

## Comments

**Alberto Ades:** This paper critically examines the rise and fall of Argentina's currency board. The authors argue that while convertibility provided nominal stability and boosted financial intermediation, it failed to foster fiscal or monetary discipline. In particular, they emphasize that the failure to adequately address the currency-growth-debt (CGD) trap that Argentina experienced in the late 1990s precipitated a run on the currency and the banks, followed by the abandonment of the currency board and a sovereign debt default. De la Torre, Levy Yeyati, and Schmukler therefore see the crisis as a bad outcome of a high-stakes strategy to overcome a weak currency problem. They conclude by examining alternative exit strategies that would have been less destructive than the one adopted.

The authors provide a comprehensive and often quantitative analysis of the challenges faced by the currency board in 1998–2001. The effort is commendable, and it will likely be followed by additional work in this exciting and important area of research. My comments center on three specific areas that call for further refinement.

First, the authors characterize the situation that the authorities faced during the period as a CGD trap caused primarily by the economy's inability to adjust to external shocks. However, this CGD theory is hard to distinguish empirically from an alternative collective-suicide (CS) hypothesis. According to this theory, the Alianza government made an endless succession of policy and political mistakes that made the collapse of convertibility inevitable. Critical statements about convertibility by key Alianza leaders, the resignation of Vice President Carlos Alvarez, the forced resignation of Central Bank president Pedro Pou, attacks by the Finance Ministry on Central Bank independence, the modification of convertibility to peg the peso to a basket, statements by key Alianza politicians in favor of a debt restructuring and against globalization—these are just some of the political shocks that gradually eroded confidence in Argentina's economic institutions, fueled capital flight, and ultimately led to the collapse of the banking system and the peso. While the situation

faced by the authorities in 1999 was far from ideal, it is hard not to speculate how much of the 2000–01 malaise was engineered by a government that never truly believed in the policies that circumstances forced it to defend. A more balanced discussion of these issues would benefit the paper.

Second, the authors argue, as do many economists, that flexibility (of labor markets and of primary public spending) is critical for fixed exchange rate regimes to work in the medium term. The same argument is applicable to a country considering dollarization. The authors note that given the difficulty in developing flexible labor and fiscal institutions, such regimes are generally not advisable. However, the cost of developing such institutions needs to be balanced against the cost of living with an underdeveloped financial system (if the banking system is forcefully pesified) or balance-sheet volatility (if the currency floats but most of the saving and lending continue to be done in foreign currency). It is not obvious that developing flexible labor market and fiscal institutions is more costly than developing the institutions necessary for a pesified financial system to become acceptable in a country like Argentina.

Finally, the authors argue that the demand for pesos following the break of convertibility was surprisingly strong. They mention that many analysts had indeed expected peso demand to collapse and the economy to become fully dollarized. The fact that this did not happen is seen as evidence that Argentines do, in fact, want to hold pesos, and it therefore provides hope for the pesification alternative. However, judging the demand for pesos in a context of stringent currency controls and a substantial increase in the share of the underground economy is, at best, heroic.

**Graciela Kaminsky:** Argentina's default and the demise of its currency board in January 2002 triggered a colossal interest in understanding what went wrong. This interest is not surprising. Until very recently, Argentina was the darling of Wall Street and the poster child of the International Monetary Fund. Argentina had stabilized the economy after a bout with hyperinflation, successfully privatized a large and inefficient public sector, managed to have a stable banking sector well prepared to deal with liquidity problems, and boosted financial intermediation to levels not seen for more than thirty years. Notwithstanding these reforms, in January 2002, Argentina staged the largest sovereign debt default in history, abandoned the one-to-one parity with the U.S. dollar, causing the peso to quickly

depreciate to 3.5 pesos per U.S. dollar, and confiscated almost all bank deposits, leaving the banks all but defunct. Mussa's title, "From Triumph to Tragedy," perhaps best captures this paradox.<sup>1</sup>

Within a couple of months, a variety of articles had been written on Argentina. Mussa argues that fiscal unsustainability was at the core of this crisis; Feldstein blames the real exchange overvaluation. Calvo, Izquierdo, and Talvi claim that a sudden stop in capital flows following the Russian crisis created a major real exchange rate misalignment and fiscal problems in Argentina that were difficult to address given the country's widespread currency mismatches, high indebtedness, and relatively closed economy. Hausmann and Velasco focus on the interaction between the real exchange rate and the country's capacity to borrow. Finally, Perry and Servén find the origins of the crisis in multiple vulnerabilities, such as deflationary adjustment under the peg, high public debt, and fiscal and banking fragility.<sup>2</sup>

Augusto de la Torre, Eduardo Levy Yeyati, and Sergio Schmukler contribute to this line of research with a new twist. They do not deal with the variety of macroeconomic vulnerabilities—domestic or external—that triggered the crisis, but rather reexamine the fixed versus flexible exchange rate debate from a new angle. In particular, they argue that hard pegs sow the seeds of their own destruction. They also provide new empirical evidence on the characteristics of the bank run that preceded the crisis. Finally, they also discuss alternative strategies for exiting the currency board.

With respect to the pros and cons of hard pegs, the authors highlight that the Argentine monetary authorities tried to raise the credibility of the currency board by increasing the exit costs—that is, by fostering dollarization—but this, in turn, made the peg more vulnerable and triggered its collapse. In particular, the authors show that the monetary authorities did not adopt prudential norms (such as loan classification and provisioning rules) that would have explicitly discouraged the use of the dollar in financial contracts.<sup>3</sup> The authors also claim that the government did not issue

1. Mussa (2002).

2. Mussa (2002); Feldstein (2002); Calvo, Izquierdo, and Talvi (2002); Hausmann and Velasco (2003); Perry and Servén (2002).

3. As discussed by de la Torre, Levy Yeyati, and Schmukler, Argentina's regulatory capital requirements for credit risk not only were determined by the typical Basel-type procedure of applying higher weights to riskier loan classes, but also took into account the risk

peso debt in domestic markets, not just because dollar debt was less costly, but probably also because it feared that issuing peso debt would create concerns that the government would liquefy the debt in the future through a nominal devaluation of the peso. I have two comments on those claims. While it is true that prudential regulations failed to account for the risk of dollar loans to the nontradables sector, proper risk accounting would not necessarily have had a significant impact on the degree of dollarization of the economy. One possibility would have been to price risk using interest rates on peso loans to the various industries. As shown in figure 2, however, interest rate differentials were very low most of the time, increasing to at most 200 basis points only sporadically until April 2001. The authors would need to provide empirical evidence on the effect of capital requirements on the volume of loans to evaluate whether the degree of dollarization would have changed substantially with other provisioning rules. My second comment refers to the effect of hard pegs on the choice of the currency denomination of government debt. While the issuance of debt denominated in foreign currency might certainly be used as a commitment mechanism, it is unclear what the contribution of the peg is to the degree of dollarization. In fact, some would argue that causality goes in the other direction. This is the so-called original sin phenomenon. According to this hypothesis, emerging countries cannot borrow in domestic currency, perhaps because of lack of credibility. This pushes governments to adopt a peg to avoid balance sheet mismatches. It would have been important to provide some evidence of the two-way causality.

The second major theme of the paper is the banking sector and the characteristics of the bank run. Here, the authors provide a very interesting dataset on the characteristics of the banking sector, including information on the currency of denomination of loans to traded and nontraded goods industries, as well as that of demand, savings, and time deposits. There is also information on the varying exposure of banks to the public sector. Certainly, this dataset can be used to examine in detail the changing vulnerability of the banking sector. I find most interesting the information and estimation of the characteristics of the bank run. The authors estimate a

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of individual loans within each loan class. In particular, the Central Bank imposed higher weights on individual loans with high interest rates, which presumably reflected the higher risk of the loan. However, this system failed to capture credit risk of dollar loans to the nontradables sector.

regression of the change of bank deposits on the characteristics of the banks during crisis and noncrisis periods. While banks' fundamentals affected the injection/withdrawal of deposits in the precrisis period, this was not the case during the crisis. Depositors did not pay attention to the characteristics of the banks at the onset of the crisis; it did not matter whether banks were public or private, domestic or foreign owned. During times of crisis, systemic events were at the core of the run. Country risk appears to have been the main driver behind the run on dollar deposits, while currency risk was the dominant factor behind the generalized withdrawal of peso deposits. These results suggest that foreign banks may not provide, as has been expected, complete insurance against fragilities of the banking sector following a variety of adverse shocks.

The third major theme of the paper is the exit strategies from currency boards. The authors examine the pros and cons of dollarization, floating, pesification of deposits and floating, and their own proposal of pesification at the margin.<sup>4</sup> They argue that floating the peso would have addressed the real exchange rate misalignment, but it would have bankrupted the banks and would not have prevented the run on deposits. The authors also suggest that stock-pesification-cum-float was the worst alternative because it involved the arbitrary and massive violation of property rights. Not only did it trigger the run, but it also contributed to the disruption of the payments system and destroyed financial intermediation. They argue that formal dollarization would have been consistent with the Argentine social contract based on the long-term commitment to the one-peso-one-dollar rule, enhancing depositors' confidence and likely preventing a bank run. Still, it is argued, dollarization would not have helped to unwind the real exchange rate appreciation and would have generated a long and protracted deflation. The authors suggest that pesification at the margin could have prevented a run and, by providing a margin for nominal flexibility, could have facilitated the unavoidable real exchange rate adjustment, without unduly disfiguring property rights.

This comparison across exit strategies lacks a common benchmark. The common benchmark should reflect the fact that under all possible exit strategies, the size of the adjustment had to be large enough to offset the

4. On dollarization, see Dornbusch (2001); on floating, see Roubini (2001); on pesification of deposits and floating, see Ricardo Hausmann, "A Way Out for Argentina: The Currency Board Cannot Survive Much Longer," *Financial Times*, 30 October 2001.

severe and prolonged stop of capital flows to emerging markets.<sup>5</sup> Under all exit strategies, current account deficits had to be transformed into current account surpluses. This, in turn, required a major wealth adjustment, via deflation or devaluation. The required adjustment was under all circumstances going to generate a tug of war: what group would have to suffer the burden of the adjustment? Pesification at the margin would not have been a panacea, either, on account of the size of the adjustment. Nontraded goods industries would have had to suffer the brunt of the adjustment. Bankruptcies would have followed, and this would have triggered major vulnerabilities in the banking sector. A run might not have been prevented either. Arguably, whichever of the four alternatives the monetary authorities chose, from complete pesification to full dollarization, after the adoption, they would have wished they had chosen something else.

To summarize, this paper provides a new angle on the Argentine crisis, as well as a new dataset for examining banking vulnerability and information on banking regulations. It also provides an interesting discussion on exit strategies from hard pegs. In short, the paper belongs in the required reference list of those interested in learning about the 2001 Argentine crisis.

5. See Calvo, Izquierdo, and Talvi (2002).

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