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Capital Flows and Financial Crises: A Comparative Analysis of East Asia (1997-98) and Argentina (2001-02)

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Abstract: This paper suggests, first, that a simple theoretical framework is useful in explaining financial crises in emerging economies. Second, it reviews the East Asian financial crises of 1997-98 . Third, the paper examines the origins of Argentina's crisis of 2001-02. Fourth, it presents a comparative analysis of both crises, highlighting their similarities and differences. Finally, the conclusions point out the drawbacks of both hard and soft pegs respective to a single foreign currency as well as the need for emerging economies to use capital controls in order to avoid the recurrence of financial crises.

1. Introduction

The successive financial crises in emerging economies during the last decade have been to a great extent different from those preceding them (Bustelo, 2000). However, they have also displayed significant common features. To analyze their similarities and differences is therefore a pertinent endeavor.

Furthermore, this kind of comparative analysis is also helpful in order to prevent future crises. Some studies (Eichengreen, 2002; Desai, 2003) have analyzed financial crises with the aim of obtaining possible conclusions on national and international measures directed to prevent their recurrence.

It is then extremely appealing to compare the East Asian crises in 1997-98 with the Argentinean crisis in 2001-02, but the comparison has attracted so far only a very limited amount of research (see, for instance, Bustelo, 2002; Rajan, 2002). This lack of interest is even more surprising if we take into account the large literature which has compared the Mexican crisis in 1994-95 with the East Asian crises (Kregel, 1998; Palma, 1998; Esquivel and Larraín, 1999; Palma, 2000; Chang and Velasco, 2001; Nishijima, 2002; Olivié, 2002; Varela and Jacobs, eds., 2002).

Besides, the comparison between the East Asian crises and the Argentinean crisis has an additional interest, due to the fact that the latter has been subjected to simplistic analyses. For instance, it has been suggested that Argentina's crisis was the result of the incompatibility between a too expansive fiscal policy and a too rigid exchange rate regime, and that the crisis was therefore a first generation type of crisis, and as such an unavoidable and predictable crisis. Insofar as the East Asian crises have been defined as second generation crises[1] or even third generation crises[2], the differences between them would be so great that they would not allow for a sensible comparison. The arguments that will be laid out in this paper are that Argentina's crisis can not be defined as a first

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[1] That is, contingent or multiple equilibria crises, and which are the result of self-fulfilling expectations, being therefore unpredictable.

[2] It is however dubious that "real" third generation models already exist, despite the shortcomings of second generation models.

generation crisis and that it has displayed several important similarities with the East Asian crises.

This article develops, updates and completes a previous work of the author (Bustelo, 2002), written before Argentina's default on its sovereign debt in early 2002.

2. The mechanisms of financial crises

The main financial crises in emerging economies during the last decade (Mexico in 1994-95, East Asia in 1997-98, Turkey in 2000-01 and Argentina in 2001-02)[3] have presented common mechanisms. One way to treat them is through a simple theoretical framework like the one presented in García (2002) and Olivié (2002), on the basis of the work of different authors.

All those crises were preceded by a considerable growth of capital inflows (Palma, 2000) in a context of a nominal exchange rate which was softly pegged (Mexico, East Asia and Turkey) or hardly pegged (Argentina). The main reasons for the emerging economies to adopt this kind of anchored exchange-rate regime were: (1) the will to fight inflation (Mexico since 1987, Argentina since 1991 and Turkey since 1999) and/or (2) the desire to attract more foreign capital (East Asia since the early 1990s). The anchor, in fact, allowed for an exchange rate-based stabilization (of prices). Moreover, it eliminated or reduced the perceived exchange risk, so it promoted capital inflows, particularly if the peg was coupled with financial opening and with large differentials in interest rates.

Two main transmission channels between capital inflows and a higher risk of financial crisis might be distinguished.

On the one hand, as far as the current account is concerned, capital inflows, especially if they are large and debt-generating, provoke a real appreciation of the currency, a loss in competitiveness and a growing trade deficit, as well as an

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[3] The Brazilian crisis of 1999 might be understood as a crisis due to contagion from the Asian crises.

increase in payments in the investment income account. Both effects culminate in a substantial increase in the current account deficit.

On the other hand, as regards to the financial account, capital inflows, as a result of their important volume and of their structure (a bias towards debt and/or volatile flows), promote: (1) a credit boom channeled to activities that increase credit risk (that is, to investments that have a low profitability or that are risky), exchange risk (to investments unhedged against an eventual devaluation) and liquidity risk (to long-term investments)[4]; (2) an increase in external debt, mainly with short-term maturities; and (3) a growing vulnerability to an eventual reversal in capital flows. The emerging economies undertaking structural reforms are then prone to display an "overborrowing syndrome", both internally and externally, as stressed in the well-known model of McKinnon and Pill (1999).

The appreciated currency in a context of a high current account deficit, the increase in risk as a result of the growing currency and maturity mismatches, the accumulation of short-term external debt (especially respective to foreign exchange reserves) and the larger dependence on potentially reversible capital flows were factors which, all together, triggered speculative attacks against the currencies. The herding behavior of investors resulted sometimes in a financial panic.

Therefore, an adequate interpretation of financial crises is one which combines a worsening in the state of some fundamentals with the speculative, herd-like and panic-prone behavior of international financial markets. In short, financial crises in emerging economies might be addressed to as liberalization crises in the context of the current framework of financial globalization.

This theoretical approach allows to apprehend the common mechanisms of financial crises. However, it does not pretend to understate that the differences between the aforementioned crises were important in several areas, such as, at

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[4] This increase in risk was also due to a financial deregulation which was undertaken without the simultaneous creation of a system of prudential supervision and regulation of banks and non-bank financial institutions.

first sight, the following:

- the exchange-rate policy previous to the crises: a soft peg in Mexico, Turkey and East Asia and a hard peg in Argentina;

- monetary policy prior to the crises: expansive in Mexico, cautious in East Asia, expansive in Turkey and restrictive in Argentina;

- the underlying process which triggered the crises: overconsumption in Mexico, overinvestment in East Asia, overshooting of inflation in Turkey[5] and "pure" indebtedness in Argentina;

- the structure of capital inflows: mainly portfolio investment in Mexico, Turkey and Argentina, and mostly bank loans in East Asia;

- the composition of external debt: mainly public in Mexico, Turkey and Argentina, and mostly private in East Asia.

3. The East Asian crises (1997-98)

The East Asian crises of 1997-98 affected mainly the so called Asia-5 economies (Thailand, Malaysia, Indonesia, the Philippines and South Korea). Although these crises can be understood in all cases as the result of liberalization or under-regulation[6], they were heterogeneous. For instance, in the years preceding the outbreak of their respective crises, Thailand, Indonesia and the Philippines displayed a significant currency real appreciation, but this was not the case in Malaysia nor especially in South Korea. Moreover, neither Indonesia or South Korea had a very large current account deficit in the two years preceding 1997.

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[5] The overshooting of inflation in Turkey was a result of the decision of the authorities to renounce to sterilization of capital inflows (that is, to the selling of government bonds). As a result, the fall in interest rates was excessive and did not allow to fight inflation sufficiently.

[6] Contrary to the "orthodox" approach, which stated that the main culprit of the crises was the excessive state intervention in a context of crony capitalism. For a critique of that approach, see Jayasuriya and Rosser (2001).

The underlying process which led to the Asian crisis is well-known and might be summarized as follows (see more details in Bustelo, 1998 and Bustelo *et al.*, 1999 and 2000).

First, financial opening, together with the currency pegs to the US dollar and with the low interest rates prevailing a the time in developed countries, led to large capital inflows, mainly in the form of short-term bank loans.

On the one hand, this inflow provoked a real appreciation of the currency, which was also due to the increase in the value of the US dollar since 1995[7] and to significant differentials in inflation rates. Currency appreciation, along with the growing competitive pressure from China and the fall in the prices of electronic parts (such as semiconductors), led to a lower growth rate of exports and, ultimately, to an increased current account deficit.

On the other hand, capital inflows contributed, together with financial deregulation, to a credit boom which led to a bubble in the stock and property markets and to an overinvestment in the manufacturing sector (Erturk, 2001).

Second, financial deregulation, without an appropriate system of prudential supervision and regulation, was a main element which led to a situation of growing financial fragility (Arestis y Glickman, 2002), as the balance sheets of the banking system worsened.

Credit assessments lost quality, external indebtedness (especially in short-term liabilities) increased and the currency and maturity mismatches grew, as financial intermediators contracted debts in foreign currency and in short-term liabilities in order to invest in national currency and in long-term positions.

Third, foreign capital flows changed abruptly their course in 1997 and 1998. According to IMF data, net capital inflows to Asia-5 decreased from US$ 69.8 billion in 1996 to *minus* 18.2 billion in 1997 and to *minus* 105.2 billion in 1998.

Table 1 includes some of the indicators of this process.

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[7] The US dollar appreciated nearly 50% respective to the yen between June 1995 and April 1997.

Table 1. Some macroeconomic indicators in East Asia before and during the 1997-98 financial crises

	Korea	Philippines	Indonesia	Malaysia	Thailand
NPCI/GDP (%)					
1983-91	-0.4	-0.8	2.6	4.1	5.7
1992-96	3.2	4.8	4.8	10.5	8.8
RCA (%)					
Dec94-Mar97	2	11	17	14	14
Dec90-Mar97	11	47	25	28	25
CAB/GDP (%)					
1990-95 (average)	-1.2	-3.7	-2.5	-5.8	-3.9
1996	-4.7	-4.7	-3.4	-5.0	-7.9
BCPS/GDP (%)					
1990	52	19	45	71	64
1996	62	49	55	93	102
STED/R (%)					
June 1994	1.62	0.40	1.72	0.25	0.99
June 1997	2.07	0.84	1.70	0.61	1.45
NPCI (US$ billion)					
1996	23.8	11.2	10.8	4.3	19.4
1998	-77.2	0.4	-9.6	-4.7	-14.1

Notes: NPCI/GDP: net private capital inflows as a percentage of GDP; RCA: real currency appreciation (in percentage); CAB/GDP: current account balance as a percentage of GDP; BCPS/GDP: bank credit to the private sector as a percentage of GDP; STED/R: short-term external debt respective to FX reserves; NPCI: net private capital inflows (US$ billion).

Sources: BIS, IMF and Bustelo *et al.* (2000), several tables.

4. The Argentinean crisis (2001-02)

The default on sovereign debt in December 2001 and the abandonment of the fixed exchange rate in January 2002 provoked, as it is very well known, a full-blown financial crisis in Argentina. The peso depreciated more than 350% in the nine first months of the year and the inflation rate reached 25.9% in 2002, after three years (1999-2001) of deflation. The recession deepened: after having fallen 4.4% in 2001, GDP collapsed 11% in 2002. Therefore, in 2002 GDP was 20% lower than in 1998 and the unemployment rate reached 18%. The current account balance, after displaying a deficit in 2001 (-1.7% of GDP), turned into a large surplus in 2002 (8.3% of GDP). Poverty and inequality increased and the wounded productive sector will surely take several years to recover.

The causes of the Argentinean crisis have been extensively debated[8]. In short, three main interpretations could be listed. The first one emphasizes the incompatibility between the rigid exchange-rate regime and the imprudent fiscal policies (Mussa, 2002), so that the crisis was, in fact, a first generation type of crisis. The second explanation stresses the "sudden stop" in international capital markets after the Russian crisis in August 1998 (Calvo *et al.*, 2002). The third explanation blames the inappropriate character of the exchange-rate regime (Haussman and Velasco, 2002; Perry and Servén, 2003).

Haussman and Velasco (2002), among others, have criticized the thesis of fiscal profligacy. Primary public expenditures remained virtually constant (around 23-24% of GDP) between 1993 and 2001. The public deficit did not reach relatively high levels until 1999 (4.2% of GDP) and as a consequence, rather than as a cause, of the recession. The public primary balance was even positive in 1997 and 1998. Public debt, despite growing significantly in absolute terms (from US$ 86 billion in 1994 to 148 billion in 2000), did not reach a percentage of GDP higher than, for instance, the upper limit in the Maastricht's

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[8] An interesting survey of the factors of the crisis can be found in the articles of Teunissen y Akkerman, eds. (2003).

convergence criteria[9]. In short, "the fiscal imbalance that emerged was related to the recession and hence is best understood as a consequence rather as a cause of the crisis" (Haussman and Velasco, 2002: 13).

Perry and Servén (2003) have convincingly suggested that Argentina did not suffer more than other Latin American countries from the contraction of international capital markets since 1998; a contraction due to the shockwaves of the East Asian and Russian crises. For instance, these authors point out that the spread on Argentina's sovereign debt did not surpass that of Brazil until 2000 and that the fall in gross capital inflows displayed the same tendency in Argentina, Brazil and Mexico between mid-1998 and late 1999[10]. Moreover, the reduction in Argentina's net capital inflow in 1999 respective to 1998 was mild (it only decreased from 23.3 US$ billion in 1998 to 21.0 billion in 1999), mainly because inward foreign direct investment triplicated its value.

Therefore, the origin of the Argentinean crisis has to be tracked to the exchange rate-based stabilization program adopted in April 1991, with the creation of a currency board. Argentina's currency board was not actually "orthodox"[11], but it consisted mainly in establishing a fixed peso-dollar exchange rate and in backing the bulk of circulating pesos with reserves in US dollars.

For analytical purposes, the period which has to be observed is 1992-98, as in 1999 the economy already entered recession. From 1999 onwards, data are misleading, because, for instance, the relatively low level of the current account deficit (4.2% of GDP in 1999 and 3.1% of GDP in 2000) was a consequence of an abrupt fall in imports, induced by the recession.

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[9] Public debt increased from 29.5% of GDP in 1993 to 43.3% in 1998 and to 51.3% in 2000 (Baer *et al.*, 2002: 10).

[10] Perry y Servén (2003) also conclude that the fall in the terms of trade in 1998-99 and the slowdown of the world economy in 2001 did not have a more pronounced impact in Argentina than in other Latin American countries.

[11] For instance, Argentina's currency board could hold a maximum of one third of its assets in government bonds and it acted temporarily (in the aftermath of the Mexican crisis) as a lender of last resort. Moreover, the central bank kept a certain amount of regulatory power over commercial banks, as it established their reserve ratios. See Spiegel (2002).

The hard peg had indeed some positive results in the case of Argentina.

First, it allowed for a substantial reduction in inflation, whose annual rate decreased from 3,080% in 1989 and 2,314% in 1990 to 17.5% in 1992. The inflation rate was lower than 4% since 1994 and lower than 1% since 1996. Therefore, interest rates could decrease and the investment rate grew significantly (gross domestic investment increased from 14% of GDP in 1990 to 17% in 1992 and to 21% in 1998).

Second, the peg made possible an increase in productivity, mainly in the tradable goods sector, which contributed also to the growing external competitiveness. The annual rate of change in total factor productivity, which had been negative in the 1980s (-1%), reached 2.1% in 1991-98 (Kiguel, 2001: 10). The main reason is that the imports of capital goods grew substantially in the early 1990s.

Third, it regenerated financial intermediation, as both bank deposits and loans increased their share in GDP: between 1991 and 1998, deposits increased from 8% of GDP to 26%, while loans grew from 14% to 30% (De La Torre *et al.*, 2003: 32).

Finally, the disappearance of the exchange risk contributed to a sharp growth in capital inflows in the form of foreign direct investment, which was also a result of widespread privatizations of public firms and banks. Gross foreign direct investment increased from US$ 1.8 billion in 1990 to 4.2 billion in 1996 and to 8.1 billion in 1997.

All the above factors contributed to a substantial growth of GDP (an annual rate of 6.7% in 1991-97), although the expansion was erratic, partly as a result of the Tequila effect in 1995 and partly as a consequence of the high vulnerability to successive external shocks (the appreciation of the US dollar since 1995, the fall in the terms of trade in 1998-99, the devaluation of the Brazilian *real* in 1999, the depreciation of the euro in 2000 and the downturn in the world economy in 2001). As shown in figure 1, which compares Argentina's GDP growth with that of other big Latin American economies (Brazil, Chile and Mexico), the growth rate of GDP was very high in 1991-94 (an annual average of 9.1%) and, as a

whole, more than respectable in 1991-98 (an annual average of 6.4%), especially in comparison with all Latin America (4.3% in 1991-94 and 3.7% in 1991-98). However, figure 1 also shows that growth was more unstable in Argentina than in Chile, Brazil or even Mexico.

Figure 1. Annual growth rates of GDP in Argentina, Brazil, Chile and Mexico, 1990-2000
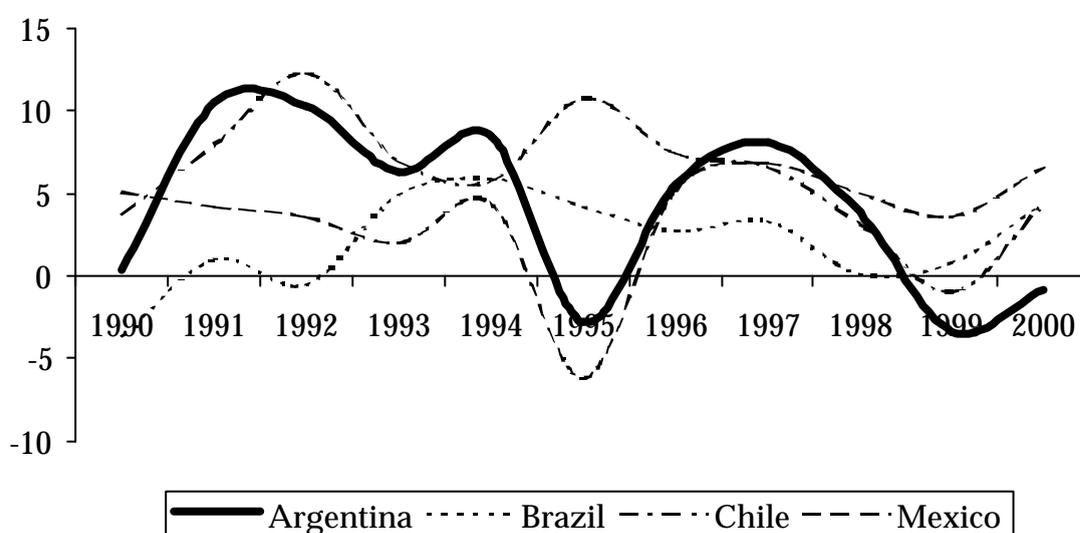
Source: IMF.

Notwithstanding, as Perry and Servén (2003) highlighted, the unemployment rate grew from 6.7% in 1990 to 15.5% in 1995, and later fell moderately to 11.3% in 1998. Poverty, which decreased substantially in 1990-93, also increased between 1994 and 1996 and remained constant thereafter and until 1999. Income inequality, as measured by the Gini index, worsened significantly from 1995 onwards.

Besides, the Argentinean growth model in the 1990s aggravated the deindustrialization that the country had been suffering since the 1980s.

Industry, as a percentage of GDP, decreased from 36% in 1990 to 32% in 1999 and to 28% in 2000 (it had reached 40% in 1980).

Therefore, the macroeconomic evolution in Argentina between 1991 and 1998 displayed important positive features but also significant pitfalls.

Besides, it is well known that currency boards have several inconveniences (see, for instance, García, 2003 and Maneiro, 2003). On the one hand, not only they make it impossible to resort to exchange-rate policy, but also to counter-cyclical monetary policy[12], especially if the economy faces external shocks, such as an increase in international interest rates, a fall in the terms of trade, a reduction in capital inflows, an appreciation of the anchor currency or a devaluation of the currency of an important trading partner. It should be remembered that this is always the case, except if the fixed exchange rate is coupled with restrictions to the free mobility of capital (through capital controls). As it is very well known, according to the Mundell-Fleming theory of the impossible trinity, it is not possible to have at the same time exchange rate stability, free movement of capital and autonomy in monetary policy. On the other hand, currency boards tend to provoke, unless they are backed by substantial foreign exchange reserves or unless a rapid price adjustment follows (arguably the case of Hong Kong since 1998), a chain of negative economic processes, beginning with a real appreciation of the currency, due to inflationary inertia and later to the eventual appreciation of the anchor currency and/or the eventual devaluation of the currency of a major trading partner.

In Argentina, massive capital inflows were due to the disappearance of the exchange risk and to interest-rate differentials but also to a very intense financial opening (see the details in Penido and Prates, 2000) and to a massive privatization of public companies and banks (Baer *et al.*, 2002). According to ECLAC data, net external financial resources grew from *minus* 3.1% of GDP in 1990 to 2.1% in 1995, to 4.9% in 1997 and to 5.8% in 1998. Net private capital

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[12] In particular, a currency board imposes a "ceiling" to the money supply and a "floor" to the interest rates.

inflows surged from *minus* US$ 203 million in 1990 to 14.5 billion in 1996 and to 18.9 billion in 1998.

This massive capital flows contributed to the unleashing of the two aforementioned transmission channels of the risk to suffer a financial crisis.

On the current account side, currency real appreciation was substantial during the whole period, as a result of inflationary inertia (inflation differentials were positive until 1995), the higher value of the US dollar since the spring of 1995, the devaluation of the Brazilian *real* in January 1999 and the depreciation of the euro in 2000. Alberola *et al.* (2003) estimate that real appreciation was substantial between 1990 and 1993 (71%) and also from 1996 onwards, so in 2001 the peso had appreciated 80% respective to 1990. Figure 2 uses the estimates of Alberola *et al.* (2003) but it presents the data using, as a base year, 1990, instead of the average of 1990-2001.

The appreciation in 1997-99 led to a slowdown in the growth of exports, as shown also in figure 2.

Therefore, together with the worsening of the investment income account (whose deficit increased from 1.8% of GDP in 1995 to 2.6% in 1998), the increase of the trade deficit led to a larger current account deficit, which grew from 2.0% of GDP in 1995 to 4.9% in 1998 (see figure 3).

As regards to the financial channel, capital inflows led to a credit boom, to a larger external debt and to a higher vulnerability to a reversal in inflows.

Figure 2. Argentina: Real effective exchange rate (1990=100) and annual growth rate of merchandise exports (in percentage), 1990-2001.
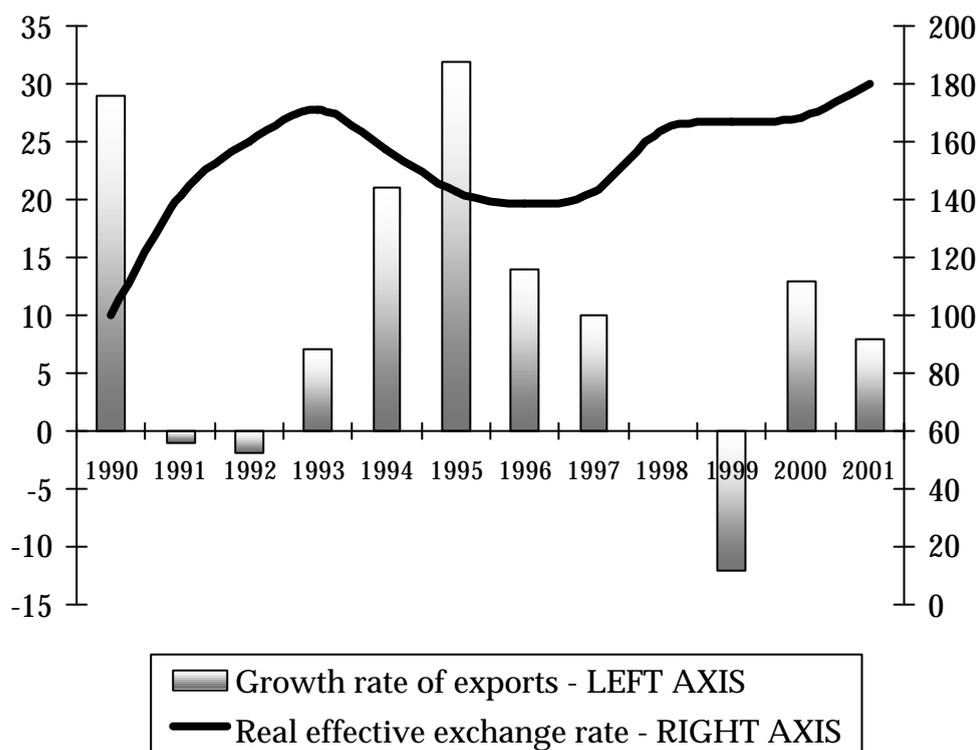
Sources: Alberola *et al.* (2003) and *Ministerio de Economía y Producción de la República Argentina.*

Figure 3. Argentina: balances of the current account and of its components (as a percentage of GDP), 1992-2001
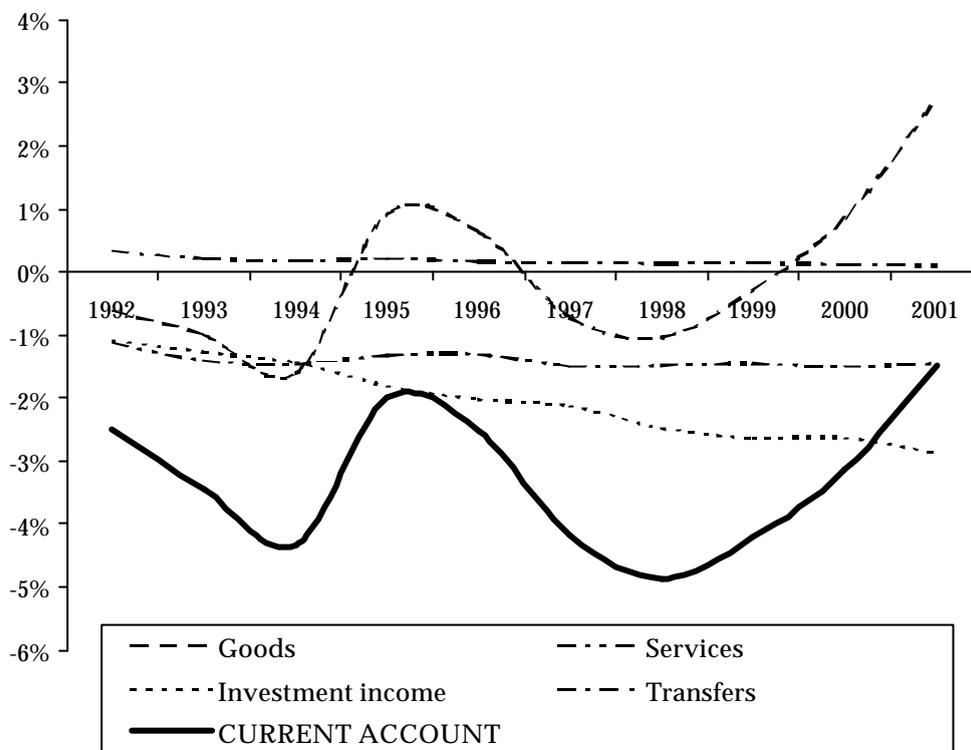
Sources: IMF, *International Financial Statistics*, and Ministerio de Economía y Producción de la República Argentina.

First, the credit boom has been analyzed by De La Torre *et al.* (2003), who indicate that credit, as a share of GDP, more than doubled between 1991 and 1998 (from 14% to 30%). A large part of credit was channeled to the non-tradables sector (for instance, consumer loans, mortgages and public debt), so that it did not allow for import-substitution (in order the save foreign exchange) or for export-expansion (to generate foreign exchange). Kiguel (2001: 15) indicates that private credit channeled to mortgages and consumer loans increased more than credit to firms. Moreover, an important part of credit to

firms was directed to activities which increased credit risk (to investments with a low profitability or with a high profitability but risky), exchange risk (that is, unhedged to an eventual devaluation)[13] and liquidity risk (long-term investments).

Second, the bulk of capital inflows was in the form of portfolio investment (mainly in bonds), as shown in table 2. Between 1992 and 1998, Argentina received a net amount of foreign capital of US$ 136.2 billion, of which 87.2 billion were portfolio investments (64%). Moreover, the bulk of portfolio investment was directed to the purchase of bonds (US$ 74.5 billion, or 54.9% of total capital inflows).

Table 2. Net capital inflows in Argentina, 1992-1998, US$ billion and percentages

	1992	1993	1994	1995	1996	1997	1998	1992-1998	%
FDI	4.3	2.7	3.6	5.6	6.9	9.1	7.2	**39.8**	**29.2**
PI	2.9	35.2	9.8	4.7	12.0	11.6	10.7	**87.2**	**64.0**
equity	*1.1*	*4.9*	*3.1*	*1.1*	*0.9*	*1.4*	*-0.2*	***12.5***	***9.1***
debt	*1.7*	*30.3*	*6.7*	*3.6*	*11.1*	*10.2*	*10.9*	***74.4***	***54.9***
OI	1.8	-18.8	3.5	7.1	1.9	8.2	5.3	**9.2**	**6.8**
Total	**9.2**	**19.2**	**17.0**	**17.5**	**20.9**	**29.1**	**23.3**	**136.2**	**100.0**

Notes: FDI: foreign direct investment; PI: portfolio investment; OI: other investment.

Source: ECLAC.

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[13] The exchange risk existed despite financial dollarization (which increased, between 1992 and 1999, from 55% to 90% in credit to the public sector and from 50% to 60% in credit to the private sector), as the bulk of credit was chanelled to the non-tradables sector, that is, to a sector which was unable to hedge against this risk in terms of tradable goods (De La Torre *et al.*, 2003: 20).

As a result, external debt increased from US$ 62.7 billion in 1992 (27% of GDP) to 140.5 billion in 1998 (47% of GDP). As a proportion of exports of goods and services, debt increased from 407% in 1992 to 457% in 1998 and to 523% in 1999. Debt service, as a share of exports of goods and services, grew from 22% in 1993 to 64% in 1998. The high weight of foreign investment in government bonds resulted in a large proportion of public debt in total debt, as shown in table 3.

Table 3. External debt of Argentina, 1993-99, as a percentage of GDP

	1993	1994	1995	1996	1997	1998	1999
Public	23.4	24.7	26.0	27.0	25.5	27.6	30.0
Private	7.1	8.5	12.2	13.8	16.9	19.5	21.1
Total	30.5	33.2	38.2	40.3	42.5	47.1	51.1

Source: IMF.

It should be borne in mind that the fact that a large part of the external debt was public does not imply that the public debt was excessive nor that the public sector beared the sole responsibility of external indebtedness. Public debt (which amounted to 43.3% of GDP in 1998 and to 50.3% in 1999)[14] was not substantially higher than that of all Latin American emerging economies (which ranged between 40% and 45%, as an average, between 1990 and 1999). Moreover, table 3 also shows that the growth of private external debt was very significant.

The ratio between short-term external debt and foreign exchange reserves, which was already high in June 1994 (1.3), reached 1.6 in December 1998 and 2.0 in June 2001. This indicated a high and growing liquidity risk.

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[14] Although most of the public debt was in foreign currency (more than 90%) and in bonds (more than 70%), according to Baer *et al.*, 2002: tables 6a and 6b.

Third, between 1997 and 1998 net portfolio investment decreased from US$ 10.7 billion to *minus* 4.8 billion. Total net capital inflows, after reaching a record high of US$ 29.1 billion in 1997, diminished in 1998 and 1999 and contracted abruptly in 2000 (12.6 billion) and in 2001 (*minus* 10.9 billion). The reversal between 2000 and 2001, which amounted to more than 23.0 billion, was equivalent to 8% of the GDP in 2000.

5. A comparative analysis

The comparative analysis between the East Asian crisis and the Argentinean crisis can be carried out in two levels: a superficial one and a structural one.

The *superficial* comparison indicates that:

- the Asian crises were sudden and totally unexpected, while Argentina's crisis was in slow-motion and protracted, as well as perfectly expected from at least 1999;

- the Asian crises displayed a great contagion effect, both regionally and internationally, while this was not the case of the Argentinean crisis[15], because, among other factors, financial markets had already discounted that the crisis was going to happen, and;

- the Asian crises were rapidly tackled by the IMF, which intervened quickly in Thailand, Indonesia and South Korea, after the outbreak of their respective crises; on the contrary, Argentina, although it obtained a stand-by credit in March 2000 (which was increased in January and September 2001 to US$ 21.6 billion), did not receive a similar assistance just before and after the default and the devaluation, perhaps as a result of the IMF's concern at the moment on the moral hazard effects of its rescue programs.

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[15] Despite serious effects on Uruguay and Paraguay. It should be remembered that the Asian crises had an important capacity to transmit themselves not only in East Asia but also in other emerging and transitional economies.

The *structural* comparison might address both the mechanisms of the crises and the underlying processes which led to them.

As regards to the mechanisms of the crises, some similarities and differences can be pointed out.

On the one hand, the Asian crises and the Argentinean crisis presented common features, in addition to the currency pegs: financial liberalization, massive capital inflows, inadequate allocation of credit, substantial real currency appreciation, high and growing current account deficits, large short-term external debt and adverse effects from the speculative and herding behavior of international capital markets.

Financial liberalization had in both cases two sides: financial opening and financial deregulation. In fact, financial opening made possible the massive capital inflows, while financial deregulation allowed for risky behaviors in the financial sector.

The main factors behind capital inflows were similar: financial opening, disappearance of the perceived exchange risk as a result of the pegs, and large interest rate differentials.

Regarding the inadequate allocation of credit, it is known that in East Asia a large part of credit was directed to investments in stocks and real estate, which created an asset bubble. In Argentina, the banking sector financed consumer credits and mortgages and made placements in the financing of the public sector. If it had instead financed import-substituting or export-expansion activities, the liquidity problems simply would not have appeared. As Perry and Servén (2003: 50) point out, this sectoral allocation of credit was a result of the fact that the regulatory system did not have enough control over credits to the private non-tradables sector, or over banking finance of the public sector.

In the six years preceding their crises, currency real appreciation was 47% in the Philippines, 28% in Malaysia, 25% both in Thailand and Indonesia and 11% in South Korea (see again table 1) while it reached 26% in Argentina (Alberola *et al.*, 2003).

The factors behind the increase in the current account deficit were also

similar: currency real appreciation, worsening of the investment income account, a fall in the terms of trade (as a result of the decrease in semiconductors' prices in 1996 in East Asia and of the prices of non-oil primary products in 1998-99 in Argentina) and a growing competitiveness by a third country in main external markets (China in the case of East Asia, and Brazil, after its devaluation of 1999, in the case of Argentina).

In both cases, the ratio between short-term external debt and reserves increased: for instance, it grew from 0.99 in June 1994 to 1.45 in June 1997 in Thailand and from 1.62 to 2.0 in South Korea; in Argentina, that ratio increased from 1.32 in June 1994 to 1.60 in December 1998.

As regards to the speculative attacks, net private capital inflows in Asia-5, according to data from the Institute of International Finance (which are different from those from the IMF mentioned above), decreased from US$ 118.5 billion in 1996 to *minus* 37.3 billion in 1998. In Argentina, total net capital inflows decreased slowly from US$ 29.1 billion in 1997 to 23.3 billion in 1998 and to 21.0 billion in 1999. But they amounted to US$ 12.6 billion in 2000 and to *minus* 10.9 billion in 2001.

On the other hand, the differences were also important. The exchange rate regime was obviously different, as the anchor was a hard peg in Argentina and a soft peg in East Asia. Macroeconomic policy in the years preceding the crises was also obviously different. In East Asia the inflation rates in the years preceding the crises were low, so monetary policy was not particularly restrictive. In Argentina, on the contrary, monetary policy was inevitably restrictive, as the existence of the currency board precluded expansionary measures.

The structure of capital inflows was very different. In East Asia, the bulk was in the form of bank loans: in 1996 they amounted to 58% of private net capital flows in Asia-5. In Argentina, portfolio investments, and, on a minor proportion, also direct investments, made for the bulk of inflows. This was the result of two features that were absent in East Asia: a large public debt and a massive privatization process.

Finally, external debt was mainly public in Argentina while it was mainly private in East Asia.

As regards to the underlying process which led to the crises, the conclusions seem to be clear. In East Asia, the trigger of the crisis was an excessive private investment (financed by short-term financial debt) while in Argentina it was a "pure" debt process, as a result of the massive capital inflow in form of portfolio investments, mainly in government bonds.

6. Conclusions

The experience of Argentina during the 1990s, compared to that of the East Asian countries which featured a crisis in 1997-98, might suggest, at first sight, that currency pegs (both soft and hard) have several drawbacks. The negative effects that have been highlighted in the preceding pages include: (1) currency real appreciation and the ensuing worsening of the current account; and (2) massive foreign capital inflows in form of portfolio investment and bank loans, that is, of debt-generating and/or volatile funds. Some specialists have concluded that what is needed is an extreme version of the two-corners approach, according to which only full dollarization or totally flexible exchange rates are suitable.

Dollarization supporters point out that this is the only way to give credibility to the exchange rate anchor. However, several theoretical and empirical studies have clearly demonstrated that emerging economies are highly vulnerable to important external shocks (such as changes in international interest rates or in their terms of trade) and domestic shocks (such as changes in their growth rates or in their employment levels), which call for some flexibility in the exchange rate. If this flexibility is missing, adjustment to those shocks has to be made through a costly price and wage deflation or through a difficult increase of productivity respective to their trade partners. Moreover, dollarization implies that the authorities renounce to all kind of autonomy in their monetary policy.

As regards to those defending totally flexible exchange rates, they do not seem to take into account that the rates would be potentially very unstable, as the intrinsic volatility in capital flows would lead to wide currency fluctuations. Moreover, as emerging economies have to obtain debt denominated in foreign currencies and they are unable to hedge against exchange risk (because of the so-called "original sin"), a sudden depreciation would increase substantially the value, in local currency, of their external debts. Therefore, the famous "fear of floating" is to a certain extent justified in the case of emerging economies.

A second conclusion is that the main problem of exchange anchors is related, not to the fact that they are more or less hard or soft, but instead to the fact that they tend to be pegged to a single foreign currency. In East Asia the peg was de facto, unofficial and soft, whereas officially there was a managed float. Anyway, the appreciation of the US dollar since the spring of 1995 pulled up the Asian currencies, especially in the case of Indonesia and Malaysia, although not so much in the case of South Korea. It should be borne in mind that Singapore, for instance, escaped relatively unscathed from the Asian crises, despite its strong trade and financial links to other countries in Southeast Asia. This might by explained by the linkage of its currency to a basket of currencies, through a monitoring band arrangement. In the case of Argentina, it has been convincingly suggested that "what made the Argentine currency board ultimately unsustainable was not just that it involved a peg but that it involved a peg to a strong dollar only" (Haussman and Velasco, 2002: 32). In fact, the peg with only the US dollar made little sense in Argentina, whose external trade was made mainly with Western Europe (an average of 24.3% of its total trade in 1992-98) and Brazil (23.1%) and only to a limited extent with the US (15.6%). Therefore, emerging economies should explore diverse intermediate exchange-rate regimes and especially those based on a peg to a weighted currency basket.

Finally, even with exchange rates pegged to an appropriate currency basket, financial crises can also happen. What is needed is to complete an appropriate exchange-rate regime with capital controls (Palma, 2000). Capital controls make it possible to decrease the proportion of short-term funds in total capital

inflows. The experience of the Chilean *encaje* (1991-98) has been illustrative.. Although some controversy still exists on the matter, this kind of control might: (1) decrease the proportion of short-term capital flows in total capital flows as well as help to control the growth of the latter; (2) avoid a substantial increase in short-term foreign debt; (3) reduce or delay currency appreciation; (4) maintain the independence in monetary policy without having to completely flexibilize the exchange rate. The experience thus suggests that in emerging economies the alternatives to capital controls are either a loss of autonomy in monetary policy or an extreme volatility in the exchange rate.

In short, this paper has tried to point out that the comparative analysis of the Asian crises and the Argentinean crisis strongly suggest that the mix of an exchange rate anchor (either soft or hard) to a single foreign currency and a quick financial liberalization is a combination full of pitfalls for emerging economies. This mix contributes to increasing capital inflows, which in both cases were massive in the years preceding their crises and which led, along with the appreciation of the anchor currency, to an adverse currency real appreciation and to an excessive growth of domestic credit. Moreover, as these inflows were made in the form of debt-generating and/or volatile funds, the result was that both the short-term external debt and the vulnerability to a reversal in capital flows greatly increased. If the speculative, herding and panic-prone behavior of international financial markets is added to the picture, all the ingredients are met for a significant increase on the risk of suffering a financial crisis.

Some measures might give emerging economies protection against this risk: an exchange-rate regime based upon a basket of currencies and a financial liberalization with a simultaneous creation of an adequate system of prudential supervision and regulation of the financial system. However, unless substantial progress is made in the construction of a new international financial architecture, which seemed a promissory field some years ago but has somewhat faded away, emerging economies will continue to be vulnerable to the current framework of financial globalization. They should therefore

apply all self-protection measures which are within their reach.

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