An Analysis of the 2002 Argentine Currency Crisis*

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Abstract
In 1991 the Argentine Government embarked on an ambitious exchange rate based stabilization (ERBS) program aimed at removing the enticement of using money creation to finance the pervasive fiscal imbalances that have been a feature of the Argentine economic landscape. Despite the strait-jacket of this program and the early successes achieved, within a decade of its implementation the program collapsed and resulted in the largest debt default in history. This paper analyzes the circumstances leading up to the failure of Argentina’s experiment with this currency board arrangement and the ensuing currency crisis of 2002. In doing so, the paper places this particular episode of exchange rate crisis into the broader context of the three generations of currency crisis models under consideration in the literature. It will be argued that the mixture of unsustainable debt dynamics, an overvalued real exchange rate coupled with labor market rigidities, and the moral hazard presented by the large IMF-supported financial rescue packages provided a recipe for economic disaster. Moreover, this debacle provides overwhelming evidence that fiscal profligacy is inconsistent with the maintenance of any fixed exchange rate regime.

Keywords: Currency crisis, Argentina and Currency Board Arrangement.

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1 Introduction:

The Argentine economy has a distinguished history littered with bouts of financial crises and economic turmoil resulting from failed economic stabilization programs that stretches as far back as the Baring Crash of 1890 - considered to be the world’s first full-fledge emerging market currency crisis\(^1\). For example, by some accounts, Argentina has had as many as eight major episodes of currency crises since 1970. Notwithstanding this litany of banking and economic debacles, the underlying causes for the failure of the numerous stabilization plans implemented has never been directly addressed - namely a combination of monetary indiscipline and fiscal indiscretion.

After years of experiencing hyperinflation in the thousands of percent per annum in the late 1980s, Argentina opted for an inflation based stabilization plan called the BB Plan in February 1989. This program, however, did not last very long as the Argentine authority financed their huge fiscal imbalances by printing money, and as a consequence of this the BB Plan collapsed seven months after it was implemented. The failure of the BB Plan, however, finally brought home the message that the Argentine authority lack any credibility in fiscal and monetary management and thus could not be trusted with managing domestic price levels without taking into account the fiscal promiscuity that has been the hallmark of most Argentine governments since 1890. To this end, an exchange rate based stabilization (ERBS) program - which removed the enticements of using money creation to finance the pervasive fiscal imbalances - was embarked upon in 1991.

Under the tutelage of the IMF\(^2\) and the leadership of Economy Minister Domingo Cavallo, Argentina instituted a Currency Board Arrangement (CBA) called the Convertibility Plan in April 1991\(^3\), tying the Argentine peso to the US dollar at parity. The two main elements of this plans were the legal guarantee by the authorities of parity in conversion between the US dollar and the Argentine peso, and the backing of any expansion in the domestic currency by an

\(^1\)For an exquisite account of Argentina’s history with stabilization programs see della Paolera and Taylor (2001).

\(^2\)See Mussa (2002) for an exhaustive discussion on the role of the IMF in the Argentine stabilization program.

\(^3\)As part of the CBA the Argentine government implemented a number of structural reforms geared towards ensuring the credibility of the CBA. These included, inter alia, the implementation of a competitiveness policy, privatization and labor market reform.
equivalent increase in the foreign exchange reserves. Additionally, the monetary authorities granted the status of legal tender to the US dollar alongside the peso, thus allowing all domestic deposits and loans to be denominated in either currency. By introducing the CBA, the Argentine government effectively provided a nominal anchor that it hoped will break the longstanding domestic inflationary dynamics.

The main aims of this program were three-fold; firstly, by instituting a currency board arrangement, the Government of Argentina effectively signalled to investors its determination to surrender its undisciplined discretionary monetary policy instruments once and for all in favor of a more rigid rule-based monetary system. Secondly, by allowing the circulation of the US dollar as legal tender, and the denomination of all debts and deposits in both currencies, the government demonstrated it strong political commitment to this regime by making the costs of reneging on this exchange rate based stabilization policy unbearably high. Finally, since the monetary authority can no longer monetize the fiscal deficits, the CBA would provide the much need discipline on the fiscal authority that have been lacking and return credibility to it economic management.

Despite the straitjacket of this exchange rate based stabilization program and the early successes achieved by its implementation, within a decade of its implementation the program collapsed and resulted in the largest debt default in history. This paper, therefore, analyzes the circumstances surrounding the failure of this Argentine experiment with a currency board arrangement and the ensuing currency crisis of 2002. In doing so, the paper places this particular episode of exchange rate crisis into the broader context of the three generations of currency crises models under consideration in the literature and discuss avenues in which this particular episode can be analyzed. It will be argued that the mix of an unsustainable debt dynamics, an overvalued real exchange rate coupled with labor market rigidities, and the moral hazard presented by the large IMF-supported financial rescue packages provided a dangerous recipe for economic disaster. Moreover, the debacle provides overwhelming evidence that fiscal profligacy is inconsistent with the maintenance of any fixed exchange rate regime.

Section 2 briefly chronicles the key events leading up to the crisis and examine the stylized facts, while Section 3 will put the crisis in the broader context of the previous generations of

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4By it very nature the CBA ensured that the monetary policy be imported from the key currency country, in this case the US.
currency crisis models with a conclusion provided in Section 4.

2 The Rise and Fall of the Convertibility Plan:

By the middle for the 1990s - four years after the introduction of the Convertibility Plan, following the East Asian crises, the Argentine economy became a model emerging market economy for those advocating the virtues of ERBS programs (including the IMF and the IADB) and was embraced as a darling by international financiers of emerging market economies. In fact, the turnaround in Argentina’s fortune was so remarkable and profound that the President of the IADB was quoted as saying that the Argentine model is one that should be adopted by other South American countries.

As seen in Table 1, the inflation rate in Argentina fell from an astounding high of 1342% in 1990 to being virtually zero within the first five years of the program’s implementation - quite a remarkable feat for a country in which runaway hyperinflation was endemic. In fact, between 1995 and 2001, inflation oscillated between a high of 2% and a low of -2%. Additionally, the economy achieved unusually rapid and sustained real GDP expansion averaging over 6% between 1991 and 1998, reaching a high of 12.2% within one year of the implementation of the Convertibility Plan. Similar impressive figures were seen in the growth rate of real per capita GDP over the same period, outperforming most other emerging market economies. As also shown in Table 1, this strong performance resulted in the massive foreign direct investment into the economy reversing the pronounced net outflows of previous years.

These early remarkable achievements under the Convertibility Plan were noticed by international investors whose confidence in the commitment of the government to the stabilization package resulted in massive capital inflows and access to the international capital market at spreads that were very attractive - lower than the average spread (sovereign bond spread over US Treasuries) for other emerging economies, averaging between 3-5%. This opportunity to access the international capital market was not passed up by the Argentine government who borrowed considerable amounts to finance it persistent deficits.5

According to Mussa (2002), when the Argentine economy survived the Mexican crisis of

5As will be pointed out later, this behavior proved to be an important catalysis in the demise of the Convertibility Plan as the cost of servicing these debts became onerous.
1994 and the Brazilian crisis of 1998, all lingering doubts about the virtues of exchange rate based stabilization program were removed from the mind of the thinkers in the IMF and other international institutions, and international investors gave a vote of confidence to the Argentine experiment. Moreover, this successful navigation away from the debacles of Mexico and Brazil is particularly important since it provided a smoke-screen that masked the deep underlying problems in the economic fundamentals of Argentina that threatened the survival of the very regime.

Foremost among the many undetected or ignored signs that signalled the inconsistency between the exchange rate policy objective and the macroeconomic fundamentals of Argentina was the persistent fiscal deficits. Unlike previous episodes where a fiscal deficit financed by domestic money creation would have resulted in unbearably high inflation rates, the financing of the deficit by floating government bond on the international market was not seen as a detrimental course of action. In fact, it may have even been seen as preferable to other forms of deficit financing as it inevitably entail a greater degree of discipline on the government. As will be shown later this behavior by the Argentine government turned out to be the main catalyst for the unraveling of the Convertibility Plan, as the debt burden became unbearable and the government was forced to default on it debt service payment, resulting in the largest debt default in history.

3 Modelling the Argentine Crisis:

As outlined above, the timing and magnitude of the Argentine currency debacle could be trace to a number of factors that have become all to common in countries that experience currency crises. By examining the potential causes, symptoms and patterns of this particular currency crisis, this paper hopes to ascertain how it fits into the three generations of currency crisis models considered in the literature - if at all. It must be pointed out that the crisis may not have necessarily been inevitable as it could be argued (see Mussa (2002) and Mulraine (2006)) that with deep structural reforms the fiscal overhang in Argentina could have been brought under control and the shift from the good to the bad equilibrium could have been averted. This, however, was an incredibly unlikely policy outcome in the absence of very strong political will, given the high costs (both social and economic) that it would have
entailed and the strong resistance that the Argentine people shown to the structural reform undertaken then.

Following the work of Krugman (1979), in the first generation model (FGM) of currency crises, a currency crisis occurs because of the inconsistency between the maintenance of a fixed exchange rate regime and fiscal imbalances financed by domestic money creation. As Krugman (1979) points out, a run on the holdings of international currency reserves becomes inevitable as speculators hedge against the ability of the authorities to maintain the exchange rate peg with the dwindling foreign currency reserve it holds. The run on reserves will eventually result in the collapse of the exchange rate regime as the authority abandons its desire to maintain the fixed exchange rate in favor of a free float. This inevitability is entirely due to the conflict between the overly accommodative monetary policy and the maintenance of the fixed exchange rate regime.

The second generation model (SGM) of currency crisis, due to the work of Obstfeld and Rogoff (1996), examines the dynamic inconsistency faced by the authority who considers the benefits of maintaining a particular fixed exchange rate regime against the costs of abandoning it. Integral to this decision process is the belief of investors who, by virtue of their expectations and actions, can cause the abandonment of the peg without any change in the fundamentals of the economy. This multiplicity in equilibrium and the resultant shift from one “good” equilibrium to another “bad” equilibrium is the result of the self-fulfilling prophetic nature of investors’ beliefs. Unlike the first generation model, this shift in equilibrium outcome can result without the fundamental of the economy being unfavorable or even changing.

Similarly, the third generation model (TGM) of currency crisis developed by Aghion et al. (2001), points to the shift from one equilibrium to the next based on the characteristics of the financial sector. In essence, with an underdeveloped financial sector and the existence of currency and maturity mismatch between assets (loans) and liabilities (deposits) the expectation(s) of a devaluation drives the economy from one equilibrium to another.

In the case of Argentina a combination of all the factors expressed above as key elements of the standard models of currency crises appears to have played a part in the collapse of the ERBS regime, with one key addition, the role of the IMF. As a quasi-guarantor to investors that the policies pursued by the Argentine government were sustainable and consistent with the overall policy objective of exchange rate parity with the US dollar, the IMF played a
crucial role in delaying the timing of the crisis and quite possibly exacerbated its magnitude when it embarked on the rescue package of 2001.

To this end we shall examine four key features of the economic landscape in Argentina that may have contributed towards the demise of the CBA, and contrast these against the stylized facts of the three generations of currency crises models currently being considered in the literature. The four key features to be discussed are; (i) the unsustainable debt dynamics, (ii) the overvalued real exchange rate, (iii) the currency mismatch and (iv) the moral hazard presented by the IMF-supported rescue packages.

3.1 Unsustainable debt dynamics:

As has been the hallmark of the standards FGMs of currency crises, Argentina had persistent huge fiscal deficits - the source of which could be traced back to a combination of the fiscal indiscretion of both the provincial and federal governments and to a lesser extent the economic downturn that started in 1999. There is no doubt that the fiscal position was weakened considerably by lower tax revenue and the high costs for social programs resulting from the economic downturn of 1999 and beyond, however, the fact the fiscal deficits were still high during the pre-1998 boom years provided evidence that the mismanagement by the fiscal authority was the main culprit. Indeed, given that the government was unable to put its house in order during times of plenty meant that the economic downturn was only a contributory factor not the proximate cause of the persistent fiscal deficits and consequently the unsustainable debt dynamics.

Because these deficits could not be financed through money creation, as considered in the FGMs, the Argentine government resorted to borrowing large amounts in hard currency on the international capital market. This practice presented a unique problem to the Argentine government when the costs of servicing these foreign debts escalated to levels that made them unsustainable, given the economic conditions in Argentina at the time. As shown by Table 2, the consolidated debt balance to GDP ratio doubled in just under ten years from a reasonable low of 32.8% in 1993 to a high of 64.1% in 2001, one year before the crisis occurred. Much of the change in the costs of servicing the debt resulted from the higher interest rate spread demanded by investor because of the increased risk of default.
In terms of the previous generations of currency crisis models considered in the literature, none of these models consider the impact of sovereign debt denominated in hard currency. This clearly offers a distinguishing feature to the Argentine crisis of 2002 to the previous bouts of currency crises considered in the literature - since the huge foreign-currency denominated debt is generally considered to be one of the main culprits for the demise of the fixed exchange rate regime. That is, in an economy with a sizeable foreign debt servicing burden changes in investor’s expectations about the risk of default can increase the costs of the debt in a manner that can shift the economy from one equilibrium to another as the onerous debt serving costs force the government to default and a resultant collapse in the exchange rate regime ensues. In this context, the Argentine experience can be considered in a multiple equilibria framework as in the second and third generations model.

To date, only Komulaninen (2004) considers the impact of foreign currency denominated debts in the context of the FGM of currency crises. He shows bond financing may not necessarily delay the timing of these debt since the lower money demand due to the higher risk premium may bring the timing of the crisis forward. However, he concludes that if the country’s indebtedness is low to moderate, bond financing will invariably delay the timing of the crisis. One aspect of the Argentine experience that was not considered in this work was the possibility of renegotiation, and issue discussed below.

3.2 The currency mismatch:

As outlined above, the Argentine government borrowed extensively on the international capital market in hard currency. This feature of the debt structure meant that the incentives to renege on the exchange rate regime would be reduced because of the high cost of doing so. To see this, consider a situation where the government decides to abandon the exchange rate peg and float the currency, with government revenues collected being denominated in the depreciated local currency and foreign debts denominated in hard currency it will mean that this course of action will increase the debt burden of the country.

As a result of this currency mismatch in external debt holdings, the Argentine government in 2000 opted to renegotiate\(^6\) its loans in a manner that reduced it short-run debt servicing

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\(^6\)As pointed out by Mussa (2002) and Gurter (2004), the size and denomination of these debts were the major cause of the government’s decision to delay the abandonment of the peg since the costs of doing so would
costs but at the expense of a much greater debt burden in the future. By doing this the
government of Argentina averted a currency crisis in the short run at a cost of increasing the
adverse impact of any future crisis.

This aspect of the currency crisis is similar to the mismatch considered in the third gener-
ation model, however, it differs significantly because it has the ability through renegotiation
to affect the timing of the crisis by prolonging it. In the case of the TGM, consideration
is given to private sector debts denominated in foreign currency with no thought given to
renegotiation of these debts. This is a crucial consideration as the renegotiation will be un-
dertaken at the cost of increasing the magnitude of the adverse impact of the currency crisis
on the overall macroeconomy.

3.3 An overvalued real exchange rate:

There appears to be no doubt that the decision to fixed the Argentine peso at parity with
the US dollar resulted in an overvaluation of the Argentine real exchange rate vis-à-vis its
other trading partners\(^7\). The appreciation of the US dollar against most major currencies
and the depreciation of the Brazilian real - Argentina’s main trading partner, resulted in the
appreciation of the Argentine real exchange rate and meant that Argentina loss substantial
competitiveness in international trade. This overvaluation resulted in a significant terms of
trade loss and consequently massive deterioration in the current account of the balance of
payment which had to be financed by the accumulation of foreign debts.

The deflation required to bring about the adjustment of the real exchange rate was unlikely
to be undertaken due to the high costs in terms of unemployment that it will bring. To
this end, Argentina became trapped in the exchange rate regime that has contributed to
remarkable success in achieving price stability. Moreover, the rigidities that existed in the
Argentine labor market meant that the necessary structural adjustment required to bring
about the corrections in the real sector in response to the overvalued exchange rate could not

\(^7\)One key consideration that is outside the scope of this paper is the fact that the volume of trade between
Argentina and the US is very low, compared to its other trading partners, this fact along with the non-
correlation between their respective business cycles may have meant that the US dollar was an unsuitable key
currency for Argentina.
take place.

This element of the Argentine experience, namely the overvalued exchange rate, is unique in the sense that it appears to be one of the key contributing factor to the currency crisis, while it seems to have played no role in the previous episodes of crises under consideration in the literature. Moreover, due to the partial equilibrium nature of the previous generations of currency crisis model, this element has could not have been previously incorporated.

3.4 The moral hazard problem:

The involvement of the IMF in monitoring the ERBS program of Argentina provides another unique feature of this currency crisis that has not been captured by the previous models as it has never really be present before. As Mussa (2002) (pp. 2-3) asserts, “...Argentina is different from most other cases where the [International Monetary] Fund has provided ...large financial support...”, in that unlike all the other case where the IMF provided substantial financial support such as Mexico 1995 and Brazil 1998 and 1999, “...Argentina operated under the auspices and close scrutiny of the [International Monetary] Fund-supported program”. This oversight by the IMF is considerably significant as it provided an “insurance” to foreign investors in that the integral involvement of the Fund was seen by them as a signal that Argentina’s macroeconomic policies pursued were consistent the exchange rate regime and an indication that the level of foreign debts was sustainable.

By acting as the overseer of the macroeconomic administration in Argentina the actions of the IMF resulted in the classic moral hazard problem. In the first place, assured by the IMF-supported structural adjustment programs, foreign investor continued to lend to Argentina large sums when it was quite apparent that these debts were becoming unsustainable. Indeed, while the intention here is not to make judgements on the actions of the parties involved, it is quite apparent that the continued access to foreign finance meant that the Argentine government were able to postpone the structural reforms necessary to bring its macroeconomic fundamentals in line. Moreover, the actions of the foreign debtors were such that they ignore the glaring mismatch between the fundamentals and policy objectives because of the IMF’s involvement.

As expressed above, this aspect of the Argentine experience is entirely new to the currency
crisis literature and offers a new dimension that should clearly be considered. In no way has the relationship between the IMF and a member-country been previously modelled in the three generations of currency crisis models.

4 Conclusions:

The main conclusion that could be drawn from this analysis is that while there are features of the Argentine crisis of 2002 that are common to those considered in the existing literature on currency crises, there are a number of new elements in this particular crisis that are peculiar to this episode. Among them are the impact of the foreign currency denominated sovereign debt, the impact of an overvalued exchange rate and the moral hazard presented by the involvement of the IMF. As discussed above, it is quite clear that these consideration have not been covered in the existing generations of currency crisis models.

Indeed, since the Argentine crisis is relatively recent and the events leading up this crisis are generally unique, as discussed above, very little can be found in the literature that relates to it. It is the hope of this paper that by providing this analysis of the key features of the economy it can offer directions for future work.
References


Table 1: Key Economic Indicators for Argentina 1990-2002

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Source: Di Tella and Vogel (2004).
Table 2: Macroeconomic Indicators for Argentina 1993-2001

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<td>-2.0</td>
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<td>-4.9</td>
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<td>Interest to GDP</td>
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