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Argentina's crisis and the implication for the exchange rate regime debate

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1. Introduction

Financial crises of the 1990s have stimulated an intensive discussion about the international financial architecture. The issue of the optimal exchange rate regime for emerging market countries integrated to international capital market (further EMC) has attracted particular attention. The fact that all emerging market countries affected by a financial crisis in the 1990s had some form of fixed exchange rate arrangement has discredited the so-called soft pegs as a preferable or even viable exchange rate arrangement. Even though views continue to differ about the appropriate exchange rate arrangement for EMC, a consensus seems to have emerged in favor of the so-called corner solution, either a flexible regime or a hard peg (a currency board arrangement (CBA), dollarization or creation of a monetary union). Particularly the CBA were seen as an attractive arrangement, after having been successfully introduced in the course of the 1990s in several countries and helped them quickly to restore financial stability.

However, the collapse of the CBA in Argentina, accompanied by a serious currency, banking and debt crisis, is likely to have important implications for the debate about the appropriate exchange rate regimes in EMC. For most of the 1990s, Argentina was considered a successful economy. It has restored the long absent financial stability, growth has picked up, and the country gained access to international capital market. The view seemed to have been widely shared that the CBA had made an important contribution to the successful stabilization and restoration of economic growth. But after its collapse in late 2001, history will probably judge this currency regime less kindly. [2] While it may not be appropriate to draw definitive lessons from the Argentinean crisis about the general suitability of the CBA for emerging market economies, the implosion of the economy that was for most of the last

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[1] Advisor to Executive Director, International Monetary Fund. The views expressed here are authors' own and do not reflect the official position of the IMF.

[2] As Felipe Larraín and Andrés Velasco observe, "a good deal of enthusiasm over currency boards owes to the experience of one country, Argentina, over a fairly brief period of time. All other experiences, except for Hong Kong's, have been too short-lived to be informative." See Felipe Larraín and Andrés Velasco (2001), "Exchange Rate Policy in Emerging Markets: The Case for Floating." Paper presented at the conference "When is a National Currency a Luxury?" London Business School, 16-17 March, 2001.

decade considered one of the most successful among emerging markets raises serious questions.

In this presentation, I will first briefly review the latest discussion on appropriate exchange rate arrangements in EMC in the aftermath of the recent financial crises. Next I will discuss the structural weaknesses typical for emerging market economies that make them vulnerable to negative external shocks, and explain how these weaknesses could cause problems under any exchange rate regime. I will illustrate that with the examples of three countries with different currency regimes: Argentina with CBA, Brazil with float, and Panama with dollarization. In view of the recent crisis, I will pay special attention to Argentina. I will argue that while the CBA allowed Argentina to restore rapidly price stability and resume stronger growth, it did not result in a significant sustainable strengthening of policy discipline and it was not accompanied by sufficiently improved flexibility of the economy and thus ability to withstand external shocks of the late 1990s. Insufficiently developed domestic currency markets, large reliance on external borrowing in foreign currency, limited room to pursue countercyclical (independent) monetary and fiscal policies, and relatively low credibility of government policies and policy regimes affected adversely the terms of external borrowing.

In the final part, I will discuss why the accession countries in Central and Eastern Europe display much less sensitivity to external shocks, apparently regardless of the exchange rate regime. I will note that so far, the CBA appear to be credible. And countries with more flexible currency regimes seem to have some room to pursue more countercyclical economic policies. I will also show that the accession countries can borrow externally on much better terms that many other EMC, particularly those in Latin America. I will argue that among the reasons for better resilience of the accession countries to external shocks are more developed local currency markets, smaller role of debt-creating capital inflows in financing current account deficits, and – most importantly – the prospect of the accession to the European Union (EU) and European Monetary Union (EMU) which provides important anchor for market expectations and credible signal about the commitment to pursue disciplined economic policy.

2. The Eternal Exchange Rate Debate

The discussion of optimal exchange rate arrangements has a long history.[3] Among others, the recurrence of this issue seems to reflect the fact that no exchange rate arrangement does operate satisfactory always and everywhere. Gold standard in the period 1870-1914 and for some time after the First World War, floating rates before the Second World War, Bretton-Woods system of pegged rates till the early 1970, floating rates after the collapse of

[3] For example, see Richard Cooper (1999), "Exchange Rate Choices." In J.S. Little and G.P. Olivei, Eds, Rethinking the International Monetary System. Federal Reserve Bank of Boston Conference Series No. 43.

the Bretton-Woods system among the currencies of major industrial countries and fixed exchange rates in most developed countries – often used as a nominal anchor in stabilization programs – have all left mixed feelings.

The spectacular collapse of fixed exchange rates in connection with financial crises in several emerging market countries in the 1990s has exposed in a very destructive way the weaknesses of the fixed exchange rate regimes in emerging market countries that become integrated to world capital market and thus exposed to large swings in capital flows. The conclusions that were drawn from the experience of the 1990s is that in a world of relatively free capital movements, the prerequisites for maintaining a successful fixed exchange rate regime have increased significantly – so much that a soft peg does not actually represent a viable currency regime for most if not all emerging market countries. As Mussa et. al. (2000) put it, that pegged exchange rate regimes are inherently crisis-prone for EMC and these countries should be encouraged to adopt floating rate regimes.[4]

The consensus has emerged in the favor of the so-called "corner solutions". EMC open to capital flows should opt either for a freely floating exchange rate regime, or for a hard currency peg, that is, either dollarization or a currency board arrangement (CBA). For example, B. Eichengreen (1998), argues that "in a world of high capital mobility there are only two feasible approaches to exchange rate policy. One is not just to peg the exchange rate but to lock it in – the Argentinean strategy."[5] Some economists do not have a strong preference for either alternative, while others are strong supporters of either a float or a hard peg. [6] In practice, it appears that most EMC are moving toward a more flexible currency

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[4] See Michael Mussa et al. (2000), "Exchange Rate Regimes in an Increasingly Integrated World Economy. IMF Occasional Paper 193, Washington, D.C. However, the authors also recognize that fixed exchange rate regimes could still be used in less developed countries that are not yet very open to international capital flows. An open question is also the use of a fixed exchange rate regime as a nominal anchor in stabilization programs in countries with very high inflation. One way how to deal with the potential risks that fixed exchange rate regime will stay in place too long and that the currency becomes overvalued is to put in place and publicly announce a timetable for exit from the peg. However, as the experience of Turkey in 2000-2001 shows, even such preannounced exit from the peg may not work as intended.

[5] See Barry Eichengreen, (1998), Toward a New International Financial Architecture." Institute of International Economics, Washington, D.C., p. 105.

[6] For examples of the agnostic approach to currency regimes see Cooper (1999); and Jeffrey A. Frankel (1999), "No Single Currency Regime is Right For All Countries or at All Times. NBER Working Paper No. 7338. Steve Hanke is one of the strongest proponents of CBA or dollarization, but many economists seem to prefer the float. For arguments against the CBAs see Muriel Roubini (2001, "The Case Against Currency Boards: Debunking 10 Myths about the Benefits of Currency Boards." See

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regimes.[7] However, as has been documented by some authors, the movement toward more flexible currency regimes is less distinct when looking at actual practices in exchange rate management as opposed to declared currency regimes.[8]

What is noteworthy in the currency regimes debate is the fact that both corner solutions, that is, both a float and a CBA and dollarization, could suffer from a potentially serious shortcomings and problems that could complicate exchange rate management and economic policy in the EMC. It is possible to raise apparently serious objections to any of these currency regimes, and find evidence of problems with this regime in practice.

First, the CBA. Even before the collapse of CBA in Argentina, there were serious reservations about the applicability of this currency regime to less than a handful of EMC. Roubini (2001) argues that the reason why countries with CBA that were successful is not the currency regime but the fact that they were pursuing the right policies, and if they pursue right policies, there is no need to adopt a CBA. Goldstein (2002) provides a list of potential shortcomings of the CBA, and concludes that CBA could be considered only in countries with a poor policy track record and solid fiscal and financial sector fundamentals. After the collapse of the CBA in Argentina, these skeptical views about the CBA will receive further boost.

Second, dollarization. Dollarization was sometimes seen as a solution to the dilemma presented by the fact that neither the CBA, nor a floating currency, could offer an attractive alternative to some countries. However, as Edward (2001) argues, there is little empirical evidence that would justify the optimism of proponents of dollarization that this could be a workable and attractive alternative of currency arrangement for more than just a small number of countries.[9]

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http://www.stern.nyu.edu/globalmacro/CurrencyBoardsRoubini.html. For a comprehensive discussion of different views on optimal exchange rate arrangements, see Morris Goldstein (2002), "Managed Floating Plus and the Great Currency Regime Debate." Paper presented at the IMF Institute economics training seminar, January 2002.

[7] See Stanley Fischer, (2001), "Exchange Rate Regimes: Is the Bipolar View Correct?" Journal of Economic Perspectives, Vol 15, No 2, p. 3-24.

[8] For example, Masson (2001) argues that there have been frequent crossing between the different exchange rate regimes in the 1990s, rather than a shift from middle to corner regimes. See Paul Masson, (2001), "Exchange Rate Regime Transitions." Journal of Development Economics, Vol. 64. See also Guillermo Calvo and Carmen Reinhart (2000), "Fear of Floating." NBER Working Paper, No. 7993.

[9] See Sebastian Edward, (2001), "Dollarization and Economic Performance: An Empirical Investigation." NBER Working Paper No. 8274.

Third, floating currencies. Calvo and Reinhart (2000) have argued that there is less in floating for EMC than the proponents of this regime suggest.[10] They note that EMC that nominally float their currencies exhibit relatively high interest rate variability and relatively low exchange rate variability compared to developed countries, and that they pursue procyclical interest rate policies. In their words, the ECM exhibit a fear of floating – they are unable or unwilling to enjoy the most important benefit of a floating currency - the ability to implement their own monetary policy. Policymakers in EMC are concerned about the impact of large exchange rate fluctuations on their economies, and thus try to limit these fluctuations, by using more aggressively interest rate policy and interventions in foreign exchange market. Exchange rate does not serve as an absorber of external shocks, it is rather seen as a potential channel of instability. Furthermore, depreciations in the EMC could be contractionary, because the adverse balance sheet effect of a weaker currency outweighs the positive effect on net exports. Calvo and Reinhart argue that the middle ground is actually not disappearing and that in practice, "corner" solutions are still rare.

If this would be the case, then the EMC are not moving toward one or other corner solution. The question about the choice of the optimal currency regime in EMC would not be which corner to choose, but rather, how to find an optimal point on the continuous scale between the pure float and a hard peg that best fits the country's needs.

We can illustrate this problem in the following way. A horizontal line AB represents the whole range of currency arrangements. Point A represents the hardest peg, and point B a pure float. The country can move from point B towards point A by using more actively interest rate policy to affect the exchange rate, and/or by directly intervening in the foreign exchange market. But as the country moves from B to A, the relative importance of costs and benefits shifts. The costs related to interest rates fluctuation (and eventually also to a falling level of foreign reserves) are increasing, and the costs related to currency fluctuation are declining. These two costs are represented by two curves, ER (which shows costs of currency fluctuation that are falling as we move from B to A), and IR (which shows costs of interest rate fluctuation that are rising as we move from B to A). The more aggressively the interest rate/intervention policy is being used, the less (other things being equal) exchange rate fluctuates. The optimal point on the AB scale would then depend on the particular characteristics and vulnerabilities of the individual countries, including the extent of currency and maturity mismatches, financial strength of financial, corporate and public sectors, structure of external borrowing and other indicators of external vulnerability, etc.

One conclusion from the debate about the optimal currency regime for emerging market countries that should be indisputable. The inherent vulnerabilities to which these countries are exposed makes the choice of the currency regime particularly difficult, and the probability is high that whatever regime is chosen will not operate smoothly. In terms of the figure 1, the cost curves are positioned high above the horizontal line, and have steep slopes.

[10] See Calvo and Reinhart (2000).

However, it should be noted that most, if not all, this concern about the operation of individual currency arrangement has been raised by economists examining mainly countries in Latin America. Among the EMC, most countries in Latin America are particularly vulnerable to adverse changes in external environment, and the question is to what extent their difficulties with currency management apply also to EMC in other regions.

Before turning to this question, let's first discuss in more detail the reasons why are EMC generally vulnerable to external shocks and why this vulnerability could complicate policy management under any currency regime.

3. Emerging market economies are by definition vulnerable …

By definition, emerging market economies are very vulnerable. "Emerging" means that these economies are abandoning the protective shield of administrative controls, they are liberalizing economic activity and opening themselves to trade and financial flows. In this process, they become more dependent on external economic and financial conditions. They become more exposed to external competition, more sensitive to capital flows, more dependent on economic activity in the rest of the world. While this integration should ultimately bring many benefits, it could be a long journey before these economies reach the degree of stability and resilience to external shocks as in developed economies. And the road is full of danger.[11]

There are several reasons why EMC are financially fragile[12]. The inherent vulnerability of the EMC led even to the formulation of the so-called "original sin" hypothesis. For different reasons, including the history of price and financial instability in emerging market countries and large currency and interest rate volatility, financial markets in EMC are insufficiently developed. They do not provide the possibility for the borrowers to borrow long-term in domestic currency, particularly from nonresidents. That means, they have to borrow either short-term, or in foreign currency. Such composition of borrowing makes debtors sensitive and vulnerable to external shocks. And it makes any exchange rate arrangement potentially problematic. If exchange rate fluctuates a lot in a floating regime, domestic currency value of external debt in foreign currency will fluctuate as well,

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[11] Being an emerging market is like being a teenager. The innocence of childhood is being gradually lost, but the mature judgement of adulthood is not yet well-established to guide a teenager through this sensitive period when he/she becomes exposed to temptations and pitfalls of life.

[12] See Eichengreen and Hausmann (1999), "Exchange Rates and Financial Fragility." NBER Working Paper, No. 7418.

potentially causing financial distress and even bankruptcy to borrowers with external debt.[13] And effort to limit the exchange rate fluctuations with a more active use of interest rate policy would affect the costs of borrowing in domestic currency. It would increase immediately the borrowing costs in case of a floating rate debt, or increase the costs of new debt that has to replace the maturing debt. All this can cause financial problems to borrowers with domestic currency-denominated debt.[14]

In principle, there are two solutions to the "original sin" problem. An immediate and apparently simple solution would be to get rid of the domestic currency and dollarize. As Eichengreen and Hausmann (1999) argue, this would do away with the currency mismatches and reduce maturity mismatches, because of the possibility to borrow more long-term in dollars. But as we have noted, dollarization is not a free lunch, it could have its own problems, and may be convenient only for a limited number of countries.[15]

Another solution would be a redemption from the original sin, that is, effort to correct the incompleteness of the financial markets that produced the vulnerable structure of borrowing. However, it is not clear how easy this could be accomplished. This depends on the cause of the original sin. Eichengreen and Hausmann argue that one possible explanation is the sovereign risk. According to this argument, foreign creditors are unlikely to lend to a sovereign in its own currency if the sovereign can manipulate the currency exchange rate and thus the real value of its external debt. The authors speculate that until a strong political constituency develops that would provide a sufficient guarantee that the sovereign will not pursue such strategy, external borrowing in domestic currency will not develop.[16] Cooper

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[13] As Eichengreen and Hausmann explain, the original sin hypothesis suggests that hedging foreign currency exposure is not possible for the country as a whole. Someone will always have an open foreign exchange position and thus be vulnerable to exchange rate changes.

[14] Moreover, in face of adverse external shock, emerging market economies with large share of foreign currency denominated and/or short term debt will not be able to pursue the same shock-mitigating policies as developed economies with well-established policy credibility and better developed financial markets To avoid loss of confidence and financial instability, emerging market countries must often pursue procyclical policies, even at the cost to output and employment. See Frederick Mishkin (1996), "Understanding Financial Crises: A Developing Country Perspective. NBER Working Paper, No. 5600.

[15] See the discussion in Roubini, (2001) and Goldstein (2002).

[16] Still, the question remains why even with well-developed domestic financial markets, domestic creditors holding domestic currency claims on sovereign should oppose currency depreciation or devaluation as much as nonresident creditors. To the extent that currency depreciation leads to a higher inflation, it would reduce real value of domestic currency debt. But to the extent that the inflation pass-through of currency depreciation is less than one

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(1999) provides some reasons for skepticism in this respect. He argues that under the floating exchange rate regime, a broad and well-developed financial market is unlikely to develop. He postulates the existence of a vicious circle. Imperfectly developed financial markets contribute to large exchange rate fluctuations, and in turn, large exchange rate fluctuations prevent the development of deeper and broader domestic currency markets. The reason is that large exchange rate fluctuations cause equally large fluctuations in real value of domestic currency denominated assets, thus providing residents an incentive to invest in a more stable foreign currency.[17] In contrast, Goldstein (2002) argues that the original sin could be cured, which in turn should allow the successful operation of a currency regime called "managed float plus". For Goldstein, the "plus" includes inflation targeting to provide a credible nominal anchor for the economy, and measures to reduce currency mismatches in the economy.

The problems that the EMC are facing in connection with external borrowing do not concern only the terms of external borrowing related to the original sin problem. There is also a related problem of quantity of external borrowing. External borrowing could be a problem when domestic savings are already high, in which case it could lead to excessive investment, or it could be a problem when domestic savings are too low, in which case the recipient country would be too dependent on external borrowing, and its investment activity could fluctuate excessively if the availability of external savings fluctuates. The first problem could be illustrated using the example of South East Asian countries with high domestic savings, while the second and third problems could be illustrated by Latin American countries with low domestic savings.

In EMC of South East Asia, domestic savings were already high, well over 30 percent of GDP. Inflow of foreign savings thus augmented already high savings available to finance domestic investment. The result was a very large investment to output ratio in these economies, approaching in several instances 40 percent. This has eventually led to

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hundred percent, resident creditors will be hurt less than nonresident creditors who ultimately care about the repayment in foreign currency.

[17] The obvious question is whether a fixed and thus stable exchange rate could better assist in overcoming the original sin problem. Again, the prospects are not promising, as illustrates the experience of Argentina. A CBA helped to establish rapidly price stability and growth and allowed Argentina to borrow abroad, but even a decade of exchange rate stability did not improve Argentina's credibility to such an extent that it would get redemption from original sin. The former central bank governor Pedro Pou complained in 1999, before the crisis escalated, that despite playing by the rules of the currency board for nine years, Argentina was unable to borrow from international investors in domestic currency except in short-term. See Pedro Pou (1999), "Is Globalization Really To Blame?", in Jane Sneddon Little and Giovanni P. Olivei, eds., Rethinking the International Monetary System. Federal Reserve Bank of Boston, Conference Series No. 43.

overinvestment, excess capacity and even to bubbles (real estate being an example). The subsequent correction of this excessive investment resulted in enormous swings in current account balances, from a deficit of 6-8 percent of GDP to similar surpluses one or two years later. Instead of using external savings, these countries began to export part of their domestic savings and accumulating foreign reserves.

In EMC of Latin America, the situation was different. Large inflow of external savings was a welcome addition to very low domestic savings, which would otherwise be able to support only a relatively small investment to output ratio. However, in this case, the problem was that a relatively large share of domestic investment was dependent on external savings.[18] In such circumstances, domestic investment and thus economic activity are much more sensitive to the availability of external savings, and could fluctuate significantly as conditions change in international capital market. In turn, large fluctuation of economic activity could adversely affect the availability of external savings, thus further exacerbating the adverse effect of low savings. Moreover, in the longer-term, continued large reliance on external savings – particularly if used in the form of debt creating inflows – would produce rising external debt and worsening of external vulnerability indicators. Sooner or later, this would adversely affect the amount and terms of available external savings, as investors become more concerned about the debtor country's ability to continue servicing its external debt.

There is a good reason why part of the savings should flow from highly developed industrial economies to less developed EMC. The EMC are correctly seen as a having a potential for higher-return investment opportunities. The stock of capital and capital-labor ratio are typically lower in EMC than in developed economies, and marginal productivity of capital higher.[19] The differences in capital-labor ratio and in marginal product of capital between developing and developed countries are so large that in a world of a neoclassical growth model, we should observe much higher capital flows to developing countries.[20] But

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[18] To illustrate, if domestic savings represent a 30 percent of GDP and if a country used external savings (runs a current account deficit) of 5 percent of GDP, then external savings finance one seventh of the domestic investment (which equals 35 percent of GDP). But if domestic savings are only 15 percent of GDP, the same amount of external savings would then finance one fourth of domestic investment.

[19] However, Baer (2001) correctly observes that it is not the return, but also its variance (risk) that determines investors' willingness to invest in EMC. High risk could partly or fully offset the attractiveness of higher return. See Gunter D. Baer (2001), "Risk and Capital Flows to the Emerging Markets." Paper presented at the conference organized by the Croatian National Bank, Dubrovnik, June 28-30, 2001.

[20] See Robert E. Lucas (1990), "Why Doesn't Capital Flow from Rich to Poor Countries?" American Economic Review, Vol. 80, No. 2, Papers and Proceedings, p. 92-96; Leslie

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the original sin-related weaknesses in the structure of external borrowing, as well as the problems of excessive investment and low domestic savings, are among the market imperfections that cause the predictions of the neoclassical model differ from the reality. The EMC face a dilemma: given their relatively low level of economic development, they should normally be recipients of foreign savings coming from a more developed countries. But the structural vulnerability (see the original sin) of the EMC implies that often, foreign savings could be coming in such form that would make the borrower country more sensitive to exchange rate movements and other shocks, and that would increase their external vulnerability.

4. Three currency regimes – three problems

As we have noted in section 2, serious concerns were raised by economists about the operation of different currency regimes. We will now look at the experience of three countries in Latin America to illustrate this concern. We start with the CBA in Argentina. In view of the recent dramatic crisis in this country, we will look in more details about the developments that led to the collapse of the CBA and to the debt and banking crisis.

4.a. Argentina and the CBA

The crisis in Argentina illustrates the perils of continuous dependence on large external borrowing in foreign currency in a country with low domestic savings. It may require that the conclusions about the applicability of the CBA to EMC be further nuanced and hedged. It is useful to look more closely on Argentina's case.

Argentina has a long history of financial instability, high inflation and defaults on its debt that goes back to the early 19th century when it gained independence from Spain. Obviously, this long history of instability has affected the economy, the behavior of economic agents, the confidence in government policies, in domestic currency, in banks. After a particularly devastating experience of hyperinflation at the end of the 1980s and failure of standard fixed exchange rate-based stabilization program to produce price stability, Argentina has opted for a more ambitious approach. In April 1991, it accepted the Convertibility Law and introduced the currency board arrangement. By law, Parliament has introduced a free convertibility of domestic currency, the peso, into the U.S. dollar at a fixed parity, one to one. The central bank lost its freedom to print money and conduct independent monetary policy, and also its ability to finance directly government deficits. This has removed the single most important source of inflation in Argentina.

The stabilization program has brought soon very positive results. Between 1989 and 1990, public budget deficit fell from 7.6 percent to 2.3 percent. Despite a rather extensive

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Lipschitz, Timothy Lane and Alex Mourmouras (2002), "Capital Flows to Transition Economies: Master or Servant?" IMF Working Paper, No. 11.

liberalization of previously regulated prices, inflation began to fall rapidly: from 1344 percent in 1990, to 84 percent in 1991 and 3.9 percent in 1994. And rapid disinflation proved to be very beneficial for economic activity. After falling by 6 percent in 1989 and broadly stagnating in 1990, real GDP grew by 9 percent in 1991, and in the period 1992-94 continued to grow by about 7 percent. Rapid restoration of price stability and high economic growth made Argentina an attractive destination for foreign investors, and foreign capital began to flow into the country. In the period 1992-1994, net inflow of foreign capital to Argentina reached $32.2. billion, about 10 percent of 1994 GDP.

At the end of 1994 and early 1995, Argentina suffered a contagion from the Mexican crisis. Inflow of foreign capital suddenly dried up, and investment and real GDP fell sharply. Doubts about the financial health of Argentinean banks resulted in a loss of about one fourth of deposits, and the authorities had to use flexibly the currency board rules to provide them liquidity support. However, as large official financial assistance to Mexico quickly stabilized the situation, and as U.S. interest rates began to fall, Argentina quickly recovered from the tequila crisis, and in 1996, growth and capital inflows resumed again.

In 1997, when the Asian financial crisis broke out, Argentina was not initially affected, and continued to enjoy good access to international capital market. But the August 1998 Russian crisis and the 1999 Brazilian crisis and the float of the Brazilian currency began to be felt in Argentina as well. While the need to borrow did not diminish, the terms of borrowing began to deteriorate, as investors became more risk averse and less willing to invest in emerging markets generally. Initially, it could be assumed that Argentina became a victim of investors' general aversion to emerging markets as an asset class. But while some countries were able to adjust to the reduced availability of external borrowing through exchange rate and current account adjustment, Argentina's ability to adjust was limited due to the CBA and the relatively closed economy. In 2001, Argentina's situation quickly deteriorated and ended with a currency, debt and banking crisis.

There are several factors that have jointly contributed to the Argentinean crisis. In general, the crisis was the outcome of the vicious circle that has developed as a result of interaction of domestic vulnerabilities and the sequence of adverse external shocks, in combination with the limited flexibility of the economy to respond to these shocks.

First, and to many analysts most prominent was the role of fiscal policy.[21] Maintaining fiscal discipline is an important condition for a successful operation of the CBA. The CBA-based stabilization program launched in March 1991 has brought a reduction of public spending and public deficit. The CBA has hardened government budget constraint, by ending monetary financing of government deficits.

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[21] See M. Mussa (2002), "Argentina and the Fund: From Triumph to Tragedy." Institute for International Economics, Washington, D.C., which could be found at http://www.iie.com/papers/mussa0302-1.htm

Table 1. Public sector balance and public debt (in percent of GDP) 1/

	1991	1992	1993	1993	1995	1996	1997	1998	1999	2000
Consolidated	-3.2	-0.5	-0.8	-2.3	-2.3	-3.2	-2.1	-2.1	-4.2	-3.6
Federal gov.	-2.5	-0.2	0.9	-0.5	-0.9	-2.5	-1.6	-1.3	-2.5	-2.4
Provincial gov.	-0.7	-0.2	-0.8	-0.9	-1.4	-0.7	-0.5	-0.8	-1.6	-1.1
Public debt $ bil	64.7	68.8	77.6	90.3	101.5	114.4	111.6	123.5	133.9	144.8
In % GDP	35.8	30.3	30.1	32.1	36.3	38.5	38.1	41.3	47.3	50.8

1/ Federal and provincial balance does not always add up to the consolidated balance, for example, because of the capitalized interest that is included in the consolidated balance.
Source: IMF

But this tightening of budget constraint was not waterproof, and more importantly, it began to loosen over time. As Argentina's stabilization program produced a rapid improvement in macroeconomic fundamentals, country's credibility in international capital market improved, and so did its access to international borrowing. While the CBA brought to an end monetary financing of public deficits, two alternative financing sources appeared: privatization revenues and borrowing in international capital market. There was no dramatic weakening of fiscal discipline in the course of the 1990s, and privatization revenues were even used partly to retire public debt. But nonetheless, table 1 shows a gradual drift of fiscal policy, as budget deficits began to creep. As a result, total debt of the public sector has doubled between 1993 and 2000, from $77.6 billion to $145 billion (which represents an increase by 20 percentage points in terms of GDP, from 30 to 50 percent).[22] Large and growing part of public debt was sold to nonresidents. The public external debt has increased from $47 billion in 1991to $56 billion in 1995 and to $91.4 billion in 2000. The share of external public debt in total public debt was clearly increasing: from 56 percent in 1995 to 63 percent in 2000. [23]

While easy access to borrowing and large privatization revenues were creating room for a gradual erosion of fiscal discipline on federal level, fiscal discipline on provincial level has remained week for a different reason. An important source of provincial government revenues were transfers from federal government. These transfers took place under a predetermined formula that provided little incentive for local governments to economize on spending or try to increase their own revenues. Furthermore, there was a minimum amount of the transfers to provinces that had to take place regardless of the state of the economy, and regardless the volume of revenues collected by the central government. As a result, this

[22] Increase in public debt during that period does not reflect only cumulative public sector deficits, but also securitization of previous implicit government liabilities.

[23] Another important buyer of public debt were domestic banks.

arrangement provided insufficient incentive for fiscal discipline of provincial governments. As table 1 shows, provincial budget balance remained in deficit for the whole 1990s.

To sum up, the CBA did not produce a sufficiently tight budget constraint for public sector. While the CBA has cut off the government from monetary financing of budget deficits, it opened room for an alternative source of financing – borrowing on international capital market. And it did little to improve fiscal discipline of provincial governments. As a result, the CBA did not produce a lasting and sufficiently strong pressure to improve public sector finance to such extent that the country would become less dependent on external financing, and thus less vulnerable to adverse external shocks. Financial situation of the public sector also did not improve enough to provide room for a countercyclical use of fiscal policy when the economy was sliding into recession

Second factor contributing to the crisis was Argentina's chronic dependence on external savings. Traditionally, countries in Latin America have had a very low domestic savings ratio, compared to other emerging market economies.[24] For a long period of time, Argentina was living beyond its means. When it wanted to increase domestic investment to support economic growth, it had to borrow abroad, in the form of bank loans, portfolio investment, or direct foreign investment. This dependence of Argentina on external savings is illustrated in table 2.

Table 2. Savings, investment (in percent of GDP) and growth

	1993	1994	1995	1996	1997	1998	1999	2000
Domestic savings	17.1	18.6	19.7	16.2	15.9	15.5	13.9	13.5
External savings	4.1	4.8	0.9	2.7	4.7	5.6	5.1	4.1
Domestic investment	21.2	23.4	20.6	18.9	20.6	21.1	19.0	17.6
Real GDP	6.0	7.1	-4.4	5.5	8.1	3.9	-3.4	-0.5

Source: The Economist Intelligence Unit Argentina Country Reports, 1996 and 2001.

In comparison with other countries at similar stage of economic development, domestic savings in Argentina were relatively low. For example, in countries of South East Asia, domestic savings are exceeding 30 percent of GDP. Moreover, as can be seen from the table, domestic savings were continuously declining during the 1990s. Arguably, the history of high inflation and repeated banking crises, confiscation of deposits and erosion of their value are among the factors that have contributed to low domestic savings in Argentina. Perhaps more puzzling is why the period of low inflation and relatively high growth in the 1990s coincided with further decline in domestic savings. One possible reason could be improved households' expectation about the future economic prospects and consumption

[24] See International Monetary Fund (2002), World Economic Outlook, April, Chapter 2.

smoothing. As people expected better economic future and increased future income, they "borrowed" part of higher future income to finance higher consumption today.

Large dependence of Argentina on external savings has had two negative consequences. First, the availability of Argentina to attract external savings was an important determinant both of domestic investment and economic growth. In times of adverse external situation when investors were less forthcoming and capital flows to Argentina fell, economic activity weakened rapidly. On the contrary, acceleration of capital inflow resulted quickly in a resumption of economic growth. High reliance on external savings has a significant drawback: the willingness of foreign investors to put their savings into countries like Argentina depends on relative attractiveness of Argentina as an investment destination. And the relative attractiveness depends not only on what happens in Argentina, but also on what happens in other countries. In countries that are very dependent on external savings, economic growth could be subject to sudden large swings that are difficult to predict, and that may be difficult to deal with.

Second, long-term reliance on external savings has resulted in a rapid and persistent increase in external debt (see table 3). The speed of debt accumulation in the 1990s was obviously unsustainable.

Table 3. Balance of payments and external debt (in $ bil)

	1993	1994	1995	1996	1997	1998	1999	2000
Current account	-7.0	-9.3	-2.4	-6.5	-12.0	-14.6	-12.3	-8.9
Capital account	11.5	9.9	2.3	12.0	16.6	17.2	13.9	9.0
External debt	70.6	77.4	99.0	112.0	130.8	141.5	147.9	150.4
In which: public	52.0	55.7	55.8	63.0	67.6	77.2	84.6	91.4

Source: The Economist Intelligence Unit Argentina Country Reports, 1996 and 2001

Table 4. External debt and debt service, 1998 1/

	Debt/GDP	Debt/exports 2/	Debt service/exports 2/
Argentina	52	406	58.2
Brazil	29	340	74.1
Mexico	41	111	20.8
Indonesia	169	252	33.0
Thailand	76	123	19.2
Korea	43	84	12.9
Czech Republic	45	71	15.2
Hungary	63	107	27.3
Russia	62	186	12.1

Source: The World Bank (2000), World Development Indicators

1/ Present value of debt 2/ Exports of goods and services

For emerging market countries, it is not unusual to rely on external savings and thus run a current account deficit for a sustained period of time. But besides the problems of quality of emerging market borrowing that we have discussed in the previous section (i.e., the maturity and currency composition), there was another reason why external borrowing has increased Argentina's vulnerability and contributed to the crisis. Argentina has a very low exports, not reaching even 10 percent of GDP. While in the 1990s, Argentina has become very open to capital flows, its economy remained relatively closed in terms of trade flows.[25] Argentina's long-term reliance on external financing and rapid growth of external debt were not accompanied by similarly rapid increase in competitiveness and exports growth that would allow to service the growing external debt, and thus to maintain Argentina's access to international capital markets.

This small openness has now became a major weakness. Measured in terms of GDP, Argentina's external debt did not reach excessively high level (before the currency depreciation). In 1999, it exceeded 50 percent of GDP, which is high, but not excessively high. Such level of debt would not automatically trigger worries that debtor country would be unable to service its debt and that it would impose a debt moratorium.[26] But measured in terms of its exports, the situation was quite different. By the end of the 1990s, Argentina's external debt reached more than 400 percent of its annual exports. While Argentina's external debt continued to increase, its ability to increase foreign currency revenues from exports of goods and services was growing more slowly. Furthermore, as Argentina's access to external borrowing began to deteriorate in late 1990s, the cost of servicing debt began to increase as well. This is evident in the sharply rising cost of debt service and in rapidly increasing debt service to exports ratio. In 2000, servicing external debt absorbed nearly all export earnings – clearly an unsustainable situation. A country whose external debt service consumes practically all revenues from exports of goods and services needs to borrow to be able to pay for imports, including imports of consumption goods. But using external borrowing to finance imports of consumption goods is not sustainable.

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[25] One can assume that the low level of domestic savings was an important reason that pushed Argentina toward a liberalization of capital flows.

[26] While the debt to GDP ratio provides information about the country's capacity to service its domestic debt, the ability to service external debt depends on the country's ability to get access to dollars or other foreign currencies in which the external debt is denominated. For some time, a country can rely on foreign borrowing to get access to foreign currencies needed to service external debt, but in the long-run, it would need to earn foreign currency by exports of goods and services.

Table 5. External debt and debt service in Argentina (in percent of exports) 1/

	1993	1994	1995	1996	1997	1998	1999	2000
Debt/GDP	27.7	27.8	39.2	42.0	45.7	48.6	53.7	52.7
Debt/exports	395.4	368	336.2	338.6	358.7	379	435.7	487.9
Debt service/exports	36.8	31.8	30.4	39.5	50.2	57.5	75.8	93.5

Source: The Economist Intelligence Unit Argentina Country Reports, 1996 and 2001; for 2000 IMF data
1/ Data in table 7 for Argentina are not directly comparable with data on Argentina in table 6, because table 6 uses a present value of external debt, while table 7 uses a nominal value.

When economic growth was robust, external financing easily available and Argentina's main export markets growing rapidly, these vulnerabilities were not apparent. However, when as a result of financial crises in Asia and elsewhere, world economic activity began to slow down, commodity prices weakened, and investors became more risk averse, Argentina's vulnerabilities suddenly looked more serious. Successful stabilization in early 1990s allowed Argentina to gain access to international capital markets and borrow abroad. Furthermore, the structure of Argentina's external financing did not actually improve significantly in the course of the 1990s, and most importantly, it remained very sensitive to changes in external environment.

In short, a decade of CBA in Argentina did not change much the fact that Argentina was and is an emerging market country, with the standard weaknesses and vulnerabilities. The CBA has allowed the country to import financial stability, and as a result, it allowed Argentina to access international capital market and thus increase external borrowing.[27] But while the stock of external debt was increasing, the economy remained vulnerable to external shocks. It remained very closed to foreign trade, which made it difficult to adjust to changes in capital account balance by adjusting current account balance. Such adjustment was made even more difficult by the currency regime which precluded nominal currency devaluation. But the introduction of the CBA has significantly reduced Argentina's ability to respond to external shocks (loss of monetary policy, exchange rate policy, increasing dollarization, insufficient room for flexible application of fiscal policy).

Therefore, it is not surprising that several indicators suggest less than perfect credibility of the CBA and fixed currency parity. First, in the course of the 1990s, dollarization in the economy continued to be on the rise. The share of foreign currency loans and deposits in total loans has increased, from about 45 percent in 1991 to around 60 percent

[27] At times of temporary reduced availability of private external borrowing, it was able to borrow from international financial institutions. In 2001, Argentina's outstanding debt to the IMF, World Bank and Inter-American Development Bank approached $35 billion.

in 2000.[28] Second, devaluation risk, measured by the difference between yield on peso and dollar-denominated Argentinean sovereign bonds, remained significant during the 1990s, as can be seen from figure 1. Moreover, the difference has increased significantly during the times of turbulence. Third, the structure of Argentina borrowing did not actually improve that much, as the former governor Pou complained (see in note 16).

4.b. Brazil and the float

We will not go into detailed analysis, but a short note on recent development in Brazil could further help to understand the problem of EMC's external vulnerability resulting from the original sin-related fragilities, regardless of the specific currency regime. Brazil has exited relatively painlessly from the exchange rate peg in early 1999. But despite having in place a currency regime described as a managed float, Brazil exhibits the standard fear of float syndrome. It tries to prevent large exchange rate fluctuations, seeks to limit currency depreciation when it is under pressure, and it does not have the ability to pursue independent monetary policy. Brazil's monetary policy is strongly procyclical. Why a country with a floating exchange rate regime is not able to benefit by pursuing independent monetary policy?

While Brazil has different currency regime than Argentina before the collapse of the CBA, it is unable to pursue an independent monetary policy because of similar external vulnerabilities as Argentina. Brazil's external debt is relatively large, and its economy is relatively closed. In 2001, Brazil's exports were only about 11 percent of GDP, and while its external debt was slightly less than 50 percent of GDP, it exceeded 400 percent of its exports.[29] Brazil's public sector is also financially vulnerable. Large part of Brazil's public debt is either short-term, and debt service costs are thus sensitive to developments in interest rates, or indexed to the currency exchange rate, and thus sensitive to exchange rate fluctuations. Currency depreciation and high interest rates explain why the net public debt to GDP ratio has increased from 35 percent in 1997 to about 55 percent in 2001.

The recent episode with political uncertainty ahead of the presidential elections in October 2002 illustrate the policy dilemmas that this vulnerable structure of public debt creates. If currency depreciates, because of adverse market sentiment, the authorities have to weigh between two alternatives: either respond to this depreciation by rising (or keeping high) interest rates, thereby rising debt service costs on the floating rate short-term debt; or

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[28] For development of dollarization in selected EMC see chart 1 in Louis Catao and Marco Terroned (2000), "Determinants of Dollarization: The Banking Side." IMF Working Paper No. 146.

[29] This represents a significant deterioration compared to those indicators for year 1998 shown in table 4. Particularly the ratio of external debt to GDP has risen sharply as a result of currency depreciation which reduced the dollar value of Brazil's GDP.

allow currency to depreciate, thereby rising debt service costs on the part of external debt linked to the exchange rate, plus also risk higher inflation (and inflation expectations) and rising interest rates to reflect higher inflation premium. The pools suggesting that presidential elections may be won by a candidate who is less favored by markets have represented such significant shock that contributed both to a weakening of the Brazilian currency, and to a significant widening of spread on Brazilian debt. Market expectations of investor-unfriendly policies and perceived increased risk of debt restructuring is posing a very difficult policy dilemma, and in the extreme, it could become self-fulfilling, producing the very outcome that the markets fear. The concern about the election outcome raises borrowing costs and weakens the currency, which worsens Brazil's debt dynamics, thus further aggravating markets' concerns about the debt sustainability.

4.c. Panama and dollarization

What about the opposite corner? Could the dollarization bring better economic performance and the desired stability and policy credibility? So far, there is little long-term empirical evidence about the operation of dollarized economies. Panama has been an exception and has thus been thoroughly analyzed. The supporters of dollarization point to a history of low inflation and relatively strong growth, as well as to the fact that Panama is the only country in Latin America that was able to issue 30-years mortgages.

But not everything is perfect in Panama. It is noteworthy to quote from a more skeptical analysis of Panama's performance: "In spite of not having a central bank, or a currency of its own, for years Panama failed to maintain fiscal discipline. Initially, these large deficits were financed through borrowing from abroad. And when foreign debt became too high, the IMF stepped in with fresh resources. And when it was not enough, Panama restructured its debt."[30] Does this sequence looks familiar? This is not surprising. It could as well be applied to the experience of Argentina under the CBA in the 1990s.

* * *

However, while the original sin could have long-lasting and serious consequences for EMC, it is not something they are destined to live with for ever. But in order to get a better understanding of the policies that could help achieve them a rapid redemption from the original sin, it may be useful on a different group of EMC.

5. Accession countries in Europe: a different story?

The problems of the Latin American countries with different exchange rate arrangements discussed in the previous part are not typical for all EMC. The accession countries in Central and Eastern Europe seem to be much less vulnerable to adverse shocks

[30] See Sebastian Edward, (2001).

or changes in financial markets' sentiment – regardless of their currency arrangements Let's try to understand why.

Table 6 shows that in terms of GDP, the level of external debt and current account deficit in the accession countries is relatively high, not unsimilar to what we see in countries of Latin America.

Table 6. Accession Countries: Indicators of External Vulnerability (in % of GDP)

	Total external debt				Current account balance			
	1998	1999	2000	2001	1998	1999	2000	2001
Bulgaria	82.8	82.3	86.5	x	-0.5	-5.3	-5.8	-6.4
Czech Republic	40.4	44.8	42.6	36.6	-2.4	-3.0	-4.5	-4.8
Estonia	53.5	59.4	60.5	x	-9.2	-5.8	-6.8	-6.8
Hungary	55.8	64.5	66.8	65.1	-4.8	-4.4	-2.9	-2.1
Lithuania	34.8	42.4	42.9	44.8	-12.1	-11.2	-6.0	-6.7
Poland	37.3	42.2	44.0	39.5	-4.3	-7.5	-6.3	-4.0
Slovak Republic	55.9	53.4	56.7	53.9	-10.0	-5.0	-3.6	-5.4
Slovenia	25.5	27.5	33.9	x	-0.8	-3.9	-3.3	-0.8

Source: IMF

Therefore, one may assume that these countries could suffer from a similar problem as Argentina, Brazil and other countries in Latin America, i.e., that they would be vulnerable to adverse external environment, that the price of their external debt would respond negatively to investors' increased aversion to risk, that they would face more difficult access to international borrowing in times of adverse external shocks, that they will be unable to pursue independent monetary policy and countercyclical fiscal policy. However, despite the fact that these economies are very open to capital flows, there is little evidence of this vulnerability. While they have suffered temporary contagion from financial crises elsewhere – particularly from the Russian crisis in 1998, this contagion was limited both in time and scope. Asset prices have suffered only a relatively small and temporary setback. Similarly remarkable is the fact that this low vulnerability holds regardless of the currency regime (CBA in Estonia, managed float in the Czech Republic, Poland and Slovenia, currency band in Hungary).

To the extent that the accession countries need to borrow abroad at all, they can do it at a much better terms than countries in Latin America. The following two tables provide some important insight into the terms of domestic and external public debt financing in the selected countries in the region that access international capital market.

Table 7. Selected transition economies: market capitalization

	In local currency ($ equivalent)	Of euro bonds (in €)	Of dollar bonds (in $)
Bulgaria	0.8	1.1	3.8 1/
Czech Republic	8.0	0.0	0.0
Croatia	2.0	2.5	1.1
Hungary	17.0	3.0	1.5
Poland	40.0	2.1	3.7 1/
Slovak Republic	6.0	1.5	0.5

Source: Bloomberg
1/ Old Brady bonds

As we can see, governments in these countries are able to finance their borrowing needs mostly from local markets, by issuing debt in domestic currency. This has an important benefit: financing of governments' borrowing needs is less dependent on access to international capital markets.[31] Market capitalization of the euro-denominated and dollar-denominated bonds is relatively small. Market capitalization in domestic currency debt is relatively high in Poland and Hungary (around 30 percent of GDP), and somewhat less in the Czech Republic (about 15 percent of GDP). However, there is basically no restriction in these countries on nonresident purchases of domestic currency government debt, and it is estimated that foreign investors hold 30-35 percent of outstanding local currency bonds in Hungary, 15-20 percent in Poland and 10-15 percent in the Czech Republic.

Table 8. Selected transition economies: yield on government debt (in %)

	Local currency	Euro
Bulgaria	10Y BGL 7.75% (April 02)	10Y € 7.5% (March 02)
Croatia	7Y HRK 6.25% (Jan 02)	7Y € 6.25% (Feb 02)
Hungary	10Y HUF 7.1% (May 02)	10Y € 5.625% (June 01)
Lithuania	10Y LIT 6.15% (March 02)	10Y € 5.875% (May 02)
Poland	10Y PLZ 8.1% (May 02)	10Y€ 5.5% (March 02)
Slovak Republic	10Y SK 7.3% (May 02)	10Y € 7.375% (2000)

[31] The Czech Republic does not have presently any outstanding foreign currency denominated sovereign bond, even though there is indication that there would be a large demand. For the time being, privatization receipts provide sufficient financing. In late 2001, Hungary has changed its borrowing strategy, from borrowing in foreign currency to borrowing in local currency. In November 2001, it issues a heavily oversubscribed 15 year HUF bond.

Source: Bloomberg

What about the terms of financing? Table 8 shows the coupon of latest bond issues in domestic currency and in the euro. First point to note is that the countries that have issued euro denominated public debt were able to do so at relatively long maturity – mostly ten years, and at reasonably low yields. Second, for countries with a CBA – Bulgaria and Lithuania – there is not much difference in yields on domestic and euro denominated debt, which reflects low currency risk. The same is true for Croatia as well, which despite the nominally managed float de facto pegs its currency to the euro. For countries with a floating currency – Slovak Republic and Poland – relatively higher yield on domestic currency debt compared to yield on euro denominated debt reflects higher currency risk (note that the euro-denominated Slovak bond shown in table 8 was issued in 2000; if issued today, market analysts estimate that the yield would be in the range 5.5-6.0%).

Besides the structure and terms of borrowing, relatively low level of external vulnerability of the accession countries is also illustrated by their monetary policy conduct. The accession countries that pursue a flexible currency regime are also able to pursue a rather independent monetary policy.[32] To the extent that the fear of floating is present, it is a different "fear", namely fear of a too strong currency that would negative affect competitiveness and economic activity.[33] The relative independence of monetary policy in the accession countries could be seen by comparing changes in policy interest rates in these countries and in the euro area. Figure 2 shows that at the time of stable or even increasing ECB interest rates in 1999 and 2000, central banks in the Czech Republic and Hungary were

[32] Of course, another question is whether an independent conduct of monetary policy brings the desired results. Buiter and Grafe (2002) caution that due to underdeveloped debt markets, monetary policy in most accession countries is unlikely to be very effective in stabilizing output. See Willem H. Buiter and Clemens Grafe (2002), "Anchor, Float or Abandon Ship: Exchange Rate Regimes for the Accession Economies." Paper prepared for the 10th Anniversary Conference of the European Bank for Reconstruction and Development, December 13-14, 2001, London. However, local debt markets are undergoing a rapid development, at least in the most advanced transition countries. For example, the widening of the fluctuation band has contributed to the development of deeper currency and debt markets, and there was little evidence of excessive currency fluctuation that would prevent this development.

[33] For example, concern about a rapid currency appreciation has prompted a discussion about the optimal currency arrangement in Poland, and some have proposed to limit the scope for further zloty appreciation by introducing a currency fluctuation band. Sometimes, the argument can be heard that inability of monetary policy to prevent currency appreciation illustrates the relative impotence of monetary policy in accession countries. However, exchange rate channel is only one among several monetary policy transmission channels, (though clearly important one in the open transition economies).

able to reduce interest rates significantly. In fact, from the second half of 2000, Czech interest rates are very close to euro area interest rates. Higher interest rates in Hungary and particularly in Poland are explained to some extent by higher inflation and by disinflation, but even these countries were able to cut domestic interest rates regardless of the ECB interest rate policy.

For comparison, figure 3 shows the evolution of policy rates in the United States (targeted federal funds rate) and Brazil (Selic rate) during the period of currency float in Brazil. Two things stand out. First, adjusted for inflation differential, the difference between the two rates is significantly higher than in the accession countries (perhaps with some exception of Poland). Second, when the Fed began to cut interest rates aggressively starting in January 2001, the Banco Central de Brazil not only did not follow, but instead, it had to increase its interest rate significantly, so that the difference between the U.S. and Brazil's policy rates widened from about 10 points to 16 points.

The question is why the accession countries are less sensitive to external developments and to financial contagion, why they are able to borrow at much better terms, and why they are able to pursue a relatively independent policies (in countries with a floating currency) or why their CBA seem to enjoy relatively high credibility?

I would offer several reasons for this relative resilience to contagion. First, while the size of the external debt is not significantly different from countries in Latin America when measured in terms of GDP, it is much smaller when measured in terms of exports. The accession countries are much more open, and thus their debt to exports ratios are generally much lower than in Latin America (with the exception of Poland, exports represent usually about 50 percent or more of GDP). Therefore, for a given level of debt to GDP ratio, there is less concern about the availability of foreign currency earnings to service their external debt, and less concern about external debt sustainability. Moreover, only a small fraction of their external debt is in the form of market borrowing, which could be most adversely affected by changing sentiment in international capital market. This could reflect the fact that accession countries do not have a long history of involvement with international capital markets, and thus did not have simply enough time to build up high level of marketable external debt.[34]

Second, while accession countries in CEA are not generally less dependent on external savings than countries in Latin America, as shown by their relatively large current account deficits, they cover an important part of these deficits by direct foreign investment, that is, by non-debt creating flows. While relying on direct foreign investment is not without

[34] Transition economies in central and eastern Europe are also less dependent on IMF financing. And to the extent that IMF programs are in place, they are often used as precautionary, without actually using the available loans.

potential risks and problems neither, it is clearly a less risky form of capital inflow than debt-creating instruments.[35]

Third, and perhaps most importantly, the accession countries benefit from the confidence-building effect of the future EU/EMU accession. The EU/EMU membership requirements ensure that the conduct of macroeconomic policies and structural reforms will produce financial stability and solid economic performance, and as long as there is a solid popular and political support in the individual countries for joining the EU and EMU, these countries will benefit from the expectation of the accession. The future membership in EU/EMU serves as an important policy anchor, as a disciplining device and thus helps to increase policy credibility in the accession countries. This helps regardless of the exchange rate regime that is in place. For countries with the CBA (Bulgaria, Estonia, Lithuania), it provides a clearly defined exit from the CBA, exit from a position of strength (i.e., meeting the strict qualification criteria for EMU membership), not from a position of weakness and crisis. And for countries with flexible currency regimes, it helps to anchor inflation expectations, and thus limit exchange rate fluctuations. In turn, relative price stability and credibility of monetary policy assist in the development of local financial market that provide a useful source of financing, both for the sovereign and nonsovereign borrowers, and thus reduce the need to rely on external financing that would result in increased external vulnerability.

Of course, future EMU membership may bring temporary policy problems of its own, like instability in capital flows and exchange rate movements ahead of the EMU entry and euroization, but this should be a manageable problem. In fact, one could conclude that the accession countries in CEA have entered the virtuous circle: future EU/EMU membership provides an anchor for economic policies, improves policy credibility and contributes to positive expectations about future economic performance. This promotes the development of local financial markets, and reduces the dependence on external financing. Less need of external financing, in combination with large inflow of FDI, is awarded by better access to international capital markets.[36] Favorable terms and limited use of external financing in turn allow to avoid a build-up of external vulnerabilities that would make the economies more vulnerable to eventual adverse external shocks.

6. Conclusion

After the collapse of the pegged currency regimes in many emerging market countries during the past decade, the consensus has emerged that the so-called soft peg regimes are not suitable for emerging market countries that have largely liberalized capital flows and that are

[35] Baer (2001) discusses some of the potential problems of FDI inflows.

[36] This confirms the well-known fact that those who do not need to borrow are best able to do so.

integrated into the international capital market. Instead, the consensus seemed to have emerged that the so-called corner solutions – either a floating currency or a hard peg in the form of a CBA, dollarization or membership in a monetary union – is the answer to the question what currency regime is appropriate for the EMC.

However, the collapse of the CBA in Argentina has raised new questions about the optimal currency arrangements for the EMC. Argentina's experience has shown that even the CBA need not deliver the degree of policy discipline and stability that its proponents have hoped for. Even under the CBA, there is room for insufficient policy discipline that could eventually unravel the currency peg. We have analyzed how this has happened in Argentina. We have also briefly discussed two countries with different currency regimes – Brazil with a managed float and Panama with dollarization, to underscore the points that floating currency does not necessary provide room for independent monetary policy, and that not having own currency does not establish policy discipline and prevent a build-up of financial vulnerability.

The conclusion is that a particular currency arrangement *per se* does not explain why a country finds itself vulnerable to shifts in market sentiment that can cause large fluctuations in economic activity, and why it cannot pursue independent policies to smooth out these fluctuations. Rather, these vulnerabilities result from low domestic savings, large reliance on external savings, and thus from the need to borrow extensively abroad which ultimately reaches unsustainable extent. Low openness to trade means that this point of unsustainability is reached sooner rather than later.

However, not all EMC suffer from these vulnerabilities. We have discussed the different experience of the accession countries in central and eastern Europe. These countries were much less affected by recent financial crises and turbulence in international capital markets, they continued to enjoy good access to external borrowing, and prices of their financial assets, including the exchange rate, did not suggest a loss of credibility.

The external debt to GDP ratio in accession countries is not much different from countries like Argentina or Brazil, and they too are relying importantly on external savings to help finance domestic investment, and are thus running sizeable current account deficits. But because the accession countries are much more open economies, their external debt to exports ratio is much smaller, which makes servicing external debt easier and does not raise concern about debt sustainability. Domestic savings in the accession countries are also relatively high, making domestic investment less dependent on the availability of external savings.

It is noteworthy that the relatively strong credibility and resilience of accession countries to external shocks does not depend on the particular currency regime. Currency regimes in the accession countries are very divergent, ranging from a CBA to a relatively free float. It is important that the countries with a CBA have a clearly defined exit – the entry into the EMU and the introduction of the euro as the used currency. Moreover, the EMU entry provides an important signal of the commitment to pursue disciplined policies. To countries

with a flexible currency regime, this commitment serves as a potent nominal anchor that assist in achieving and maintaining price stability, assists the developments of local financial markets, makes these countries less dependable on external financing, and thus less vulnerable to exchange rate movements. This allows them to pursue relatively independent monetary policy, attuned to the need of their domestic economies.

If the process of EU/EMU accession is successfully accomplished, it would provide an important lesson for those EMC that have problems with achieving a full credibility of their policies and that remain unduly sensitive to conditions in international capital markets. Of course, the problem is that membership in the EMU is not available to those EMC. Replacing domestic currency with dollar or some other currency is not the same as joining the EMU. EMU membership does not just bring a stable currency enjoying high credibility. It also means a membership in the club with strict rules for maintaining stability-oriented policies, something that dollarization alone does not bring.

	ECB	CR	Hungary	Poland
1999	3	8.75	17	18
	3	8	16	18
	3	7.5	16	18
	2.5	7.2	16	18
	2.5	6.9	16	18
	2.5	6.5	15.5	18
	2.5	6.25	15.5	18
	2.5	6.25	15.5	18
	2.5	6	15.5	18
	2.5	5.75	15.5	18
	2.5	5.5	15.5	21.5
	3	5.25	15	21.5
2000	3	5.25	14.5	21.5
	3.25	5.25	13	22.5
	3.5	5.25	12	22.5
	3.5	5.25	11	22.5
	3.75	5.25	11	22.5
	4.25	5.25	11	22.5
	4.25	5.25	11	22.5
	4.25	5.25	11	24
	4.5	5.25	11	24
	4.5	5.25	11	24
	4.75	5.25	11	24
	4.75	5.25	11	24
2001	4.75	5.25	11	24
	4.75	5	11	24
	4.75	5	11	22
	4.75	5	11	22
	4.5	5	11	22
	4.5	5	11	20.5
	4.5	5	11.25	20.5
	4.5	5.25	11.25	19.5
	4.25	5.25	11	19.5
	3.75	5.25	10.75	18
	3.75	5.25	10.25	16.5
	3.25	4.75	9.75	16.5
2002	3.25	4.75	9.5	14.5
	3.25	4.25	9	14.5
	3.25	4.25	8.5	14.5
	3.25	4.25	8.5	13.5
	3.25	3.75	8.5	13.5

	Brazil	USA
2000	19	5.5
	19	5.75
	19	6
	18.5	6
	18	6.25
	17.5	6.5
	16.5	6.5
	16.5	6.5
	16.5	6.5
	16.5	6.5
	16.5	6.5
	16.5	6.5
2001	15.75	6
	15.25	5.5
	15.25	5.25
	15.75	5
	16.25	4.25
	16.75	4
	18.25	3.75
	19	3.75
	19	3
	19	2.5
	19	2
	19	2
2002	19	1.75
	18.75	1.75
	18.5	1.75
	18.5	1.75
	18.5	1.75