krugman and Obstfeld (1994) and Argy (1994) to sketch a simple model which we use to develop our analysis of the transmission of policy shocks. Different cases will be explored related to alternative exchange-rate arrangements amongst countries.

$$Y_A = D_A(Y_B, r_A, Y_C^*, e, f_A) \qquad (1)$$

$$Y_B = D_B(Y_A, r_B, Y_C^*, e, f_B) \qquad (2)$$

$$M_A = L(Y_A, r_A) \qquad (3)$$

$$M_B = L(Y_B, r_B) \qquad (4)$$

$$M_B = \overline{M}_B \qquad (5)$$

$$r_A = r_B \qquad (6)$$

$$0 = BP_B(Y_B, Y_A, Y_C^*, e, r_B - r_c) \qquad (7)$$

$$e = \bar{e} \qquad (8)$$

where Y denotes output and M is real money supply, r denotes interest rate, and e is the real exchange rate. The subscripts stand for Argentina (A) and Brazil (B) and USA or the rest of the world (C). Equations (1) and (2) represent equilibria in the goods markets (IS). Equations (3), (4) and (5) represent equilibria in the money markets (LM). Equation (5) indicates that country B controls the money supply either by sterilisation, when the exchange rate is fixed, or by permitting it to float. Equation (6) represents the equilibrium condition for the foreign-exchange market. Equations (7) and (8) stand, respectively, for the balance-of-payments equilibrium condition under

floating exchange rate, necessary to determine its value , and for the target level of the exchange rate under a fixed exchange-rate system. The assumption is that perfect capital mobility prevails between countries *A* and *B*, and that domestic prices are fixed or present high viscosity, in both countries, in the short run.

Scenario 1:

Let us assume that a fixed exchange-rate arrangement prevails among the three countries. Consider the integration area (A+B). The effects of monetary and fiscal policies will be more important from B to A than from A to B as long as A depends more on B than B does on A . This is due to the lack of symmetry (in size and/or structure) between A and B.

Assume now that B makes use of sterilisation practices (open-market operations by which B tries to offset the impacts of foreign-reserves changes on the monetary base) while economy A does not sterilise. Take C's position as given (*ceteris paribus*). Consider that perfect capital mobility prevails between A and B, but being less than perfect between these two in relation to C.

If this is the scenario, economy B starts to play the dominant role in terms of controlling monetary policy. Changes in monetary policy in A affects B's level of reserves, but not its money supply.

The question is: will country A accept a monetary policy dictated by country B? (Keep in mind that in this example B stands for Brazil, and A for Argentina!). The loss of autonomy on the part of A seems to be the main problem of this relationship.

The sterilisation policy implemented by Brazil creates an important asymmetry in this relationship. Monetary shocks originating in Brazil, for instance, will be amplified in Argentina. On the other hand, monetary shocks originating in Argentina will be dampened in Argentina and in Brazil as well.

Within the same thought experiment it is interesting to recall the effects of sterilisation upon the fiscal shocks. If the fiscal shock starts in Argentina, its effects will be through trade and capital inflow leaking from Brazil and country C (the Rest of the World or US, for instance). Sterilisation, however, isolates the monetary leakage and enhances the positive effect of Argentina's policy. On the other hand, fiscal shocks originating in Brazil will lead to a slump in Argentina's output. In other words, fiscal shocks coming from Argentina will be amplified in Argentina and Brazil, while fiscal shocks coming from Brazil will be dampened.

The above experiments of monetary and fiscal policies are illustrated by

Figure 7, using the simple Mundell-Fleming framework represented by the equations of the model presented above.

Figure 7 shows that Brazil and Argentina are initially at points 0 and 0', respectively, where both countries'output and the foreign exchange market are in equilibrium. The fiscal shock originating in Brazil shifts the IS curve to the right and determines a new equilibrium (point 1) at which Brazil's output and interest rate are higher. The equilibrium in the foreign exchange market leads to the outflow of reserves from Argentina to Brazil. Open-market- sterilisation policy assures that money supply does not change in Brazil. As a result the interest rate in the region will rise leading to a fall in Argentina's output (point 1') as LM contracts.

Monetary shocks originating in Brazil will increase the region's money supply . The result is a decline of the interest rate followed by an output rise in both countries (points 2 and 2').

This analysis has to contemplate the response of the region to external shocks. Fixed exchange-rate systems translate any change in foreign demand into internal shocks. For instance, a reduction of exports become similar to a reduction of government expenditures. In the same vein any change in capital inflow due to pulling or pushing factors corresponds to a change in the money supply of the countries of the region. This has been the case of Argentina that suffered the capital flights of 1994-95 due to the Mexican crisis and more recently due to the Asian and Russian events. As a result Argentina's GDP went through a severe recession. On the other hand, capital flights originating in Argentina tend to be less severe given Brazil's open market policy. Once capital flight imposes a constraint in liquidity intra-region capital will barely provide some compensation and the end result would be a reallocation of capital within the region. In the case of sterilisation, the final result of Brazil's monetary policy could well be an increase in the region's money supply.

Figure 7

r_A
r_B
LM_{A2}
BRAZIL
LM_B
LM_{B2}
LM_A
LM_{A1}
IS_B
IS_{B1}
IS_{A1}
Y_B
Y_{B1}

Y_{A1}
Y_{A2}
IS_A
1
2
1’
2’
0
0’
ARGENTINA
Y_{B2}
Y_A

When the country sterilises, as it is the case of Brazil, external shocks of capital outflows do not translate themselves into monetary shocks. Sterilisation can be understood as providing an insulation to external monetary shocks.

This shows clearly the asymmetries of the countries when faced with external shocks due to credibility or changing external conditions.

Scenario 2:

Consider a floating exchange-rate regime between A and B, but a fixed exchange-rate arrangement between A and C (as occurs in reality between the Argentine peso and the US dollar since 1991).

A non co-ordinated change in A or B can affect the degree of integration. The link is associated with monetary policy. Assume, for example, a monetary contraction in A leading to a devaluation of B's currency in relation to A's . The effect will take the form of a trade shift. A will import more from and export less to B. If we consider that B is inflation biased while A is not, the previous effect will be reinforced and B’s

currency will experience further devaluation in relation to A's.

Let us change slightly this scenario within the regime of floating exchange rates and assume that the monetary policies of countries A and B do not differ much but that the latter has a growing fiscal deficit. In that case, B's interest rates will be increasing and the capital inflow to B will lead to an appreciation of its currency. This situation will affect the trade between A and B in the opposite direction that was depicted before. Assume that B is inflation biased in comparison to A, in the sense of presenting excess demand in the form of a growing fiscal deficit. However, in contrast to inflationary deficit financing through printing money, B finances the fiscal deficit through foreign-capital inflows. These programmes, in general, do not correct the "fundamentals" and rely heavily in foreign capital inflows. If these are not interrupted no serious problem will occur. Consider, however, that a growing lack of credibility on the sustainability of the programmes prevails. In this case, the capital inflows would halt, and the model would collapse. It is important to notice that this scenario approaches the recent situation facing Latin American countries because it is characterised by a floating exchange-rate regime between A and B.

An interesting aspect to be pointed out has to do with the vulnerability to external shocks. Argentina becomes more vulnerable to external shocks than Brazil given its commitment to a fixed exchange rate as the analysis of scenario 1 suggests. In Brazil's case, floating exchange rate insulates, partly, the effects of foreign shocks in the same vein that the sterilisation policy does. On the other hand, demand shocks that affect Brazil will affect Argentina as well directly through movements of the exchange rate.

Scenario 3:

The last scenario to be explored represents an extension of the last possibility of scenario 2 and considers the implementation of a target-zone exchange-rate arrangement in B and also between A and B. Between A and C let us assume the maintenance of the fixed exchange-rate regime.

Target zones impose constraints in the fiscal and monetary policies of country B. If country B has a permanent fiscal deficit it is likely that the rate of interest will be too high, and the exchange rate too low. B will be pushed to the lower limit of the exchange-rate band, and to the upper limit of the interest-rate band. Monetary policy is tight, in the sense that it is not used to finance the fiscal deficit, and capital inflows are mostly sterilised, but in the meantime the trade imbalance is growing. If foreign

capital doubts the sustainability of the exchange rate, a speculative attack *a la* Krugman (1979) on the government foreign reserves is likely to occur with damaging consequences. Note that this kind of exercise is slightly different from the traditional one in which the speculative attack is due to the expansion of internal credit. Here fiscal imbalances point to an overvaluation of the domestic exchange rate, and to a trade-balance disequilibrium. Its sustainability would depend on the confidence that foreign capital attaches to the country's government policies.

From these three scenarios it becomes evident that the macroeconomics of MERCOSUR hinges upon the success or failure of the stabilisation programmes, of the monetary and fiscal policies of its members, and on the nature of the capital mobility amongst regions. The evidence so far seems to indicate that recent capital inflows have more to do with capital push than with capital pull. The destination, however, seems to depend on the interest-rate differentials, and on the credibility of the stabilisation policies.

It is clear after examining these simple scenarios that an important condition for the growing integration of a regional economic bloc relies on the successful outcomes of the member countries' stabilisation efforts. Even in this case, it has been advocated by several analysts that co-ordination amongst countries in the process of integration produces better results than total lack of co-ordination.

Doubts and main dilemmas to be solved

Nevertheless, some questions (with ambiguous likely answers) remain to be asked:

1) Does economic integration imply fixed-exchange rate arrangements between countries? Are exchange rates more or less vulnerable within interdependent economies?

2) Given the asymmetries between economies and heterogeneous preferences: are target zones a way out?

And a number of dilemmas to be resolved:

1) The case for integration seems to embody a system in which: the exchange rate should float in relation to C and be fixed between A and B. However these economies depend heavily on C which makes this unlikely.

2) Fixed exchange rates within MERCOSUR involve the problem of deciding whether one member's policy prescriptions can be allowed to dominate crucial economic decision-making.

On the face of it, this problem is similar to the dilemma imposed upon the

European Union, particularly on questions relating to the way the new Euro currency should be managed from the beginning of 1999. However, the situation in reality is very different from that which faces MERCOSUR. From its inception in 1957, the European Union had at its heart the idea that peaceful economic and political relations should forever prevail between France and Germany (the core of the European Union), and that the terrible blood-stained history of their mutual relationship since the 1870s should never repeat itself. The EU, therefore, has never seriously been threatened by a Franco-German struggle to dominate its central institutions. With MERCOSUR, it is essential for future harmonious working that Argentina and Brazil (the core of MERCOSUR) reach a similar historical accommodation with each other (a task that should be easier to accomplish than, given the immense accumulation of bitterness that had to be overcome, the Franco-German settlement!).

Recently, the dilemma of protectionism has emerged leading to social movements against the outcome of trade integration. Argentina's workers have been claiming for protection for the tradable sector, in other words to their own works.

5. Concluding Remarks

As we have examined the integration process in Latin America possesses an unique feature in that the members of the MERCOSUR union are likely to attach their currencies (or a common currency) to an outside currency, the US dollar, in a fixed-rate or a target-zone type system. With a diminished role for the important instrument of monetary policy, the role of national fiscal policies in the MERCOSUR countries needs to be further discussed. It is also worth bearing in mind that in analysing the prospects for MERCOSUR, we are dealing with countries with histories of high budget deficits, a problem some members will find very difficult to solve. Besides we are also dealing with countries highly integrated to the global economy since their stabilisation programmes, exchange-rate-based stabilisation programmes (ERBSP), depend fundamentally on foreign capital inflows. Therefore, the fact that we have shown that Argentina has followed currency-board arrangement and Brazil a tight monetary policy does not mean that increasingly vulnerability to external shocks is not the case. Indeed, recent world-wide currency crises seriously affected the Brazilian economy for several reasons (including portfolio re-allocation). At the same time, the proximity of the Presidential re-election of President Fernando Henrique Cardoso postponed correction of fundamental variables: fiscal reform and alignment

of the exchange rate, for instance, turning Brazil the main target for speculative attacks as it did happen in the beginning of the 1999's when the government was forced to let the exchange-rate float.

Back to our present topic conclusion, a few conjectures can be advanced:

- *Lack of macroeconomic co-ordination*

Lack of macroeconomic co-ordination is a serious hindrance to effective economic integration. Since the financial fragility of the public sector is not a phenomenon restricted to Argentina and Brazil, it follows that significant differences in the fiscal stances of the other associated economy will, in the future, operate as a nontrivial hindrance for the consolidation of a larger and stable free trade area. The major point here is that (in general terms) in order to reap on a steady basis the welfare gains expected from growing integration, national economies should give high priority to serious and permanent fiscal consolidation.

- *Priority attached to 'sound' money*

Exchange-rate-based stabilisation plans introduce a deflationary bias in the countries that implement these programmes as long as overvaluation of exchange rates reduce aggregate demand. At the same time the maintenance of large interest-rate differentials in order to attract foreign capital reduce the rate of growth exacerbating the unemployment problem. Priority attached to sound money leads Central Banks to pursue deflationary policies minimising their attention to full employment and growth strategies.

On the other hand, the tendency towards the introduction of a single currency, (or a fixed exchange rate among currencies) that is embodied in the idea of building a monetary union, may lead to the equality of inflation rates or even to the convergence of interest rates amongst member countries.

In addition to the deflationary bias alluded above, the need for fiscal convergence in order to reduce external shocks may tie the hands of the policymakers in a low employment equilibrium solution. As it is currently happening with EU the attempt to meet the deficit to GDP criterion (defined by the Maastricht Treaty of a maximum ratio of 3 percent of GDP at market prices) has been achieved at a high cost in terms of unemployment.

Co-ordination therefore is fundamental for the success of integration but does not guarantee growth and full employment and on the contrary may exacerbate stagnation and unemployment.

References

Andrade, J.P., F.G.Carneiro and M.L. Falcão Silva, 1999. "Comparing Monetary Policies: Brazil and Argentina", *Texto para Discussão* No.8, Série Economia, Centro de Estudos de Empresas, Universidade Católica de Brasília, Universa Editora.

Arestis, Philip and Malcolm Sawyer. 1998. "Prospects for the single european currency and some proposals for a new Maastricht." Paper presented during *The Fifth Post Keynesian Worksohop* organized by the Journal of Post-Keynesian Economics, University of Tennessee, 25 June- 01 July, mimeo.

Argy, Vitor. 1994. *International Macroeconomics: Theory and Policy*. London/New York: Routledge.

Banco Central do Brasil, *Boletim do Banco Central do Brasil*, several issues.

Baumann, Renato and Juan Carlos Lerda, 1987. *Brasil-Argentina-Uruguai – A Integração em Debate.* Brasília: Editora Marco Zero/UnB.

Calvo, Guillermo A. 1994. "Comments on Dornbusch and Werner", *Brookings Paper on Economic Activity.*

Calvo, Guillermo A., Leonardo Leiderman and Carmen Reinhart. 1993. "Capital Inflows and Real Exchange Rate Appreciation in Latin America". *IMF Staff Paper* (40): 108-151. Washington, DC: The International Monetary Fund.

De Grauwe, Paul. 1992. *The Economics of Monetary Integration*. UK: Oxford University Press.

Frenkel, Jacob A. and Assaf Razin. 1992. *Fiscal Policies and the World Economy.*Cambridge: The MIT Press.

Gonçalves, Reinaldo, M.L. Rollemberg Mollo ,and M.L. Falcão Silva. 1994. "Coordenação Cambial no MERCOSUL: Propostas e Cenários." In: *Boletim MERCOSUR – Informações Selecionadas* No. 13, Brasília: Banco Central do Brasil (Sept./Dec)..

Glick, Reuven e Michael Hutchison.1992. "Fiscal Policy in Monetaary Unions: Implications for Europe". *Working Papers in Applied Economic Theory*. Federal Reserve Bank of San Francisco, (March) .

Hallet, Andrew J. Hughes .1989. "What are the Risks in Co-ordinating Economic Policies Internationally? In Ronald MacDonald and Mark Taylor (eds.). *Exchange Rates & Open Economy Macroeconomics.* Oxford, UK and Cambridge, USA: Basil Blackwell.

International Monetary Fund, *International Financial Statistics*, several issues.

Krugman, Paul. 1979. "A Model of Balance of Payments Crises". *Journal of Money, Credit, and Banking* (11) August: 311-25.

Krugman, Paul and Maurice Obstfeld. 1994. *International Economics: Theory and Practice* 3rd. Edition, Haper Collins College Publishers.

Morais, José Franco M. 1997. "Plano Real – Um Teste de Credibilidade", mimeo, Departamento de Economia, UnB.

Silva, Maria Luiza Falcão. 1999. *Modern Exchange-Rate Regimes, Stabilisation Programmes, and Co-ordination of Macroeconomic Policies: Recent Experiences of Selected Developing Latin American Economies*. USA/UK: Ashgate..

Silva, Maria Luiza Falcão. 1997 "The Rules-Versus-Discretion Debate Revisited: What can be learnt from Argentina's Quasi-Currency-Board Regime". *Social and Economic Studies* 46 (1): 111-34, (March).

Silva, Maria Luiza Falcão and Joaquim Pinto de Andrade. 1996. "Brazil's new currency: origin, development and perspectives of the Real". *Revista Brasileira de Economia* 50(4):427-67, (Oct/Dec).

Silva, Maria Luiza Falcão and Thomas S. Torrance. 1998. "Exchange-Rate-Based Stabilisation Plans: the Brazilian Experience with a Target-Zone Regime". *Economia Aplicada* (1): 31-64, (March).

Thorstensen Vera and Ernesto Lozardo. 1995. "Brazil: International Trade opportunities among economic regional blocs". *Texto para Discussão* No.45. São Paulo: Departamento de Economia/EAESP/FGV.

Zarazaga, Carlos E. 1995. "Argentina, Mexico and Currency Boards: Another Case of Rules Versus Discretion", *Economic Review* (Fourth Quarter), Dallas/US: Federal Reserve Bank of Dallas.