

# CIGLOB

CENTRO INTERNACIONAL DE  
GLOBALIZACIÓN Y DESARROLLO

International Center for Globalization and Development

Documento de Trabajo  
Working Paper

**N°33**

## **Lessons from a Comparative Analysis of Financial Crises**

*Roberto Frenkel*

February 2013

[www.ciglob.org](http://www.ciglob.org)

Contact us / Contáctenos:  
[contact@ciglob.org](mailto:contact@ciglob.org)

Santiago - Chile



## Symposium Article

# Lessons from a Comparative Analysis of Financial Crises

ROBERTO FRENKEL

Economics, CEDES, Sánchez de Bustamante 27, Buenos Aires 1173, Argentina.  
E-mail: frenkel@cedes.org

The first part of the article presents a comparative analysis of the macroeconomic behavior of some of the Eurozone economies (Greece, Ireland, Portugal, Spain and Italy: GIPSI countries) with that of a set of emerging market economies that experienced financial crises in the period of financial globalization. The comparison also focuses on the pro-cyclical fiscal policies implemented in common by emerging market and Eurozone countries. The second part of the article is devoted to the recent Argentine experience of crisis, foreign debt default and recovery.

*Comparative Economic Studies* advance online publication, 28 February 2013;  
doi:10.1057/ces.2013.2

---

**Keywords:** financial crises, financial globalization, crisis resolution, Eurozone

**JEL Classifications:** E5, F4, G1

## INTRODUCTION

Cesaratto (2012) and Bagnai (2012) have developed analyses of the Eurozone crises<sup>1</sup> making use of our description of the macroeconomic dynamics that precedes the crises in emerging markets (as presented in Frenkel and Rapetti, 2009). On the other hand, I became very interested in the comparison between the macroeconomic performances of the Eurozone and the emerging market countries in early 2010, when the Greek sovereign risk premium started to rise. In a short paper (Frenkel, 2010) I discussed the similarities and differences of country risk premiums between both sets of countries. In this

<sup>1</sup> The article is based on a presentation prepared for the workshop 'The Euro: manage it or leave it! The economics, social and political costs of crisis exit strategies' 22–23 June, Faculty of Economics, Gabriele d'Annunzio University, Pescara, Italy.



article I attempt a broader comparison, taking my own analysis of crises in emerging markets as the point of departure. This perspective could be useful to shed some additional light into the understanding of this important issue.

The article is presented in two parts. The first part presents a comparative analysis of a set of financial crises that occurred in the period of financial globalization, which lasted from the late 60s of the past century up to present times. The second part focuses on the recent Argentine experience of crisis, foreign debt default and recovery (late 1990s and early 2000s).

The first part is presented in two sections. In the section ‘Comparing financial crises in the globalization period’, I compare the macroeconomic behavior of some of the Eurozone economies (Greece, Ireland, Portugal, Spain and Italy: GIPSI countries) with that of a set of emerging market economies that experienced financial crises in the second period of financial globalization. I focus on the stylized facts of the critical processes, looking for commonalities and differences.

My first point is that all the mentioned experiences have in common a cyclical macroeconomic dynamic, which resembles that originally described and explained by Hyman Minsky. This observation allows me to separately analyze and compare the booming phases (ie the formation of the crises) on the one hand, and the second contractive phases (ie the processes that lead to the systemic financial crisis) on the other. I show that analogous events put in motion the first phase and that similar dynamics are observed in this phase in both sets of countries. I conclude that the same factors (ie capital inflows and swift private credit expansion) have planted the seeds (ie the appreciation of the real exchange rate and the generation of important current account deficits) of the turning point and the second phase of the cycle in both emerging market and the mentioned Eurozone economies.

With regard to the second phase, the comparison focuses on the exchange risk and the risk of default of the debts issued in the first phase. The inexistence of a lender of last resort in international currency for the emerging market economies makes their behavior differ from that of the Eurozone countries. In the former, the exchange risk and the risk of default of the debts in international currency (both private and public) issued in the first phase have a key role in the dynamics leading to the financial and currency crises. In contrast, in the Eurozone cases, the main source of negative feedback effects in the second phase of the cycle is the risk of default of public debts. These effects result from the reluctance of the European Central Bank (ECB) to play the role of lender of last resort of Eurozone governments. However, I also observe that the GIPSI economies would be trapped in contexts of debt deflation and low competitiveness even if the ECB would have acted as lender of last resort of the governments.



Next, the comparison focuses on the pro-cyclical fiscal policies implemented in common by emerging market and Eurozone countries in the second phase of the cycle. I explore the political economy of these policies, which privilege the issuing of signals to the financial markets above measures to foster the recuperation of growth and employment. The Keynesian beauty contest provides an appropriate framework for this analysis.

The section 'Lessons from the comparative analysis of crises' focuses on the lessons that can be drawn from the comparative analysis of crises. One conclusion of the comparison is that the macroeconomic policies implemented by emerging market countries in the 2000s suggest that they have learned from their past experience with crises, whereas the monetary and financial design of the Eurozone and the policies currently implemented have made the same mistakes that emerging market countries have committed in the first 30 years of the modern financial globalization, up to the late 1990s.

A brief description of crisis resolution experiences in emerging market economies follows. Successful resolutions included devaluation in all cases (with the exception of the Argentine Tequila crisis in 1995). In most cases the resolution included massive international rescue packages or the substantial alleviation of the debt burden together with the refinancing of private debts in favorable terms subsidized with significant fiscal resources. The present orientation of Eurozone policies does not seem to draw any lesson from these historical antecedents.

### **Comparing financial crises in the globalization period**

Taxonomy is the activity of grouping individuals into species, arranging species into larger groups, and giving those groups names, thus producing a classification. I apply this methodology to a set of financial crises that took place in the second period of financial globalization, which lasted from the late 60s of the XX century up to present times. The set comprises the most important crises as experienced by emerging market economies from the early 80s and the crises that Eurozone economies are suffering nowadays. Instead of the form or shape of the individuals recorded by the naturalists, the classification looks at the stylized facts of the critical processes.

#### *The set of crises*

Emerging market economies are developing countries that entered into the expanding international financial system after implementing policies of deregulation and liberalization of their financial systems and capital accounts. Almost all of these countries were net receptors of capital flows from developed countries from the beginning of the financial globalization process up to the late 1990s (Frenkel and Rapetti, 2010). In the past three decades of the last



century (expanded to include the first 2 years of the 2000s) those countries experienced two waves of crises. The first wave swept the Latin American region in the early 1980s. This experience is related to the fact that Latin American economies entered into the globalization process much earlier than other developing countries: Brazil began to tap the Eurodollar market in the late 60s and other Latin American economies began to receive international credits in the second half of the 70s. Most of these economies experienced foreign debt crises in the early 80s, but some of them did not experience systemic financial crises (Brazil, for instance). I take advantage of the work by Laeven and Valencia (2008) in order to identify the financial crises cases. In the early 80s deep financial (and currency) crises were experienced by Argentina, Chile, Uruguay and Mexico.<sup>2</sup>

The second wave of financial crises in Latin America began with the 1995 Mexican and Argentine crises, which were followed by the Brazilian currency crisis in 1998 and the financial and currency crises in Argentina and Uruguay in 2001–2002. On the other hand, five economies in East Asia and Russia experienced financial crises in 1997–98. The Asian and Russian crises had important financial spillovers and negative real impacts on developing countries. Finally, Turkey in 2001 experienced a financial and currency crisis that, together with the Argentine and Uruguayan mentioned crises, constitute so far the last financial crises in emerging markets.<sup>3</sup> It seems important to stress that each wave of crisis was preceded by booms of capital inflows to developing countries.

The crises in the Eurozone were triggered by the US sub-prime crisis. The initial impacts of the contagion were proportional to the degree of exposure of the national financial systems to toxic assets in the United States, irrespective of their balance of payments situations. For instance, gross domestic product (GDP) contraction in 2009 was greater in Germany, which showed a current account surplus, than in other Eurozone economies showing current account deficits but less exposure to US assets (Servén and Nguyen, 2010). I am interested in the further development of the critical processes in Greece,

<sup>2</sup> It is important to differentiate financial crises that have taken place together with foreign debt crises from foreign debt crises not accompanied by financial crises, because the macroeconomic dynamics that lead to the crises differ in both cases. For instance, Brazil in the early 80s confronted a public foreign debt crisis without a domestic financial crisis. The public foreign debt, intended to deepen the ISI process and preserve relatively high rates of growth in a context of high energy prices, became unsustainable because two simultaneous negative shocks in 1979: the abrupt rise of the international interest rate and an additional jump in the oil price. In contrast with Argentina, Chile, Mexico and Uruguay, Brazil in the 1970s maintained the foreign exchange controls and did not open the capital account nor deregulate the financial system (Frenkel, 2003).

<sup>3</sup> From 2002 on, there were no financial crises in emerging market economies, despite the strong negative real and financial shocks caused by the US sub-prime crisis.



Ireland, Portugal, Spain and Italy (GIPSI). In these countries a second surge of critical developments led by Greece started in early 2010.

### *The Minskyan cycle*

The first stylized fact I observe is shared by all the episodes in the mentioned set of crises. They were preceded in all cases by a cyclical macroeconomic dynamics, with an initial phase of expansion, followed by growing financial fragility and ending up in financial crises (in all the mentioned cases except Brazil in 1998) and in currency crises in all the emerging market cases (with the exception of the Argentine in 1995). This cyclical dynamics is clearly related to the work of Hyman Minsky (1975, 1977). Minsky stressed that unregulated market economies are systems cyclical in nature, in which crises are not unusual events. A key element of this cyclical pattern is the endogenous behavior of agents' risk perception and expectations. In the development of the boom phase, optimism spreads and confidence increases. Optimism and confidence tend to reduce the perception of risk and agents – investors and intermediaries – take riskier positions. Asset price bubbles that support the financial expansion inflate in the process. In the booming phase, the balance sheets become increasingly fragile. At some point a negative episode draws people's attention to the high degree of risk exposure and a period of distress begins. Concern about the exposure to risk leads many players to prefer liquidity and undo positions. Bubbles deflate and many agents are forced to assume wealth losses. Pessimism replaces the previous optimism while the contraction process feeds back. The development of the downturn leads to the systemic crisis.

It was impressive to realize how accurately the Minskyan cycle described the pattern followed by the American economy in the period preceding Lehman Brothers' bankruptcy. Minsky's insights were then broadly recognized and this helped to bring them back from the intellectual exile where they had been relegated.

Actually, the Minskyan cycle is observed in many other financial crises.<sup>4</sup> The processes that led to financial crises in the emerging market economies and the Eurozone economies exhibit Minskyan features similar to those verified in the US economy. Crises were always preceded by booming periods

<sup>4</sup> Besides the pioneer work by Minsky and Kindleberger (1978), the role of credit expansion in the configuration of financial crises has gained increasing recognition (see for instance Kaminsky and Reinhart (1999) and Reinhart and Rogoff (2009)). Kaminsky and Reinhart have studied the role of credit expansion fed by international capital inflows in the configuration of 'twin' financial and balance of payments crises. Schularick and Taylor's (2012) study of financial crises in the period 1870–2008 provides strong support to the role of financial exuberance in the configuration of financial crises and to the general validity of Minsky's model.



in which credit expanded and risk taking increased. Analysis of the range suggests that the crises emerged as the culmination of the same processes that caused a growing optimism and encouraged greater risk taking in the boom phase.

*Stylized facts shared by the crises in emerging market and Eurozone economies*  
Besides the above-mentioned cyclical dynamics, the comparative analysis of the crises in emerging market and Eurozone economies crises reveals other common stylized facts:

*Similar triggers of the booming phase.* In Frenkel and Rapetti (2009) we pointed out an important difference between the triggers of the booming phase in the US sub-prime crisis and the emerging market crises. In the United States, the real state bubble and the financial innovations that started with the securitization of mortgages (and other debts) are the key ingredients of the booming phase of the cycle. Both are processes that developed and nurtured one to another during a relatively long period. These facts are consistent with the Minskyan view about the endogenous character of the trigger of the booming phase in developed economies. In contrast, a distinguishing characteristic of the emerging market crises is that the booming phase began not with innovations in the financial markets, but with the implementation of macroeconomic policies that give rise to a profitable environment for financial arbitrage between domestic and foreign assets. Hence, the trigger of the Minskyan cycle in emerging market countries crises has an important exogenous component, associated to the implementation of new macroeconomic policies. This stylized fact is shared by the peripheral Eurozone crises.

The booming phase in emerging market economies was generated by relatively drastic changes in macroeconomic policies and regulations, which typically included the liberalization of the capital account of the balance of payments and local financial market jointly with the implementation of some sort of exchange rate fixation (pegs or active crawling pegs).<sup>5</sup> The implementation of new regulations and macroeconomic arrangements operated as an exogenous shock on the financial system, which quickly established incentives for arbitraging between domestic and foreign assets and led to booming phases.

The initial booming phase in the Eurozone economies also resulted from a drastic change in macroeconomic policies. The introduction of the common currency operated as a shock on the national financial systems, which

---

<sup>5</sup> The Asian countries that experienced crises in 1997–98 already had fixed exchange rate regimes when they liberalized the capital account to facilitate the reception of international credits in the 1990s.



established stronger incentives for arbitraging between core and peripheral countries assets and led to the booming phase in the periphery of the Eurozone.

*Lax financial regulation.* The regulation of local financial markets was weak in both the emerging market economies and the Eurozone economies. In the emerging market cases it may be because local financial markets had been recently liberalized or because the expansion of financial intermediation during the boom exceeds the existing regulatory capacity. In the Eurozone cases, the introduction of the common currency, by increasing the incentives to international capital flows, generated renewed risks without a contemporaneous reinforcement in financial regulation.

*Crucial role of capital movements.* International capital movements had a crucial role in the boom and the contracting phase in both the emerging market economies and the Eurozone economies.

*The triggers put in motion similar macroeconomic dynamics.* In what follows I present a narrative of a stylized cyclical dynamics based on my analysis of crises in emerging market economies.<sup>6</sup> The ability of the narrative to depict the macroeconomic dynamics of the GIPSI cases is discussed in Cesaratto (2012) and Bagnai (2012). Complementary evidence can be found in Bibow (2012), European Commission (2009) and European Commission (2010).

The combination of credibly fixed (or predetermined) exchange rate and capital account liberalization generates important arbitrage opportunities by exploiting significant spreads between the yields of foreign and domestic assets. Capital inflows expand liquidity and credit in the economy and feed bubbles in financial and real assets. As a result, output and employment growth accelerate. The expansion of aggregate demand leads to non-tradable price increases, which under fixed (or predetermined) exchange rate regimes provokes an appreciation of the real exchange rate. The real appreciation trend reinforces capital inflows seeking to obtain capital gains by holding domestic assets. This in turn feeds back into the real economy, accelerating the expansion of credit and output growth. In this context, domestic agents' financial positions became increasingly fragile (in Minsky's sense). Simultaneously, the combined effect of the real exchange rate appreciation and economic growth stimulates the demand for imports, while exports tend to weaken. The worsening of the trade balance together with the increase in the interest and dividend payments turns the current account into deficit.

<sup>6</sup>The narrative draws on Frenkel (2003) and Frenkel and Rapetti (2009). A formal model, originally intended to interpret the Chilean and Argentine crises of the early 80s, is presented in Frenkel (1983). The model is sketched in Williamson (1983) and restated in Taylor (1991). Taylor (1998) argues that this framework is also applicable to the emerging market crises of the 1990s.





A steady increase in current account deficit is typically observed. As, initially, capital inflows are higher than the absolute value of current account deficits, foreign exchange reserves accumulate during the booming phase in the emerging market economies. At some point, however, current account deficit becomes larger than capital inflows, turning negative the balance of payments result and inducing a contraction of liquidity and credit in an already fragile financial system. This is the beginning of the contracting phase. Asset prices bubbles gradually begin to deflate and episodes of illiquidity and insolvency emerge, first as isolated cases and then as a systemic financial crisis. In the emerging market economies, financial tensions or crises precede currency crises in most cases.

The above narrative describes a process in which the credit expansion is fed by international capital inflows while current account deficits widen.<sup>7</sup> The process reaches the turning point when the balance of payments result turns negative. The following contracting phase is described as a gradual process leading to the financial crisis (in all cases) and the currency crisis (in the emerging market cases). This description is intended to emphasize that what leads to the turn of the cycle is the increasing financial and external fragility attained by the economy along the expansionary phase (ie the permanency of the expansionary phase would require a permanent growing trend in capital inflows). However, in fact, instead of a gradual process, the contracting phase can be an abrupt fall triggered, for instance, by a sudden stop of capital flows induced by contagion effects, as it happened in a number of emerging markets and in the GIPSI cases.<sup>8</sup> In any case, being the sudden stop triggered by a fundamental or non-fundamental contagion, its damaging effects are proportional to the financial and external fragility previously attained by the economy.<sup>9</sup> The narrative (and the model on which it is based) tells the story of one country, but the actual boom-and-bust processes have taken place simultaneously in groups of countries, not only in the Eurozone,<sup>10</sup> but also in

<sup>7</sup> The cases of Ireland, Portugal and Spain seem to fit comfortably in the narrative. In Greece, public expenditures significantly contributed to the expansion of aggregate demand. Italy also experienced increasing current account deficits in the 2000s, mostly related to a stagnant productivity (Bagnai, 2012; Cesaratto, 2012; Bibow, 2012).

<sup>8</sup> Particularly, this may be the case of Italy. This country had shown a high public debt/GDP ratio for a long time, but the sovereign risk premium only started to rise after the contagion of the Greek crisis.

<sup>9</sup> For instance, emerging market economies after the Lehman Brothers' bankruptcy experienced negative real and financial shocks of similar magnitude than the shocks that these economies confronted after the East Asian crises. Although in the late 1990s a number of emerging markets experienced deep crises, no crisis took place in these economies in the 2000s, because their external and financial configurations were more robust than in the late 1990s (Ocampo, 2010; Frenkel, 2012).

<sup>10</sup> Also the emerging markets crises have simultaneously taken place in groups of countries: the



the emerging market cases. Hence, contagion effects have been present in different degrees in many cases.

*Stylized facts exclusive to the emerging market economies' crises*

I have presented so far the similar roles that capital flows and current account deficits had in emerging markets and Eurozone crises. Beyond this common stylized fact, the critical processes took different paths in the emerging market economies and the Eurozone economies. A key differential factor relates to the existence or not of a lender of last resort able to dissipate the default risk on the debts in international currency issued during the booming phase. In the emerging market economies case, given the absence of a lender of last resort in foreign currency, exchange risk and country risk are key determinants of the critical processes, as I explain below. Before that, I briefly discuss the consequences of the inexistence of an international currency lender of last resort in the emerging market economies cases.

Country risk and its price – the country risk premium – are central to the analysis of foreign debt sustainability in emerging market economies. These debts have a specific default risk associated with the currency in which the debt is nominated (Frenkel, 2008). The default risk of the debts issued in foreign currency affects both public and private debts. A private debtor may be liquid in domestic currency and able to service its debt without difficulty at the current exchange rate. However, if liquidity in foreign currency becomes insufficient to serve all international debts, the government could appeal to convertibility suspension in order to avoid the depletion of reserves, forcing the private agents to default on their debts. On the other hand, if sufficient liquidity in foreign currency is available, it is highly unlikely that the public sector fails to fulfill its commitments in that currency because of the lack of liquidity in domestic currency. Therefore, only insufficient liquidity in foreign currency can force a default on public debt issued in that currency. Consequently, public debt is the lower risk between the debts in foreign currency issued by domestic agents. This is why country risk premium is typically indicated by the sovereign risk premium, and measured as the difference between the yield on a sovereign bond in US dollar and the equivalent yield on the US bond, which is taken as the risk-free asset.

It is not difficult to understand why the state and expected evolution of the balance of payments are crucial in the assessment of sovereign (country) risk in emerging market economies. The debtor country has financing needs in foreign currency, consisting of the sum of the current account deficit and

Latin American economies in the early 80s, Mexico and Argentina in 1994–95, and the Asian countries, Russia, Turkey and a number of Latin American countries in the late 1990s–early 2000s.



the foreign debt capital payments. A crucial point is that the possibilities of adjusting the balance of payments are not unlimited, even after devaluing the domestic currency. Consequently, in emerging market economies default risk is closely associated to the possibility that the country does not get all the foreign currency liquidity needed to meet its obligations (Frenkel, 2008).<sup>11</sup> I would like to emphasize that this risk would disappear if emerging market economies had a lender of last resort able to provide the country with the needed foreign currency liquidity.

Under conditions of high foreign debt in an emerging market economy, a large proportion of the financing needs must necessarily be covered with funds from capital markets, even after adjustments have been made in the external sector. The assessment of the future path of the debt and its sustainability depends on the interest rate faced by the debtor and thereby on the risk premium determined in capital markets.<sup>12</sup> Multiple-equilibria scenarios are not uncommon. In their assessments of debt sustainability, each investor has to guess the behavior of the rest of the market participants. The predominance of optimistic assessments may result in a relatively low risk premium and sustainable debt projections. On the contrary, predominantly pessimistic perceptions may result in high risk premium and unsustainable debt projections. Through the determination of risk premiums, market participants determine whether the debt is sustainable or not in a standard self-fulfilling behavior. I discuss this issue more in depth below.

Given the absence of a lender of last resort in foreign currency, exchange risk and country risk are key determinants of the critical processes in the emerging market economies. The evolution of external accounts and foreign exchange reserves reflect one aspect of the Minskyan cycle in these economies. As already mentioned, there is a steady increase in the current account deficit in the first phase of the cycle. Initially, capital inflows are higher than the absolute value of current account deficits and reserves accumulate. At some point the current account deficit becomes larger than the capital inflows. The stock of international reserves reaches a maximum and then contracts, inducing the contraction of money and credit.

The portfolio decisions of domestic and foreign agents – regarding the portion of the portfolio exposed to country and currency risks – are affected by the evolution of the balance of payments (Frenkel, 1983). The evolution of domestic interest rates reflects the financial aspects of the cycle in the emerging market economies. The local interest rate tends to decline in the

---

<sup>11</sup> A similar view on the role of international currency liquidity in financial crises in emerging markets is exposed in Chang and Velasco (1999).

<sup>12</sup> A formal model is presented in Frenkel (2005).



first phase and to increase in the second. As exchange rate policy initially enjoys credibility, arbitrage between domestic and foreign assets leads to a reduction of domestic interest rates. Low interest rates contribute to the real and financial expansion. In the second phase the interest rates rise. The increase in nominal and real interest rates in the second phase is also explained by the arbitrage between domestic and foreign assets. The sum of the exchange risk premium plus the country risk premium – the added price of devaluation and default risks – sets a floor for local real interest rates and is the main variable that drives their increase. The persistent increase in the current account deficit – and from a certain point the contraction trend in international reserves – reduces the credibility of the exchange rate rule, on the one hand, while increasing, on the other hand, the probability of default of the debt issued in international currency.

The maintenance of the exchange rate rule and the regular service of external obligations require increasing capital inflows. Therefore, risk premiums tend to increase. Higher risk premiums and consequently higher interest rates are required to balance the portfolios and attract foreign capital. The economic activity contracts and episodes of illiquidity and insolvency further contribute to reducing the credibility of the exchange rate policy. At the end of the process there is no interest rate high enough to sustain the demand for local financial assets. There are runs on central bank foreign exchange reserves, which ultimately lead to the collapse of exchange rate regime.

*Stylized facts exclusive to the Eurozone economies' crises*

In contrast to emerging market economies, neither private debts nor public debts in the Eurozone economies have an additional risk of default associated to the potential lack of foreign currency liquidity at the national aggregate level. This is so because the Eurozone payments system warrants the availability of liquidity to fulfill all international payments. On the other hand, ECB has performed the role of lender of last resort of commercial banks (and indirectly to firms) located in the Eurozone economies.

In association with the different settings, the critical processes have evolved differently in the emerging market economies and the Eurozone economies. In the emerging market economies' crises, as was already mentioned, the evolution of external accounts and international reserves feedback negatively in the second phase of the Minskyan cycle throughout their effects on the exchange rate risk and the specific default risk of international currency debts, public and private. This stylized fact is absent in Eurozone economies' crises. In the Eurozone economies, the exchange rate risk has had no role in the portfolio decisions leading to capital outflows (at least until the GIPSI critical processes were well advanced, when the



possibility of Greece abandoning the euro and issuing a new currency became visible). Neither have capital flows been directly influenced by the evolution of the external accounts. Eurozone countries do not carry stocks of international reserves whose evolution could indicate risks of devaluation and default, as in the emerging market economies. The Eurozone economies' balance of payments results (the sum of current and capital account results) are approximately recorded in the Target2 balances of the ECB and do not seem to have a significant influence in the countries' risk assessments.<sup>13</sup>

On the other hand, public debts in the Eurozone economies do have a specific liquidity risk of default similar to that of public debts in emerging market economies issued in foreign currency. This is so because governments in the Eurozone do not have a (highly credible) lender of last resort able to dissipate this risk.<sup>14</sup>

The debtor government in the Eurozone economies has some financing needs, made up by its fiscal deficit (the primary deficit plus interests) plus the principal maturities. The possibilities of adjusting public finances are not unlimited. Consequently, there is a risk that the debtor does not count with sufficient liquidity to cover its financing needs and be forced to default on their obligations. The role of the default risk premium in the sustainability of public debts in the Eurozone is similar to the role it has in the sustainability of foreign currency debts (public and private) in emerging market economies. As in the emerging markets cases, a large proportion of the financing needs of the GIPSI governments must necessarily be covered with funds from the market, even after adjustments have been made in the public accounts. The process that follows is also similar to the experience of emerging market economies with their foreign currency debts. The markets' assessments of risks tend to place the countries in financial traps with increasing public debt ratios and risk premiums.<sup>15</sup>

<sup>13</sup> On the Target2 balances of the European Central Bank see Sinn and Wollmershaeuser (2011) and Cesaratto (2012).

<sup>14</sup> The ECB have had this role to some extent, but the rhetoric and weakness of its interventions did not eradicate the fears and uncertainties associated to the possibility of default on public debts. The announcement by the ECB of the Outright Monetary Transactions (OMT) generated more optimistic expectations about the sustainability of the GIPSI public debts, but the conditionality to which these operations would be subjected leaves open doubts about their efficacy. No OMT operation has been implemented at the time I am writing this article.

<sup>15</sup> Research by the IMF has recently shown that the market assessments of default risks are associated with the short-term growth performances, that is, perceived risk increases when output falls (Cotarelli, 2011). The author comments on the crucial mechanism of the vicious circle: 'projected growth is important (higher growth leading to lower spreads), but, again, short-term growth is what matters, rather than potential growth. One unpleasant implication of this focus on short-term output growth is that, if the fiscal multiplier is sufficiently large (higher than 1.2-1.3



In the Eurozone economies' crises, in absence of the influence of the exchange risk and the international liquidity risk in the portfolio decisions, the main source of negative feedback effects in the second phase of the cycle is the evolution of public debt ratios and sovereign risk premiums, throughout their effects on the portfolio decisions of the private sector. These effects would not occur if the Eurozone governments had a credible lender of last resort.

*Another stylized fact shared by the Eurozone and the emerging market economies: Pro-cyclical fiscal policies in the contraction phase of the cycle*

So far we have pointed out stylized facts of the macroeconomic dynamics determined by the interaction between agents' behavior and the institutional settings. In addition, we could also consider as another stylized fact of the crises dynamics the pro-cyclical fiscal policies implemented by the governments in the second phase of the cycle in order to gain credibility from the markets and revert the capital outflows and the recession trends. Actually, this stylized fact was observed in almost all emerging market economies' crises and on the other hand, pro-cyclical fiscal measures are presently a crucial ingredient in the development of the Eurozone economies' crises. An obvious motivation of these policies is the conditionality imposed in exchange of financial support by the multilateral institutions. The International Monetary Fund (IMF) has imposed fiscal austerity in all cases in which its support programs were involved in the emerging market economies' crises. On the other hand, fiscal austerity is the main objective of the policy orientation of the European Union and the main conditionality presently claimed by the European financial institutions to the support given to the Eurozone economies. In what follows, we want to discuss other motivations and objectives pursued by governments that implement pro-cyclical fiscal policies both in the emerging market economies and the Eurozone economies, besides the conditionality imposed by international institutions.

The second phase of the cycle is currently in full development in the Eurozone economies' crises. The turning point of the cycle could be dated in September 2008, when the contagion of Lehman Brothers bankruptcy spread to the entire world. Hence, the second phase of the cycle in the Eurozone economies' crises has lasted so far about 4 years.

In order to make a valid comparison with regard pro-cyclical fiscal policies between the crises in the Eurozone economies and the emerging

based on the estimated coefficients), a fiscal tightening can lead to a rise in spreads: the improvement in the deficit tends to lower spreads, but the short-term decline in GDP, acting also through the short-term rise in the debt ratio, tends to push spreads up.'



market economies, we should look at the emerging market economies' crises dynamics in the period between the turning point of the cycle and the abandoning of the fixed exchange rate. As was already mentioned, all the emerging market economies' crises ended up in devaluations (the only exception is Argentina in 1995, when the currency board exchange regime survived the financial crisis). The period between the turning point of the cycle and the devaluation has usually been relatively short in the emerging market economies. For instance, between 1 and 2 years in the Latin American crises in the early 1980s, about 1 year in the 1995 Mexican crisis and less than 1 year in the East Asian crises. The Argentine crisis in 2001 is an exception in this regard because the turning point of the cycle occurred in mid-1998 whereas the devaluation took place at the end of 2001. The contraction phase was a prolonged depression that lasted three and a half years in which pro-cyclical fiscal policies were intensively implemented. This makes the Argentine case particularly relevant in comparison with the Eurozone crises because, both in Argentina and in the Eurozone crises, the second phase of the cycle has lasted much more than in other cases, giving room for clear observations of the implementation and effects of the pro-cyclical fiscal policies.

In order to discuss the motivations and effects of pro-cyclical fiscal policies, I take as a fact that they have direct contraction effects on aggregate demand (Jayadev and Konczal, 2010; DeLong and Summers, 2012; Guajardo *et al.*, 2011).<sup>16</sup> The idea that a fiscal deficit reduction may have a net expansionary effect on output rests on the existence of indirect positive effects on private expenditures, throughout the impact of the policy on expectations and credibility. In an emerging market economy case, the potential effect of the policy on the domestic real interest rate, throughout the reduction of the country risk premium, points to a visible link between the policy and its hypothetical positive indirect effects. In the case of a Eurozone economy, the potential expansionary effect also rests on a reduction of the sovereign risk premium, but there is no visible link between the reduction of the risk premium and the hypothetical consequent increase in private expenditures. In this case, the indirect expansionary effects of a deficit reduction seem to rest on more ambiguous mechanisms than in an emerging market economy. However, beyond their hypothetical foundations, a bet on the indirect expansionary effects does not seem to be the main motivation of a government that pursues pro-cyclical fiscal policies in the contraction phase. Governments may or may not believe in indirect expansionary effects, but it

---

<sup>16</sup>This assessment has recently gained support from the IMF. See, for instance, IMF World Economic Outlook, Chapter 1 (2012).



seems clear that in all cases debt sustainability is the main objective of those policies: the sustainability of both the aggregate external debt of the country and the public debt issued in international currency, in the case of an emerging market economy; and the sustainability of the public debt in the case of an Eurozone economy.

Sustainability<sup>17</sup> means the ability of the debtors to fulfill its financial commitments as they are written in the involved contracts. Obviously, sustainability is not a guarantee that the contracts will actually be fulfilled. Sustainability is an assessment about future uncertain events, based on present information and probable conjectures.

An investor has to evaluate both the prospects of the capital flows and the ability of the country to make necessary adjustments in the external accounts (in an emerging market economy case) and in the public accounts (in both emerging market economy and Eurozone cases). Domestic information cannot provide a complete assessment of the risk. Even the quantitative components of the sustainability assessment depend on the behavior of the financial market. Present and expected risk premiums are necessary information to forecast the evolution of the debt burden and the future financing needs. As the prospects of the country risk premium are essential components of the sustainability assessment, each of the investors has to conjecture the behavior of the rest of the market. Consequently, there is room for multiple equilibrium and self-fulfilling prophecies.

The composition of the present and forecasted financing needs provides information about the proportion that should inescapably be backed by new lending in the market, even after adjustment policy measures have been taken. When the debt burden makes up for the bulk of the present and projected financing needs, the effects of current domestic policy measures on the financing needs are relatively small. Consequently, the assessment of sustainability depends in this case mostly on conjectures about the behavior of the rest of the financial market (and also on conjectures about the behavior of the international institutions).

Sustainability is then a self-fulfilling prophecy of the average opinion of the market. The average opinion can suddenly change from sustainable to unsustainable. The changes can be triggered by relatively small variations in the fundamentals or other news affecting the fundamentals. Or the change can be caused by domestic or international news less connected with the fundamentals. The sufficient condition for that to happen is a conventional opinion shared by most of the market participants. Consequently,

<sup>17</sup>The discussion that follows draws on Frenkel (2008).





sustainability is highly vulnerable to contagion effects or other sources of volatility, international or domestic.

The valuation of the assets issued by a country in the above situation is a neat example of the Keynesian beauty contest. What can the country do to make their financial assets look more beautiful? For the mentioned reasons, the government domestic policies have relatively little room for improving in the short run the fundamentals in which the sustainability assessments are based. However, this does not mean that domestic policies are irrelevant. They are relevant, not because of their effect on the fundamentals, but as signals to the financial market. The signals should make the country look more beautiful in the eyes of the average beauty criteria of the market. Signals are intended to convince individual investors that the average opinion will be favorably influenced. Hence, they have to harmonize with the more generalized conventions of the market participants. Fiscal austerity measures are valuable signals if, as it is actually the case, generalized conventions see them always positively, even if an independent analysis could show that they worsen the sustainability fundamentals. The effects of the announcements of pro-cyclical fiscal policies should be seen well before the adjustment measures objectively show their results on economic variables.

A country in this context loses most of its policy degrees of freedom. The financing of the debt burden becomes the main focus of domestic policies because it is the most important and urgent government target. The default of the debt would impose a high political cost and consequently, the government perceives the loss of funding as the most important threat it faces. Policy signals to the market may be, and usually are, socially or politically problematic and may actually have negative impacts on the economic performance. Experience shows that governments choose to confront the domestic social and political conflicts and risk a worsening of the economic performance in order to give priority to the issuing of signals to the market. Governments always prefer to play for time. The threat of default is tangible, while the effects of the signals are more uncertain, take more time to appear or simply are comparatively less costly for the government.

In no case in the emerging market economies crises the pro-cyclical fiscal policies have helped to stabilize the financial market, reduce the risk premiums and avoid the abandoning of the fixed exchange rates. The signals were not capable of turning the vicious circle of higher risk premiums and worsening debt ratios into virtuous circles of lower risk premiums and improving debt ratios, even in the case of Argentina, where the fiscal austerity announcements were effectively implemented along a period long enough to make fully observable their effects on output and the fiscal accounts (Damill *et al.*, 2010).



In the Eurozone economies crises pro-cyclical fiscal policies and signals are in full operation. So far, they have been incapable of turning the mentioned vicious circle into a virtuous one.

### **Lessons from the comparative analysis of crises**

The main lessons provided by the above comparative analysis refer to how to prevent the occurrence of crises.

In the first place, the crises in both developed and developing countries have highlighted the shortcomings of poorly regulated domestic financial systems. The general lesson is that reinforcing and extending financial regulation is essential to avoid instability and crisis.

A specific conclusion with regard to emerging market economies is that the prevention of crisis involves elements that go beyond the regulation of the domestic financial systems. In emerging market economies, the conjunction of macroeconomic policies with the pattern of insertion into the international financial system has a crucial role in the financial performance. The study of crises in emerging market economies suggests that in addition to strengthening and expanding financial regulation, these countries should: (1) adopt exchange rate regimes that prevent speculation and provide flexibility to policymakers, (2) implement measures pointing to the regulation of capital flows and (3) implement policies that ensure the robustness of the external accounts, including the accumulation of foreign exchange reserves and the preservation of competitive (or non-appreciated) real exchange rates.

The emerging market economies seem to have taken advantage from those lessons. Significant changes took place in many countries in the 2000s with respect to the dominant features in the 90s and before. There were important changes in the patterns of insertion into the international financial system, in macroeconomic policy regimes and in the regulation of national financial systems. Many countries adopted managed floating exchange rate regimes, generated current account surpluses and accumulated considerable foreign exchange reserves (Frenkel and Rapetti, 2010). These changes are consistent with the preventive measures suggested by the study of emerging market economies' crises briefly presented above. Hence, it can be concluded that the robustness exhibited recently by developing economies can be seen as confirmation a-posteriori of those recommendations.

Before the emergence of the Eurozone economies crises, suggestions of crisis prevention policies were usually accompanied by initiatives that should be implemented at the international level. The building of an institution able to perform the role of lender of last resort in international currency for emerging market economies was one of the most often mentioned recommendations. In fact, some of the recommended domestic policies – for



instance, the accumulation of large volumes of foreign exchange reserves – were mainly intended to have a substitute role for such an institution. The recent experience in the Eurozone shows how far we are from the possibility of constructing a more rational and stable international financial architecture with an international lender of last resort as one of its central elements. The reason is simple: if governments' coordination to set up an efficient international arrangement to prevent and manage crises is so difficult in the Eurozone, what would be the possibility of such an arrangement at the global level?

With regard to the Eurozone, the comparative analysis shows that the establishment of the Euro resulted in a type of crisis with strong similarities to the crises in emerging market economies. In both emerging market and Eurozone economies the crises originated in the conjunction of fixed exchange rates, full capital mobility and weak financial regulation, that is, in the conjunction of failures in macroeconomic policies and failures in financial regulations.

A preventive lesson for Europe should be: do not adopt the common currency, but the lesson is irrelevant now. A more concrete and practical lesson refers to the negative feedback effects in the contraction phase of the Minskyan cycle. The main sources of these effects in the Eurozone economies are the vicious circle dynamics of public debt ratios and risk premiums. These mechanisms could have been stopped by the operation of the ECB as a credible lender of last resort of the Eurozone governments, in the same way as did the central banks in United States, United Kingdom and Japan after the financial crises burst in these countries. Maybe there is still time in Europe to do it.

Even if the ECB had performed from the beginning of the crises as a credible lender of last resort for governments and the negative feedback mechanisms had been consequently neutralized, the GIPSI countries would be anyway trapped in contexts of debt deflation and low international competitiveness. Has the experience of the emerging market economies something to teach us in this regard?

As was already mentioned, all emerging market economies crises ended up in devaluations, and so, a more depreciated real exchange rate was the general condition for the following recovery processes. However, devaluation was not a sufficient condition. For instance, the Latin American crises of the early 1980s were followed by big devaluations and a number of rounds of foreign debts restructurings. However, none of the debt restructurings in the 1980s included substantial alleviation of the debt burdens. As a consequence, the biggest countries in the region experienced about 8 years of stagnation, high inflation and hyperinflation. The stabilization and the recovery of



growth were inconsistent with the fulfillment of the debt obligations. In other more successful crisis resolutions (for instance, Mexico after 1995 and the East Asian countries after 1998) the debts restructurings did not include significant haircuts, but were facilitated by massive international rescue packages led by the IMF. Almost in all cases the resolution of the crises in the emerging market economies comprised the bailout and deep restructuring of the domestic financial systems, which included the refinancing of private debts in favorable terms (subsidized with fiscal resources) and involved significant fiscal costs.

The Argentine crisis in 2001 is a singular case. Argentina defaulted on its external debt, as did the Latin America countries suffering crisis in the early 80s, but then suspended debt payments to private creditors for about 4 years. In 2005, Argentina reached an agreement with creditors to restructure most of the debt with a haircut that at that time was an historical record. As in other cases, the crisis resolution involved a huge devaluation and the bailout and restructuring of the domestic financial system, with favorable refinancing terms for domestic private debts. The economy began to grow soon after the devaluation and sustained a very high rate of growth in the following years. This experience makes the Argentine case particularly interesting for people looking for lessons from crisis resolutions.

### **The Argentine 2001–02 crisis, debt default and recovery<sup>18</sup>**

#### **The macroeconomic evolution in the nineties**

The basic plot of the macroeconomic story of the late 90s was quite simple. The negative financial turnaround in the foreign environment experienced in 1997–1998, after the East Asian and Russian crises and the Brazilian devaluation, found the Argentine economy with a significant and growing current account deficit, a considerably appreciated currency and a visible lack of policy instruments to deal with these problems, given the rigidities of the adopted macroeconomic policy rule. In these conditions the country-risk premium jumped upwards and the access to foreign funds became more and more problematic. The subsequently increased interest burden had a negative impact on all borrowers, including the public sector.

Because of the fixed exchange rate and dependence of monetary conditions on the balance of payments, fiscal policies had to bear the burden of the adjustment to the new situation. The government argued that furthering fiscal discipline would strengthen confidence, and consequently

<sup>18</sup>This section draws on Damill *et al.* (2010).



the risk premium would fall, bringing interest rates down. As a result, domestic expenditure would recover pushing the economy out of the recession. Lower interest rates and an increased output would, in turn, reestablish a balanced budget, thus closing a virtuous circle. Fernando de la Rúa's administration in 2000 borrowed this entire argument from Carlos Menem's administration, which had preceded it, and the IMF gave its seal of approval. All of them failed.

The entire macroeconomic story of the late 90s is about this failure. Despite the strong adjustment in the primary balance of the public sector the virtuous circle was never attained. Even worse, the increases in taxes and the cuts in public expenditures reinforced the recessionary trend, thus feeding the negative expectations that prevented realizing the highly anticipated fall in the country-risk premium. Fiscal policy alone was impotent to compensate for the strong macroeconomic imbalances, which laid somewhere else, that is, in the external sector of the economy. Under this self-destructive fiscal policy orientation, the economy got trapped into a vicious circle for several years, and suffered from the longest recession since the First World War.

### **The Bailout of the financial system**

The suspension of the service payments on a part of the public debt was declared on 24 December 2001. The measure initially affected 61.8 billion dollars in public bonds and another 8 billion dollars in diverse liabilities, out of a total debt of 144.5 billion dollars. The rest – mainly debt with multilateral organizations (32.4 billion dollars) and recently issued guaranteed loans (42.3 billion dollars) – remained as performing debt.

The devaluation of the peso that followed had a strong impact on the economy, given the important dollarization of contracts inherited from the convertibility period. The government interventions beginning in early 2002 aimed both to reduce the wealth transfer from debtors to creditors and avoid the collapse that would have resulted from being unable to fulfill domestic contracts set in US dollars. The official intervention intended to manage the 'distribution of losses'. In many cases the intervention meant that parts of the losses were absorbed by the State by issuing new debt.

The main source of the new indebtedness came from the intervention in the financial system, which involved a 14.4 billion dollar rise in public debt. In February 2002, the government decided to compel the conversion of all foreign-currency bank deposits into pesos at a rate of 1.4 pesos per dollar. Bank credits denominated in foreign currency were converted into pesos at a rate of one peso per dollar. This measure was aimed at avoiding generalized bankruptcies in the private sector. The 'asymmetric pesification' of credits



and deposits caused a significant loss in banks' net worth that was compensated by the government.

Considering the different measures and effects derived from the management of the convertibility collapse and the declaration of default, between December 2001 and December 2003 the gross public debt stock increased by about 28.2 billion dollars (23% of 2003 GDP). By the end of 2003, Argentina's total public debt reached 179 billion dollars (146% of 2003 GDP).

### **The public debt swap**

In the second half of 2003 the first official steps for the restructuring of the defaulted debt were taken. In September, after reaching an agreement with the IMF, the government took advantage of the annual meeting of the IMF and the World Bank in Dubai to make public the main guidelines and the agenda of their restructuring proposal.

The 'Dubai proposal' established that Argentina would offer uniform treatment to every holder of its bonds issued up to December 2001, while still fully servicing its multilateral debt and the guaranteed loans issued in 2001. The government thus recognized a defaulted stock of bonds of about 87 billion dollars. This amount left aside an important volume of past due interest. A 75% haircut was to be imposed on the bonds, according to which new bonds would be issued in a swap that would leave the equivalent of a maximum amount of bonds of about 21.8 billion dollars. Three bonds, called Par, Quasi-Par and Discount, were announced. Although the detailed characteristics of the instruments were not published at the time, their outlines were clear. The Par would preserve the nominal value of the original debt but would have longer maturity and a lower interest rate than the other two. The other two bonds would entail nominal haircuts. The haircut corresponding to the Discount bond would be higher than the haircut of the Quasi-Par. The new bonds would also incorporate mechanisms – which would be specified later on – to reward the bondholders with a coupon tied to the economic rate of growth. The sustainability of the proposal was said to be consistent with a target for the primary surplus that had been recently agreed upon with the IMF (2.4% of GDP for the central government and 3% for the consolidated public sector). The government announced that it expected to maintain that target in the long run.

In June 2004, a few months after the finance ministers of the Group of seven manifested that Argentina should accelerate the restructuring process and issue 'good faith' signals, the government made public a new proposal in Buenos Aires. It was a second offer that aimed to get closer to the creditors' positions. The eligible debt was the same as the one defined in Dubai, although it was now measured at 81.8 billion dollars.



In exchange for that defaulted debt stock, new bonds would be issued for a total of 38.5 billion dollars, in case the level of acceptance of the swap was lower than 70%, and for 41.8 billion dollars in case the level of acceptance was higher than the 70% benchmark. This offer involved a substantial improvement if compared with the 21.8 billion dollars to be issued according to the Dubai proposal. The swap would comprise only the capital of the defaulted bonds, whereas the past due interests would not be recognized, that is, liabilities amounting to 81.8 billion dollars would be exchanged for new bonds amounting to 38.5 or 41.8 billion dollars, depending on the level of acceptance.

The swap started on 14 January 2005. Six weeks later, the restructuring operation was closed. On 3 May 2005, the government announced that acceptance of its offer had reached 76.15% of the debt in default. This meant that 62.3 billion dollars of the old bonds would be exchanged for about 35.3 billion dollars of new instruments plus the corresponding GDP growth-linked coupons. The maximum amount of the issuing would be 15 billion dollars in the case of the Par bonds, 8.33 billion dollars in the case of the Quasi-Par bonds and about 11.9 billion dollars in the case of the Discount bonds.

The government expressed satisfaction at the swap's outcome. The operation signified the reduction in the public debt stock by about 67.3 billion dollars and attenuated the public finances' exposure to the exchange risk, as around 44% of the new bonds were denominated in local currency.

### **Macroeconomic policy and performance after devaluation and default**

The abrupt fall in output and employment that the economy was experiencing since mid-1998 continued after the end of the convertibility regime, but for only a very short period. Certainly, in opposition to most opinions and beliefs – including those of the IMF's officials – the traumatic episodes that brought the convertibility regime to an end were not followed by a deeper depression. Moreover, an extraordinary quick recovery started only one quarter after the devaluation and default. The GDP recovery started soon after the exchange rate depreciation (around three months later, as can be seen in the available monthly activity indicators).

The recovery was precisely triggered by the sudden change in the relative prices in favor of the tradable goods sectors. In the beginning of this phase the recovery was led by the local production of previously imported goods. Apart from the shift in relative prices, the quick economic recovery that followed the crisis was also a consequence of a set of policies that, still with flaws and ambiguities, aimed at recovering the basic macroeconomic equilibriums.



Many of the policies that had important roles in this stage faced opposition from the IMF. First, the imposition of exchange controls: this measure compelled the exporters to liquidate in the local market a considerable part of the international currency generated by their exports and also restricted capital outflows. Second, the establishment of taxes on exports (retentions): this absorbed part of the devaluation's favorable effect on the exporters' incomes and significantly contributed to the recovery of fiscal equilibrium; it also attenuated the impact of the devaluation on domestic prices and, consequently, on real wages. Third, a flexible monetary policy: this initially enabled assistance to banks in the crisis phase and afterwards contributed to the recovery of money demand, thus helping the recovery. Fourth, when the foreign exchange market started to show an excess supply of international currency, exchange rate policy attempted to stop the peso from appreciating through the intervention of the Central Bank (and of the Treasury later on).

The IMF particularly insisted on a freely floating peso. For a short period the government adopted this regime. Once the exchange rate was free to float, however, the parity rose abruptly, reaching levels close to 4 pesos per dollar. Reintroduction of exchange controls followed, which was crucial to contain the exchange rate overshooting. The government managed to stabilize the nominal exchange rate by mid-2002 by compelling the exporters to liquidate the international currency in the local exchange market and by limiting the currency outflows.

Soon after, when the exchange rate was stabilized, the demand for pesos started to recover and the exchange market began to show an excess supply of dollars. The end of the exchange rate overshooting put a check on the rise in the domestic prices. The freezing of public utilities rates, as well as the high unemployment (which kept nominal wages from rising) also contributed to slow the rise in prices.

The improvement in the consolidated public sector global balance that took place between 2001 and 2004 was equivalent to 10% points of GDP. This result passed from a global deficit of 5.6% of GDP in 2001 to a 4.5% surplus in 2004.

Which factors explain the adjustment in the fiscal cash flow results? 40% of it derives from an improvement in the provinces balances. This improvement comes from the increase in tax collection facilitated by the recovery and the rise in nominal prices, together with the restraint in expenditure. Meanwhile, 60% of the six-points-adjustment in the national public sector's budget is explained by the improvement in the primary balance (+3.7% of GDP). The contraction of interest payments, basically resulting from the default on the sovereign debt, accounts for the rest (-2.4% of GDP).





The rise in the national primary surplus is mainly explained by an improvement in tax revenues (+4.7% of GDP). It is interesting to observe that although the receipts from traditional taxes such as the VAT and the incomes tax rose significantly, they did not increase substantially when measured as a proportion of GDP. Between 2001 and 2004 they increased by 1.2% of GDP taken together. The tax on exports is the item that mostly explains the rise in tax revenues. The soy and derivatives industry generated almost one half of the taxes on exports.

Hence, the public sector absorbed part of the effect of the devaluation on the profitability of the tradable goods sector, and also benefited from the high prices reached by some of the exportable goods, such as soy and oil. The contribution made by the tax on financial operations established in 2001 was also very relevant. The increase in the collection of this tax explains 30% of the improvement in total tax receipts.

The interest payments on the public debt passed from representing almost 4% of GDP in 2001 to only 1.4% in 2004 (without taking into account the accrued interest on the debt in default).

However, the fiscal effects of the suspension of part of the debt service payments are significantly higher than what is shown in the mentioned account. It can be estimated that the amount of interest on the public debt – valued at the 2004 exchange rate – would have represented, in that year, between 9% and 11% of GDP. This is approximately equivalent to one half of the total tax collection of that year. Paying that amount would have certainly been incompatible with the economic recovery. As was pointed out above, a crucial aspect of the fiscal financial vulnerability derived from the extremely high proportion of debt in foreign currency, with the consequent exposure to the impact of exchange rate variation. The substantial exchange rate depreciation in 2002 would have had a harsh impact on the public sector's financial equilibrium. Taking this into account, it can be said that the payment suspension and the following debt restructuring enabled a considerable amount of fiscal savings – either measured in domestic currency or as a proportion of GDP.

However, the most important effect of the default and the end of the convertibility regime was regaining the instruments of macroeconomic policy. This was of crucial importance in moving the economy out of the abysmal situation generated by the agony and the final collapse of the convertibility regime.

### **Acknowledgements**

The author thanks the comments by an anonymous referee and the support of Ford Foundation to the research.



## REFERENCES

- Bagnai, A. (2012): Unhappy families are all alike: Minskyan cycles, Kaldorian growth and the Euro zone peripheral crises. In *Iniciativa para la Transparencia Financiera* (ITF). Technical Papers, [http://www.itf.org.ar/ingles/pdf/documentos/87\\_2012.pdf](http://www.itf.org.ar/ingles/pdf/documentos/87_2012.pdf).
- Bibow, J. (2012): *The Euro debt crisis and Germany's Euro trilemma*. Working paper no. 721, Levy Economics Institute of Bard College: New York.
- Cesaratto, S. (2012): Controversial and novel features of the Eurozone crisis as a balance of payment crisis. In *Quaderni del Dipartimento di Economia Politica e Statistica*. Working paper no. 640, Università degli Studi di Siena: Italy.
- Chang, R. and Velasco, A. (1999): Liquidity Crises in Emerging Markets: Theory and Policy. Working Paper 7272, National Bureau of Economic Research, USA.
- Cotarelli, C. (2011): Challenges of budgetary and financial crises in Europe. Presentation at the London School of Economics and Political Science, Fiscal Affairs Department, International Monetary Fund, 18 November.
- Damill, M, Frenkel, R and Rapetti, M. (2010): The Argentinean debt: History, default and restructuring. In: Herman, B, Ocampo, JA and Spiegel, S (eds). *Overcoming Developing Country Debt Crises* Initiative for Policy Dialogue Series Oxford University Press: New York.
- DeLong, JB and Summers, LH. (2012): *Fiscal Policy in a Depressed Economy*. Brookings: Washington DC.
- European Commission. (2009): Special report: Competitiveness developments within the euro area. *Quarterly Report on the Euro area* 8(1).
- European Commission. (2010): Special issue: The impact of the global crisis on competitiveness and current account divergences in the Euro area. *Quarterly Report on the Euro Area* 10(1).
- Frenkel, R. (1983): Mercado Financiero, expectativas cambiarias y movimientos de capital. In *El Trimestre Económico*, México.
- Frenkel, R. (2003): Globalization and financial crises in Latin America. *CEPAL Review*. No. 80, Economic Commission for Latin American of United Nations: Santiago de Chile.
- Frenkel, R. (2005): External debt, growth and sustainability. In: Ocampo, JA (ed). *Beyond Reforms: Structural Dynamics and Macroeconomic Vulnerability*. Stanford University Press: Palo Alto, and ECLAC.
- Frenkel, R. (2008): From the boom in capital inflows to financial traps. In: Ocampo, JA and Stiglitz, J (eds). *Capital Markets Liberalization and Development*. IPD Book Series, Oxford University Press: New York.
- Frenkel, R. (2010): El riesgo país en la zona del Euro y en las economías de mercado emergente. In *Iniciativa para la Transparencia Financiera* (ITF), Readings 53, <http://www.itf.org.ar/ingles/pdf/lecturas/lectura53.pdf>.
- Frenkel, R. (2012): Lecciones de política macroeconómica para el desarrollo, a la luz de la experiencia de la última década. In *El Trimestre Económico*, Mexico.
- Frenkel, R and Rapetti, M. (2009): A developing country view of the current global crisis: What should not be forgotten and what should be done. *Cambridge Journal of Economics* 33(4); Special Issue: The Global Financial Crisis, pp. 685–702. July.
- Frenkel, R and Rapetti, M. (2010): Economic development and the international financial system. In: Griffith-Jones, S, Ocampo, JA and Stiglitz, J (eds). *Time for a Visible Hand. Lessons from the 2008 World Financial Crisis*. Oxford University Press.
- Guajardo, J, Leigh, D and Pescatori, A. (2011): *Expansionary austerity: New international evidence*. IMF Working paper WP/11/158. International Monetary Fund.
- International Monetary Fund. (2012): *IMF World Economic Outlook*, Chapter 1, International Monetary Fund: Washington.



- Jayadev, A and Konczal, M. (2010): *The boom, not the slump: The right time for austerity*. Working paper, August 23, The Roosevelt Institute, [http://www.rooseveltinstitute.org/sites/all/files/not\\_the\\_time\\_for\\_austerity.pdf](http://www.rooseveltinstitute.org/sites/all/files/not_the_time_for_austerity.pdf).
- Kaminsky, G L and Reinhart, CM. (1999): The twin crises: The causes of banking and balance-of-payments problems. *American Economic Review* 89(3): 473–500.
- Kindleberger, C. (1978): *Manias, Panics, and Crashes: A History of Financial Crisis*. John Wiley and Sons: New York.
- Laeven, L and Valencia, F. (2008): *Systemic banking crises: A new database*. IMF Working Paper WP/08/224, International Monetary Fund.
- Minsky, H. (1975): *John Maynard Keynes*. Columbia University Press: New York.
- Minsky, H. (1977): A theory of systemic fragility. In: Altman, E and Sametz, AW (eds). *Financial Crises: Institutions and Markets in a Fragile Environment*. John Wiley and Sons: New York.
- Ocampo, JA. (2010): How well has Latin America fared during the global financial crisis? In *Iniciativa para la Transparencia Financiera* (ITF). Readings, <http://www.itf.org.ar/ingles/pdf/lecturas/lectura56.pdf>.
- Reinhart, CM and Rogoff, KS. (2009): *This Time is Different*. Princeton University Press: Princeton, New Jersey.
- Servén, L and Nguyen, H. (2010): Global imbalances before and after the global crisis. In *Policy Research*. Working paper no. 5354, The World Bank Development Research Group, Macroeconomics and Growth Team, The World Bank.
- Schularick, M and Taylor, AM. (2012): Credit booms gone bust: Monetary policy, leverage cycles, and financial crises, 1870–2008. *American Economic Review* 102(2): 1029–1061.
- Sinn, H and Wollmershaeuser, T. (2011): *Target loans, current account balances and capital flows: The ECB's rescue facility*. Working paper no. 17626, November, National Bureau of Economic Research, <http://www.nber.org/papers/w17626>.
- Taylor, L. (1991): *Income Distribution, Inflation and Growth*. MIT Press: Cambridge, MA.
- Taylor, L. (1998): Capital market crises: Liberalisation, fixed exchange rates and market-driven destabilization. *Cambridge Journal of Economics* 22(6): 663–676.
- Williamson, J. (1983): *The Open Economy and the World Economy*. Basic Books: New York.