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Argentina: macroeconomic performance and crisis

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1. Introduction

This work focuses on two central and controversial topics about the currency board regime established in Argentina in 1991 and the crisis of late 2001. The first is related to the main characteristics of the policy regime and the economic performance it led to. Are the Convertibility regime and the Argentine crisis a special case, or both share the stylized facts with other critical experiences of financial globalization? We assert that the Argentine experience in the nineties is similar to other LA cases of trade and financial liberalization and opening leading to crisis. So, similar critical factors can be identified in all those cases and there is a common explanation of the performances and the crises.

The second point focuses on the fiscal issue. An unsustainable public debt dynamics determined by the fiscal policy of the second half of the nineties is the privileged explanation of the Argentine crisis. Our point is that public debt dynamics was mainly caused by the cumulative effects of the rise in the interest rates - pushed by the increase in the country risk premium - after the Asian and Russian crises. The interests' item was the main factor explaining the increase in the fiscal deficit in the 1998-01 period. The pension system deficit also contributed to that increase. The fall in the public pension system receipts mainly resulted from the recession and the employment contraction that started in mid-1998, thus, it was also an indirect effect of the new financial conditions. The fiscal deficit increased despite a significant rise in the primary balance surplus. In order to give solid foundation to those arguments we reviewed the fiscal accounts figures, incorporated new information on public debt and elaborated a new quantitative picture of the evolution of the fiscal accounts that is presented for the first time in this paper.

In the next section we focus on the first topic, that is, on the elements of a common explanation for the several episodes of crisis. We then examine the fiscal issue in Argentina in the nineties. Finally, we present our conclusions regarding the role of the fiscal performance and the public debt on the development of the crisis.

2. External Crisis

2.1. Latin American financial globalization and crises[i]

In the new stage of financial globalization that took place in the 1990s, a number of LA countries have experienced external and financial crises, with dramatic real effects.

The crises in Mexico (1994-95), Argentina (1995), Brazil (1998-99) and again in Argentina (2001-02) burst in the countries that had received the largest capital flows in the earlier booms. These countries are, in turn, the largest economies in LA and the largest “emerging markets” in the region.

A brief examination of the cases in question is sufficient to reveal certain common traits in the institutional and policy contexts: (1) the nominal exchange rate was fixed or quasi-fixed; (2) the real exchange rate had appreciated; (3) there were virtually no barriers to the free movement of capital; (4) inflows of capital during the earlier boom had been large in comparison to the pre-existing money and capital markets; and (5) regulation of national financial systems during the boom periods was weak and permissive.[ii]

A more detailed analysis of the cases in question also shows that they all were subject to cyclical macroeconomic dynamics, with an initial stage of growth followed by a period of stagnation or recession, increasing financial and external fragility and, last, a financial and currency crisis. The Argentine economy went through the cycle twice in the nineties, because the convertibility regime survived the crisis triggered by the tequila effect in 1995. After 1995, the Argentine economy experienced another brief phase of growth, based on a new increase in capital inflows that lasted until the Asian crisis. The turning point in this second cycle came in 1998.[iii]

The institutional and macroeconomic policy contexts described above were shaped by the application of programs that combined structural reforms[iv] with antiinflationary macroeconomic policies in which the fixed or quasi-fixed exchange rate played a crucial role. Mexico implemented a program of this kind in 1988, Argentina in 1991 and Brazil in 1994.

2.2. The experiments in the Southern Cone

Early regional experiences in joining the international financial globalization in the 1970s – Argentina and Chile – anticipated the models that would become widespread in the 1990s. The so-called 'Southern Cone liberalization experiments' combined financial and trade reforms with macroeconomic systems involving pre-set exchange rates and a passive monetary policy. The reforms included liberalization and deregulation of capital flows, liberalization of the local financial market and open trade. The pre-set exchange rates (called "tablitas") were intended to bring down inflation. These policy experiments led to financial and trade liberalization and deregulation in the context of a fixed, appreciated exchange rate. [Fanelli and Frenkel (1993) and Frenkel (2002)].

The experiments had the same confluence of local conditions and booms in capital flows that can be seen in the critical cases in the 1990s. Furthermore, the processes that arose from the Southern Cone experiments are similar to the developments that led later to the crises in Mexico, Brazil and Argentina in the recent stage. Although the experiments in the 1970s were shorter than in the recent cases, the macroeconomic dynamics points to the same cycle of boom, shrinkage and crisis.

Both Chile and Argentina fully liberalized capital flows and adopted pre-setting exchange rate policies in the last quarter of the seventies. By the end of 1979, when the United States' monetary policy raised the interest rate, Argentina and Chile already had large external debts and current account deficits. From that time on, the higher international interest rates made a further contribution to their external fragility. The crises erupted shortly afterward. The exchange regime collapsed in Argentina in early 1981 and in Chile in 1982. The external financial markets were closed to both economies in 1982 and in both cases large-scale rescues of the local financial system were undertaken, at high fiscal costs. Both economies went into deep recession.

Neither the fiscal deficit nor the existence of public guarantees of bank deposits – an element that could potentially create moral hazard – played significant roles in the crises. Both were present in Argentina, although Chile had a fiscal surplus and the deposit guarantee had been eliminated for the explicit purpose of making the financial system more efficient and less risky. The IMF supported these policy experiments. In 1980 and 1981, when Chile's external accounts exhibited large current accounts deficits, the IMF (Walter Robicheck) maintained that this situation should not be cause for concern, as long as it was not accompanied by a fiscal deficit – which Chile did not have at the time. The IMF (Michel Camdessus) maintained the same position with regard to the situation in Mexico in 1994. On both occasions, the basic argument was that the rational behavior of the private sector would guarantee the efficient allocation of resources taken in loans from abroad and would also guarantee their repayment.

The crises of the Southern Cone experiments had a deep intellectual impact. Chile was a particularly shocking case because it had all the ingredients that should guarantee its success and stability, according to the theory that gave basis to that set of policies. The experiments were founded in a version of the modern "monetary approach to the balance of payments", a view that was born in the University of Chicago under the impulse coming from a world capital market recently reestablished.

Papers and discussion about these experiences generated a new body of economic literature, under the heading of "the sequencing literature" (Fanelli and Frenkel, 1993). The main conclusion of these works was that a wrong sequence of reforms lied behind the crises. That is, basically, that the crises originated in a premature financial opening. The consequent policy prescription was that the financial market must be opened only after the economy was stabilized, opened to international trade, and counting on a solid domestic financial system. That is, at the end of the application of a sequence of measures – which would later configure the core of the Washington Consensus- and only after the first set of reforms fully showed their expected results.

These observations make evident that in the first half of 90', when a new boom of capital flows was being experienced, neither historical experience nor analytic work nor policy recommendations were lacking that could serve as antecedent to examine the processes that were then taking place in Mexico and Argentina. The Southern Cone experiments had taken place a decade before and had also been analyzed profusely. However, neither the IMF, nor the work of the analysts of the markets, nor most of the academic production, showed traits of the memory of these cases and their lessons.

Even more surprising, the unawareness of these experiences and lessons extended to some persons who had had an active participation in that debate and contributed to the "sequencing literature", some of them reaching relevant positions in the new stage (for example, Mrs. Anne Krueger - current Manager Director of the IMF - [Krueger (1984)] and Mr. Sebastián Edwards - former Chief Economist of the World Bank for Latin America - [Edwards (1986)]). The lack of memory of the crises was such that in the conventional interpretation that settled after the crisis of Mexico of 1994, this would appear as surprising as a lightning in a sunny day.

2.3. The cyclical dynamics that leads to crisis

The starting point of the cycle that marks the cases in the 1970s and 1990s is the confluence of local programs and a boom in capital flows into emerging markets. It is precisely the abundance of low-cost international financing that makes policy packages viable ex ante.

The launching of the programs is followed by massive capital inflows and a first phase of accumulation of foreign reserves and high rates of growth of monetary and credit aggregates. The domestic demand expands strongly and the prices of real and financial assets (real state, stocks) experience a bubble.

The impact on the prices of assets and on the amounts of money and credit is very large because the capital flows are large in comparison to local markets. The local financial systems and capital markets are relatively small and scantly diversified. The menu of assets is short and little use is made of banking services. The local financial system had previously administered few resources and is not prepared to efficiently allocate a growing mass of credit. For the same reasons, the capacity of the authorities to supervise a system that is growing rapidly in terms of volume and the number of intermediaries is weak. With a fixed or quasi-fixed nominal exchange rate that initially enjoys great credibility, investments in local assets bring high returns in dollars. There are strong incentives to adopt positions in local assets financed with debt in foreign currency.

The real exchange rate has already appreciated or tends to appreciate in the expansion stage because inflation is higher than the sum of the pre-set devaluation rates (zero in the case of fixed exchange rates) plus international inflation. The pressure from rapid growth in demand on non-tradable sectors contributes to the appreciation.

As a result of exchange rate appreciation, more open trade and growth in domestic demand, imports grow rapidly and the trade deficit rises. The other components of the current account deficit also tend to increase - slowly at the outset and then more quickly - as the external debt grows and the stock of foreign capital invested in the economy rises.

Relative prices bias real investment toward non-tradable sectors. As a result, the growing returns in international currency from FDI have no counterpart in the current account balance in an increase in exports.

The evolution of the current accounts and reserves defines one aspect of the cycle. There is a continuous increase in the current account deficit, while capital flows may undergo abrupt changes. The day arrives when the current account deficit is larger than capital income. Reserves peak and then shrink, leading to shrinkage in the supply of money and credit. However, the cycle is not determined exclusively by this mechanical element. The magnitude of capital flows is not an exogenous datum. The portfolio decisions of local and external agents on the percentage of local assets – the percentage of the portfolio exposed to country risk or exchange risk – are affected by the behavior of the balance of payments and finances.

The domestic interest rate reflects the financial aspects of the cycle. It tends to drop in the first phase and rise in the second. Since the exchange policy initially enjoys high credibility, arbitration between financial assets and local and external credits leads to a reduction in the rate in the first phase. Low interest rates contribute to real and financial growth. In this context, financial fragility (in Minsky's usage) increases significantly. The interest rate rises in the second phase and bouts of illiquidity and insolvency crop up, first as isolated cases and then as a systemic crisis.

How can we explain the increase in the nominal and real interest rates? Since the financial market is open at both ends, there is arbitration between local and external assets, as noted earlier. The interest rate in local currency can be expressed as the sum of the international rate in dollars paid by the country plus the devaluation rate established in the exchange policy rules (zero in the case of fixed exchange rates), plus a residual that responds to the exchange risk and the local financial risk. In turn, the international rate confronted by the country can be broken down into two parts: the yield of USA Treasury bonds plus a residual that compensates for the risk of domestic debt issued in dollars - i.e. the country risk premium.

The sum of the exchange risk premium and the country risk premium – the aggregate price of the risk of devaluation and the risk of default – is the main variable whose increase causes the local interest rate to rise

A steady increase in the current account deficit and – after a certain point, the trend towards shrinking reserves – undermines the credibility of the exchange regime on the one hand and, on the other, increases the probability that the debt will not be served in due time and form. Maintaining the exchange regime and regularly servicing the foreign debt would require growing capital inflows. Consequently, the risk premiums tend to rise. High risk premiums and the resulting high interest rates are necessary to balance the portfolios and attract capital from abroad. Economic activity shrinks and bouts of illiquidity and insolvency also contribute to undermining the credibility of the exchange regime. This dynamics proved to be explosive in all the cases examined. At the end of the process, no interest rate is high enough to maintain demand for local financial assets. There are runs against Central Bank reserves that finally lead to the collapse of the exchange regime. In the cases that occurred in the 1990s, the market for new debt issues generally closes when the country risk reaches some critical high level.

The relative weights of the exchange risk premium and the country risk premium were different in the 1970s and the 1990s. The difference is linked to the different forms that external financing assumed in each decade. In the 1970s, financing came principally from international bank loans. The country risk premium was the surcharge levied on the international prime rate charged by the banks on their loans to the country. The secondary debt market was insignificant. In this context, in Argentina and Chile in the late seventies-early eighties, the exchange risk was the main factor that determined the rise in interest rates in the second phase of the cycle, while the increase in the surcharge levied by the creditor banks was not significant. This can be explained by the behavior of the banks. As long as each bank has a portion of its portfolio invested in assets in the country, it is interested in preserving their quality and the borrower's ability to repay. Consideration of the sunk portfolio influences decisions on the amounts and price of new loans.

In the 1990s, on the other hand, the main form of financing is the sale of bonds and other debt instruments on a primary market consisting of many and varied players. The debt papers are traded daily on an active secondary market. The country risk premium arises from the continuous quotations of the papers on that market. In the 1990s, the rise in the country risk premium – resulting from the fall in the price of country debt papers on the global secondary market – is the main motor for the increase in interest rates in the second phase of the cycle. Besides, the debt market in the most recent stage of globalization is more volatile than the credit market of the 1970s. It is more subject to contagion and to herd behavior.

2.4. The fiscal deficit and the public debt

The foregoing analysis of economic developments highlights some stylized facts that are present in all the processes under consideration. The description of those stylized facts focuses on the linkage between a country's finances and real economy and the international financial system. There is positive feedback during the boom and negative feedback during the bust. The public and private sectors financial processes have not been examined separately. The fiscal deficit financed with foreign capital is tacitly included into the local destinations of capital inflows and consolidated with the private deficit. The public sector's external debt is part of the country's total external debt and its performance is not analyzed separately.

The reason for this approach is simple: fiscal sustainability did not play a prominent role in generating the crises in Chile in 1982, Mexico in 1994-95, Argentina in 1995 or Brazil in 1998-99 (or the Asian crises in 1997-98).[v]

To examine this aspect in the recent experience of Argentina, we will first analyze, in the following section, the available information regarding the fiscal evolution in the nineties. We then return, in the last section of this work, to the relationships between the fiscal accounts and the crisis.

3. The Convertibility regime and the fiscal performance

As we have pointed out in the preceding section, most interpretations of the collapse of the currency board installed in Argentina in 1991 identify the fiscal imbalance as the central cause (if not the only one) of that crisis.

Certainly, there are not doubts of the presence of a strong financial unbalance of the public sector in the final stages of that macroeconomic regime. However, that evidence doesn't allow, by itself, a causal reading. Our own interpretation of the operation of that monetary regime identifies as the main problems for their sustainability the effects of the exchange rate appreciation and its consequences on the external vulnerability of the economy. [vi]

The evaluation of the nineties fiscal accounts is difficult by a number of serious deficiencies in the available information. Precise figures referring to the global financial obligations of the federal public sector prior to 1993 are missing, as well as are those of the provincial debts before 1996. Complete data about fiscal revenues and expenditures for the federal government, on an accrual basis, are also lacking for the period before 1994. It is thus very difficult to trace a clear picture of the initial prevailing conditions and to evaluate events in between the edges of the decade.

It is also well known that a significant discrepancy exists between the public deficits accumulated throughout the decade and the increase in the public debt registered during the same period. This stock-flow inconsistency is very difficult to understand and solve solely on the basis of the available information. Our best effort was made in order to close this informational gap. We believe that it constitutes an unavoidable requirement to have a well-founded assessment of the Argentine fiscal performance.

We present below estimations of the total public debt for the whole period and identify the main factors explaining the divergence between the accumulated deficit and the increase in the public debt.[vii] On that basis we develop an analysis of the evolution of the fiscal accounts and the financial obligations of the public sector in the nineties that allow for a number of conclusions that contrast in several respects with those of the dominant interpretation of the crisis.

3.1. Fiscal unbalance in historical perspective

To assess the fiscal performance throughout the nineties we start by looking at this period from a long-run perspective. This can be done looking at the figures in the next table.

Table 1
Fiscal Result of the consolidated public sector
(Nation plus provinces and the City of Buenos Aires)
Averages per period, as a percentage of GDP

Period	Primary balance without privatization proceeds	Primary balance	Interest payments	Global balance without privatization proceeds	Global balance
1961-1970	-3.4	-3.4	0.7	-4.0	-4.0
1971-1980	-6.0	-6.0	1.0	-7.0	-7.0
1981-1990	-5.1	-5.1	2.0	-7.0	-7.0
1991-2000	-0.4	0.1	2.2	-2.6	-2.1

Source: Cetrángolo and Jiménez (2003), and Gaggero, J. (2003) .

These estimations neatly show that the financial unbalance of the public sector was considerably reduced in the nineties. On average, a balanced primary result was attained. This result implies a remarkable adjustment of more than 5 percentage points of GDP in comparison with the two prior decades.

The global balance showed a similar improvement. Additionally, for the decade as a whole, the deficit roughly equals the interest burden, of about 2% of GDP.

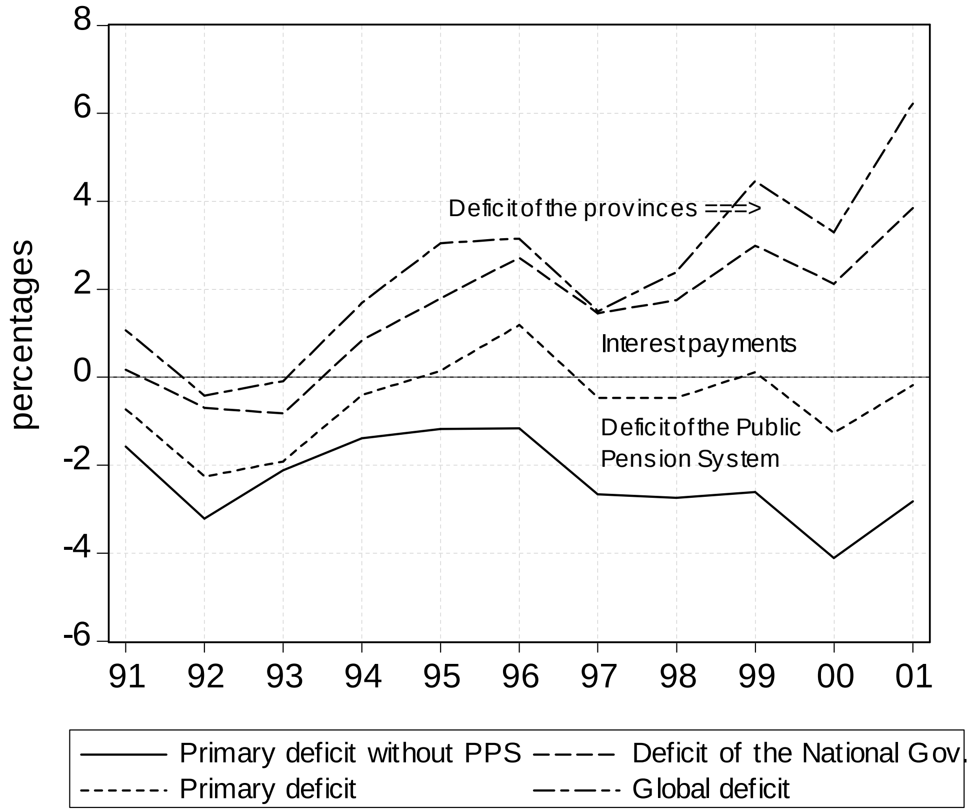
3.2. Fiscal results under the currency board regime

The average figures we have just commented on result, however, from quite different trends within the decade. Roughly, three clearly distinct phases can be identified: an initial stage from 1991 to 1994, an intermediate one that follows until 1997 and, from then onwards, the period of depression that ends in the final crisis of the prevailing macroeconomic regime. The main landmarks separating these phases are, in the first case, the reform of the pension system in 1994 and, in the second, the beginning of the economic contraction in 1998 associated with the effects of the Russian crisis.

Taking into account the macroeconomic setting, the first fiscal phase corresponds to the period of price stabilization and fast economic recovery that was fostered by significant capital inflows. The second one starts with the brief recession of 1995 (triggered by the Tequila effect) and followed by a new and rapid expansion. Finally, the third period is dominated by a deflationary trend throughout its complete extension.

We will describe the main features of the fiscal performance in these three phases with the help of the next graph and tables.

Graph 1
Fiscal deficit in the nineties
(on an accrual basis, in % of GDP)



Source: Our own estimations on the basis of data from the Ministry of Economy and Cetrángolo et al. (2000) for the period prior to 1994.

Table 2.a
Fiscal results in the nineties
(accumulated amounts by period, on an accrual basis,
Million U$S dollars at current prices)

Period	Primary balance excluding the public pension system (1)	Balance of the public pension system (2)	Primary balance (3)	Interest payments (4)	Balance of the National Government (5)	Balance of the provinces (6)	Global result of the consolidated public sector (7)
1991-94	18154	-6495	11658	10654	1004	-6116	-5112
1995-97	13967	-16193	-2226	14036	-16262	-4553	-20815
1998-01	34851	-29656	5195	35271	-30076	-157	-45835
1991-01	66972	-52345	14627	59960	-45333	-26428	-71762

2) Does not corresponds exactly to the deficit of the public pension system, but to the difference between retirement and pension payments of the National Government and the own receipts of the public pension system, resulting from specific wage taxes and firms' contributions. The system also receives resources from other sources, like part of the income tax proceeds, etc.
(3) = (1) + (2).
(5) = (3) - (4).
(7) = (5) + (6).
(6) includes the City of Buenos Aires.
Source: Our own estimations on the basis of data from the Ministry of Economy and Cetrángolo et al. (2000) for the period prior to 1994.

Table 2.b
Fiscal results in the nineties
(averages by period, , on an accrual basis,
as percentages of GDP)

Period	Primary balance excluding the public pension system	Primary Balance	Interest payments	Balance of the National Government	Global result of the consolidated public sector (1)	Privatization Proceeds (2)	Global result without privatization proceeds (3)
Average 1991-94	2.07	1.33	1.20	0.13	-0.56	0.60	-1.16
Average 1995-97	1.66	-0.29	1.70	-1.99	-2.56	0.49	-3.05
Average 1998-01	3.07	0.45	3.13	-2.68	-4.09	0.37	-4.46
Average 1991-01	2.32	0.57	2.04	-1.47	-2.39	0.49	-2.88

(3) = (1) - (2)

Source: idem table 2.a.

3.2.1. The initial period (1991-94)

The early nineties witnessed a remarkable improvement in the public accounts. The economy had gone through several episodes of high instability and hyperinflation that eroded the real fiscal receipts during the previous year. Public revenues experienced an outstanding recovery fostered by both the price stabilization and the economic recovery that started in 1990.

Furthermore, macroeconomic stability was a great help for tax administration. A significant improvement was reached in this area during the period, thus contributing to a sounder fiscal performance.[viii] The data on the evolution of the tax burden presented in Table 4 evidence the retrieval of the ability of the government to collect taxes in the early nineties.

As shown in the Graph 1, the consolidated public sector reached a small surplus in 1992-93. The balance for the whole initial period was, however, slightly negative, though it averaged only 0.56 percentage points of GDP.

The privatization process was very intense during those same years. Setting privatization proceeds aside, the public deficit amounts to 1.16 percentage points of GDP, as showed in the right column in Table 2.b. On the other hand, half of this unbalanced result originated in the provinces.

As seen in table 2.b, global deficit results from the addition of the following items:

1) The primary surplus of the National Government (NG) excluding the result of the public pension system (PPS)[ix]: slightly above 2% of GDP for 1991-94.
2) The deficit of the PPS of about 0.74 percentage points of GDP.
3) Interest payments amounting to 1.2% of the Gross Domestic Product.
4) Provincial unbalance (-0,69%).

3.2.2. The reform of the pension system

A deep reform of the pension system was implemented in 1994. Argentina previously had a hybrid scheme that combined a pay-as-you-go design with a proportionality rule (i.e. pension benefits were linked to the wages of the active workers). The reform established a private capitalization system coexisting with a public one. The latter involved already retired citizens as well as those active workers who chose to remain within it.

We do not examine in detail here the pension reform.[x] The most important point regarding the fiscal performance in the nineties refers to the negative impact of the reform on the balance of the public pension subsystem (PPS). Since many workers abandoned the PPS for the new private one, their contributions to the PPS were also transferred to the latter. Thus, the receipts of the PPS suffered a significant fall. The increase in the financial needs of the PPS from 1994 on is clearly visible in Graph 1.[xi]

3.2.3. The intermediate period (1994-1997)

A new phase in the fiscal evolution of the nineties begins with the pension system reform. It is also in this period that the authorities begin to implement the so-called “fiscal devaluation measures”. The expression refers to measures designed to alleviate the tax burden on tradable sectors, as a way to compensate for profitability reductions caused by the appreciation of the peso, an original sin of the currency board regime.

As a consequence of these factors, the loss of receipts of the PPS and the fiscal devaluation, the public deficit rises. And this happens in spite of the first wave of pro-cyclical fiscal policies, implemented in 1995 as an answer to the crisis that followed the impact of the Mexican devaluation of December 1994.

The government increased VAT, as part of a fiscal package aiming at offsetting the negative effect of the recession on the fiscal receipts.

The global fiscal unbalance jumps by about 2% of GDP on average, in comparison with the prior phase. However, as can be deduced from the figures in Table 2.b, the primary surplus of the National Government (without considering the PPS). . The deficit of the PPS jumped by an amount equivalent to 1.2% of GDP and constituted the main explaining factor of the deterioration of the global finance. In other words, around 60% of the rise in the fiscal financial needs in the period resulted from the evolution of the public pension subsystem (while almost 25% was due to the rise in the flow of interest payments on the outstanding debt). It should also be noticed that the deficit of the provinces is falling in this period, reaching a balanced situation in 1997, as showed in Graph 1.

3.2.4. Public debt before the economic depression

We now look at the evolution of the public liabilities to complete our description of the fiscal evolution in the first two periods considered so far.

As it was already mentioned, a significant discrepancy exists between the figures of debt variation throughout the decade and what can be deduced from the consolidated deficit of the public accounts.

In the Table 5, below, we quantify this discrepancy for the three phases we are characterizing and we also identify the main explaining factors.

It can be observed that the main discrepancy appears precisely in the first phase, up to1994. The consolidated liabilities of the National Government and the provinces increased then by about 22 billion dollars above what could be explained by the public deficit. And this happened in spite of the concentration, in the same period, of mass privatization operations that implied the rescue of outstanding debt by more than 7.1 billion dollars, and the debt reduction of more than 2,3 billion that resulted from the Brady Plan.

However, as the same Table shows, the bulk of the discrepancy in this phase resulted from the recognition, during the first years of the currency board regime, of liabilities (with both retired workers and suppliers of the public sector) mainly accrued in prior periods

Even so, we must stress the fact, as it is evident in Graph 2, below, that the public debt stays basically stable in the early nineties (measured as a percentage of GDP), below 30% in the case of the total debt, and under 25% for the foreign obligations. In fact, the latter was slightly declining, as a consequence of both the appreciation of the peso and the fast expansion of the aggregate product.

In synthesis, the 1991-94 period was characterized by a strong improvement in the public accounts and by the non-traumatic absorption of a significant amount of liabilities accrued in previous years, that is, by a normalization of financial obligations many of which were already under litigation. If there is something that clearly emerges from these figures (particularly Graph 2), it is the absence of any signal of fiscal sustainability difficulties by 1994, when the economy was hit by the external shock derived from the Mexican crisis. [xii]

In the ensuing phase, the debt-to-GDP ratio jumps upwards. But as the Graph 2 also shows, the rise is concentrated in 1995. It was in part an effect of the recession (that rises that ratio), but the main cause was the foreign financial support package coordinated by the IMF that was of considerable help to overcome the recession and the financial crisis that followed the Tequila effect.

The same Graph suggest that after that negative shock had been left behind, in the expansionary phase of 1996-97, the public debt-to-GDP ratio seemed to stabilize again and in a low level by any international comparison: close to 35%. The foreign debt even falls slightly as a proportion of the aggregate product.

Once again, and in spite of the higher current deficit and the unbalance of the PPS, the evidence seems to be far of indicating a risk of fiscal sustainability problems around 1997, before the beginning of the depression.

3.2.5. The economic depression of 1998-2001

The fiscal setting we have just described so far changed substantially in many aspects from 1997 on. Particularly after the Russian crisis of August 1998, whose impact triggered an economic contraction that happened to be unusually long.

The Graph 1,above and the Table 3, below, can help to understand some central features of the fiscal evolution in the new phase.

Firstly, the consolidated fiscal deficit takes a steep upward trend that would bring it to about 6 percentage points of GDP in 2001. This happened despite the several rounds of contractionary (and thus, pro-cyclical) fiscal policies implemented in the period (in late 1998, late 1999 and 2000) aiming at reversing that negative trend. [xiii]

Table 3 makes possible to look at the fiscal evolution in perspective, by comparing the average result of the public sector accounts of the 1998-2001 period with those of 1994, the last year of the early nineties phase.

The average annual deficit of 1998-2001 (that amounted to 11,458 million dollars on an accrual basis) was 7,112 million dollars greater than the 1994 unbalance.

Where did this increase come from? As can be seen in the Table, the main burden in the explanation falls on the rise in interest payments (+ 6 784 million dollars) and, in the second place, to the widened financial gap of the public pension system (+ 4 867 million). A smaller figure is due to the greater provincial unbalance (+ 592 million), although it is true that this was following a rising trend, as can be seen in Graph 1.

The Table also shows that the pro-cyclical fiscal measures, if inappropriate, were not ineffective. They made possible to reach a substantial increase in the primary surplus (without considering the PPS), of more than 5 billion dollars yearly. However, as we have already stressed, this was not enough to offset the increase in the flow of interest payments and the unbalance of the public pension subsystem.

Table 3
Comparison of the average public deficit of the 1998-2001 period with 1994 figures (on an accrual basis, in million dollars at current prices)

(1) Variation of the global deficit	+ 7112
(2) Variation of the deficit of the public pension subsystem	+ 4867
(3) Variation of the primary deficit of the National Government	- 5131
(4) Variation of the primary deficit of the provinces	+ 592
(5) Variation of interest payments of the consolidated public sector	+ 6784

(2) See definition in Table 2.a.
(3) Without considering the public pension subsystem.
Source: Our own estimations on the basis of data from the Ministry of Economy and Cetrángolo et al. (2000).

The explosive trend in the amount of interest payments can be clearly observed in the Table 4, below. The burden of interest payments on global tax receipts, which was already increasing after 1994, starts sharply moving upwards in 1996. In 2000, before the outbreak of the crisis, this ratio approached 19%, thus doubling the level of the mid-nineties. This was in part a consequence of the fall of tax receipts owed to the recession. But it substantially originated in the rise of the average interest rate on the public debt. This rate was approached through the quotient between the annual flow of interest payments and the outstanding stock of financial liabilities at the end of the previous year. We include this estimation in Table 4. The average interest rate jumped upwards from 5,8% in 1996 to 9,4% in 2001.

3.2.6. Public debt during the depression

The above mentioned rising trend of the interest rate was closely correlated with the trend of the country risk premium in 1997-2001. It had a clear impact on the global deficit, as we have described above. It also triggered the explosive trend of the public debt from 1997 on (see Graph 2).

Our description shows that this was substantially a financial problem, a debt trap in a context of turbulence in foreign financial markets that had a negative impact on country risk premium. In 1997, before the impact of the Russian crisis, the consolidated deficit was below 2% of GDP (Graph 1) and falling, and the public debt did not surpass 35% of GDP. Beyond the evidence of some loosening of the fiscal discipline (specially in the provinces) during the last years of Menem's administration, the above description does not suggest that the crisis is the result of a discretionary fiscal policy or a complete relaxation of fiscal discipline, as it is often suggested. On the contrary, we have already seen that the active pro-cyclical policies implemented along the period generated important primary fiscal surpluses (without considering the PPS), well above those obtained in the early nineties. These policies added to the factors behind the deflationary scenario of the period, but could not stop the increase of the public debt.

Additionally, as a reflection of the increasingly difficult access to foreign funds in an unfavorable financial context, the domestic debt of the public sector (with local banks and private pension funds) acquired a more important role, as can be seen in the Graph 2. Meanwhile, the foreign debt tended to stabilize, even if the ratio foreign-debt-to-GDP kept rising moderately, mainly as a consequence of GDP contraction. The ratio between the consolidated public debt and the aggregate domestic product surpassed 55% in 2001. It had risen by 20 percentage points in only four years.

Table 4
Consolidated tax burden and weight of the interest payments in the public debt (in percentages)

Year	Global tax burden (% of GDP) (1)	Average interest rate on the public debt (%) (2)	Ratio of interest payments to tax receipts (%) (3)
1991	18.8	NA	5.6
1992	20.8	6.6	8.3
1993	21.3	5.0	6.0
1994	21.1	5.5	6.9
1995	20.9	6.1	9.2
1996	19.6	5.8	9.7
1997	21.0	6.7	10.9
1998	21.4	7.6	12.2
1999	21.4	8.3	15.9
2000	21.9	8.9	18.5
2001	21.1	9.4	23.4

(1) On a cash basis. It includes contributions to the Public Pension System.
(2) Estimated as the quotient between interest payments of every year and the outstanding public debt at the end of the previous year.
(3) Tax receipts include contributions to the Public Pension System.
Source: Our own estimations on the basis of data from the Ministry of Economy and Gaggero (2003).

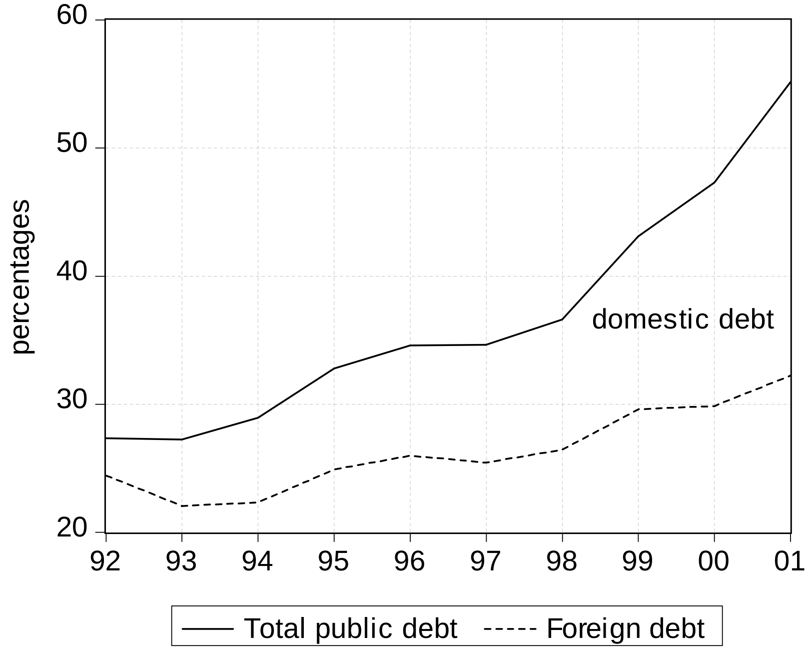
Table 5
Fiscal deficit and increase in the public debt
(in Million dollars at current prices)

Period	Deficit of the consolidated public sector (1)	Increase in the gross public debt (2)	Discrepancy (2) - (1) = (3)	Liabilities accrued in prior periods (4)	Interests capitalized in the period (5)	Effect of variations in exchange rates (6)	Increase in public financial assets (7)	Debt reduction (Brady plan) (8)	Debt swaps through privatizations (9)	Other factors (10)
1992-1994	3247	25094	21847	22859	2255	-599	3205	2323	7111	3561
1995-1997	20815	22659	1844	3892	3135	-3381	2842	0	40	-4604
1998-2001	45835	52817	6982	5947	1624	-5665	-152	0	0	5228
Total	69897	100570	30673	32698	7014	-9645	5895	2323	7151	4185

(2) It does not include the Central Bank debt.

(2) - (1) = (3).
(3) = (4) + (5) + (6) + (7) - (8) – (9) + (10).
(5) Not included in the estimated deficit in column (1).
(8) It includes 2,323 million dollars (with a negative sign) in 1992-94, corresponding to the estimation of the net reduction in the outstanding debt as a consequence of the Brady agreement.
Source: our own estimations based on data from the Ministry of Economy, Melconián et al. (1997), Cetrángolo et al. (2000) and Teijeiro (1996).
Note: the variation of the stock of obligations of the Central Bank with the multilateral organizations, not included in this table, was of 2,771 million dollars between 1991 and 2000. In the year of the crisis, 2001, they jumped by 8,867 millions, owing mainly to the new financing obtained from the IMF to strengthen the stock of foreign exchange reserves of the monetary authority. This debt increase is not considered here because it has neither fiscal origin nor fiscal utilization.

Graph 2
Evolution of the public debt
in % of GDP



Source: our own estimations based on data from the Ministry of Economy.

3.2.7. The behavior of the public expenditures of the consolidated public sector.

The preceding sections were devoted to the exam of the evolution of the fiscal unbalance and their financial aspects. To complete this analysis we include here the aggregate figures that show the evolution of the public expenditures throughout the nineties.

This issue is highly relevant because some visions that point to the fiscal problem as the matrix of the crisis often stress the supposedly strong increase of the public expenditures as the real root of the problem.

The aggregate public expenditures grew significantly in the period. As we saw in the prior section, this was in great part a consequence of the strong increase in the interest rates of the public debt during the second half of the decade. However, when the primary expenditures (whose changes are a better indicator of fiscal impulses) are considered, it can be seen that their behavior in the nineties is far from explosive. The Graph 3 presents the evolution of primary expenditures in real terms and per capita. We also include the series of per capita GDP.

Graph 3
Per capita primary expenditures of the
Consolidated Public Sector,
on an accrual basis, at constant prices,
and GDP per capita
(1991 = 100)

(1) Per capita primary expenditures deflated by the GDP deflator.
(2) Per capita GDP at constant prices.
(3) Per capita primary expenditures deflated by the CPI.
Note: these figures include some expenditures of the Social Health Insurance Institutions, as well as those of some provisional funds of the provinces still not transferred to the National Government, items that are not included in the fiscal figures issued by the National Treasury. Thus, the figures in the Graph are higher than those of the Treasury (the difference amounted to about 3% of GDP in the year 2000.
Source: Our own estimations based on data from the Dirección Nacional de Gastos Sociales Consolidados.

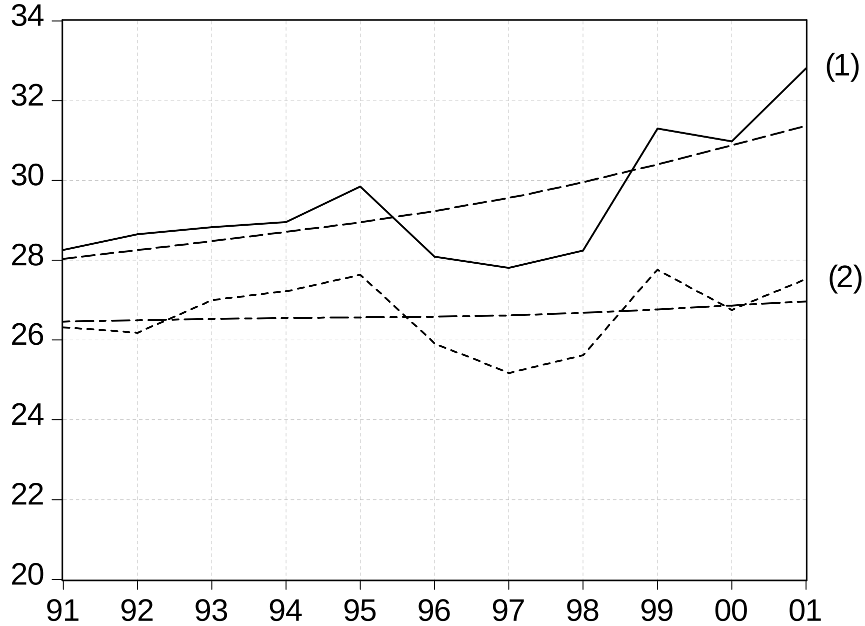
The first stylized fact is the definitely pro-cyclical behavior of the primary expenditures of the public sector. They moved following a pattern that resembles the trajectory of per capita GDP throughout the two cycles experienced in the decade. There was a first period of increase of public expenditures per inhabitant, in parallel with the strong economic expansion in the early nineties. Then, they fell during the 1995 recession following the Tequila effect. A new recovery took place at the beginning of the second half of the decade, also followed for a decline in the final years of the period.

The behavior of per capita primary expenses deflated by the GDP deflator shows a behavior that closely follows the pattern of per capita GDP. This expenditure index reached a level of 121 in 2001, up of 100 in 1991. This increase is equivalent to a yearly rate of 1.9%, slightly above per capita GDP growth, that was of 1.5% a year, on average, in the period.

On the other hand, when the per capita primary expenditures are deflated by the CPI index, the 2001 level happens to be almost the same of the beginning of the decade: only 3% above the initial real value.

In the Graph 4 we present again the primary expenditures of the Consolidated Public Sector, as well as total expenditures, both in percentages of GDP.

Graph 4
Primary and total expenditures of the
Consolidated Public Sector and their trends,
in percentages of GDP



(1) Total expenditures as a percentage of GDP.
(2) Primary expenditures as a percentage of GDP.
Note: these figures do not include of the Social Health Insurance Institutions, as well as those of some provisional funds of the provinces still not transferred to the National Government, as mentioned in the notes to Graph 3.
Source: Our own estimations based on data from the Dirección Nacional de Gastos Sociales Consolidados.

It can be seen that the primary expenditures fluctuate around an average of 26.6% of GDP. They increased in the recessive period that began in 1998. At the end of the period they amounted to about 27.5% of GDP, only 0.9% above the average of the nineties and barely at the same level of 1995. In contrast, the total expenditures present a neat rising trend, due to the increase of interest rates and to the ensuing explosive trend of the public debt since 1998. The average of the decade is, in this case, equivalent to 29,4% of GDP, but in 2001 the series reached a level of 32,8% of GDP, thus being 3,4% points of GDP above the average of the nineties and 4,55% above de 1991 mark.

4. The fiscal accounts and the crisis. Final comments.

We have already pointed out that fiscal sustainability did not play a major role in several of the episodes of crisis we have considered here. Meanwhile, a fast-growing public debt that at some point could be considered unsustainable by the market participants that have being financing it can, obviously, be the trigger of a crisis.

On the other hand, large fiscal and public debts were present in the Argentine crises in 1981-82 and 2001-02 and it has been frequently argued that they are explained by those circumstances. However, it is clear that the origin of the 1981-82 Argentine crisis did not lie in the fiscal accounts. In this case, only half of the external debt was public before the crisis and the military regime did not appear to have major difficulties in adjusting public finances. The fiscal deficit and its external financing were the result of government decisions that did not pose particular problems. The policy was broadly supported by advisors who were advocates of the 'monetary approach to the balance of payments', which maintained that monetary policy – and only monetary policy – was the instrument that determined the balance of payments result and the level of reserves. As long as discipline and control over internal credit was maintained, it was said that the public deficit would not cause problems. Furthermore, it was not the behavior of the banks that led to the crisis, by restricting their supply of financing or raising its price. The international banks continued to provide financing for the public sector, with low surcharges, until the dying days of the exchange regime. In the case of Argentina and in the parallel case of Chile, the domestic financial crises began to become apparent at least one year before the exchange policy regime collapsed.

The 2001-02 Argentine crisis that we have examined so far is rather different. On this occasion, the public debt is the main component of the country's external debt. The case shows the cyclical macroeconomic dynamics mentioned above, but in the second recessive phase there is an increasing fiscal deficit and a rapid growth in public debt, largely financed with external resources. This did not occur in the first cycle (1991-1995), but in the second cycle that began in 1996, after the crisis triggered by the tequila effect.

The initial increase in the public deficit originated, as we described in the preceding section, in the Social Security System. On the one hand, the reform of late 1994 derived a substantial part of the receipts of the system to the new private subsystem (the Pension Funds), while the benefits to be payed by the public subsystem did not diminish. On the other hand, the government decided to cut firms´ contributions to the pension system as a way to compensate the negative effect of the exchange rate appreciation on competitiveness. Be as it may, the main negative impact on the fiscal accounts resulted, in the second half of the nineties, of the public debt interest burden. The rise in interest rates characteristic of the contractionary phase of the economic cycle had a direct bearing on public debt growth, so contributing to a perverse dynamics of higher debt and higher risk (Damill and Frenkel, 2003).

An investor sustainability analysis detects multiple sources of concern in this case. On the one hand, the macroeconomic dynamics that are typical of processes that trigger crises are present: the current account deficit and the external debt increases; there is a growing need for capital inflows; and the external financial fragility of the economy as a whole increases. On the other, in parallel, there is an increase in the public debt and growing needs for public sector financing.

The rising trend in the country risk premium and the interest rate can be associated with the status of the external accounts or, alternatively, with the evolution of public finances, or with both, as the investment fund analysts and the risk classification agencies actually did in their reports. But, even if public debt sustainability uncertainties weighted significantly in the investors assessments, this should not hidden the original source of public deficits and debt. The main source was not an exogenous mistaken fiscal policy, but the compounded effects of inherent fragility and contagion. The Argentine experience and crisis does not constitute a special case. In explaining the crisis, Occam's razor suggests that the stylized facts shared with the other mentioned crises should be privileged.

The IMF and many analysts[xiv] are emphatic in attributing the cause of the Argentine crisis to the fiscal deficit and the dynamics of the public debt, without paying attention to their sources. There is an implicit suggestion that the experience would have been sustainable and the crisis would not happened if fiscal policy had been different.

It should be pointed out that if the IMF were to acknowledge the alternative explanation, it would be placed in an uncomfortable position and forced into self-criticism. In the first half of the 1990s, the Fund gave intellectual and financial support to fixed, appreciated exchange rate policies, including the convertibility regime adopted by Argentine in 1991. Later, when the Mexican crisis revealed the failings of those exchange policies, the IMF changed direction. Its new approach acknowledged the volatility of capital flows and it recommended floating exchange policies. But that new approach continued to look favorably on fixed exchange rate policies with great institutional and legal rigidities – such as currency boards or dollarization regimes. This category became one of the 'corner solutions' accepted by the new orthodoxy. The umbrella of the new orthodoxy was large enough to cover the Argentine Convertibility regime.

The IMF's commitment to the convertibility regime achieved its highest expression in the emergency package granted to Argentina at the end of 2000. The conditions did not include any significant changes in policy. The support was clearly intended to extend the survival of the regime, when there were clear indications that it had become unsustainable. The multilateral funds ended up financing payment of debt service and the flight of capital. The IMF agreed to a disbursement in August 2001, when the Argentine authorities were virtually alone in believing that it was still possible to save the regime.

It is understandable that the IMF would prefer to forget this story. The diagnostic analysis that attributes the problems and crisis in Argentina exclusively to fiscal policy is convenient, because it relieves the IMF of any responsibility for the events and their disastrous consequences – not just those that afflicted ordinary Argentines but also the capital losses of foreign investors. It is less understandable that the IMF had subsequently refused for months to offer even a modicum of support – refinancing of capital owing to the Fund – for policies that attempted to manage the consequences of the crisis that was caused by policies that the Fund had previously supported. Paradoxically, IMF officials have sometimes justified their reluctance with ambiguous references to the "the mistakes we made with Argentina in the past".

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[i] This section draws on Frenkel (2003). The narrative is based on the model presented in Frenkel (1983). Presentations of the model in English can be found in Williamson (1983) and Taylor (1991). The model was applied to the explanation of crises in Taylor (1998), Frenkel (2002) and Eatwell and Taylor (2000).

[ii] Regulation of the system was reformed and strengthened in Argentina after the 1995 crisis. Accordingly, it was more robust during the boom in capital inflows in 1996-97. However, there was a systemic exchange risk in Argentina owing to the partial dollarization of the financial system. While

the banks held their local assets and liabilities in dollars and did not appear to run any exchange risk individually, a large part of their dollar loans were owed by agents whose income was in pesos from non-tradable activities.

[iii] A detailed description is presented in: Damill, Frenkel and Maurizio (2002 and 2003) and Damill and Frenkel (2003).

[iv] Reforms involved trade liberalization, and openness and liberalization of the capital account, coupled with privatization, fiscal reforms and deregulation measures in other markets.

[v] If the public sector has a deficit to finance and has issued debt, the increase in the interest rate in the downturn tends to increase the deficit and speed up the increase in debt in both the public and private sectors. Just before the crises, management of the public debt caused difficulties in Mexico and Brazil. But that is not the point. The question is what mechanism determines the increase in risk and interest rates. In other words, does the source of original uncertainty lie in the dynamics of public financial accounts and needs or in the dynamics of external financial accounts and needs. In Brazil and Mexico, it was not fiscal problems that led to the second phase of the cycle.

[vi] Damill, Frenkel and Maurizio (2002) and Gaggero and Gómez Sabaini (2002).

[vii] A detailed explanation of the methodological questions involved and the estimation procedures we followed is presented in: Damill, Frenkel and Juvenal (2003).

[viii] Gaggero and Gómez Sabaini (2002), Cetrángolo and Jiménez (2003).

[ix] Surplus that falls to about 1,4% if the proceeds from privatization are not considered.

[x] An analysis can be found in Cetrángolo (1994).

[xi] The definition of the deficit of the public pension system pictured in the graph is the same described in note (2) in Table 2.a.

[xii] The appreciation of the peso tended to reduce the debt-to-GDP ratio, because a high proportion of the public sector financial liabilities was denominated in foreign currencies. In this regard, the external and fiscal fragility are closely linked, given that the fiscal receipts are in domestic currency.

[xiii] Gaggero, J. (2003).

[xiv] Particularly the former Chief Economist of the IMF M. Mussa [Mussa(2002)]. There are a few exceptions: Calvo et al.(2002) and Hausmann and Velasco (2002), among them. Calvo et al. focus on the effects of capital flows volatility. Hausmann and Velasco believe that the role of the financial unbalance of the public accounts was not the decisive factor. They assume that the deficit was mainly a consequence of the market friendly reform of the pension system carried on in 1994 and not the result of a fiscal policy beyond control. Perry and Servén include fiscal desequilibrium as one among multiple causes.

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