

**THE COLLAPSE OF THE CURRENCY BOARD  
AND THE HARD WAY BACK TO NORMALITY IN ARGENTINA**

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## **Introduction**

Argentina has yet to recover from the dramatic setback that it suffered less than two years ago. Though the collapse reached all the spheres of social life, in this paper we will focus on the economic dimension of the crisis.

To do so, after this brief introduction the paper is organized into four sections. The next one succinctly summarizes the main features of the Argentine economy in the past decade. In the second section we try to clarify the reasons of the economic and financial crisis that, in 2001, ended the market-oriented reform attempt that had shaped the economic evolution since the early nineties. The third section analyzes the initial reactions to the crisis and poses the main challenges that Argentina will have to face to restore economic normality. The last section presents the main conclusions of the paper.

### **1. Argentina in the nineties: a second failed attempt at market-oriented economic reform**

The economic and financial crisis that Argentina experienced in 2001-2002 reached unprecedented depth but was not a completely unfamiliar event for the country. As a matter of fact, it was the last episode of a long decay that spanned over the last thirty years, from the mid-seventies to the present. Throughout that period the country displayed a rather volatile economic performance, characterized by ample fluctuations, both real and monetary, recurrent disruptions, and a dismal track record in terms of long-run growth and income distribution (see J. Fanelli, 2002).<sup>1</sup> Somewhat paradoxically, over that declining period the country underwent two ambitious attempts at market-based economic reform.

The first attempt took place under the military regime initiated in 1976. As is well known, it ended in a complete failure and the military had to leave power in 1983, well before they had anticipated. In the eighties, while the country was struggling to rebuild democracy, economic policies had to deal with the consequences of the “debt crisis” and found little room to promote economic reform. In any case, that decade also ended with a serious crisis, this time characterized not only by a deep recession but also by hyperinflation.

The second round of market-friendly economic reform, the one that led to the current predicament, took place under President Menem’s two terms in office, from 1989 to 1999. As in the seventies, the comprehensive economic reform included the pegging of the exchange rate, this time through the adoption of a Currency Board with a 1-to-1 parity between the peso and the US dollar, as well as deep trade and financial liberalization. Other reforms were also implemented in this case, as additional measures to consolidate the new macroeconomic setting. Among them: 1) the massive privatization of public utilities and the radical reorganization of the pension system on the fiscal side and, 2) the autonomy of the Central Bank and the implementation of a new set of prudential regulations for commercial banks, the so-called Basel “plus” standard, on the financial side.

At first, both drastic disinflation and fast economic growth seemed to prove this combination right. This initial period lasted until mid 1998 and it comprised a lengthy expansion in its first four years (1991-94), a subsequent short recession in 1995, and a sharp recovery from 1996 to mid-1998. Throughout the period there was growing optimism about the future of the Argentine economy. In fact, Argentina appeared to be one of the most successful cases of market-oriented reforms in a democratic context, and received widespread applause as a result of its impressive

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<sup>1</sup> Fanelli, J. (2002) “Growth, Macroeconomic Instability and the Crisis of Convertibility in Argentina”, Eclac Review N° 77, August.

track record in terms of growth and price stabilization, including that of the international financial institutions.

The second period began in the second half of 1998 and was characterized by an unusually long economic contraction accompanied by a slight declining trend in nominal prices. This phase, a true economic depression, ended in the severe financial and currency crash of 2001.

Given the policy choice made with the adoption of the Currency Board, capital movements had a direct impact on the fluctuations of economic activity, through their effect on interest rates, internal liquidity and aggregate expenditure. This was particularly destabilizing at a time of high volatility in international capital flows. During the expansionary years of the early nineties net capital inflows exceeded the current account deficit, thus allowing for a significant accumulation of foreign reserves while feeding domestic credit creation and a swift economic recovery.

The Tequila episode was followed by significant capital outflows and triggered the sharp recession of 1995. Renewed inflows, nonetheless, allowed the economy to quickly resume its expansionary trend. This time, however, the expansion was considerably more vulnerable than the previous one, because the financial positions of both the private and the public sector were much more fragile than before.

As a result, the Argentine economy could not stand the worsening of the international scenario that followed the crises of Southeast Asia in 1997 and Russia in 1998. The unexpected and prolonged stop in capital inflows to emerging countries, initiated after the Russian default, put an end to the second expansion of the nineties, and started the deep depression of the last part of the decade. Finally, in the second half of 2001 foreign financial markets completely shut out for Argentina, determining the unsuccessful conclusion of the second round of market-oriented reform in the last thirty years.

## 2. The collapse of the Currency Board regime: why did it happen?

There are two contending explanations about the collapse of the Currency Board regime in Argentina. One stresses the inconsistency between the fixed exchange rate regime and the large deficits generated by the government (see M. Mussa, 2001).<sup>2</sup> According to this view, the accumulation of public debt eventually became unsustainable and led to the loss of access to financial markets and the unfeasibility of maintaining the Currency Board.

The other focuses on the problems caused by the fixed exchange rate regime on the competitiveness of tradable sectors, at a time when a strong dollar (and therefore a strong peso) overlapped with a sharp devaluation in the Brazilian real, Brazil being the main trade partner of Argentina (see R. Frenkel, 2002).<sup>3</sup> Along this perspective, the loss of competitiveness induced a decline in investment and triggered a painful depression. A long enough economic contraction would have been the only possible way to induce the deflation required to correct the relative price imbalance under a fixed exchange rate, but proved politically unsustainable and eventually led to the end of the Currency Board regime.

Both explanations have their merits and are not necessarily contradictory with each other. However, none of them is enough to fully explain neither the origin nor the magnitude of the crisis. Regarding its origin, the crisis was not the direct outcome of an endogenous policy inconsistency, as the fiscalist explanation would suggest, nor the immediate consequence of the loss in competitiveness, as the non-fiscalists would put it. True, the Argentine economy was not competitive enough in world markets and was far from enjoying a consolidated fiscal stance. But these weaknesses alone would not have triggered the crisis

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<sup>2</sup> Mussa, M. (2002) "Argentina and the Fund: From Triumph to Tragedy", Institute for International Economics, mimeo.

<sup>3</sup> Frenkel, R. (2002) "Argentina: A Decade of the Convertibility Regime", mimeo.

unless an unexpected and persistent reversal in capital flows, hitting all emerging economies, had started after the Russian crisis of August 1998.

As with respect to the magnitude of the crisis, in our view it has mainly to do with two related factors. Firstly, the large correction required in the equilibrium real exchange rate after the external shock caused by the capital flow reversal. Secondly, the expected impact of that correction on the financial positions of indebted agents, mainly the government and the corporate sector. The former factor cannot be attributed to the difficulties created by the Currency Board regime to competitiveness in the tradable sector. The latter is not related to the size of the (flow) fiscal deficit, but to some relevant features of the country's financial institutions affecting the (stock) portfolio decisions of all domestic economic players.<sup>4</sup>

To understand why the reversal of capital flows could cause such a collapse in Argentina, it is necessary to pay special attention to two structural weaknesses of its economy that the reforms undertaken during the Currency Board regime left unattended.

On the real side, despite aggressive trade liberalization, the non-financial sector of the Argentine economy remained quite closed or, in other words, the share of tradable sector output in total GDP stayed quite small. The initial overvaluation of the domestic currency, tolerated as a cost of price stabilization, and the mistaken decision to simultaneously liberalize both foreign trade and finance, are behind this fact.<sup>5</sup>

On the monetary side, financial fragility continued to be a pervasive feature of the Argentine economy. Not only financial transactions stayed basically short-run increasing rollover risks, but also portfolio dollarization of domestic agents expanded substantially, inducing large currency-denomination mismatches in financial transactions. The trend was

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<sup>4</sup> Moreover, the Argentine fiscal stance at that time was quite reasonable, especially when compared to that of other emerging economies.

<sup>5</sup> Quite remarkably, these were the same mistakes that had been made in the previous Southern Cone reform experiences of the early eighties.

encouraged by policy makers, which regarded it as a way to enhance the credibility of the Currency Board regime.<sup>6</sup>

The mix of portfolio dollarization with a relatively small tradable sector made the adjustment to the capital flow reversal much more difficult in Argentina than in most other emerging countries (see Calvo et al, 2002).<sup>7</sup> On the one hand, as its economy was quite closed, the required depreciation in the equilibrium real exchange rate was rather large. On the other hand, dollar-denominated indebtedness of “peso-generating” agents (mostly linked to non-tradable activities) made those agents, not only private corporations and households but also the government, highly vulnerable to balance-sheet effects following a sizable real depreciation.

Lending to private firms and households with revenues not linked to the dollar became riskier, because a devaluation of the domestic currency seemed more likely. At the same time, the value of non-tradable collateral tended to fall for the same reason. The result was that access to domestic bank credit became more restricted for the private sector, worsening the contractionary consequences of the external financial shock.

The government, in turn, was unable to ease the private sector financial predicament because it faced similar problems itself. In fact, more than 60% of its debt was denominated in dollars and the share climbed to almost 85% when all hard currencies were considered. Moreover, though the flow fiscal accounts were reasonably under control, the public debt growth had nevertheless been much faster than it could have been explained by the accumulation of fiscal deficits (excluding pension reform costs). Two were the reasons: 1) the issuance of debt consolidating bonds (“Bocones”) acknowledging contingent liabilities with pensioners and government suppliers that obtained favorable judicial sentences in their

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<sup>6</sup> In fact, it was not even considered necessary to include any provision limiting currency mismatches in the prudential regulatory framework of the banking system.

<sup>7</sup> Calvo, G., A. Izquierdo and E. Talvi (2002), “Sudden Stops, the Real Exchange Rate and Fiscal Sustainability: Argentina’s Lessons”, mimeo.

disputes with the government and, 2) the need to finance the large transition costs arising from the ill-conceived pension system reform launched in mid-1994, with no serious consideration of its implications on the vulnerability of the government's financial position.<sup>8</sup> In sum, the government was facing a rapidly growing public debt, mainly denominated in foreign currency that could easily become unsustainable under a real devaluation.

Was there a less traumatic course available after the capital flow reversal than the one the Argentine economy followed? If one agrees that a large correction in the real exchange rate was unavoidable as a result of the "sudden stop", the required policy answer would have been to adjust the public sector accounts as much as needed in order to face: 1) the consequent increase in the government debt burden and, 2) the implicit contingent liabilities that would inexorably surface as a result of the foreseeable failure of the private sector and the banking system to manage their own larger debt burdens without government assistance. Most estimations suggest that the required adjustment would have implied jumping from the slight primary surplus achieved in 1999, around 0.5% of GDP, to one of more than 3%, and to keep that surplus on a "permanent" basis.

One can only conjecture whether or not the shift from a fixed to a floating exchange rate regime would have helped the government to perform the required adjustment. On the one hand, it would have made it easier to correct the real exchange rate. Moreover, it could have helped cutting public expenditures thanks to the effect of inflation on real salaries and pensions (as it actually happened after the crisis, as a result of the pass-through effect of the nominal devaluation on prices). On the other hand, however, the severe credibility loss of abandoning the Currency

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<sup>8</sup> According to public figures, Argentina's public debt amounted to us\$ 144,000 billion by the end of 2001, or 54% of GDP. Of that total, some us\$ 32 billion (12% of GDP) can be attributed to the materialization of contingent liabilities, while another us\$ 21 billion (8% of GDP) to the transition costs of the pension reform.



Board regime, that had become the cornerstone of the whole contractual system, would have certainly made the fiscal and financial adjustment much harder to pursue.

Would have been possible for the government to carry out such drastic adjustment? There can be many opinions regarding that question. However, considering that the economy was entering a period of depression at a time when large segments of society were beginning to heavily feel the fatigue of almost a decade of reform, and considering also the massive wealth redistribution that the fiscal and financial adjustment would have involved, it is extremely unlikely that any government could have performed such task successfully.

Leaving aside the counterfactual world, we know that reality took a very different course. A heterogeneous political coalition had won the national elections and taken office by the end of 1999. The new Administration, headed by President De La Rúa, was committed to preserve the Currency Board regime. Maintaining a fixed nominal exchange rate made the correction of the real rate extremely slow and painful, but the government discarded the shift to a floating regime, fearful of the balance sheet effects and the credibility implications of such policy change. On the other hand, the successive measures taken to increase the primary surplus were fiercely resisted by the affected sectors, systematically blocking the fiscal adjustment.

In the meantime, the economy was steadily deteriorating, worsening the financial distress of the government and the private sector. As a result, the position of several domestic banks began to weaken, also affecting the perception of investors regarding the strength of the whole system. In mid-2001 a bank run started, distributive conflicts grew out of control, and the government proved politically unable to regain the initiative. Finally, by the end of December that year, rampant social turmoil forced President De La Rúa to resign, well before the end of his mandate. The default on the

public debt and the abandonment of the Currency Board regime followed soon afterwards.

### **3. The aftermath of the Currency Board collapse: Is there a way back to normality?**

The crisis reached its peak in 2002. The GDP fell almost 11%, the largest reduction since World War I, led by a dramatic plunge in aggregate investment which went down 36%, with its productive equipment component dropping almost 48%. The accumulated decline in GDP over the last four years reached 20%. As a result, the per capita GDP last year was about 11% lower than that generated in 1993, a decade ago. The sharp deterioration of activity levels had a significant impact on employment: the unemployment rate reached a maximum of 21.5% in April 2002. At the same time, the dramatic devaluation of the domestic currency caused a strong increase in the price level, though fortunately did not trigger an inflationary spiral. Given that nominal wages showed on average only a minor improvement, real wages fell drastically. This fact and the reduction in employment severely worsened poverty and indigence levels.

During the first half of last year, economic performance was strongly influenced by the immediate effects of the abandonment of the Currency Board regime: the huge devaluation of the domestic currency, the banking crisis, the default on the public debt, the loss of confidence on the contractual system, and a generalized political and economic uncertainty. Despite the progressive implementation of exchange controls and the interruption in the payments of public and almost all private debt services, throughout the first six months of the year the Central Bank systematically lost foreign reserves. This fact reveals the intensity of capital outflows over that period, as well as the impact generated by the net positive payments of capital and interests to multilateral institutions, which totaled 4.1 billion

dollars, or about 4 percentage points of GDP in 2002. The recurrent postponement of a new agreement with the IMF, only reached in January 2003, even determined the deferment of a payment to the World Bank in November, the first time Argentina did not fulfill an obligation with a multilateral institution in its entire history.

The way in which the government initially handled the earliest consequences of the crisis only aggravated the problems. On top of the already existing restrictions on withdrawals from bank accounts, and in order to face the financial collapse triggered by the simultaneous run on deposits and foreign exchange observed at the end of 2001, the government decided to impose the asymmetric “pesification” of bank assets and liabilities, as well as the reprogramming of term deposits. These measures had dramatic redistributive wealth effects which exacerbated the loss of confidence of the public in banks and in the enforcement of contracts at all levels.

Throughout the first half of the year the financial institutions continued losing deposits as a consequence of the trickle down (“goteo”) of funds allowed by the existing regulations and the sentences of judges in favor of investors (“amparos judiciales”). To avoid a generalized closing down of institutions, the Central Bank had no choice but to assist the banking system with massive rediscounts, which reached a peak by April and May but went on being a distressing source of monetary expansion until August. The monetary and banking picture has only begun to slowly get better since that month because of a gradual recovery of bank deposits, which grew from their lowest level of 55.5 billion pesos in July 2002 to 59.2 billion in January 2003. As a result, the liquidity of banks has also improved (the aggregate ratio of bank reserves to total deposits went up from 12.7% in June 2002 to 23.2% in January 2003) and the demand for new rediscounts has stopped since September last year.

To further complicate the economic environment, the fiscal stance experienced an initial deterioration after the abandonment of convertibility,

despite the fact that nominal primary expenditures were kept stable throughout the year and, therefore, showed a sharp reduction as a proportion of GDP. The reason of the deterioration was the extremely poor behavior of tax collection in the first months of the year. Then, the primary balance of the national government in the first quarter of 2002 was a deficit of 1.7% of GDP, and both the federal and many provincial governments were forced to issue bonds that began to circulate as “quasi-monies” to face their current expenditures. It was only in May that tax revenues began to rise, basically thanks to the positive impact of the price hike on the VAT and the tax on financial transactions (“impuesto al cheque”) as well as the establishment of an export tax: average tax revenues in the period May 2002- January 2003 were 54% higher in nominal terms than in the period January- April 2002. As a result, the primary balance of the federal government has turned into a surplus since the second quarter of last year.

The several factors mentioned above made the first quarter of 2002 the worst moment of the crisis: the peso depreciated more than 200%, despite the fact that the Central Bank sold almost 2 billion dollars of its foreign reserves to attenuate the devaluation, while the product (controlling for seasonality) dropped 6% with respect to the already extremely low level of the last quarter of 2001. The peso devaluation and loss of foreign reserves continued a few more months, but in the second quarter of 2002 some indicators started to show signs of a slight economic recovery: the fiscal stance improved, bank deposits first stopped falling and then began to grow, and capital outflows drastically diminished.

This last element, together with the high surpluses obtained in the foreign trade, exerted a downward pressure on the FX market, helping firstly to partially revert the overshooting of the dollar quotation and later to stabilize the exchange rate. Also, the Central Bank managed to replenish its reserves and keep them above the 10 billion dollar threshold considered safe by the authorities. Moreover, the excess supply observed in the FX market allowed the monetary authorities to start gradually lifting the

exchange and capital controls imposed at the beginning of the year. At the same time, price hikes tended to slow down while the nominal interest rates dropped significantly.

With the gradual improvement in the monetary variables and the fiscal accounts, the sharp decline in economic activity started to recede. The activity hit bottom sometime during the second quarter of 2002 and from then on began to recover, albeit very slowly. The GDP experienced an increase of 0.8% that quarter, and of 0.2% and 2.0% in the third and last quarters of the year. According to the EMI (the official Monthly Industrial Survey), in particular, the industrial production accumulated an increase of 10.4% between April and December. The level of employment also showed a minor improvement: between April and October (the two months when data are collected) the labor market generated 331,000 new jobs and the employment rate (not including the beneficiaries of official programs) rose from 31.4% to 32.2%.

The repercussions of last year's economic performance on foreign trade were noteworthy. Despite the huge real devaluation, exports only totalled 25.3 billion dollars, 5% less than in 2001. The main reasons explaining that outcome were financial constraints, the increase in imported input prices, and also the storing of part of the exportable grain production as a way to face the ongoing high level of uncertainty. On the contrary, imports diminished dramatically: they were 56% lower than in 2001, totalling slightly less than 9 billion dollars. The collapse of the economic activity and the real devaluation were the obvious reasons of that result. In sum, the yearly trade surplus reached a striking 16.4 billion dollar figure, the highest in the country's history.

To assess the economic prospects for the near future, there are both favorable and unfavorable elements that have to be considered. On the positive side, the most significant change has certainly been the improvement in the relative price of tradable goods brought about by the peso devaluation. As a result, import substitution is already a perceptible

process, with many productive activities notably recovering positions in their respective markets. Thus, according to a study carried out by CEP (“Centro de Estudios de la Producción”, Ministry of Production), in the first half of 2002 the import substitution process “explained” an estimated 40% of the fall in total imports, and it was particularly relevant in sectors such as “Food and Beverages”, “Textiles and Shoes”, “Pulp and Paper” and “Metal-Mechanic”. Although export performance has not yet fully reacted to the change in relative prices, it is a fact that the external competitiveness of several productive sectors, including many without previous export background, has improved dramatically.

Nevertheless, the current embryonic recovery has still to surmount overwhelming challenges to consolidate and become sustainable. First, though the system’s liquidity grew substantially, bank credit and other financing mechanisms remain virtually nonexistent, thus imposing a severe constraint to any business expansion. Even without taking into account the consequences of “pesification”, outstanding bank credit to the private sector suffered a dramatic contraction: while in February 2002 the total was 47.1 billion pesos, in January 2003 it has diminished to just 30.5 billion.

Another serious problem is the clear misalignment of wages and public utility prices. The indefinite postponement of the adjustment in these prices is obviously unsustainable. In the case of wages, leaving aside efficiency and equity considerations, the current labor market conditions will not last forever. In the case of privatized public utilities, the delay will harm investment in these sectors even further, with adverse consequences on the maintenance and future expansion of economic infrastructure and, therefore, on systemic competitiveness. In fact, the risk that the stock of physical capital becomes obsolete because of insufficient investment is not only threatening the performance of public utilities but that of the whole economy as well. Thus, two key questions that the new government inaugurated in May 2003 will have to face are how to revive investment

and how to deal with the inevitable adjustment of wages and public utility prices, so that they do not rekindle inflation.

The challenges ahead are magnified by high political and economic uncertainties. The latter, in particular, not only derive from a volatile international scenario but also from the several pending reforms conveyed to the new government. To set in motion these reforms is crucial if the current timid recovery is ever to become a process of sustained growth. The most urgent issues include:

- The resolution of the multiple pending wealth conflicts, particularly within the financial system, created by the end of convertibility
- The restructuring of the banking system, in particular the segment of public banks
- The renegotiation of contracts with the privatized public utility firms
- The renegotiation of the public and private external debt
- The fiscal reform required to attain, in a sustainable growth context, the primary surplus needed to fulfill the redefined debt commitments
- The establishment of a new fiscal pact between the national government and the provinces

In any case, even admitting the potential volatility of the current economic and institutional environment, the relief brought about by the present monetary and foreign exchange stability and the very low levels of private spending in the last few years are likely to induce a modest recovery of domestic demand this year. There are also some symptoms that exports, not only agricultural but also industrial, are finally responding to the real devaluation of 2002. Given that there is a significant slack in capacity utilization, most GDP growth projections for 2003 range from 4.5% to 5.5%.

There is not doubt, however, that to make this short run recovery sustainable in the medium and long run, a firm determination to carry out

the required reforms at the macro level will be crucial. In addition, the new strategy will have to focus not only on consolidating the ongoing import substitution process and strengthening the domestic market, but mainly on aggressively expanding exports. In order to do so, the economy will gradually have to shift from its main current source of competitiveness, to a large extent based on unsustainable low unit labor costs and artificially low public utility prices, to a more genuine source, based on systematic productivity gains. Otherwise, there is the clear risk that already existing activities that expand, or new activities that begin under these market conditions, will be unable to compete in the future without some form of undue government support.

#### **4. What can we learn from Argentina's recent past?**

All emerging countries suffered the sudden reversal of capital flows that followed the Russian default of August 1998, but the effects of the financial shock in Argentina were devastating. As we have argued before, the interplay of two structural economic flaws lies behind this fact. The quite closed nature of the Argentine economy to international trade, made the real devaluation of the domestic currency required for adjustment in the current account much higher than in most emerging economies. Given the extreme portfolio dollarization prevalent in Argentina, this had remarkably damaging effects on the balance sheets of non-tradable sectors, the government (also a "peso generating" agent) and the domestic banking system, due to widespread currency mismatches in financial transactions.

Argentina remained a rather closed economy despite the aggressive trade liberalization efforts undertaken in the late seventies and, more recently, throughout the nineties. In both cases the use of the exchange rate as nominal anchor, aimed at price stabilization, interfered with that



purpose. The simultaneous attempt at outright financial liberalization introduced an anti-export bias that also worked against trade liberalization.

Premature financial liberalization was also a powerful incentive for portfolio dollarization, particularly in a country like Argentina, with a history of extreme economic volatility. Brazil is a clear counterexample in this regard: also with a quite closed and volatile economy, it managed to avoid dollarization thanks to more prudent financial policies. As a result, the huge devaluation of the real that followed the Russian default in January 1999 did not have the critical balance sheet effects observed in Argentina.

To conclude, we want to emphasize a few lessons that can be drawn from Argentina's recent experience. The first one is not new, but is recurrently forgotten: the sequencing is crucial for the success of liberalization processes. Trade liberalization, vital for growth promotion, should come the sooner the better. On the contrary, financial liberalization requires a strong domestic financial system as a prerequisite, and should proceed gradually to avoid destabilizing effects.

The second one concerns fiscal policy. In financially vulnerable economies the government needs enough room for intervention in times of crisis. In other words, when the economy is facing an exogenous shock, the government should not be part of the problem, as is the case when it suffers debt sustainability problems that tend to amplify the initial consequences of the shock, but part of the solution, providing assistance to distressed players. This implies that the government should not only target at low fiscal deficits, but also at a low debt levels.

The banking system was the other main amplifying mechanism in the recent Argentine crisis. As a matter of fact, its last stage was triggered by a bank run. This was so because banks were highly exposed to currency mismatches between their dollar deposits and their credits to non-tradable sectors, and they also maintained large positions in government bonds. Therefore, another important lesson concerns financial policy: every effort should be made to gradually reduce portfolio dollarization. On

the one hand, this means trying to develop attractive financial instruments denominated in the domestic currency (such as deposits indexed to the CPI). It also means gradually trying to develop a market for peso denominated government bonds. On the other hand, it means reformulating prudential regulations so as to limit dollar denominated lending to non-tradable sectors. Prudential regulations should also constrain bank exposure to the public sector (including the provinces).

A fourth lesson has to do with nominal exchange rate regimes. Fix regimes, like the Currency Board arrangement, despite their popularity until very recently, seem not very useful for emerging economies nowadays. Under the current conditions of extreme volatility in international capital flows, the rapid adjustment in real exchange rates is crucial to avoid wide fluctuations in output and employment. Nevertheless, without significant wage and price flexibility, only present in textbook models, fixed nominal rates tend to retard the required adjustments, hampering competitiveness and trade performance, and amplifying real fluctuations.

The current discredit of fix regimes has led most emerging countries to adopt flexible exchange rate arrangements. However, fully flexible regimes, the other corner solution, also pose huge risks for emerging economies. Given that prices are sticky, the free floating of nominal rates is inevitably associated with large volatility of real rates. This is not only problematic for trade. It can also endanger domestic financial stability, especially when portfolio dollarization induces large currency mismatches.

In between both corner solutions, intermediate exchange rate regimes can in principle provide an adequate level of real flexibility limiting, at the same time, exchange rate volatility. They present, however, a serious disadvantage: they can only do their job properly with a certain degree of capital repression. Besides the current stand of international financial organizations (IFIs) against selective capital controls, these controls are likely to become inefficient over time unless they have some

backing from the developed countries and the IFIs, which seems unlikely in the foreseeable future.

There is a final important lesson of our analysis. While we believe that under the present circumstances fixed exchange rates are not appropriate for most emerging countries, it would be a mistake to attribute to the Currency board arrangement the sole responsibility in the recent Argentine crash. If it is true that the vulnerability of Argentina to the capital flow reversal was mainly due to the combination of too little trade integration (economic closed-ness) and too much financial integration (portfolio dollarization), then the basic reason behind the collapse was the unfeasibility of achieving the large real exchange rate correction required for adjustment without causing a distressing effect on the financial position of domestic economic players, including the government itself. This fact was independent of the prevailing nominal exchange rate arrangement.