

# Growth, *instability and* the convertibility *crisis in Argentina*

---

**José María Fanelli**

*Centro de Estudios de Estado  
y Sociedad (CEDES),  
Buenos Aires  
[josefan@cedes.org](mailto:josefan@cedes.org)*

The Argentine economy is currently going through the deepest and most prolonged recession of the postwar period: a devastating panorama that contrasts vividly with its significant growth in 1991-1998. In this article we will analyse the macroeconomic dimensions of the crisis which led to the abandonment of convertibility. Firstly, we will identify some structural weaknesses of the Argentine economy that are a source of macroeconomic instability. In particular, we will study the role of the imperfect access to international capital markets, the limited openness, the lack of financial depth and the nominal and policy rigidities, as well as the role of the errors in expectations and volatility. Secondly, we will examine the sequence of disturbances (shocks) in 1998-1999, concluding that the simultaneity of many of them aggravated their effects and that, under the convertibility régime, the economy was not prepared to face such consequences. Finally, we will briefly outline the policies that the country should apply in order to restore macroeconomic and financial stability.

# I

## Introduction

The Argentine economy is currently undergoing the deepest and longest recessionary process of the postwar period. This process began in late 1998 and, as time passed and the successive stabilization attempts failed, the agents increasingly perceived that the country was entering the obscure realm of economic depression. The consequences of this process are proving to be devastating. In December 2001 the democratically elected President was forced to resign and the convertibility regime that had been introduced in 1991 was abandoned. The expected growth rate for 2002 is -15% and inflation is on the rise. The peso has lost two-thirds of its value against the dollar since the replacement of the currency board regime with a floating system. Almost half of the population is now living under the poverty line (in 1998 the proportion of poor was 28%), and the country has defaulted on its debt.

This dismal picture contrasts sharply and strikingly with the 1991-1998 period, when the economy grew by more than 41% and there was a substantial privatization-led process to modernize the infrastructure in the context of a programme of structural reforms. In 1991-1998 Argentina was considered to be one of the most successful emerging economies, and the favourable investor sentiment permitted the country to place a significant amount of bonds in foreign capital markets. In 2001, Argentine bonds accounted for as much as a quarter of J.P. Morgan's benchmark index of emerging-market bonds.

The contrast between the 1991-1998 and 1999-2002 periods has created a bizarre situation that is difficult for the population to grasp: real GDP in 2002 will be 30% lower than in 1998, but the productive

capacity is roughly the same as in late 1998, when the recession began. We frequently hear people saying "How can this be happening if there was no war that destroyed our productive capacity!"

In a nutshell, if we were to assume that per capita GDP can be explained by the level of per capita physical and human capital accumulated, we would not be able to explain the situation in Argentina. It is therefore obvious that explaining the present situation implies explaining why valuable resources are not being fully employed. But not only this. In the case of Argentina it is also crucial to explain why the rate of utilization of these resources is so low and why the situation has lasted so long. In other words, the problem is not only recession but depression. We cannot ignore the fact that the unemployment rate is approaching a quarter of the labour force and that between the third quarter of 1998 and the second of 2002, the quarterly GDP series registers thirteen quarters with no growth.

In this paper we will argue that the rate of utilization of resources is currently so low because the institutional and contractual infrastructure of the economy collapsed as a result of the abandonment of the currency board. Under such circumstances, it is very difficult to define property rights properly and precisely. Hence, a considerable proportion of agents have no incentive to put the available resources to their best use.

Three factors are key to understanding why the disorganization of economic institutions was so widespread. The first has to do with the characteristics and time-sequence of the shocks that hit the economy in 1998-1999. From 1998 on, Argentina was hit by a series of shocks which severely affected its competitiveness and financial position. These shocks include a fall in the prices of its exports and in the terms of trade, a tightening of external credit markets, the appreciation of the U.S. dollar, and the devaluation of real in Brazil. In addition, a fiscal shock occurred because of the political cycle. The second factor has to do with the particular features of the Argentine fiscal, monetary and financial regimes, which helped to amplify the consequences of the shocks. Under convertibility, the available set of counter-cyclical instruments was extremely limited. Prices and wages were not sufficiently flexible, and the fiscal regime was

---

□ This study was prepared for the conference on Financial Stability and Development in Emerging Economies, organized by the Forum on Debt and Development (FONDAD) as part of the Initiative on International Financial Governance, jointly sponsored by the Ministry of Foreign Affairs of the Netherlands, the Nederlandsche Bank, the International Development Research Centre (IDRC), the Economic Commission for Latin America and the Caribbean (ECLAC), the International Monetary Fund (IMF) and the United Nations Conference on Trade and Development (UNCTAD).

rigid (especially in terms of the relations between the Federal Government and the provinces) and subject to political influences. The third factor is that the currency board had been in force for more than ten years and had gained credibility after having passed the test of the Tequila Effect in 1995. Hence, private contractual relations had to adapt largely to the rules of the currency board. This was especially so with regard to dollar-denominated contracts. The dollarization of financial instruments introduced additional constraints, in so far as real depreciation would increase the financial vulnerability of firms and make the financial position of banks more fragile.

But even if we successfully explain why and how convertibility and the shocks that occurred resulted in the present crisis, we must still wonder why Argentina adopted such a system and why the country was so exposed to the specific configuration of shocks that occurred. These questions trigger an array of others: Why did Argentina choose a system as rigid as a currency board in the first place? Why were contracts dollarized? Why were foreign investors so foolish as to buy long-term bonds from a country that would default a few years later? Why was the IMF so involved with and supportive of the country's policies under convertibility? In order to answer these questions it is necessary to examine some specific characteristics of the Argentine economy that played a critical role in generating the macroeconomic disequilibria and adjustment dynamics that are typically observed. We consider that the following characteristics are of crucial importance in this respect.

First, "very big" errors in expectations seem to be more frequent in Argentina than in many similar countries. Several examples corresponding to the current crisis and involving the presumably best-informed agents may be given in this respect: Argentine bonds accounted for a quarter of the J. P. Morgan index and the country defaulted on its obligations; a significant proportion of foreign-owned banks' credit portfolios were allocated to producers of non-tradeables who were unable to honour their obligations after the devaluation; a significant part of foreign direct investment in the non-tradeable sector proved *ex post* to be excessive; the newly-privatized firms agreed on contracts which were impossible to meet if convertibility were abandoned; and the IMF supported stabilization programmes whose goals were almost impossible to meet.

Second, the interactions between the Argentine economic structure and the shocks to which the country is exposed frequently give rise to "perverse" effects. Specifically, such interactions result in stochastic data-generating processes that are unstable (i.e., subject to frequent and unexpected structural changes) and volatile. This means that the potential for inconsistent expectations and the occurrence of "big errors" does not arise from agents' lack of sophistication, but from the inherent complexity and instability of the processes that the agents must "model" in order to forecast the future evolution of the variables of interest to them,<sup>1</sup> all of which facts have consequences on the agents' economic behaviour. Among the most important factors for understanding the Argentine experience are the shortening of contracts' maturities and the incompleteness of financial markets.

Third, some features of the economic structure help to amplify the consequences of shocks. Three features may be emphasized in this respect: the type of international integration, the rigidities affecting nominal variables and the policies followed, and the lack of financial depth. Indeed, the absence of fluctuation-dampening factors is particularly apparent in the present circumstances. The financial crisis, the fall in national income and political uncertainty gave rise to powerful destabilizing forces. Without significant offsetting mechanisms other than those of the market, the economy is now in a state of depression.

This paper analyses the macroeconomic dimensions of the Argentine crisis. Our discussion above suggests that structural features play an important role. Consequently, section II studies the problem of structural breaks and high volatility, as well as their relationship with errors of expectations and the characteristics of contracts in Argentina, while section III examines the disturbances of 1998-1999 and their interactions with the country's economic structure, with special emphasis on the role of international integration, nominal and policy rigidities, and financial effects. Finally, section IV contains some concluding observations.

---

<sup>1</sup> See Heymann, Kaufman and Sanguinetti (2001) and Fanelli and Heymann (2002) for a discussion of these issues in the context of Latin American countries.

## II

### Structural breaks, volatility and the macroeconomy

The literature on macroeconomic fluctuations in developing countries increasingly shows that such fluctuations display properties that differ from those observed in OECD countries (Agénor, McDermott and Prasad, 2000; Easterly, Islam and Stiglitz, 2000; Fanelli, 2000). This fact is often attributed to differences in economic structures. One point that is repeatedly emphasized is the higher volatility observed in the macroeconomic series corresponding to less developed economies. A second point is the incidence of structural reforms. In the case of Argentina, we believe that both factors are relevant. From our point of view, it is the very presence of high volatility and structural breaks that complicates the process of formation of expectations and makes the macroeconomy unstable.

Of course, it is a very well-known fact that fluctuations in aggregate variables can always be interpreted as a result of plans deliberately chosen by agents holding accurate expectations. Under such a hypothesis, the present Argentine recession would be an “equilibrium” phenomenon. But, in contrast to this view, we suggest that in the case of Argentina, agents made important mistakes and that, as a consequence, they are currently making large revisions of their perceived permanent income and are immersed in a generalized process of reformulation of contracts. Two facts support a “disequilibrium” approach. First, it seems very difficult to account for the current deep and long-lasting recession without referring to some sort of disappointed expectations. Besides, Argentina is not only experiencing a strong fall in its activity level, but is also undergoing what we usually call a “crisis”: a situation in which a large proportion of agents fail to comply with the terms of their contracts. Many firms and financial intermediaries are facing bankruptcy and, as a consequence, the basic fiscal, financial and even political institutions are under strong pressure. Second, the difference between a “crisis” and the isolated non-fulfillment of a contract is that the former implies the threat of an across-the-board failure to respect contracts and property rights. Hence, if we were to assume the absence of errors, we would have to assume that when adopting decisions, agents have already anticipated and

internalized the huge transaction costs that they would incur if a “bad” situation (namely, a state of crisis characterized by the generalized redefinition of contracts and property rights) occurred. We would have to assume that, when agreeing on the terms of a contract, the private sector has fully internalized the costs of the negative externalities that a systemic crisis would generate.

One point that is sometimes less emphasized, yet is important for understanding the Argentine experience, is that macroeconomic instability and big errors of expectations may also provoke “mutations” in the economic structure. This may occur as a result of the fact that economic agents take into account that they live in an unstable economy and change their behaviour accordingly. A typical example of this kind of phenomenon is the shortening of contracts in contexts of high uncertainty, which may have permanent effects on the economy. It can affect financial depth and, in turn, investment and risk management. In this way, instability can in itself induce structural breaks. It is therefore necessary to consider the possible interactions between macroeconomic disequilibria and dynamics and the microeconomic structure (Fanelli, 2000).

In this section we discuss these issues in more detail and present empirical evidence that we deem valuable for understanding the current Argentine crisis. Before embarking on the analysis of the data, we will make a small digression in the following paragraphs on the relations between expectations, structural breaks and volatility, which we feel may be useful for a clearer interpretation of the time series data on Argentina.

#### 1. Volatility, structural breaks and expectations

There is no doubt that Argentina is a highly volatile economy, as the data that we present below show. Two typical features of instability are structural breaks and volatility. With regard to volatility, the conditional variance of the stochastic processes may show heteroskedasticity. Thus, in the case of Argentina, periods of turbulence alternate with periods of tranquility, suggesting that it would be advisable to

assume changing conditional variance when modelling the stochastic processes. It should be noted that highly changeable conditional variance has economic consequences, because it influences the risk premium (Enders, 1995).<sup>2</sup>

Structural change matters in the case of Argentina because the “deep parameters” defining the economic structure<sup>3</sup> tend to change unexpectedly and more frequently than in, say, the OECD countries. This has a bearing on stability because, on the one hand, if the structural break is “unique”, it cannot be known beforehand (in the sense that agents do not know the probability distribution of these kinds of shocks in advance). On the other hand, if a sizeable break occurs, agents must learn how the economy works under the new circumstances. This creates “model uncertainty” and makes the formation of expectations difficult. This phenomenon tends to generate “pure” uncertainty because the agent knows that “something” may occur but cannot calculate the probabilities of this or describe exactly how the event will impact the economy.

Obviously, not all structural changes have the same potential to induce instability and problems of learning. If the structural change is fully anticipated by the economic agents, it will be included in their relevant information set and taken into consideration when negotiating the terms of a contract. This is not likely to be the kind of structural change that generates instability and big errors of expectations. Instability-inducing structural disruptions are typically associated with the occurrence of events that not only have permanent effects on the economy but are also “unique” or “really new.” If even the best-informed agents find it difficult to anticipate the shock and/or to determine its consequences, however, it is reasonable to expect it to affect their behaviour.

<sup>2</sup> Periods of turbulence and tranquility could also be associated with a time-dependent non-stationary variance, that is, with permanent rather than temporary changes in volatility, although I am not aware of any study on this matter in Argentina.

<sup>3</sup> By economic structure we mean the set of exogenous variables and parameters that represents the agents’ behaviour, the policy regime, and the probability distributions governing stochastic processes. Hence, if we assume that the economic structure can be represented in terms of the reduced form of the model (i.e., in terms of exogenous variables and parameters), we are saying that the parameters and variables plugged into the reduced form change unexpectedly, following a stochastic pattern that the agent cannot disentangle properly when forming expectations. Of course, agents can learn, but in the meanwhile, their errors of expectations will be important for macroeconomic equilibrium.

Two observable consequences are likely to result from these kinds of events. The first is that the corresponding series should present some discrete jumps and show no tendency to return to the pre-break level. Consider, for example, a one-time permanent change in the mean of an otherwise stationary sequence, or a single “pulse” that has a permanent effect on the mean value of a unit root sequence. Second, variations in the level of volatility should be observed in the vicinity of the points at which the process takes a sizeable discrete jump. This would result from changes in the incidence of forecasting errors. Immediately after the shock takes place, plans will prove to be wrong and mutually inconsistent in the aggregate. But, as learning reduces errors of expectations and contracts are renegotiated, the conditional variance should tend towards the unconditional one after a period. Likewise, there could be permanent changes in the value of the unconditional variance. This would be the case, for example, if a stabilization programme succeeded in reducing the variability of relative prices by deflating the economy. It is a well-established fact that there is a positive association between inflation and the variability of relative prices.

Some specific phenomena associated with structural breaks and volatility are worth highlighting because they will play a role in our analysis of Argentina. First, as Heymann, Kaufman and Sanguinetti (2001) emphasize, after the occurrence of a positive or negative shock that produces a break, agents will find it very difficult to assess what the “true” growth trend of the economy is and, hence, to decide what their level of expenditure and financial exposure should be. If agents mistakenly assess their true wealth, the allocation of resources across time and states of nature will not be efficient and will generate aggregate inconsistency of plans.

Second, in so far as the real value of assets used as collateral depends on the state of the economy, the change in perceptions about future prospects will influence the conditions of credit markets. Likewise, if the level of volatility changes, the perception of risk will change, as will asset prices, in that they will be negatively related to their conditional volatility. This is especially important if markets are incomplete. Under such conditions risk is difficult to diversify and hedging possibilities are reduced. Hence, if producers are risk-averse, conditional price variability will affect product supply and producers may reduce their exposure by withdrawing from the market in periods of substantial risk. At the aggregate level, if national risk is difficult

to diversify and hedge in international financial markets, higher volatility means higher risk premiums, which in turn affects the allocation of resources and hence growth.

Third, in conditions of volatility and structural breaks, bygones may not be bygones. Past expectations will affect the present to the extent that they are built into the terms of contracts signed in the past which are still in force. If past expectations subsequently prove to be “very” wrong, one of the parties may be unable to meet the terms of the contracts and it will be necessary to redraft them. Hence, when making decisions agents will bear in mind that the probability of being “very” wrong is not nil and also that other agents’ perceptions about the future may change suddenly. *Ceteris paribus*, one would expect that the higher the uncertainty about the “true” shape of the multivariate distribution generating the data in the relevant information set, the shorter contracts will be. In economies subject to pure uncertainty, we should observe a lower average duration of contracts as agents try to hedge against unique “bad jumps” in the economy’s stochastic trend. We should also observe situations of systemic crash in which contracts are violated across the board because of the occurrence of unexpected changes in the economy’s stochastic trend and hence in cash flows and collaterals.

Fourth, liquidity has a premium in conditions of uncertainty because recontracting is costly and the need to recontract is higher as the probability of having wrong expectations rises. We think that this is one reason why, under the highly uncertain circumstances which precede a permanent shock like the launching of a stabilization programme, whose consequences are difficult to disentangle, the “wait and see” or “be flexible and liquid” attitudes will be highly profitable, in so far as the value of the waiting option has higher value. An increase in the preference for liquidity will be the norm.

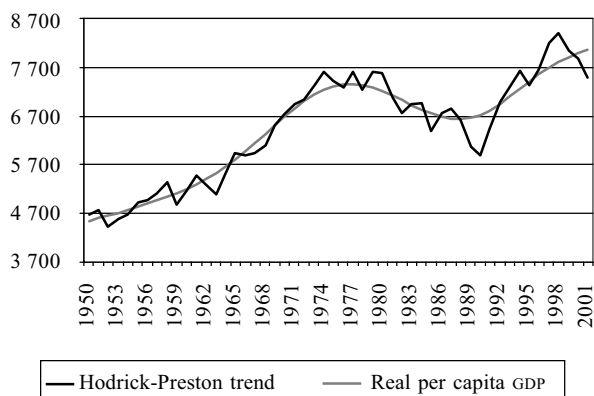
## 2. Trends and macroeconomic instability

Do the time series for Argentina indicate the existence of volatility and structural breaks that could give rise to the kind of instability discussed above? In other words, are there sudden changes in the growth trend and outbreaks of volatility? Is the average duration of contracts affected by macroeconomic instability? Are there interactions between credit conditions, shocks, and aggregate fluctuations? Are there sudden changes in the preference for liquidity?

Figure 1 shows the evolution of the Argentine per capita GDP over the last fifty years and the

FIGURE 1

### Argentina: Real per capita gross domestic product (In constant 2000 pesos)



corresponding Hodrick-Preston trend. As can be seen, the average growth rate is low and the trend shows marked changes associated with macroeconomic and financial crises and/or regime changes (1975-1976; 1980-1981; 1988-1989; 1991; 1999-2001). Likewise, major events inducing sharp “kinks” in the activity level and discontinuous jumps in the growth rate are frequent. If we compared this time series with that of a typical OECD country, we see that Argentina shows more ups and downs and that major events are more frequent. In fact, this stylized fact is not peculiar to Argentina. Easterly, Islam and Stiglitz (2000), show that non-OECD countries are far more likely to experience GDP growth downturns than industrial economies. They maintain that non-OECD countries experience a downturn 22% of the time, while OECD countries are in a downturn just over 9% of the time. The frequency of downturns in Argentina (36%), however, is well above the average for the developing countries.

It is interesting to note that the 1975 crisis represents a key breaking point concerning instability and economic policy. From that year on, Argentina definitively abandoned its rather fruitless import substitution strategy and its economic policy approach became much more market-friendly. The level of volatility is very different before and after this point (table 1). Between 1950 and 1974 the probability of a downturn was more or less in line with that corresponding to developing countries in general (21%). In the 1975-2001 period, however, this probability increased to 52%, which means that per capita GDP fell in more years than it grew. As a consequence, the average per capita GDP growth rate is

TABLE 1

**Argentina: Inflation and growth instability, 1950-2000**

	1950-1974	1975-2000	1950-2000
Average inflation rate (CPI) <sup>a</sup> (%)	24.30	94.70	60.90
Coeff. of variation of relative prices (WPI/CPI) <sup>b</sup>	0.08	0.34	0.27
Average growth rate of per capita GDP (%)	2.02	0.13	1.04
Frequency of downturns (%)	21.00	52.00	36.00
Coeff. of variation of per capita GDP growth rate	2.08	37.27	4.55

Source: Based on data from ECLAC, 1998 and 2002.

<sup>a</sup> CPI: consumer price index.

<sup>b</sup> WPI: wholesale price index.

much lower, while the coefficient of variation has skyrocketed. Likewise, even though the second period includes the 10 years of convertibility, during which inflation was very low, the inflation rate and relative price variability were significantly higher in this second period. Very large downturns and steep accelerations of inflation, however, are to be observed in both periods.

Owing to the abundance of jumps and major events, this dynamic behaviour has been called a “stop-and-go” pattern of growth. One characteristic of the stop-and-go pattern is that all macroeconomic aggregates tend to show marked variability; the volatility of Argentine investment, consumption and GDP growth is high even if we take developing countries as the standard of comparison. Table 2 shows the volatility of these variables in Argentina and in similar Latin American countries.<sup>4</sup>

Notice that consumption growth is more volatile than GDP growth. This suggests the existence of important failures in capital markets which obstruct consumption smoothing, and that the welfare costs induced by market failures in financial markets may be significant. It also indicates that Argentina faces severe constraints as regards diversifying national risk.

Periods of tranquility and turbulence can also be identified in the Argentine economy. Outbreaks of volatility are especially apparent in the relative price series. To illustrate this point, figure 2 shows the evolution of the real exchange rate (RER) over the last 25 years.<sup>5</sup> Note, first, the relationship between breaks and volatility: sharp upward jumps in the real exchange rate are followed by variations in the volatility level. In

<sup>4</sup> For more evidence on this issue, see IDB (1995)

<sup>5</sup> RER is defined as the US wholesale price index times the nominal exchange rate over the Argentine wholesale price index.

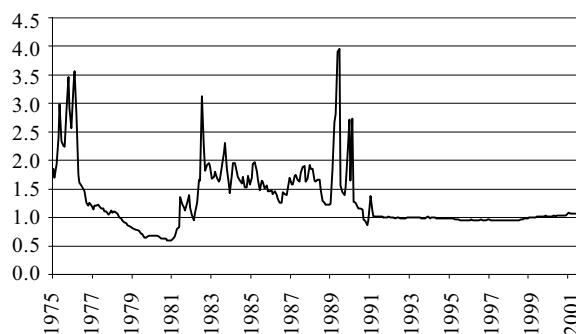
TABLE 2

**Argentina: Volatility of macroeconomic aggregates**

Country	Coefficient of variation		
	Investment growth	Consumption growth	GDP growth
Argentina	7.1	2.4	1.8
Brazil	2.4	0.9	0.9
Chile	2.6	2.3	1.1
Mexico	3.5	1.0	0.9

Source: Based on data from World Bank, 1999.

FIGURE 2

**United States and Argentina: Real exchange rate (WPI) in January of each year**  
(Index, 1993 = 1)

a more formal analysis using ARCH and GARCH models,<sup>6</sup> Fanelli and Rozada (1998) showed that the variance of the real exchange rate presents conditional heteroskedasticity: that is, the conditional variance depends on the past realizations of the error process

<sup>6</sup> ARCH = Autoregressive Conditional Heteroskedasticity. GARCH = Generalized Autoregressive Conditional Heteroskedasticity.

and hence “big” errors induce “big” variance in the neighbouring observations. A second characteristic is that jumps in the real exchange rate and radical changes in volatility tend to be associated with regime changes. The more marked jumps tend to coincide with the sudden end of currency pegs of some type or other after balance of payments crises with significant capital flight. Such regime changes (in 1975, 1981, 1989 and 2001) were associated with major swings in economic policies. The two periods of lowest volatility in the series correspond to systems where the exchange rate was used as the nominal anchor: the “tablita” of 1978-1981 and the decade of convertibility (1991-2001). We interpret this as evidence that the monetary and exchange rate regime may not be neutral: different regimes will have dissimilar effects on the real side (Fanelli and Heymann, 2002).

The importance of regime changes is also suggested by the studies on Mercosur. During the 1990s, the transmission of macroeconomic impulses between the Mercosur countries grew more important as the volume of trade expanded, starting from quite low levels. Thus, the bilateral real exchange rate with Brazil became an increasingly significant variable for Argentina. Chudnovsky and Fanelli (2001) examined the properties of the series, using GARCH models, and found significant volatility in the variable, with strong effects of regime changes such as the launching of the Argentine convertibility system in 1991 and the flotation (cum devaluation) of the Brazilian currency in 1999.

Instability of the real exchange rate compounds with variations in real GDP to determine wide fluctuations in the dollar value of GDP. The coefficient of variation of the Argentine real GDP in constant dollars is almost twice the coefficient corresponding to the real GDP in constant pesos (0.66 and 0.36, respectively). The contribution of the tradeable and non-tradeable sectors to the variance, however, is very different, the fluctuation in the dollar value of the non-tradeable sector being much higher. Figures 3 and 4 show the evolution of total output, tradeables and non-tradeables in constant dollars and pesos. Note the sizeable and increasing gap between the dollar value of tradeables and non-tradeables under convertibility (1991-2000) and also under the “tablita” (1978-1981). It would appear that the dollar value of non-tradeables tends to inflate under systems that peg the nominal exchange rate. The appreciation in the dollar value of non-tradeables, however, disappears together with the peg systems. This may be a source of financial fragility if,

FIGURE 3

**Argentina: GDP and tradeable and non-tradeable goods**  
(In millions of constant 2000 dollars)

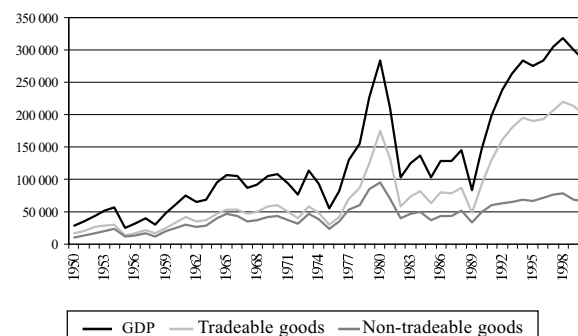
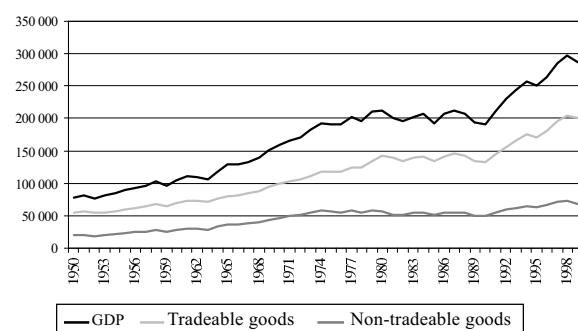


FIGURE 4

**Argentina: GDP and tradeable and non-tradeable goods**  
(In millions of constant 2000 pesos)



under a peg system, inflated non-tradeable productive assets are used as collateral by firms to demand dollarized credit in the domestic banking system and/or in foreign credit markets.

We have already pointed out the higher macroeconomic instability of the 1975-2001 period. Figure 3 clearly shows that the fluctuation in the dollar value of GDP, and particularly in the dollar value of non-tradeables, is wider in this period. This fact may also have a bearing on the recurrence of financial crises in the last twenty-five years. For one thing, unlike the 1950-1975 period, when capital flows were not very significant and dollarization unknown, from the late 1970s on capital movements became increasingly important as Argentina began to open its capital account. At the same time, there was a persistent tendency for the domestic financial instruments to be denominated in dollars. Consequently, firms producing products with highly volatile dollar prices faced a



gradual disappearance of peso-denominated credit instruments. We are not implying by this that a simple causal relationship exists between capital account liberalization, dollarization, and instability. Rather, we wish to stress the perverse interactions that may take place in such a context.

Fanelli and Heymann (2002) stress that, in a highly dollarized economy such as Argentina, this fact may severely affect financial stability. The difficulty in determining sustainable levels of spending can lead to a deterioration in the quality of decisions (Heymann, Kaufman and Sanguinetti, 2001): with a shifting trend, agents may realize at some point that their expenditures have been in fact highly pro-cyclical and that they had been “living beyond their means”. The problem of identifying permanent incomes cannot be bypassed when making decisions dealing with production, spending, and asset holding. In post-1998 Argentina, the realization that wealth estimates had been exaggerated caused an extremely traumatic adjustment which culminated in the current crisis. The system of mostly dollarized financial contracts that developed under the convertibility monetary regime was highly vulnerable to fluctuations in the dollar value of incomes. This resulted in the breakdown of contracts, which was itself a source of economic disorganization to the extent that it triggered a financial crisis. Likewise, we must consider that, for an indebted country with a dollar-denominated debt, the dollar value of its GDP is relevant because it is utilized in the assessment of the country’s ability to pay, generally in the light of the debt/GDP ratio. To the extent that the dollar value of GDP directly affects creditworthiness, there is a linkage between the expected trend of a country’s income expressed in dollars and the evolution of the country risk premium. The abandonment of convertibility in December 2001 and the ensuing steep depreciation of the peso revealed that dollar incomes were going to be much lower than expected.

### 3. Contract maturities and financial deepening

According to the hypothesis on micro-macro interactions that we discussed above, the stop-and-go pattern and the changing level of volatility should have permanently affected the agents’ behaviour and, hence, should have induced structural innovations in the economic system. In this respect, an important effect of the macroeconomic instability was that it induced changes in key aspects of the terms of contracts. During the long period of high instability which began in 1975,

it is possible to detect substantial changes in the maturities, currency denomination and risk characteristics of contracts. This has had permanent and non-neutral effects on the economy, which are vital for understanding the current situation.

In the case of Argentina, it is a very well documented fact that the maturity of contracts is affected by changes in inflation and volatility, as well as by changes in the monetary regime. Specifically, after the inflationary spurts in 1975 and 1989, there were significant across-the-board permanent shrinkages in contract duration in the goods, labour and financial markets. Although maturity length increased somewhat in the period of low inflation under convertibility, the phenomenon of contract shrinkage has proved to be very persistent.

Some of the evidence of the preference for flexible short-term contracts has to do with studies on purchasing power parity. In the case of developed countries, the purchasing power parity property does not hold in the short run but seems to apply after a long adjustment period; there is no evidence of this behaviour for developing countries due to lack of data (Froot and Rogoff, 1995; Edwards and Savastano, 1999). In the case of Argentina and Brazil (perhaps because of the comparatively weaker price inertia in economies with inflationary experience) the variance around the mean is larger than for other economies, but the deviations have smaller mean durations. In fact, the presence of a unit root is rejected more easily for the Argentina-Brazil bilateral real exchange rate than it is for the exchange rates of developed countries (Chudnovsky and Fanelli, 2001). In other words, the historical experience shows a bilateral exchange rate that has varied a great deal, but does not seem to have a “permanent” drift. This suggests that contracts are shorter in conditions of high volatility.

The relationship between macroeconomic instability and contract duration can also be detected by examining financial intermediation. After years of very high inflation, in 1990 the M3/GDP ratio was around 5% and the maturity of credits and deposits was extremely short. The fall in inflation and volatility under convertibility stimulated financial depth and the lengthening of contracts, although the process was slow. In 2000, after nine years of convertibility, the average maturity of 70% of the banks’ assets and 82% of their liabilities was less than 90 days. These developments were not firmly rooted, however: the current financial crisis is completely erasing the positive financial developments of the 1990s, and indeed the run on the banks was facilitated by the short duration of deposits.

In fact, low financial depth has been a permanent problem in Argentina, and the history of macroeconomic instability and repeated financial crises has greatly contributed to this result. Lack of financial depth is a source of inefficiency and a deterrent to growth, as some firms may forgo profitable opportunities because they do not have fluent access to credit markets and because of financial market failures. Likewise, when financial failures are pervasive, macroeconomic fluctuations affect the financial position of the firms, making it very difficult to manage risk and the consequences of cyclical downturns.

The results given in Fanelli, Bebczuk and Pradelli (2001) support this hypothesis. They used a panel of Argentine limited companies and GMM estimations<sup>7</sup> to trace the effects of financial market imperfections and the macroeconomic variables on the investment process and the firm's financial structure. To examine the importance of macroeconomic disequilibria and financial deepening they introduced the country risk premium and the private credit/GDP ratio, respectively. They estimated two financial structure equations in which the dependent variables were the proportion of long-run debt and the proportion of dollar-denominated debt, respectively. Regarding financial development, the hypothesis states that increasing financial deepening and capital inflows increased the credit supply in the 1990s, thus allowing firms to increase their leverage after a long period of tight rationing. They found that both the macroeconomy and financial deepening are important for debt composition in terms of the maturities and currency denomination of contracts. Specifically, the country risk coefficient is significant and negative (implying a negative association between the proportion of long-term debt or dollar denominated debt and the country risk), while the influence of the credit/GDP ratio is significant and positive. In these two financial structure regressions, the variables that reflect information and agency problems, such as firm size and tangibility, also have a significant effect. With regard to the investment equation, cash flow and the country risk are also significant. In sum, this suggests that financial imperfections matter and that there is a direct link between aggregate variables and decisions at the micro level.

The coexistence of free capital mobility and lack of financial deepening may be a source of macroeconomic and financial uncertainty, as

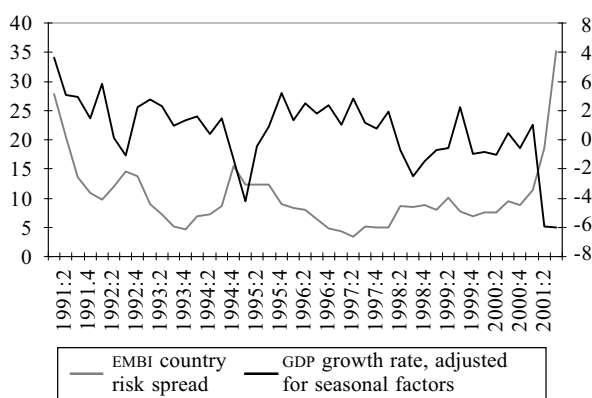
international capital flows into "emerging" countries are far from stable. At the same time, the tools available to the authorities for smoothing the consequences of sudden changes in the intensity and direction of flows are rather limited. In the case of Argentina, under convertibility and free capital movement, there was a close association between capital flows, the generation of credit, and the activity level. After late 1998 this association resulted in a perverse macroeconomic dynamic that ultimately led to external and domestic default.

Under convertibility, external shocks, both positive and negative, influenced the cost of domestic credit. In this regard, the main link between external and domestic credit markets was the country risk premium. Changes in the conditions in emerging countries' capital markets and/or in the domestic macroeconomic scenario were reflected immediately in changes in the country risk premium. The volatility of domestic and external conditions thus affected the cost of credit and aggregate demand. Figure 5 shows the evolution of the country risk premium as measured by the EMBI spread and compares it with the economy's quarterly rate of growth. Both variables show high volatility, and there is a marked and negative relation between changes in the country risk premium and changes in the quarterly GDP growth rate.

Another important feature is the close association between the supply of credit and the activity level. Indeed, given the capital market imperfections, it seems plausible that changes in the availability of credit do matter for the level of activity. Using an error correction model, Fanelli and Keifman (2002) found results that are consistent with the hypotheses of a relevant positive association between credit and output in the short run and a negative correlation between the country risk premium and the evolution of the macroeconomy.

FIGURE 5

**Argentina: Country risk and economic activity**



<sup>7</sup> GMM: Generalized Method of Moments.

### III

## Asymmetries, rigidities and dynamic effects as sources of instability

Developing countries tend to be volatile, but the evidence analysed suggests that Argentina is more volatile than one would expect on the basis of its per capita GDP. We do not have any a priori elements for assuming that the shocks hitting the Argentine economy are inherently more volatile than those hitting similar developing countries (although it could be maintained that the specific sequence of shocks in 1998-1999 made this period particularly tense). This means that we should look for internal sources of instability. The best candidates are, on the one hand, features of the economic structure (rigidities, asymmetries) that may amplify the impact of shocks and, on the other, dynamic and feedback effects that may leverage shocks such as fluctuations in terms of trade, fiscal impulses, or sudden reversals in capital flows.

In this paper we will concentrate on two issues. Firstly, we will analyse a number of structural aspects which have played a crucial role in amplifying the shocks that preceded the fall of the convertibility regime and helped to generate the current state of economic disorganization: i) the asymmetries in Argentina's integration with world trade and financial markets; ii) the constraints imposed by nominal and fiscal rigidities and differences in the speed of adjustment of key variables, and iii) the lack of financial depth and the phenomenon of dollarization. Secondly, we will analyse the sequence of shocks in 1998-1999.

#### 1. Asymmetrical international integration

Argentina's integration with the world economy shows two fundamental asymmetries between the real and the financial side. First, while the economy's degree of trade openness is very low, its openness to capital flows is much higher. Second, trade flows between Argentina and the United States are very low, but the bulk of Argentina's external debt is denominated in dollars and domestic financial intermediation is largely dollarized. An additional asymmetry and possible source of instability is that the public sector is heavily indebted, while the private sector holds substantial amounts of foreign assets.

FIGURE 6

**Openness: Latin America, Argentina, Brazil, Chile and Mexico**  
(Exports and imports as a percentage of GDP, at market prices)

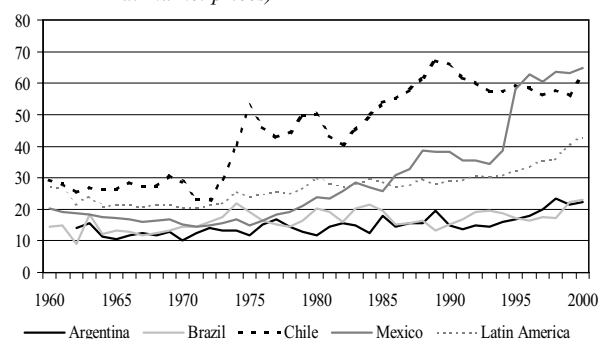


Figure 6 shows the openness of Argentina, other selected Latin American countries, and the region as a whole. Argentina's coefficient of openness, as measured by the relationship between exports and imports and GDP, is one of the lowest in Latin America. This can be partially explained by the fact that the country followed a strategy of import substitution industrialization for a long period. However, it is also true that the structural reforms of the 1990s aimed at opening up the economy, including participation in a regional agreement (Mercosur), did not have much success either. An important fact connected with Argentina's low degree of openness is that the country's relative factor proportions determine that the country's comparative advantages are in the "wrong sectors". In other words, the possibility of fully exploiting its "natural" comparative advantages in agricultural products is severely limited by the mercantilist agricultural policies implemented in the developed world. Another factor that is not favourable to openness is that its most important neighbour and partner, Brazil, is a rather closed economy while Latin America as a whole is also a relatively closed region.

The picture is completely different if we look at capital movements in terms of both stocks and flows. In the 1990s, when the capital markets were open to

the country, Argentina was a privileged recipient of foreign direct investment and capital inflows (see table 3). As a reflection of this access, the external debt/GDP ratio is one of the highest in the region. In a sense, one could say that the developed countries acted irrationally: they lent heavily to a country whose products they did not want to buy. It was only to be expected that a country facing severe protectionism should have problems in meeting its financial obligations.

This asymmetry between the real and the financial side is a source of financial instability because the economy is highly leveraged in terms of tradeables. If we use the foreign debt/exports ratio as a proxy of this leverage, it is clear that Argentina is overly leveraged. Table 4 shows the ratios corresponding to Argentina, Brazil, Chile, and Mexico. The Argentine ratio is the highest of all and showed an upward trend in the 1990s, in spite of the privatization process which helped to finance the external disequilibrium without augmenting the external debt. Note the highly positive evolution of this indicator in the case of Mexico after the signing of the North American Free Trade Agreement (NAFTA). Regional integration with the US resulted in a much higher coefficient of openness, and the agreement also helped to increase FDI flows. Hence, Mexico's external debt did not increase after the "Tequila Effect" and the country financed its current account deficit from FDI flows. This suggests a secure and sustainable way of reducing external overexposure and financial instability.

Although Argentina's degree of integration with capital markets was much higher in the 1990s, it was also highly imperfect. One important characteristic was the instability of the flows, which were affected by contagion and sudden stops. The incidence of these factors was critical during the "Tequila effect" and after the Russian crisis. Another flaw of the Argentine integration is that the country did not substantially improve its capacity to diversify the national risk. We have already called attention to the high volatility of aggregate consumption. Fanelli (2000) also gives evidence on the lack of correlation between Argentina's and the world's consumption (as proxied by United States consumption).

Difficulties in managing national risk create a link between macroeconomic uncertainty and the demand for foreign exchange. In the case of Argentina, "bad" macroeconomic states of nature are typically characterized by a steep depreciation of the currency and recession. Low consumption situations correlate positively with high real exchange rates. Hence, under

TABLE 3

**Argentina: Financial flows in the 1990s**  
(Annual averages, as a percentage of GDP)

	1991-1995	1996-2000	1990-2000
Foreign direct investment	2.4	3.1	2.8
Increase in foreign liabilities	3.6	4.2	3.9
Increase in foreign assets	3.2	2.8	3.0
Current account deficit	2.5	3.9	3.0
Accumulation of reserves	0.3	0.8	0.6

Source: Prepared by the author on the basis of data from ECLAC, 2002.

TABLE 4

**Latin America (four countries): External debt/exports ratio**

	1980	1985	1990	1995	2000
Argentina	3.4	5.9	5.1	4.7	5.5
Brazil	3.2	4.1	3.9	3.4	4.3
Chile	2.4	5.4	2.2	1.4	2.1
Mexico	2.8	3.7	2.6	2.1	0.9

Source: Based on data from ECLAC, 2002.

incomplete markets, agents demand foreign assets as a hedge against this "bad" situation. It follows that the desire to cover open foreign exchange positions augments, especially when "pure" uncertainty increases.

The role of the foreign assets held as a hedge by residents can be traced in the balance of payments and the country's net financial position. The attempt to obtain hedging cover is reflected in the fact that Argentina's net external indebtedness is very low. Argentina, as a whole, is not a heavily indebted country: foreign assets in the hands of the private sector represent around 75% of the stock of external debt, which is largely held by the government. This relationship between the stocks of assets and liabilities is consistent with the evolution of the balance of payments capital account in the 1990s. Table 3 shows that in this period the flows of financial assets and liabilities were very similar, which means that FDI flows would almost have been sufficient to finance the disequilibria in the current account. This suggests that there is a purely financial dimension in the "debt problem" that has more to do with risk hedging and moral hazard (see below) than with the demand for foreign savings to finance domestic investment. In net terms, the increase in foreign debt

went to finance asset accumulation and not real investment.<sup>8</sup>

This picture of stocks and flows seems to be at odds with the picture of the present financial crisis. One main cause of the crisis was the existence of large positions in foreign exchange that were not effectively covered. This is true. But there are several factors that must also be considered. First, it must be taken into account that it was not the private sector but the government that had the largest uncovered position. Second, there may have been a moral hazard problem. Many firms that were heavily indebted in dollars may have assumed that in the event of a generalized crisis originating in an abandonment of the currency board system the government would implement a “pesification” of dollar liabilities. Indeed, *ex post* they were right. Third, mismanagement of risks may have played a role. Specifically, bank managers may have ignored the phenomenon of risk migration from currency risk toward credit risk.

## 2. Rigidities and dynamic and financial effects

It seems that open economies are more volatile but grow faster (Easterly, Islam and Stiglitz, 2000). Argentina, however, is rather closed, grows little, and is volatile. We will now briefly examine some rigidities and dynamic and financial effects that may have had a bearing on this and played an important role under convertibility.

Typically, the market imperfection that breaks neutrality and incorporates monetary problems into the analysis is some kind of rigidity in the adjustment of nominal prices. When these are inflexible, monetary policy can have a real impact not only on aggregate demand but also on the real exchange rate<sup>9</sup>. We have already noted that price rigidities certainly help to explain the high volatility of the observed real exchange rate (see figure 2).

Easterly, Islam and Stiglitz (2000), however, call attention to two points that have not been sufficiently emphasized. First, there are the differences in adjustment speeds, as well as the distributive effects that arise from price changes, especially those against which individuals cannot be insured (reflecting

incomplete markets). Under these circumstances, the income effects can overwhelm the substitution effects arising from price changes. Second, there are the dynamic effects arising from firms’ and financial institutions’ wealth and cash flow constraints.

Income and financial effects are relevant in the Argentine case. This was especially evident in the interactions between fiscal adjustment, tax collection, and the activity level from 1998 on. At the beginning of 2000, when the economic recession was well under way, the new administration made important efforts to reduce the fiscal deficit. They assumed that reducing the deficit would restore confidence and foreign investors would bring the much-needed funds. However, the results tended to be just the opposite. Tax collection did not increase and the economy went into an even deeper recession. This kind of destabilizing effect is typical of the Argentine economy and is generated by the conjunction of strong income effects and the pro-cyclical behaviour of capital markets. Everyone would agree that it is not very wise to increase taxes during a downturn and that the income effects of tax increases should be avoided. In order to avoid adjustment during a downturn, however, the government must be able to finance the deficit, and this was not the case in Argentina in 2000. Obviously, the best way out is to maintain prudential fiscal policies. For example, one of the main sources of the budget disequilibrium was the poorly-designed reform of the social security system, which generated a sizeable deficit. The excesses committed during the electoral process in 1998-1999 were also important. In this regard, one negative feature of the convertibility system was the assumption that a currency board would automatically discipline the government: the government could not print money, and the markets would not lend to governments with soft fiscal policies. These arguments, however, ignored the possibility of errors of expectations by those participating in the markets, and this does not seem prudent in the context of a volatile economy.

Concern with firms’ and financial institutions’ balance sheets is also warranted in the Argentine case. Credit conditions can react quickly to changes in investors’ perceptions, and the way overall volatility and national risk evolve is therefore highly relevant. The evidence in Fanelli, Bebczuk and Pradelli (2001) shows that when the macroeconomic setting worsens there is simultaneously a shift toward demand for foreign exchange and a mounting demand for short-term financing. Hence, economic downturns create pressures on foreign exchange and

<sup>8</sup> Note that the same happened in Chile, a country whose economic policy is of much better quality than Argentina’s.

<sup>9</sup> In the literature on developed countries this imperfection is supposed to be the most relevant empirically (Basu and Taylor, 1999; Taylor, 2000).

financial markets both inside and outside the country. When the exogenous macroeconomic shock is strong enough, this combination of events can trigger so-called “twin crises”, which is what did in fact occur in Argentina.

Negative shocks reduce firms’ net worth, increasing the probability of financial distress. A regression exercise shows that a one-percentage-point increase in the country risk premium reduces the value of firms listed on the Buenos Aires Stock Exchange by 2.2 percentage points (Fanelli, 2000). Under such circumstances, creditors react by shifting their demand toward assets with short-term maturity, in order to better monitor the behaviour of debtors and because the liquidity premium rises in uncertain environments. But if we assume that the duration of assets is somewhat constant throughout the cycle, then when debt maturities are shortened, the firms’ financial position further deteriorates and default becomes more probable. This increase in risk is perceived by creditors as an upward movement in the costs of financial distress (if we calculate these costs as the probability of default multiplied by its cost). Under these circumstances, a logical result is that creditors will try to shorten maturities to better monitor and discipline debtors. If this reasoning holds, there are endogenous factors which tend to reduce maturity and increase financial duress during recessionary periods.

The phenomenon of risk migration is closely related to this issue. Risk tends to migrate in the financial system because hedging does not reduce systemic risk. It only transfers the exposure elsewhere or transforms the type of exposure. This is very important in the case of Argentina. When the level of perceived systemic risk increases, banks hedge against currency risk and seek better matching of the duration of assets and liabilities. The counterpart of this is that firms’ liquidity falls and the maturities of their liabilities shorten during downturns. This augments the firms’ vulnerability, increasing counter party risk. The ultimate effect of the banks’ attempt to hedge is that risk migrates from currency risk to credit risk. And the greater the amount of risk mitigation by banks, the more likely it is that unforeseen losses will migrate quickly from one market to another. As risk migrates through the system it tends to emerge in its most basic form, as credit risk (Kimbal, 2000). When one takes into account the phenomenon of risk migration and its effects on bank solvency, the argument of Calomiris and Powell (2000) about market discipline seems weaker. They argue that tight credit supply during a downturn is a sign of the

financial system’s strength, because tight credit supply in the face of a recession and high loan losses is precisely what one would expect from a banking system that is subject to market discipline. The Argentine case, however, suggests that in the context of a generally weak economic system, the financial sector does not become more healthy if it simply transfers its risk to firms, because this too rebounds on it.

### 3. Simultaneous shocks and financial fragility

We have already drawn attention to the striking differences in the economic performance of Argentina between the 1991-1998 and the 1999-2000 periods. The breaking point can be situated in the third quarter of 1998, when the current prolonged recession began. The various external shocks that hit the economy hard in 1998-1999 played a decisive role in this. Any of these shocks would have been enough to induce significant macroeconomic imbalances, but the fact that they occurred almost simultaneously compounded their effects and the economy was ill prepared to absorb them and manage the consequences. We already identified weaknesses in the economic structure and dynamic mechanisms that may have substantially amplified the impact of the shocks.

Another factor that helped to aggravate the downturn and exacerbated financial fragility was the poor quality of economic policies in a context of political instability. The counter-cyclical instruments in the hands of the authorities were rather limited, so it is clear that Argentina would have suffered a substantial recession under any post-shock scenario. But the point is that the available instruments were not used efficiently, and the influence of political factors was a determinant in this regard. In the pre-election 1998-1999 period the authorities followed inconsistent fiscal policies which resulted in public sector over-borrowing, a disarray in the relationship between the federal and provincial governments, crowding out of the private sector, and rising financial stress. The policies implemented by the politically weak administration that took office in December 1999 did nothing to correct the situation.

The appreciation of the dollar and the global financial crisis of 1998-1999 played a critical role in generating the shocks, since they triggered various events that negatively affected the Argentine economy (table 5).

Under convertibility, the appreciation in the dollar directly affected the competitiveness of Argentine

TABLE 5

**Argentina: The 1998 – 1999 crisis**

Fall in the terms of trade (percentage variation)	11.1
Fall in export prices (percentage variation)	20.0
Fall in exports to Brazil (percentage variation)	30.0
Real devaluation of the Brazilian real vis-a-vis the Argentine peso (wholesale price index)	18.4
Appreciation of the US dollar vis-a-vis the euro (per cent)	10.0
Net capital outflows (as a percentage of GDP, excluding FDI)	1.4
Increase in public sector interest payments (as a percentage of GDP)	1.0

Source: Based on ECLAC data.

exporters because the bulk of the country's exports do not go to the United States. As the Argentine peso was pegged to the dollar, a strong dollar meant an overvalued peso. The strong dollar had another important consequence. In 1998, Brazil was using the nominal exchange rate as an anti-inflation device and the real was more or less pegged to the dollar. Under such circumstances, the stronger dollar increased pressure on the Brazilian real exchange rate and the country ultimately adopted a floating system in January 1999. With the marked depreciation of the Brazilian real, it was much more difficult for Argentina to compete with that country's exports, and this was aggravated by the fall in domestic global demand in Brazil. Thus, Argentine exports fell substantially in the two years following the devaluation (table 5). The asymmetry between the direction of trade flows (toward Europe and Mercosur) and financial flows denominated in dollars also played a role. As table 5 shows, the deterioration in the terms of trade was accompanied by a fall in the nominal value of export prices. *Ceteris paribus*, this increased the real debt burden in terms of Argentine exports and deteriorated the debt/exports indicator. Argentina's creditworthiness was affected by these developments in that the country's solvency was put under severe scrutiny.

In the period that began with the Asian crisis, and especially after the Russian episode, the interest rates that Argentina paid to its foreign and domestic creditors increased substantially. Table 5 shows that government interest payments augmented by one percentage point of GDP in 1998-1999. However, this was only the beginning, for in 2000, the interest burden was to reach

3.3% of GDP (compared with 1.8% in 1997). Likewise, net capital inflows fell by more than one percentage point of GDP. Soaring interest rates and tight liquidity constraints quickly eroded the country's solvency.

Argentina's level of debt was not high in terms of GDP, this ratio being 43% in 1997, which was in line with Latin American standards. Other Latin American countries which were similar to Argentina in this respect did not default on their external commitments, but this fact does not take account of the role played in Argentina by some of the structural destabilizing mechanisms discussed earlier, namely, the elevated debt/exports ratio -which was increasing because of the fall in exports- and the fact that investors may have anticipated that the dollar value of GDP and, hence, government revenues, would plunge if the convertibility system were abandoned. Under these circumstances, macroeconomic disequilibria triggered feedback effects. As the likelihood of devaluation grew, borrowers had to offer higher interest rates to compensate lenders for the increasing credit risk. The increase in interest rates, in turn, helped to raise the risk of default, which led in turn to even higher interest rates and so on.

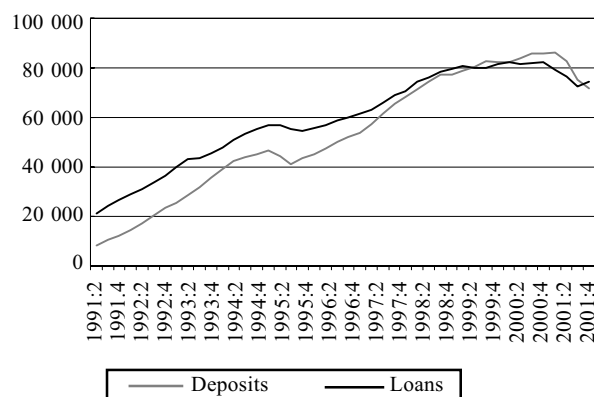
Although these dynamics represented an increasing threat to the banks' financial position, in the first stages of the crisis the banking system was able to cope with the pressures quite well. After the Tequila Effect, bank reserves increased substantially and tighter prudential regulations based on the Basle Accords were implemented, which resulted in stronger bank capitalization (11.5% of assets at risk). But even bank assets of reasonable quality and liquidity can deteriorate seriously when the economy experiences a stubborn recession in which risks migrate and financial contracts tend to be short.

As "pure" uncertainty about the future rose steadily in 2001 -hand in hand with the increasing likelihood of a regime change and the deepening of the recession that was deteriorating the banks' assets- depositors rushed to cash their deposits. In 2001, total deposits in the financial system fell by 16%, and this gave rise to mounting liquidity problems, in spite of the high reserves ratio and the strong capitalization of private banks at the beginning of that year. Figure 7 shows the evolution of deposits and credit under convertibility.

Another disturbing consequence of the continuous deepening of the crisis was the persistent deterioration of the budget equilibrium. To a certain extent this was an endogenous consequence of the recession-driven fall in government revenues. In mid-2001 the tight international and domestic credit rationing obliged the

FIGURE 7

**Argentina: Deposits and loans**  
(Millions of pesos)



government to launch a “zero deficit” policy which quickly failed. As a consequence of this failure, the IMF refused to disburse the funds corresponding to a previous agreement, and under these circumstances, the government had no choice but to default in January 2002.

In December 2001, several banks showed an unsustainable liquidity position, while the deposit drain accelerated. To stop the drain, the government implemented the so-called “*corralito*”, which

prohibited the withdrawal of deposits from the banking system, although it was possible to transfer deposits between banks. There was, however, an ongoing “trickle-down” of liquidity from banks because some depositors found legal ways to overcome the prohibition and the *corralito* did include some exceptions (the so-called wage accounts). The restrictions were later tightened in order to restrain liquidity and stop the continuous depreciation of the peso, but the authorities were only partially successful in this.

Another key initiative for handling the crisis was the “pesification” of private credits. The stock of private credit in the banking system is now denominated in pesos and partially indexed to inflation. Pesification created a sizeable gap between the value of the banks’ assets and that of their liabilities, and in practice this completely eroded the banks’ net worth. The situation is currently at a sort of standstill. Private banks are claiming compensation for the effects of pesification, while the government intends to replace the deposits in the *corralito* with government and bank bonds. In this context, the credit supply has evaporated and it is extremely difficult to finance working capital, not to mention investment. There are also huge problems in restoring a fluid payments system. In sum, after the implementation of the *corralito* and the adoption of a floating system, the economy is experiencing severe financial, fiscal, and inflationary problems.

## IV

### Final remarks

Argentina has no choice but to face the future. If we assume that the government’s or the IMF’s actions are not completely useless for dampening the effects of shocks and crises, we must conclude that better domestic policies could be designed and that a deeper involvement by the multilateral organizations would greatly help Argentina. Better policies could save Argentina from more destruction of its productive capacity than is strictly necessary and could prevent its population from continuing to sink below the poverty line.

Although the obstacles may appear insurmountable at first sight, on the basis of our analysis we can make educated conjectures on the sequence of policies that

the country should follow in order to restore macroeconomic and financial stability. We will discuss four steps in this respect.

The imposition of the “*corralito*”, the debt default, and the depreciation of the peso induced an across-the-board failure to respect contracts and property rights. This fact, together with the acceleration of inflation and the sudden change in relative prices, exacerbated the situation of pure uncertainty. Given the link between uncertainty and the demand for foreign assets that we discussed above, these events have been continuously pushing the demand for foreign assets to the right, resulting in a combination of repeated reserve losses and exchange rate overshooting. The authorities are



therefore now facing the dilemma of letting inflation skyrocket or letting the reserves drop to zero.<sup>10</sup>

The **first step**, then, is to attack the uncertainty which is at the heart of this dilemma. In order to reduce uncertainty, it is critical to restore and reinforce the institutional and contractual infrastructure that collapsed after the fall of the currency board. Under fuzzy property rights it makes no sense to invest efforts if it is not clear who will have the right to claim the future return of assets. In this sense, a minimum level of institutional order is crucial for the activity level to recover. This is no exaggeration. The Argentine financial system is in a mess. Nobody can tell what the value of the banks' assets and liabilities is. The contracts of newly-privatized firms supplying basic services like water, energy and communications need to be renegotiated after the abrupt change in relative prices; indeed, some of these firms have defaulted on their debt obligations. The government has also defaulted on its external debt, as have a good part of private agents. In addition, the law regulating bankruptcy is now being changed. This suggests that institution-building and transparency are key inputs to any consistent economic policy.

Undoubtedly, the place to begin with the reconstruction of institutions and the macroeconomy is the financial system. To avoid hyperinflation it is necessary to stop the Central Bank from assisting the banking system. The banking system is of crucial importance for restoring the payments system, for financing working capital, and for advancing towards a more precise definition of property rights. The restructured banking system will nevertheless not be able to generate a substantial supply of credit, however, for it will have only limited scope for action. This means that Argentina will have to develop other capital market segments. Nonetheless, in the current situation the priority must be to restore the capacity to provide basic services associated with transactions and working capital.

The restructuring of the banking system is no easy task from the political point of view. Under the present circumstances the government cannot afford to bear the

full costs of the financial crisis, as it did in previous financial crises. This suggests two sine-qua-non conditions for solving the crisis. First, the costs of the restructuring must be shared by taxpayers, banks and depositors alike. Second, the financial position of the public sector is so weak that it will not be able to implement a credible restructuring operation without some sort of explicit and active external support.

If the government succeeds in eliminating the *corralito* and avoiding hyperinflation at the same time, it is likely that both the nominal exchange rate and the activity level will stabilize. If this happens, it might be possible to take a **second step**: to focus on the stabilization of public revenues and the negotiation of a new agreement with the provinces.

The **third step** towards stabilization should be to consolidate a sounder monetary and exchange rate regime. This is crucial for restoring the ability to make contracts. The economic system needs a nominal anchor for denominating contracts. Under conditions of instability in the demand for domestic assets, it seems reasonable to concentrate on stabilization of the inflation rate.<sup>11</sup> In any case, if the country avoids dollarization, the "monetary regime" in the near future will be characterized by more or less "dirty" management of the exchange rate, probably including capital controls.

One of the main policy goals should be to avoid "big" mistakes in the management of the exchange rate or the design of the exchange rate regime. Argentina's goals should be modest but firm in this respect: The country should avoid economic policies that combine a rigid exchange rate system, external over-borrowing, and fiscal flaws, as was the case of the "tablita" and convertibility. Such policies allow the country to approach "first world" per capita GDP and to reduce volatility artificially for a while, but only at the cost of an inflated dollar value of the non-tradeables sector output. As we have seen, sooner or later agents revise their expectations and recalculate their permanent incomes on sounder bases, and as a result the economy collapses. We believe that Argentina should not implement full dollarization, since this would probably lead to problems like those of the currency board (Fanelli and Heymann 2002).

Another important goal should be to implement "long-run" macroeconomic stabilization policies, namely, policies that seek to transform the economic

<sup>10</sup> There is a vicious circle between the financial fragility of the banks, budget imbalances, inflation and devaluation. If the government helps the banks by rediscounting or prints money to finance the deficit, it will be increasing the monetary base and feeding the demand for foreign exchange. If it allows the nominal exchange rate to find its level, then inflation will shoot up. If the Central Bank sells foreign exchange to meet the increased demand, then the reserves will soon dry up.

<sup>11</sup> We have discussed this issue in depth in another paper (Fanelli and Heymann, 2002).

structure so as to eliminate the features and deactivate the mechanisms that make the economy volatile. In this paper, we illustrated at length the fact that volatility and structural breaks matter in Argentina and matter a lot. In fact, given the country's history of perverse interactions between growth and instability, the building of macroeconomic buffers should be one of the most important elements in a sustainable growth policy.

The **fourth step** for stabilizing the economy is to reach an agreement with foreign creditors. This step, however, cannot be taken before the other three. It would be difficult to negotiate with a government that cannot collect taxes or guarantee basic social institutions such as property rights and contracts. This is why Argentina needs to solve its debt problem as soon as possible. Nonetheless, the alternative to overborrowing is not zero borrowing. The country needs to access international capital markets. In addition to the need for foreign savings, we have seen that there is a diversification aspect too. In this regard, Argentina has a lot to learn from the Chilean pragmatism.

What about growth? Are there "hidden" resources that could be mobilized to restore growth? Let us conclude the paper with some conjectures on this issue. A first not-so-hidden resource is that Argentina is reasonably rich in human and natural resources. To keep these stocks from deteriorating further it is vital to solve the crisis and simultaneously implement policies that mobilize the resources. In this regard, Argentina should take full advantage of the current increase in the relative prices of tradeables and complement it with aggressive policies to improve the non-price dimension of competitiveness and to open new markets.

The developed countries that invested heavily in Argentina in the 1990s and have lately seen the value of their bonds and physical assets plunge could greatly help both Argentina and the recovery of the value of their investments. As part of an emergency package,

they might soften trade protectionism in specific sectors to allow Argentina to gain market access. In this connection, Argentina could offer more rapid debt repayment in return for market access. In the end, not only Argentines but also the consumers and investors of the G-7 countries would be better off. Argentina has the rod, and it knows how to fish. The problem is how to get admission to the fish market. The Mexican experience is very important in this respect. After joining Nafta, Mexico's external indicators improved substantially, driven by the spurt in exports and foreign direct investment.

A second hidden resource is the stock of foreign assets in the hands of the private sector. To a great extent, the accelerated accumulation of these assets in recent years was the counterpart of increasing economic uncertainty. Valued at the current exchange rate, the stock of financial resources held by the private sector is sizeable, representing roughly 100% of the current GDP. The real devaluation of the peso must have had an important positive wealth effect in part of the private sector. As soon as the economy stabilizes, this wealth effect can become a powerful incentive to effective demand. We must also take into account that after a long recession there will likely be an increase in the demand for capital goods and consumer durables which depreciated during the downturn. Likewise, the existence of liquid financial assets held by firms means that investment projects could be financed with their own funds.

A third resource that can be mobilized is Mercosur. This agreement has the potential to supply many of the inputs that Argentina needs to sustain the growth process: new markets for exports, an inflow of FDI, and the development of larger and deeper capital markets at the regional level.<sup>12</sup>

(Original: English)

#### Bibliography

- Agénor, P., J. McDermott and E. Prasad (2000): Macroeconomic fluctuations in developing countries: Some stylized facts, *The World Bank Economic Review*, vol. 14, No. 2, Washington, D.C., World Bank.
- Basu, S. and A. Taylor (1999): Business cycles in international historical perspective, *The Journal of Economic Perspectives*, vol. 13, No. 2, Nashville, Tennessee, American Economic Association.
- Calomiris, C. W. and A. Powell (2000): *Can Emerging Market Bank Regulators Establish Credible Discipline? The Case of Argentina, 1992-1999*, NBER working paper No. 7715,

- Cambridge, Massachusetts, National Bureau of Economic Research, Inc. (NBER).
- Chudnovsky, D. and J. M. Fanelli (2001): *El desafío de integrarse para crecer. Balance de una década de Mercosur*, Madrid, Siglo XXI Editores.
- Easterly, W., R. Islam and J. E. Stiglitz (2000): *Shaken and Stirred: Explaining Growth Volatility*, Washington, D.C., World Bank.

<sup>12</sup> The Mercosur growth potential is analysed in Chudnovsky and Fanelli (2001).

- ECLAC (Economic Commission for Latin America and the Caribbean) (1998): CEPAL, Cincuenta años. Reflexiones sobre América Latina y el Caribe, *Revista de la CEPAL*, special issue, LC/G.2037-P, Santiago, Chile.
- \_\_\_\_\_ (1999): *Economic Survey of Latin America 1998-1999*, LC/G.2056, Santiago, Chile.
- \_\_\_\_\_ (2002): *Indicadores macroeconómicos de la Argentina*, Buenos Aires, ECLAC Office in Buenos Aires.
- Edwards, S. and M. A. Savastano (1999): *Exchange Rates in Emerging Economies: What Do We Need to Know?*, NBER working paper No. 7228, Cambridge, Massachusetts, NBER.
- Enders, W. (1995): *Applied Econometric Time Series*, London, John Wiley & Sons.
- Fanelli, J. M. (2000): Macroeconomic regimes, growth and the international agenda in Latin America, *Latin American Trade Network Meeting*, Buenos Aires, Latin American Faculty of Social Sciences (FLACSO), 8-9 November.
- Fanelli, J. M., R. Bebczuk and J. Pradelli (2001): *Determinants and Consequences of Financial Constraints Facing Firms in Argentina*, Buenos Aires, Asociación Argentina de Economía Política, www.aep.org.ar.
- Fanelli, J. M. and D. Heymann (2002): *Monetary dilemmas: Argentina in Mercosur*, paper prepared for the International Conference Towards Regional Currency Areas, Santiago, Chile, ECLAC, March.
- Fanelli, J. M. and S. Keifman (2002): Finance and changing trade patterns in developing countries, in J. M. Fanelli and R. Medhora (eds.), *Finance and Competitiveness in Developing Countries*, London, Routledge.
- Fanelli, J. M. and M. Rozada (1998): Convertibilidad, volatilidad y estabilidad macroeconómica en Argentina, *Estudios de política económica y finanzas. Revista de la Universidad de Palermo*, año 5, No. 2, Buenos Aires, Universidad de Palermo.
- Froot, K. and K. Rogoff (1995): Perspectives on PPP and long-run real exchange rates, in G. Grossman and K. Rogoff (eds.), *Handbook of International Economics*, vol. III, chap. 32, Amsterdam, The Netherlands, Elsevier Science B.V.
- Heymann, D., M. Kaufman and P. Sanguinetti (2001): Learning about trends: Spending and credit fluctuations in open economies, in A. Leijonhufvud (ed.), *Monetary Theory as a Basis for Monetary Policy*, London, Macmillan.
- IDB (Inter-American Development Bank) (1995): *Economic and Social Progress in Latin America and the Caribbean, 1995*, Washington, D.C.
- Kimbal, R. (2000): Failures in risk management, *New England Economic Review*, Boston, Federal Reserve Bank of Boston, January-February.
- Taylor, A. M. (2000): *A Century of Purchasing Power Parity*, NBER working paper No. 7577, Cambridge, Massachusetts, NBER.
- World Bank (1999): *World Development Indicators 1999*, Washington, D.C.