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The Argentine Macroeconomy during the Post-Convertibility Period: Performance, Debates and Perspectives

Martín Rapetti¹

1. Introduction

The last days of 2001 were witness to the unfolding of the worst crisis in Argentina's economic history. The intense nature of the crisis did not abate in the following months. Economic activity continued in freefall, while capital flight persisted, the exchange rate overshot massively and expectations of hyperinflation increased. Quickly after that, however, a process of economic recovery set in, followed a few months later by the start of a normalization process in financial variables. The economy has not ceased to expand since then, and at the time of writing GDP has surpassed the previous record level attained in mid-1998, before the start of the recession that would lead to the debacle. Throughout this period of recovery and growth, most of the contract breaches inherited from the collapse of convertibility have been processed, the most notorious of which has been the restructuring of Argentina's sovereign debt in default.

In this renewed setting, it seems timely to make an assessment of the post-convertibility period. To that end, this paper analyzes macroeconomic performance over these years, develops the main arguments in the debate that ensued and discusses some issues that are relevant in examining the medium term macroeconomic outlook.

The following section briefly describes the features, evolution and collapse of the convertibility regime. The third section analyzes the main features of macroeconomic performance in the post-convertibility period, including the vigorous and almost immediate recovery in economic activity, as well as the rapid normalization of monetary and financial variables. The fourth section presents the principal debates that arose from macroeconomic performance during the period, paying particularly close attention to that on the consistency of official monetary and exchange rate policies attempting to simultaneously obtain exchange rate and price stability targets. The last section offers some conclusions.

2. The convertibility regime: a brief summary

In March 1991 the Convertibility Law was sanctioned. It established fixed peso-dollar parity and validated contracts in foreign currencies. It also stipulated that the Central Bank would have to back almost 100 percent of its monetary base with foreign reserves, setting

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narrow margins to the possibilities of purchasing public bonds and lending to the commercial banks. Thus, the Central Bank virtually became a currency board. This novel monetary arrangement was the pillar of a broader stabilization program, intended to shift the economy away from the high inflation regime (Heymann and Leijonhufvud, 1995) in place since the mid seventies, which had led to two brief hyperinflationary episodes in 1989 and 1990. The program included, from early 1991, an almost complete liberalization of trade flows and the full deregulation of the capital account of the balance of payments. It was jointly applied with a wide array of market-friendly reforms, targeting the privatization of a large proportion of state-owned enterprises.

The stabilization program had an immediate and lasting success in stopping inflation. It also put the economy into a rapid growth path. Between 1990 and 1994 GDP grew at a 7% annual rate. However, the expansion stopped in 1995 following the massive capital outflow triggered by contagion from the Mexican crisis (the so-called 'Tequila effect'). In effect, Argentina showed clear signs of external vulnerability. This was a result of two features that arose from the specific local circumstances in which the convertibility regime was developed and that significantly influenced its performance and dramatic breakdown. First, the real exchange rate was already appreciated when the nominal exchange rate was pegged to the dollar in March 1991, and this appreciated level lasted throughout the nineties. There was an important increase in manufacturing sector labor productivity, but the average unit labor cost in constant dollars did not fall because non-tradable goods and services' prices and nominal wages rose in the first half of the decade.

Second, despite the high credibility enjoyed for a long time by the exchange rate commitment, private sector savers have shown a preference for dollar denominated deposits while banks hedged their balance sheets against exchange rate risk by offering dollar denominated credit. Consequently, since the early stages of the Convertibility regime there was a persistent trend for the proportion of dollar denominated assets and liabilities in the local banking system to grow. The dollarization of private sector assets was perceived as a hedge against the risk of devaluation and so contributed to reduce the volatility of local portfolios and to extend the maturity of contracts. Thus, the exchange risk burden rested not only on foreign investors, and banks and big firms indebted abroad but also on numerous local bank debtors with peso denominated income.

These two features made the economy extremely vulnerable to the perceptions of external creditors. On the one hand, the combination of trade opening with the appreciated exchange rate resulted in a chronic trade balance deficit. The trade deficit together with the growing structural deficit in the factor services account generated a rising current account deficit. To reach a positive rate of growth the economy required substantial net capital inflows. To sustain any positive rate of growth the economy required increasing external capital inflows. On the other hand, widespread contract dollarization made massive default risk highly sensitive to exchange rate risk. In such an economy with a structural current account deficit and massive contract dollarization, exchange rate and default risk tended to grow over time.

However, the Convertibility regime survived the 'Tequila effect' thanks to external financial support led by the IMF, and in late 1995 a recovery was already starting. The new phase of capital inflow-led growth decelerated in mid-1997, when the country-risk premium jumped after the devaluation in Thailand. In mid-1998, following the onset of the Russian crisis, a new contraction started. Given the legal constraint to pursuing a counter-cyclical monetary policy, the government had to rely on fiscal and supply side policies to cope with the depression. First the Menem administration and after December 1999 the incoming De la Rúa administration tried to revert the contractionary trend through several fiscal tightening

programs. In their view, the main cause of the economic depression was not the exchange rate appreciation and the external and financial vulnerability, but fiscal mismanagement. Fiscal discipline would entail stronger confidence, and consequently the risk premium would fall bringing interest rates down. Therefore, domestic expenditure would recover pushing the economy out of recession. Lower interest rates and an increased GDP would, in turn, reestablish a balanced budget, thus closing a virtuous circle.

However, with the economy locked in an external debt trap, the 'confidence shock' did not help to revert the trend. Moreover, the rounds of contractionary fiscal policies only reinforced the deflationary conditions and pessimistic expectations. Besides some initiatives on the financial front, including several financial agreements with the IMF and two important 'voluntary' debt swaps implemented in the second half of 2001, divergent processes (i.e. the withdrawal of bank deposits and the contraction of international reserves) carried on. Finally, in December 2001 the government established hard restrictions on capital movements and on withdrawals of cash from banks (the so-called 'corralito'). The purposes of the measures was to avoid either the generalized bankruptcy of banks or the violation of the currency board monetary rule. But their main objective was to curtail the demand for foreign currency, preserve the stock of reserves and avoid the devaluation. It was also the last drastic move in attempting to prevent a default on sovereign debt. The measures did however represent the end of the regime.

The December financial restrictions contributed to deepen the already strong social and political tensions. After a few days of social unrest and political commotion the country experienced the resignation of the government, followed by a succession of temporary presidents. One of these announced to Congress the decision of defaulting on part of the public debt, and resigned shortly afterwards. In the first days of 2002, with a new president in office, economic policy officially abandoned the currency board regime and the one-to-one parity of the peso to the US dollar.

3. The post-convertibility macroeconomic regime and performance²

The convertibility regime was abandoned amid chaotic conditions. The massive flight to external assets that precipitated the collapse of the regime accelerated after the devaluation of the peso and the default. The government decided to replace the currency board for a dual exchange rate regime, while maintaining exchange controls and the 'corralito'. The foreign exchange (FX) market was split in two segments: an official market for certain trade and financial operations with a fixed parity of 1.40 pesos per dollar, and a floating rate market open for the remaining foreign exchange operations. Soon after, the IMF let the new administration know that there would be no negotiations with the country while the dual exchange rate regime and controls were in place, leading the government to unify the FX market and allow the peso to float. Once the local currency started to float, the parity rose abruptly and after a few months reached levels close to 4 pesos per dollar, with expectations of further increases.

The overshooting led to a rise in domestic prices. Although the pass-through was low in comparison to other devaluation experiences, four months after the devaluation the CPI accumulated a 21% increase. This caused an average fall in real wages of nearly 18% and consequently a further recessionary impulse on aggregate demand.

² This section draws on Frenkel and Rapetti (2005).

Against expectations, the contractionary balance sheet effect of the devaluation was small, mainly due to official intervention. When the FX market was unified and the exchange rate allowed to float, the government decided to convert most domestic debts contracted in dollars (bank credits, rents, etc.) into pesos at a AR\$/US\$ 1 rate, thus neutralizing most of the effects of change in relative prices on the debtors' balance sheets. In contrast, banks deposits originally denominated in dollars were 'pesoificated' at 1.40 pesos per dollar (plus indexation to the CPI).³ Together with the 'pesoification', the authorities unilaterally decided to extend the maturity and duration of all deposits, including those originally contracted in pesos. In exchange, private depositors received certificates for the rescheduled deposits (CEDROS), a group of deposits that came to be known as the 'corralón'.

Social indicators such as unemployment rates and the poverty and extreme poverty indexes, which had worsened considerably during the nineties, suffered from additional deterioration in this stage, mainly as a result of the rise in domestic prices that followed the devaluation (Damill, Frenkel y Maurizio, 2003).

The dramatic fall in output and employment continued through the period immediately following the end of the convertibility. However, this trend did not last for long, as the recovery started only a quarter after the devaluation and default. At that time most analysts were expecting a hyperinflation led by the exchange rate overshoot and the continuation of the contractionary trend.

Since the second quarter of 2002, GDP has grown at a 7.9% average annual rate and by mid-2005 had surpassed the historical maximum level reached in mid-1998 (see Graph 2.1 in the appendix). The recovery was bolstered by the shift in the relative prices and also by an adequate set of policies that, although still subject to flaws and ambiguities, aimed at stabilizing the FX market and domestic prices and recovering the basic macroeconomic equilibria, especially for both fiscal and external balances. Favorable external conditions, such as high international commodities prices and low international interest rates, have also contributed to the process. The following subsections analyze the main features of Argentina's macroeconomic performance in the post-convertibility period.

3.1 The main features of economic recovery

The path of economic recovery can be divided into three periods. In the first, comprising the second and third quarters of 2002, GDP expansion was weak and rested on international trade variables stimulated by the real depreciation. Domestic absorption (particularly, private consumption and investment) continued to shrink as in the previous depression, although at a lower pace. Therefore, it was not aggregate demand that stopped the decline in the activity level. The ongoing fall in employment and real wages⁴, the liquidity constraints generated by the 'corralito' and 'corralón' and the substantial uncertainty on the future values of the main financial variables imposed important limitations on the recovery of private consumption and investment expenditures. Table 1 in the appendix shows the contraction of aggregate demand components in this period. It also shows that the expansive factors were exports and specially import substitution. Favored by the change in relative prices, domestic production started to supply an increasing share of aggregate demand.

³ Later on, the government issued new debt to compensate the banks for the balance sheet effect of the asymmetric 'pesoification'.

⁴ Although at a much lower pace, both real wages and employment continued to fall during this period.

It is remarkable that this phase started while the country was still immersed in a context of accentuated financial instability and political uncertainty, and also despite the short-term contractionary effects of the depreciation still being underway. It is especially notable that the recovery took place while financial variables were describing such a divergent path. As shown in the next section, the nominal and real depreciation, the withdrawal of bank deposits, capital flight, the erosion of international reserves and the rise in domestic interest rates were still taking place at the start of the third quarter of 2002.

After this short initial stage a second period began. Along this phase the recovery was led by the increase in the domestic demand components. The normalization of the behavior of financial variables during the third quarter of 2002 certainly helped to create a more stable environment, allowing the private sector to begin taking advantage of the opportunities unfolding from the change in relative prices. Domestic absorption grew at a 12.8% annual rate and accounted for more than the entire rise in GDP over the period. In contrast, net exports started to act as a contractionary force, mainly due to the rapid recovery of imports but also due to a weak export performance.

Private consumption picked up substantial momentum, growing at a 9.6% average annual rate between the third quarter of 2002 and the second of 2004 and explaining 69% of GDP growth in the period (see Table 1). Several factors accounted for this performance. One factor worth highlighting was the launch of an unemployment subsidy program (the so-called *Plan Jefas y Jefes de Hogar Desocupados*) during the second half of 2002. It provided some income to 1.8 million of beneficiaries. Secondly, after an important downturn of around 25%, real wages started to recover starting in the fourth quarter of 2002, as a consequence of both the deceleration of inflation and the rise in nominal wages. After reaching a peak in April 2002, the inflation started to slow down and since the end of that year the monthly inflation rate has mostly remained below 1% for the subsequent two years (see Graph 2.2). The improvement in nominal wages was associated with the rapid fall in unemployment, but was also helped by an official policy consisting of staggered lump-sum raises in private sector wages determined by decree during 2002-04.

The fall in the unemployment rate was due to the important recovery in employment, favored not only by the economic expansion but also by the real exchange depreciation. There is significant evidence showing that a depreciated or competitive real exchange rate tends to increase the labor intensity of output, given a certain activity level or growth rate (Frenkel and Ros, 2005). The recovery in employment therefore stimulated private consumption throughout two channels: by increasing the number of wage-earners and by contributing to the rise in real wages.

Additionally, the devaluation had a positive wealth effect on the private sector's foreign assets. These assets -which currently exceed U\$S 120 billion dollars- increased in value relative to domestic goods and assets such as real estate and land.

Investment showed an amazing dynamism; growing at a 42.7% annual rate during this second phase and contributing to 57% of GDP growth (see Table 1). This behavior is in part a result of the gradual normalization of the financial environment. However, it should be stressed that this recovery took place in a context of accentuated credit rationing, both external and internal. Investment was apparently financed by higher profits retained by firms. The 'wealth effect' resulting from the significant external assets holdings by the private resident sector may have contributed as well. This effect was clearly the principal factor behind the rapid expansion of both residential and corporate construction, given the lack of bank credit during this period. Construction explained 56% of the increase in investment along this second phase. The other 44% was due to investment in capital goods, imports in

particular, which grew 310% between the third quarter of 2002 and the second quarter of 2004.

Finally, the effect of net exports on the economic recovery was contractionary in this second period (see Table 1). This basically resulted from a recovery in imports, which almost doubled in only five quarters. As mentioned above, the demand for foreign capital equipment was one of the major elements in this rapid recovery, together with imports of intermediate inputs. The rate of growth in exports declined, despite which the substantial trade surplus generated by the 2001-02 crisis remained virtually unchanged.

From the third quarter of 2004 on, exports started a speedy expansion at a 22% annual rate, giving way to a third phase in the economic recovery process. Along this new phase, economic growth has maintained momentum, but in contrast to the previous period it has rested not only on the expansion of domestic demand but also on export growth. As Table 1 shows, two thirds of GDP expansion during this stage was explained by domestic demand of local production (see the last column of the table) and the other third by exports. The official strategy of securing a competitive exchange rate is surely a crucial factor behind the export upturn. The lag in the reaction of exports to the new set of relative prices does not differ from other international experiences, such as Brazil after the 1999 devaluation. Tradable firms required time to take advantage of the competitive real exchange rate (RER), adjusting production and establishing commercialization channels abroad.

By mid-2005 GDP surpassed its pre-crisis level and what initially started as a recovery became a process of economic growth. At the time of writing, activity continues to expand at an impressive 9% annual rate. It is important to notice that the current process is significantly different from other economic growth episodes in Argentina's economic history. In contrast to the traditional fiscal and external imbalances, current macroeconomic configuration stands out for the existence of external and fiscal surpluses.

The improvement in the Consolidated Public Sector result (i.e. including the provinces balances) that took place between 2001 and 2004 was impressive: equivalent to 9.2 points of GDP (see Table 2). The balance went from a global deficit of 5.6% of GDP in 2001 to a 3.6% surplus in 2004. The main factors explaining the fiscal adjustment were the following: Almost 40% derived from an improvement in provincial accounts caused by the increase in tax collection (facilitated by the economic recovery and the rise in nominal prices) jointly with restraint in expenditure. The Federal Government contributed with the other 60% of the adjustment, with two factors especially relevant. The contraction of interest payments, basically resulting from the partial default on sovereign debt, was one of these (-2.5% of GDP). The other was the levying of new taxes on exports immediately after devaluation, jointly with the maintenance of the tax on financial operations established in 2001 (+2.7% of GDP). The revenues generated by these two taxes were equivalent to almost the entire national primary surplus in 2004. Thus, the public sector captured part of the devaluation's effect on the profitability of the tradable goods sector, and also benefited from the high prices of some export goods such as soy and oil.

Table 2

Fiscal adjustment: Results of the Consolidated Public Sector (CPS)
(As a percentage of GDP)

		1998	2001	2004	Variation 2004-01	Variation 2004-98
National Public Sector (NPS)	Total Receipts	18,9	18,8	23,5	4,7	4,6
	- Tax Receipts	13,5	13,8	18,7	4,9	5,2
	- Financial Tax (1)	0,0	1,1	1,5	0,4	1,5
	- Tax on Exports	0,0	0,0	2,3	2,3	2,3
	- Other taxes	13,5	12,7	14,9	2,2	1,4
	- Other receipts	5,4	4,9	4,8	-0,1	-0,6
	Total Expenditures	20,3	22,0	20,9	-1,1	0,6
	- Primary expend.	18,0	18,2	19,6	1,4	1,6
	- Capital expend.	1,3	1,0	1,3	0,3	0,0
	- Interests services	2,2	3,8	1,3	-2,5	-1,0
	NPS Primary Result	0,9	0,5	3,9	3,3	3,0
NPS Total Result	-1,4	-3,2	2,6	5,9	4,0	
Prov.	Provinces Primary Result	-0,3	-1,5	1,4	2,8	1,6
	Provinces Total Result	-0,7	-2,4	1,0	3,4	1,6
CPS	CPS Primary Result	0,6	-0,9	5,2	6,2	4,6
	CPS Total Result	-2,0	-5,6	3,6	9,2	5,6

(1) Tax on bank debits and credits.

Source: Author's calculations based on Ministry of Economy data.

On the other hand, the adjustment of external accounts started well before the devaluation. The improvement in the current account started in 1998, led by the contraction in imports derived from the economic depression. Despite interest payments increasing by almost 2.4 billion dollars, the current account deficit was reduced by more than 10.7 billion between 1998 and 2001 (see Table 3). Over the post-convertibility period there was an additional adjustment of almost 7 billion dollars. It is interesting to compare 1998 and 2004 because GDP was almost at the same level⁵ in both years, while RER levels were dramatically different. The 17.5 billion dollars improvement in the current account is attributable to a great extent to the real devaluation. Over the whole period, the trade balance showed an impressive improvement of 19.1 billion, resulting from both an expansion in exports (8.2 billion) and a reduction in imports (10.9 billion). When interest arrears (5.5 billion) resulting from the default on private and public external debt are taken into account, the improvement in the current account increases to 23 billion of dollars.

Table 3
External adjustment: Current Account of Balance of Payments

⁵ Average GDP in 1998 was in fact 3.2% higher than the average in 2004.

(In billions of dollars)

	1998	2001	2004	Variation 2001-98	Variation 2004-98
Current Account	-14.5	-3.9	3.0	10.7	17.5
Trade Balance¹	-7.6	3.4	11.5	11.0	19.1
- Exports	31.2	31.0	39.4	-0.2	8.2
- Imports	38.8	27.5	27.9	-11.2	-10.9
Interests	-5.1	-7.5	-6.8	-2.4	-1.8
- Credits	5.3	4.7	2.9	-0.6	-2.3
- Debits	10.3	12.2	9.8	1.8	-0.6
Utilities & Incomes	-2.3	-0.3	-2.3	2.0	0.0
- Credits	0.9	0.6	0.6	-0.2	-0.3
- Debits	3.2	0.9	2.9	-2.3	-0.2
Other rents & Transfers	0.5	0.4	0.7	-0.03	0.2
Interest arrears	-	-	5.5	-	5.5
Current Account + Int. Arrears	-14.5	-3.9	8.5	10.7	23.0

(1) Includes goods and services.

Source: Author's calculations based on Ministry of Economy data.

3.2 The evolution of monetary and exchange rate policies

The weakening in the demand for local assets began by mid-1998. This process took place simultaneously with a persistent rise in the country risk premium. However, the divergent trends in the domestic financial market that triggered the collapse of the convertibility regime only started in October 2000, associated with the political turmoil caused by the Vice-President's resignation. The process followed a simple pattern. Devaluation expectations and the perception of a higher risk of default led the public to withdraw deposits and run against international reserves. No bank fell into bankruptcy because the Central Bank supported the banks' liquidity. Despite several signals issued by the government aiming at changing expectations, the intensification of this process could not be stopped. Restrictions on capital outflows and the 'corralito' were therefore established in early December.

After the convertibility regime had been abandoned, the government aimed to restrain capital flight and stabilize the markets by introducing a dual exchange rate regime. The original idea was to use this scheme only temporarily, in order to stabilize the nominal exchange rate while the domestic prices absorbed the impact of the devaluation, and then pass to a floating rate regime.

The decision to unify the FX market and let the peso float, following the IMF's demand, proved to be inconvenient. Given the conditions in the domestic financial system and the high degree of uncertainty, an overshooting of the exchange rate should have been anticipated. The price of the dollar skyrocketed, fed by self-fulfilling expectations.

It should be noticed that this process took place in a liquidity constrained economy, due to the 'corralito' and 'corralón' restrictions. However, the restriction on cash withdrawals from

banks was not complete and was relaxed to some degree during January and February 2002. Some additional liquidity was generated as a result of judicial rulings. A relevant portion of private savers, affected by the 'pesoification' and rescheduling of bank deposits, initiated judicial injunctions (*amparos*) requesting the return of their original bank deposits in dollars. Several judges ruled that 'pesoification' was unconstitutional and demanded that banks release the funds. The funds returned for deposits originally made in dollars were carried out in pesos at the current exchange rate. People took these peso holdings to the FX market to demand dollars.

It should also be mentioned that an erratic monetary policy implemented during the first quarter of 2002 did not help in turning around the divergent trends. The government delayed in launching a domestic asset that could perform as a potential substitute for dollars. Given the distrust in banks and in the Treasury, the economic depression and growing inflation, foreign currency appeared as the only asset available for allocating financial resources. It was only two and a half months after the devaluation that the Central Bank started to issue securities (so-called Lebac bills) in order to supply a financial instrument that could compete with the dollar.

All these factors contributed to deepen the perverse dynamic of financial variables during the first half of 2002. Capital flight from domestic assets between March 2001 and mid-2002 is described in Graph 2.3. It shows that there was a significant fall in private bank deposits⁶ and that the nominal demand for cash was stagnant, while international reserves dropped substantially. These series show that there was a substitution of local assets (cash and deposits) for external assets (international reserves).

The result of the asset substitution affected the FX market. The nominal (NER) and real exchange rate rose steadily during the first half of 2002 (around 260% and 180%, respectively). Their paths are shown in Graph 2.3. The real exchange rate overshooting was so pronounced that in June 2002 its value was almost 50% weaker than the 1980/2001-period average value, and 68% weaker than the average during the decade of convertibility.

The divergent trends began to turn around in July 2002, with the stabilization of the FX market (see Graph 2.4). This was the result of several factors. Controls on foreign exchange transactions were introduced in November 2001, before the collapse of convertibility (including the obligation to settle foreign currency export earnings in the local FX market), and then tightened in March 2002. But it was only since early June 2002, after Roberto Lavagna took office as Minister of Economy, that the implementation of controls was strengthened and the interventions in the exchange market were reinforced, as a systematic policy intended to stabilize the foreign exchange market. The ruling that called for dollar export revenues surpassing U\$S 1 million to be sold directly to the Central Bank was especially important in this regard⁷. This became the main source of dollars for the monetary authority, allowing it to increase the volume of its interventions in the foreign exchange market.

Limiting the peso outflow from banks also helped restrict the demand for foreign currency. In April 2002, Congress approved the so-called *Ley Tapón* to ease the pressure resulting from the *amparos*. The law modified court procedures and stated that depositors

⁶ Graph 2.3 shows a 'jump' in the private bank deposit series in January 2002. It reflects the accounting effect of the 'pesoification' at 1.40 pesos per dollar of deposits issued in foreign currencies, previously valued at a AR\$/U\$S 1 rate. Ignoring this accounting effect, there was a clear drop in deposits.

⁷ The limit for exports surrender then suffered several additional modifications, reducing the minimum to U\$S 200,000 in September 2002. With the normalization of the FX market, the authorities gradually started to raise the limit.

would be allowed to access the funds only after the judicial process was concluded; which in the meantime were to be deposited in an escrow account (thus preserving the liquidity of the banking system). However, the law did not completely succeed in stopping the outflow from banks, which continued through July 2002, when the government issued a decree preventing the devolution of deposits stipulated by the *amparos* for 120 days.

Finally, the behavior of the local financial market also contributed to stopping the exchange rate bubble. Local interest rates skyrocketed – in July 2002, the average rate on time deposits reached a 76% peak, and the interest rate of the 14-day Lebac bills reached almost 115% (see Graph 2.5). Local financial assets became more attractive as substitutes for the dollar. On the other hand, as mentioned above, the real price of the dollar reached very high and ‘abnormal’ levels by historical terms (i.e. the prices of domestic assets, non tradable goods and salaries in dollars were perceived as abnormally low). In this context, once the authorities managed to stop the exchange rate bubble in July, the public rapidly changed expectations and a trend towards the appreciation of the exchange rate ensued.

A normalization phase in monetary and financial variables began in the second half of 2002. After reaching a peak of almost AR\$/US\$ 4 during the last days of June, the exchange rate began to experience a smooth nominal appreciation trend. Although the inflation rate was already low and decelerating, the rise in domestic prices contributed to the real appreciation (Graph 2.4), which helped make local assets increasingly attractive. Bank deposits began to grow, as did the demand for Lebac, local shares and cash (Graph 2.3). This portfolio substitution in favor of local assets resulted in a persistent drop in interest rates (Graph 2.5).

The normalization of financial activity dissipated disrupting expectations and thus allowed the second phase of economic recovery mentioned above to set in, based on the expansion of domestic expenditure. Interestingly, the recovery of private expenditure during this phase took place without a significant contribution from bank credit. Although the recovery in private deposits allowed banks to rebuild liquidity, credit to the private sector continued to shrink until late 2003 (see Graph 2.6).

In this context, domestic expenditure was mainly financed by own private sector savings, primarily cash holdings. Graph 2.7 shows the increase in cash holdings since the fourth quarter of 2001. Both the monetary base/GDP ratio and the monetary base/total bank deposit ratio showed very high rates of growth, as well as high levels compared to the convertibility period. Although low interest rates on bank deposits contributed to that performance, it seems to be mainly a persistent consequence of the financial crisis.

The nominal and real appreciation came to a halt in mid-2003, mainly as the result of a deliberate policy decision. Ensuring a stable and competitive real exchange rate (SCRER) was gaining prominence as part of the official policy stance. Nestor Kirchner took office as President in May 2003, and decided to keep Lavagna as the Economy Minister. After a few months, both Kirchner and Lavagna started to make explicit reference to the importance of preserving a SCRER as part of the official economic strategy. Although the announcements did not identify a specific policy target, operations by the government – the Central Bank and the Treasury – in the FX market actually kept the price of the dollar in a range between AR\$2.8 and AR\$3.05. This exchange rate policy was conducted jointly with a monetary policy based on quantitative monetary targets, which started in 2003. Targets have since then been announced at the beginning of every year through the Central Bank’s monetary programs, in which the authorities commit to maintaining monetary aggregates within a certain range. The idea behind this policy is that there is a link between monetary aggregates and the inflation rate. Since the Central Bank law makes the pursuit of low inflation rates the

primary goal of the institution⁸, monetary policy is thus assumed to control the price level indirectly through the management of quantitative targets. Under this policy orientation, low inflation rates should be attained not only as a result of the effective monetary expansion but also through the effect of the Central Bank's announcement in its monetary program acting as an anchor for inflation expectations.

Although monetary authorities explicitly declared that their only target was the inflation rate, it has been clear for any observer that the Central Bank has also pursued an exchange rate target. This double-target regime was not implemented without difficulties. Once the FX market was stabilized by mid-2002, an excess supply of foreign currency emerged, generating appreciation pressures. While the Central Bank had had to intervene in the foreign exchange market by selling dollars to control the overshooting of the exchange rate during the first half of 2002, immediately afterwards it started to purchase foreign currency to slow down appreciation. Given that liquidity was scarce in the previous context and that economic recovery was rapid, the expansion in the monetary base caused by these interventions was at first easily absorbed by the private sector, which showed an abnormal liquidity preference after the crisis, as explained above. But gradually the authorities began to fear the effects that the speedy monetary expansion could have on inflation, and therefore decided on a slowdown⁹. Hence, in 2003 the Central Bank started to confront the situation of dealing with two 'potentially' conflicting objectives –preserving a competitive exchange rate by intervening in the FX market and attaining strict monetary expansion targets announced in the monetary program – more openly.

Table 4 shows the sources of variation of the monetary base. It accounts for the 'tensions' in simultaneously conducting monetary and exchange rate policies. The rapid growth in the monetary base during the second half of 2002 was followed by a gradual deceleration over the following two years, and finally a contraction in the first half of 2005. The table also shows the increasing intervention in the FX market to preserve the exchange rate target. Increasing money creation caused by the interventions in the FX market in conjunction with a decelerating monetary base growth (or even contraction) was made possible through several mechanisms. Throughout 2003, the sterilization operations implemented by issuing Central Bank bills (*Lebac*) and notes (*Nobac*) were especially relevant, neutralizing almost 75% of the 'excess'¹⁰ of monetary expansion caused by the intervention in the FX market.

⁸ In fact, the law is somehow vaguer; it establishes that central bank's 'primary and fundamental mission is to preserve the value of the Argentine currency'.

⁹ The decision to slow down the rate of expansion in the monetary base was not entirely attributable to a decision by Central Bank authorities. In successive agreements signed with the IMF, the agency's staff pushed for the implementation of restrictive quantitative targets on monetary base growth.

¹⁰ We define 'excess' as the difference between the monetary expansion caused by Central Bank interventions in the FX market and the effective monetary base variation. Since the Central Bank has to address the quantitative target announced in the monetary program, the defined variable gives an approximation of sterilization needs. It also accounts for the 'tensions' in conducting a 'dual-target' regime.

Table 4
Sources of variation of the monetary base
(Monthly average, in millions of pesos and dollars)

	Assistance to the Treasury	Assistance to Banks	Central Bank FX Intervention	Central Bank Lebac and Nobac	Others	Monetary Base Variation	'Excess' of monetary expansion (1)	Treasury FX Intervention (2)
2002:01 ⁽³⁾	124	1,426	-1,450	-216	522	406	-1,856	n/a
2002:02 ⁽⁴⁾	250	86	1,281	-270	327	1,674	-393	n/a
2003	-52	-125	1,374	-420	32	809	565	28
2004	-543	-601	1,931	-323	28	493	1,438	112
2005:01	-70	-807	2,166	-1,319	-146	-176	2,342	535

(1) See footnote 10.

(2) In dollars.

(3) Calculated for the period February-June 2002.

(4) The table omits a single cancellation of a National Bank rediscount by the Treasury with assistance from the Central Bank in September 2002, for about AR3.500 billion.

Source: Author's calculation based on Central Bank data.

The need for sterilization increased during 2004. The Central Bank could afford to reduce the issue of Lebac and Nobac securities because other compensatory mechanisms began to operate. As liquidity increased, banks started to service the debt incurred with the Central Bank during the financial crisis. Hence, their payments on principal and particularly interest acted as a source of monetary contraction in 2004. In 2005, the Central Bank launched a program allowing banks to make accelerated amortization payments on their debt, reinforcing this contractionary mechanism.

The Treasury also helped absorb the 'excess' monetary expansion caused by the Central Bank's interventions in the FX market. Although in 2002 there was a net flow of financing to the Treasury, starting in early 2003 and particularly in 2004 the transactions between the Treasury and the Central Bank acted to contract the monetary base. Purchases of international reserves with the proceeds of the fiscal surplus caused a monthly average monetary contraction of AR\$543 million in 2004. The main purpose of these operations was to service the debt with multilateral financial institutions. However, the Treasury also intervened in the exchange market with the explicit purpose of preserving the real exchange rate level and to assist in managing the monetary base. The government employed the National Bank to actively intervene in the FX market. These operations started in 2002 and gradually expanded afterwards, becoming an important policy instrument. In effect, during the first half of 2005 the Treasury bought an average 535 million dollars per month.

Despite the success in meeting the exchange rate and monetary targets during 2003 and 2004, the economic performance in 2005 made it clear that the government has started to face increasing difficulties in managing monetary and exchange rate policies. In particular, the inflation rate has gradually accelerated, up to a level of 12% at the end of the year (see Graph 2.2). Many analysts, including those from the IMF staff, suggest that controlling inflation and managing the exchange rate are incompatible goals. As the well-known impossible trinity or *trilemma* postulates, the government of a country that is integrated with international financial markets cannot simultaneously conduct active monetary management and determine the exchange rate. In the view of these analysts, the Central Bank should

focus exclusively on price stability by raising interest rates and allowing the peso to appreciate.

The government has refused to follow these recommendations. To ease the appreciation pressures in the FX market and thus partially relieve the Central Bank from the need to intervene, controls on the capital account were introduced in June 2005. Basically, the new measures established that all capital inflows – excluding the issuing of new private and public debt, international trade financing and foreign direct investment – would be subject to a 30% unremunerated reserve requirement for at least 365 days. This strategy is inspired by that applied in Chile during the nineties and attempts to reduce short term capital inflows. However, the controls left loopholes to avoid the reserve requirements. There has been no evidence of a reduction in the supply of dollars to the FX market since the measures were implemented. Local analysts believe that controls are ineffective and even the authorities do not reject the notion that they were introduced more as a signal of the government's commitment to the SCRER strategy than as an effective control mechanism. For instance, capital inflows can easily circumvent the reserve requirement by operating through the stock exchange, by buying domestic assets abroad and selling them in the local market.

4. Macroeconomic debates

As is well known, the crisis of convertibility triggered a heated debate in academia and policy making circles. Argentina had been set forth as an example of the success of structural reforms encouraged by multilateral organizations during the nineties, but rapidly became an international 'pariah'. In the most widespread explanation of the 'Argentine failure', the decisive factor leading to the crisis was out of control public spending, jointly with lax fiscal auditing by the IMF (Mussa, 2002). Not surprisingly, the IMF's officials – as well as its internal auditors – adopted this version as their own diagnosis (IMF, 2004 and IEO, 2004); it would be difficult to expect from them any evaluation that entailed a responsibilities in terms of recommendations, either implying errors in diagnosis or due to ideology or vested interests, as some critics have suggested (Stiglitz, 2002). However, it is hard to explain why this view is deep-rooted among economists – especially abroad – considering the lack of evidence supporting it. A simple look at fiscal statistics suffices to corroborate that primary public spending remained stable during the nineties in terms of GDP. The main sources of public sector imbalances, in fact, were the fall in revenues caused by the privatization of the social security system and the strong rise in interest payments on government debt.

According to a less widespread interpretation, but one that more accurately fits the facts, the rise in the burden of services on public debt was a result of the progressive worsening of the economy's external solvency, which led to increases in the country-risk premium and in interest rates (Damill and Frenkel, 2003). From this perspective, the origin of the crisis is to be found in misguided economic policy that resulted in an unsustainable external (both public and private) debt path. Actually, Argentina's macroeconomic experience under convertibility can be interpreted as an example of a more general pattern of external crises, with a boom and bust cycle path generated by important capital inflows to small and

badly regulated domestic financial systems, in fixed (or semi-fixed) exchange rate environments¹¹.

Argentina's contribution to the macroeconomic debate is not exclusively related to the collapse of convertibility; the recent experience has also played its role. For instance, the causes of the default on public debt have been widely discussed. Reinhart, Rogoff and Savastano (2003) interpreted this episode as a case of a serial defaulter that suffers from debt intolerance. From this perspective, the recent Argentine default would be the result of a combination of, on one hand, the country's innate tendency towards opportunistic behavior (acquired over its history) and, on the other, the irresponsible behavior of governments that insist in contracting external debt – with the complicity of pro-cyclical financial markets – beyond the country's low limit of tolerance. Damill, Frenkel and Rapetti (2005) question the general argument based on the incidence of the remote past in the unfolding of the default episodes and show, in particular, that the serial defaulter category is inaccurately applied to Argentina¹². Furthermore, it seems more reasonable to explain the probability of default in terms of actual macroeconomic performance and external solvency indicators, so responsibility should be attributed to the country's economic policy rather than its history as a debtor.

The debate that drew the most attention from local macroeconomists was about the simultaneous use of monetary and exchange rate policies. The discussion centered on the Central Bank's effective capacity to carry out a policy with internal objectives (price stability, in this case) and control the exchange rate at the same time. This is essentially the debate on the impossible trinity or *trilemma* of an open economy, which holds that in a country integrated with international financial markets, the monetary authority cannot simultaneously control the quantity of money and the nominal exchange rate, being able to control only one of these variables.

The previous section showed that since 2003 authorities have carried out a policy of targets for the growth of the monetary base aimed at providing price stability while at the same time controlling the nominal exchange rate. Some observers have argued that this result was possible because the economy was virtually isolated from capital markets, due to the credit rationing following the default. But as Argentina's links to capital markets are gradually rebuilt, the possibility of eluding the *trilemma* will progressively run out. A proof of this would be the recent enforcement of restrictions on capital inflows.

¹¹ The stylized features of this cycle can be described as follows. It begins with an expansionary phase caused by capital inflows typically attracted by high interest rate differentials between local and foreign assets in the context of a credibly fixed exchange rate. Domestic credit and aggregate demand expansions follow. Real exchange rate appreciation emerges as a consequence of inflation generated by demand pressures, residual price increases (in cases of exchange rate stabilization programs), or both. The current account worsens as a result of the increasing flow of imports caused by both the exchange rate appreciation and the expansion of demand. External financial needs rise and debt is accumulated, increasing the external vulnerability of the economy. As the perceived risk rises, capital inflows tend to slow down and interest rates go up, pushed by rising country risk and exchange risk premiums. Reserve accumulation reaches a maximum and a second contractionary phase begins. Capital outflows and higher interest rates give way to an illiquid and insolvent financial scenario a la Minsky (1977). The rise in the real interest rate - an endogenous consequence of increasing external fragility - sharpens the contraction of economic activity creating additional sources of financial stress. Finally, the exchange rate regime has to be abandoned, sometimes after a financial crisis unfolds. For an interpretation of the Asian and Latin American external and financial crises in the nineties in this vein, see Taylor (1998), Neftci (1998) and Frenkel (2003).

¹² For instance, Argentina was an exceptional case in the thirties, as the only Latin American debtor to fully meet its external liabilities on time.

Other analysts are skeptical as to the unavailability of the *trilemma*. Several authors have argued that the *trilemma* cannot be generalized to any context¹³. This line of argumentation stresses that the *trilemma*'s validity depends, among other things, on the types of operations available to the Central Bank and the direction of capital flows. In brief: although it is not possible to maintain the exchange rate and the interest rate in a configuration that causes capital outflows indefinitely – as the stock of reserves is finite and therefore can be depleted – the opposite is feasible. With unrestricted capital inflows, it is possible to simultaneously control the quantity of money and the nominal exchange rate by resorting to sterilization. These can even take place independently of the government's will, through compensation mechanisms that arise from the cancellation of commercial banks' debt with the monetary authority (Lavoie, 2001) – as has occurred in Argentina since 2003, as shown in section 3.2. On the other hand, sterilization operations do not necessarily involve an unsustainable quasi-fiscal cost, as argued by critics. If the local currency depreciates, the substitution of assets (reserves for bills; Lebac and Nobac in the case of Argentina) will generate capital gains for the Central Bank that can offset the cost of sterilization (Bofinger y Wollmershäuser, 2003).

As described above, the current excess supply of foreign exchange in Argentina leads the monetary authority to issue Lebac and Nobac in order to remain within the monetary expansion targets of its program. The larger the foreign exchange surplus in the market – *ceteris paribus* the compensating effects derived from other transactions– the larger the extent of the intervention required to avoid an appreciation of the peso and therefore the larger the quantity of currency to be sterilized. It is clear that the current monetary policy is subject to stress that may be hard to manage. But do they arise from policy inconsistency, as would follow from the *trilemma*?

It is important to notice that, following Walras' Law, an excess supply in the foreign exchange market must necessarily imply an excess demand in some other market of the economy. In simplified form, this could be in the markets for money, goods, other assets (physical or those accruing rent), or some combination thereof. If the public decides to divest itself of dollars to increase its cash holdings, this constitutes a genuine liquidity preference, without any effect on good prices. If it corresponds to an excess in the demand for goods, the adjustment could take place either through prices or quantities, depending on the elasticity of supply. Finally, a downward trend should be observed in domestic interest rates if there is excess demand for assets, as long as their supply is fixed. Therefore, if the excess supply in foreign exchange implies an excess demand for domestic assets, the monetary authority should have no difficulty in regulating the quantity of money (or the interest rate) and the nominal exchange rate, as long as the demand for domestic assets can be satisfied with securities issued by the Central Bank. In this case, the monetary authority could employ two instruments (exchange market interventions and sterilization) to pursue two objectives without altering its net balance sheet position. The situation is obviously more complex if the excess supply of foreign exchange corresponds to an excess demand for some asset that is different to that issued by the Central Bank (i.e. goods or other financial assets). Under these conditions, Central Bank would face a greater difficulty in simultaneously pursuing both objectives, and would probably have to enforce some form of capital controls, accommodate an interest rate raise on its securities or allow some appreciation of the local currency.

The debate over “dilemmas” in the simultaneous handling of exchange rate and monetary policy is linked to the discussion over the sustainability of the official policy of ensuring a SCRER. Although the determination of the real exchange rate remains an open

¹³ See, for instance, Frenkel (2005), Frenkel and Taylor (2005), Taylor (2004, Chap. 10), Eatwell and Taylor (2000), Blecker (2004) and Godley and Lavoie (2003).

question for economic theory¹⁴, eluding the *trilemma* would imply a substantial degree of control over the level and/or path of the exchange rate over at least the short and medium term. In fact, to the extent that the government can direct monetary policy towards internal targets (inflation) and set a level (or path) for the nominal exchange rate, it would at the same time be exercising a substantial degree of control over real parity. In any case, recent history shows that Argentine authorities have succeeded in keeping the real exchange rate stable at least for three years.

5. Conclusions

This paper analyzes the macroeconomic evolution of Argentina following the collapse of convertibility in the last days of 2001. It was shown that after the devaluation and the partial default on public debt, the economy continued to shrink at a considerable rate, as had happened towards the end of the convertibility regime. However, the contractionary trend was short-lived. Starting in the second quarter of 2002, the economy set off on a rapid recovery process. By mid-2005, GDP had surpassed the peak reached in 1998 and the high rates of growth persisted.

The analysis implicitly questions the explanation that attributes economic recovery mainly to a favorable external context. Under this interpretation, the recovery would be taking place despite – as seen from this perspective – an economic policy full of mistakes and omissions. Although the contribution of external factors to the recovery has been undeniable (in particular the high prices of some commodities) the fact that the substantial part of the expansion derives from domestic sources of demand weakens that interpretation. The main factor lies in a pragmatic macroeconomic policy, aimed first at stabilizing domestic financial markets and ensuring the basic macroeconomic equilibria, and then at preserving a SCRER, adequately managing monetary policy and reinforcing tax collection. The exchange rate policy provided incentives to the tradable sector, promoting the expansion of its output, employment and investment.

The ongoing process is substantially different from other economic growth episodes in Argentina's economic history. Current macroeconomic conditions stand out due to the external and fiscal surpluses. Argentina's economic performance since at least the Second World War has been a story of low and volatile economic growth. Both external and fiscal imbalances have traditionally acted as the main constraints to a sustained development process. In this regard, the present macroeconomic configuration based on 'twin surpluses' seems to offer an important opportunity for the country.

Despite the apparent success of the Argentine strategy, the SCRER policy conflicts with conventional wisdom. The set of policies that the IMF and other orthodox commentators recommended for Argentina and other Latin American countries combines a fully open capital account, pure floating exchange rates and inflation targeting as the monetary policy regime. I understand this combination to have two important negative attributes. First, the volatility of capital flows is transmitted through the volatility of nominal and real exchange rates and relative prices. Second, inflation targeting sets a bias towards exchange rate

¹⁴ A significant share of economists subscribe to the purchasing power parity hypothesis as an explanation of how the real exchange rate is determined over the long run (Taylor and Taylor, 2005), despite the fact that it is not without substantial weaknesses in terms of empirical verification Blecker (2004).

appreciation, with negative effects on employment and growth. So far the recent Argentine experience seems to show that a macroeconomic policy regime focused simultaneously on employment, inflation and growth with a SCRER as an intermediate target is a valid alternative. The orthodox objections to the SCRER policy based on *trilemma* argument are weak. As a general assertion that attempts to be valid under all circumstances, the *trilemma* is false. Particularly, in a context of capital inflows, Central Banks should not confront severe difficulties in simultaneously managing the exchange rate and the short run domestic interest rate (or the monetary base). Those targets can be simultaneously attained by implementing interventions in the FX market and sterilization operations in the money market; reinforced, if necessary, by regulations on capital flows.

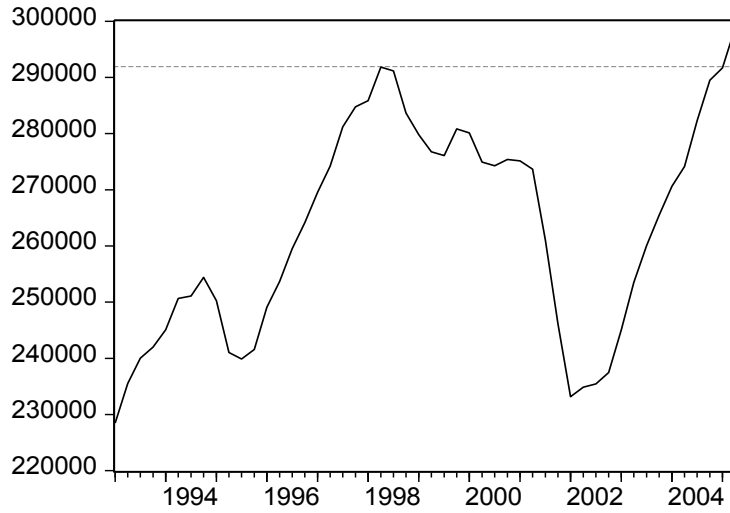
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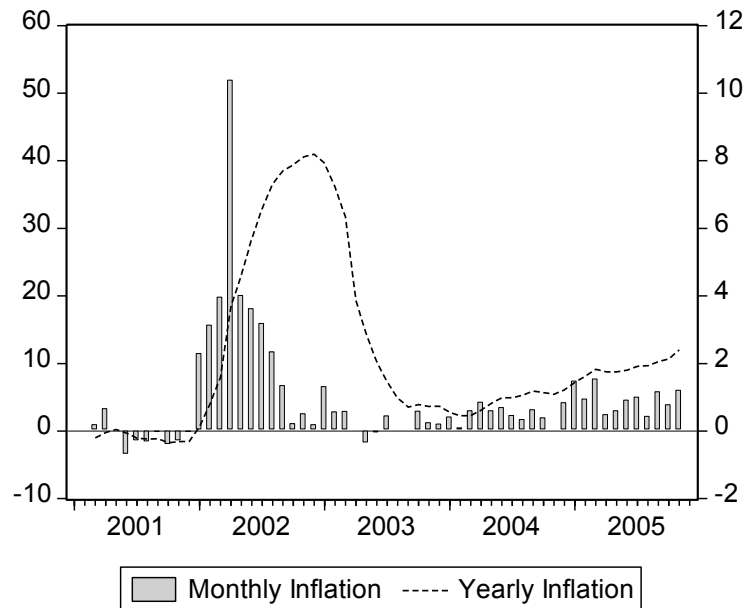
Appendix

Graph 2.1
GDP, seasonally adjusted
(In millions of pesos of 1993)



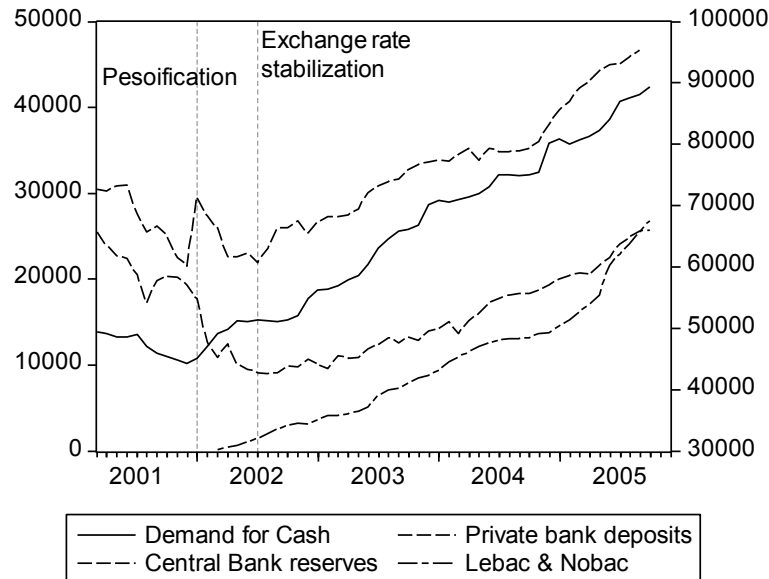
Source: Ministry of Economy

Graph 2.2
Yearly inflation rate and monthly inflation rate (right axis)
(In %)



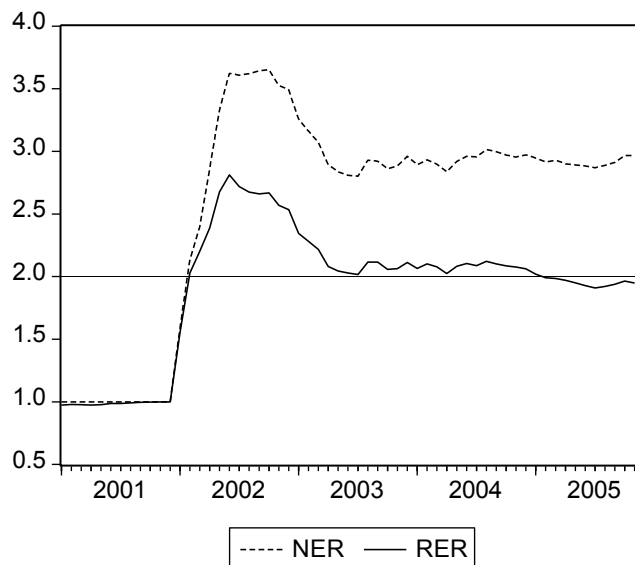
Source: Author's elaboration based on INDEC.

Graph 2.3
 Demand for cash, central bank international reserves*, Lebac, and Private bank deposits (right axis)
 (In millions of pesos and dollars)



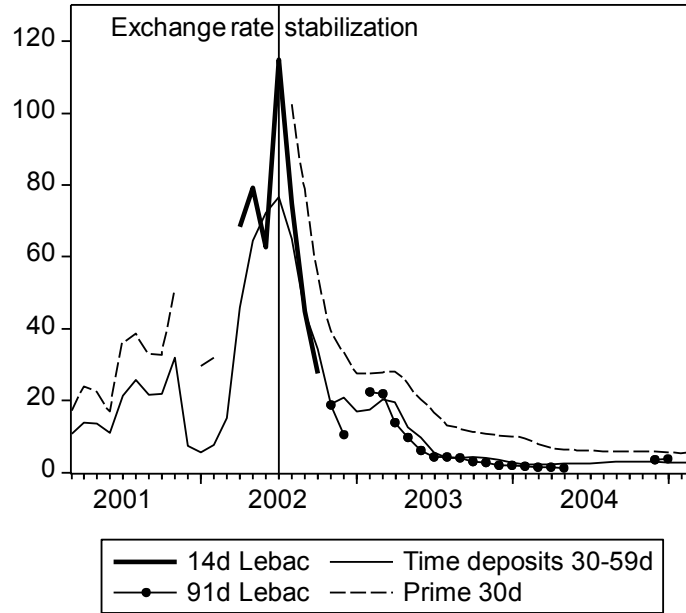
* In millions of dollars
 Source: Central Bank of Argentina.

Graph 2.4
 Bilateral nominal (NER) and real exchange rate (RER)* with the United States
 (In pesos and index 1 = December 2001)



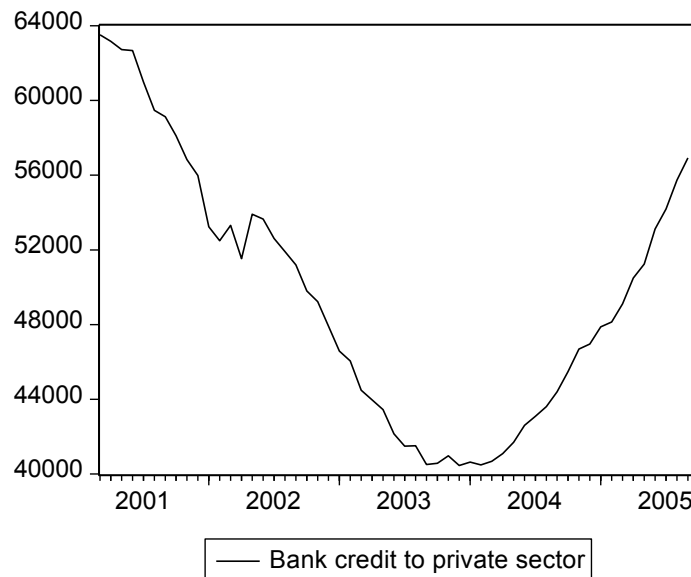
* Real exchange rate was calculated using US and Argentina Consumer Price Indexes.
 Source: Author's elaboration based on Central Bank of Argentina and Ministry of Economy.

Graph 2.5
 Interest rates in pesos: Lebac (14 and 91 days), Time deposits (30 to 59 days) and
 Prime (30 days)
 (Monthly average, in %)



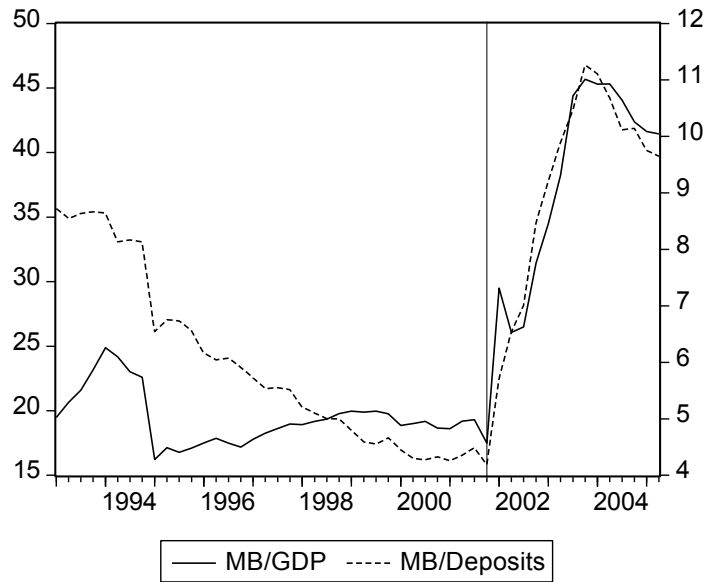
Source: Author's calculation based on Central Bank of Argentina

Graph 2.6
 Bank credit to the private sector
 (In millions of pesos)



Source: Central Bank of Argentina

Graph 2.7
 Monetary Base in relation to Total Bank Deposits and GDP* (right axis)
 (In %)



* Seasonally adjusted

Source: Author's calculations based on central bank and Ministry of Economy