GERARDO DELLA PAOLERA
ALAN M. TAYLOR

Gaucho Banking Redux

An Argentine economic experiment has come to an ignominious end. The attempt to establish a stable currency has given way to an unplanned float, and a fourfold devaluation has rendered null any chance of restoring the old parity. In addition to a widespread economic malaise following some years of a boom, one of the major casualties of the crisis is the banking sector, where the search for a long-run cure has barely begun. The fiscal health of the government remains under a cloud of suspicion. Foreign investors in government bonds, badly burned, are ill disposed toward the country. Most observers agree that the political class has failed, and some have suggested that nothing less than placing the country in "economic receivership" and turning its affairs over to an independent foreign administrator will rectify the situation:

> Investors here, with minds disorganized by the fate which has overtaken those concerned in the reckless speculations and borrowings of the past years, seem to conclude that Argentina is ruined because they, themselves, have lost money. Reckless speculators in the Argentine republic have lost money because they carried their speculation to undue lengths; but the Argentines have profited and the country is profiting by the sowing broad-cast of [foreign] capital in the country.
>
> A solid administration is required under an honest President. Some assistance in the formation of a bank upon sounds principles is needed, with improvement in the currency. It is possible that the system of taxation might be varied so as to provide for the provincial and municipal loans which were too readily granted; though probabilities disincline an observer to conclude that local taxation will be increased without great difficulty.

Gerardo della Paolera is with the American University of Paris and Fundación PENT, Buenos Aires. Alan M. Taylor is with the University of California, Davis.

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> Suggestions have been hazarded relative to foreign financial control. Foreign financial control may be needed, and may be possible in the case of a feeble or a decaying state.[1]

As the reader may have guessed from the florid tone and antiquated style of this prose, the year is not 2002. It is 1891. A certain W. H. Bishop is writing for a new publication called the *Economic Journal* as Argentina gropes its way through the wreckage of what we have previously characterized as the world's first full-fledged emerging market crisis, the Baring Crash of 1890.[2] The year 1890 has stood ever since in the Argentine historiography as a fateful year of unmatched economic calamity.

Given the scale of the present crisis, and the economic, social, and political wounds it has opened up, Argentine economic history will perhaps have to be rewritten from a very different perspective, with 2001 seen as a turning point. Yet the lessons from the past are hauntingly familiar, and they are here once again to be relearned. How will history be rewritten? It is not just that the events of 2001–02 are more catastrophic than those of 1890–91. Indeed, Argentina has suffered a steady stream of economic crises throughout its history. One purpose of this article is to highlight the common features of these episodes and place the present debacle in some historical perspective. There are also differences, which we are careful to spell out, that separate the present from the past.

In this paper, we argue that Argentina's inability to ever develop sound banking institutions plagued all previous attempts to reform the monetary regime using exchange-rate-based stabilizations. We see the twin crisis problem noted by Kaminsky and Reinhart as endemic to Argentina.[3] One of the deep causes that have doomed so many reform programs is crony leadership. The Asian developing countries were also faulted for their crony capitalism after the 1997 crisis. In both Asia and Argentina, cronyism reached deep into the financial sector. The failure of key banking and financial institutions to follow prudent, transparent, accountable, and noncorrupt practices is as central to understanding the Argentine crisis of 2001 as it was to understanding the Asian crisis of 1997.

It is also a recurring theme in the long history of Argentine crises (listed in table 1). There is, in fact, a much older name for this phenomenon.

1. Bishop (1891). In the original, "foreign" reads "European."
2. Our historical treatment draws on della Paolera and Taylor (2001).
3. Kaminsky and Reinhart (1999).

TABLE 1. Monetary and Banking Regimes and Major Crises, 1890–2001

Period	*Monetary regime*	*Banking regime*	*Previous peak-to-trough fall in real GDP (percent)*	*Years to regain previous peak*	*Devaluation, years 1–2 (percent)*	*Inflation, years 1–2 (percent)*	*Min, max velocity*[a] *(GDP/M3)*	*Max, min multiplier*[a] *(M3/M0)*
1890–91	Dirty float	Law of national guaranteed banks	15	5	108	119	1.4, 3.7	3.1, 1.3
1913–14	Gold standard (currency board)	Commercial code	20	7	–3	21	2.4, 2.6	2.2, 1.8
1929–31	Gold standard (currency board)	Commercial code	14	6	45	–8	1.9, 2.4	3.7, 2.4
1980–81	Dirty float (crawling peg)	Law of 1977	10	7	~2,000	~750	3.8, 5.7	4.0, 1.1
1988–90	Dirty float (crawling peg)	Law of 1977	8	4	~60,000	~50,000	3.4, 12.8	1.8, 1.3
1994–95	Dollar standard (currency board)	Law of 1977	3	2	0	0	4.8, 5.4	3.5, 2.7
2001–02[b]	Dollar standard (currency board)	Law of 1977	≥ 22	≥ 8	>260	>40	2.9, 3.4	4.0, 3.0

Source: della Paolera and Taylor (2003, statistical appendix); 1994–95 and 2001–02 velocity and multiplier ratios are based on Central Bank and Finance Ministry data; other calculations for 2001–02 are based on data from *Informe Económico Trimestral* (available at www.mecon.ar).

a. M3 and M0 are in pesos only, excluding dollar cash and accounts. In 1988–90, the multiplier rose during the hyperinflation episode. The figures for 2001–02 cover up to the bank freeze of December 2001.

b. Our calculations for 2001–02 are based on a GDP peak in 1998 and are purely speculative based on conditions at the time of writing. The 22 percent peak-to-trough estimate is based on the reported 9 percent fall in real GDP from 1998 to 2001 and the latest, 13 percent, year-to-year fall reported for 2001–02 (second quarter). The eight year estimate for recovery of previous peak is based on an upper bound guess of 5 percent growth per year over the next four years.

When the problem first emerged on the River Plate, a memorable moniker was crafted by the English correspondent W. R. Lawson, who wrote of the Baring Crash in an article entitled "Gaucho Banking" in 1891:

> [Argentine banks] were free banks in the freest sense of the term, for any Gaucho who had the political open sesame to them could ask for almost anything he pleased, and it would be given him so long as there was a *piastre* left in the till.[4]

We resurrect the term gaucho banking here to refer to the recurring way in which convertibility plans in Argentina have foundered on a misunderstanding of the internal and external convertibility nexus in a small open economy with cronyism. A well-known corollary of the macroeconomic trilemma is that a central bank that adopts a currency board cannot act as a lender of last resort, which makes the regime potentially fragile on the banking side. Given such a regime choice—a choice made with a knowledge of all the risks and a willingness to accept bank fragility as a price to be paid—bank fragility need not endanger the convertibility plan itself. What can endanger convertibility is another, deeper institutional weakness, prevalent in Argentina and also in other developing countries: the possibility that banks might engage in crony relationships with private or public borrowers, thereby corrupting balance sheets.

This is how we read the Argentine dynamics of the second quarter of 2001. Changing the convertibility laws might have appeared innocent at first glance, because international reserves were not touched. While base money looked sound, however, the change allowed banks to substitute public bonds for reserves on their balance sheets, eroding public confidence in bank-created money.

The banks should be viewed as accomplices rather than victims, because they showed no resistance to moral suasion by the authorities. Indeed, many bankers welcomed the chance to earn big returns in the short run. It was, they thought, a safe bet: high yields if the plan worked, and a freeze/bailout (or pesification) if it didn't.[5] (And they were right, as it turned out.) This was the key institutional shock that, in a situation of tension between internal and external convertibility, took Argentina's economy off its stable path.

4. *Banker's Magazine* (1891, p. 38), quoted in Ford (1962, p. 100).

5. Pesification refers to a change in the law of contracts in which all contracts denominated ex ante in U.S. dollars (including bank deposits and loans) were converted into Argentine pesos at a rate of one peso to the dollar. On the intellectual origins of this idea, see Hausmann (2001).

This particular set of policy choices represents a bad way to handle a crisis, even by the admittedly weak standards of past Argentine economic policymaking. In terms of economic losses, as table 1 shows, this crash will likely be more severe than anything seen before, worse even than the harsh downturn of 1914 (which, in turn, exceeded the Baring Crash in depth and duration).[6] It is also clear that the special exchange rate arrangements that prevailed at the onset of the present crisis were present during only one previous crisis episode—that of 1929—when the country's first currency board (created in 1891 after the Baring Crash) finally met its demise. Thus, in what follows we offer two analytic narratives, one for the 1929 crash and one for the 2001 crash, the two crises in which we find the parallels to be strongest.

Table 1 identifies the major twin crisis episodes since the unification of the modern Argentine state in 1862 and also classifies monetary and banking arrangements.[7] Exchange rate experiments throughout Argentine history have often oscillated between periods of very loose floating (a freely falling currency, as Reinhart and Rogoff call it), and periods of more or less hard pegs.[8] The gold and dollar standards backed by currency boards were the harder regimes, and the dirty floats and crawling pegs rather softer. The willingness to experiment so freely with different regimes is, of course, a time-honored tradition in Argentina—and indeed all of Latin America—creating the kind of reputational problems noted by W. R. Lawson in 1899:

> [South Americans] are always in trouble about their currency. Either it is too good for home use, or, as frequently happens, it is too bad for foreign exchange. Generally they have too much of it, but their own idea is that they never have

6. Output is about 22 percent below the 1998 peak based on current data. Even with 5 percent growth for four years (which not even the most optimistic forecasts allow), the economy will spend a projected eight years below its previous peak. This surpasses all previous experience.

7. The crisis of the 1870s, although very important in economic terms, did not embody all of the attributes of a modern emerging-market twin crisis. In that crisis the Avellaneda administration faced unsustainable deficits and debt service burdens inherited from the preceding Sarmiento administration. The response in the short run was to monetize the fiscal gap without any major adjustment in the fundamentals. Predictably, the exchange rate eventually collapsed, but no major banking crisis occurred. This episode thus has all the hallmarks of a classic first-generation speculative attack model (Krugman, 1979) and none of the more complex attributes of a twin crisis, such as was seen in 1890 or 2001. Accordingly, we do not focus on the 1870s crisis here.

8. Reinhart and Rogoff (2002).

> enough. . . . The Argentines alter their currency almost as frequently as they change their presidents. . . . No people in the world take a keener interest in currency experiments than the Argentines.[9]

Just as exchange rate regimes have changed over time, so have banking regimes—at least at first glance. The Baring Crash was quite distinct in that it occurred under a heterodox banking experiment, known as the Law of National Guaranteed Banks. This was an unsustainable regulatory framework, replete with moral hazard and other defects, and which was swept away after 1890. Banks were then regulated by the commercial code, with no special banking code whatsoever. When the Central Bank was created in 1935, it was given broad responsibilities for banking oversight, but it was not until comprehensive banking laws were promulgated in 1977 that any modern basis for supervision was set in place.

Various measures associate the demise of both hard and soft pegs with economic volatility. For example, in 1890 the Argentine regime had floated away from gold parity by a cumulative 100 percent over the previous five years of overheated boom; the Baring Crash accelerated existing nominal movements, and it was followed by a deep recession. With purchasing power parity holding fairly strictly for this economy throughout its history, and with half-lives of adjustment of two years or so, it is not surprising to see exchange rates and prices track each other so closely. The only exceptions are the global inflation after 1914 and deflation after 1929, times when the foreign price level was volatile.

Table 1 suggests that the present crisis might break all records for output losses: output is far below the peak of 1997–98, it may go still lower, and it will probably not regain its former peak before 2005 based on even the most optimistic projections. This crisis has thus far avoided the hyperinflationary tendencies of the 1980s collapses, but nominal adjustments have already matched or exceeded those seen during the Baring Crash, as well as anything witnessed during the breaks in earlier hard pegs in 1914 and 1929.

The table also shows monetary and banking statistics that allow us to compare the financial contours of this crisis with earlier episodes. The data reveal a clear tendency toward financial underdevelopment in the Argentine economy over the long run. Each successive crisis has tended to boost velocity and drive the multiplier still lower, as the public fled bank money

9. *Banker's Magazine* (1899, p. 691), quoted in Ford (1962, p. 90).

for cash. (The lone exception was the fall in the multiplier in the hyperinflation of 1988–90, when a flight from pesos to dollars drove M0 down faster than M3.)

After a century or more of money and banking fiascos, Argentines are very wary of putting their assets in peso cash (outside money) or peso deposits (inside money). That is why recent measures of money velocity and the money multiplier register little improvement over figures seen a hundred years ago. Even relatively tranquil times, such as the long postwar interlude from the 1940s to the 1970s, were characterized by stunted financial development, because the techniques used to contain banking crises—policies of financial repression—were also inimical to long-run financial development.[10]

The 1991 convertibility plan had the potential to reverse the trend of financial involution. The plan went beyond simply introducing an ultrahard fixed exchange rate regime. A failure to grasp this point has been one of the common misunderstandings of Argentine policy during the last decade. The Argentine experiment of the 1990s was harder still, since it allowed for dollarized contracts. The law sought to restore credibility to the peso not just by pegging to the dollar, but by deliberately and legally embedding financial dollarization throughout the economy—thus raising the economic and political cost even further for any government tempted to countenance devaluation. The regime thus made even a prudent exit strategy difficult to devise.

If this regime were to fail, it would do so spectacularly. In this respect, it did not disappoint. In the short run, the violation of contracts caused by pesification has raised questions about institutions, property rights, and the basic rule of law. Unprecedented problems remain, however, even if these cracks are smoothed over. In past crises, some strategic decisions were taken to preserve a semblance of reputation in some spheres. The long-run budget constraint required someone to bear the pain, so partial default was needed. One or two levers could be pulled: the government could maybe default on debt, either internally or externally; or default on money holdings via inflation; or temporarily freeze assets and impose forced conversions. This time the authorities have pulled all the levers at once. In this sense, the past may provide limited guidance as to what comes next in Argentina, but leadership will be much in need again.

10. McKinnon (1973).

When Bishop summed up his article in 1890, he noted that radical solutions like foreign financial control were perhaps necessary in a "feeble or decaying state," but that Argentina was not in that position: it was, in his view, "a vigorous and growing state" where "material wealth exists and is developing." He also believed that Argentina was willing to patiently endure the sacrifice needed to rebuild a tattered reputation, and he quoted a remarkable assertion by President Nicolás Avellaneda, the leader who guided the country through a crisis in the 1870s, that "we will suffer thirst and hunger rather than not pay our debts."[11]

If a leader could navigate the present crisis as well as his predecessor did the 1890s, there would be much less to fear in the form of economic suffering in the short run. Back then a new commitment to fiscal prudence ensued under President Carlos Pellegrini. The Baring Crash had brought down the economically reckless regime of Miguel Juárez Celman, yet his vice president was of a different stripe. Through fiscal reforms at home and principled negotiation with creditors abroad, he laid the foundations for a return to stability and growth after the restoration of convertibility in 1899. He also reformed the banking sector in ways that were to restore stability in the medium term. Pellegrini's management of a debilitating economic crisis was courageous and inspired. His and subsequent administrations failed in one key respect, however, by leaving an internal-external convertibility weakness at the heart of the Argentine economy. This weakness was exposed in 1929.[12] It was obscured for many years by the strictures of financial repression at home and isolation from the global economy abroad, but it returned to center stage in the late 1990s, to be confronted by current and future administrations.

Unfortunately for Argentina, the spirit of gaucho banking has remained alive and well throughout the twentieth century. It affected both public and private banks, their relationships with both public and private creditors, and the sustainability of exchange rate regimes. In the rest of this paper, we discuss the dynamics of internal and external convertibility, and then

11. Bishop (1891, p. 538).

12. That such a flaw should erupt in the 1920s comes as no surprise, since many countries other than Argentina had to grapple with similar problems in a shifting political economy in the interwar period. At that time, gold standard rules—no matter how hard they appeared on paper—proved rather ineffective once the underlying political commitment dissolved or institutional pollution arose, thereby rendering a hard peg much less credible (Obstfeld and Taylor, 2003). One might view the dramatic worsening of Argentina's country risk in 2001 under the dollar exchange standard in the same light.

present a discussion of the 1929 and 2001 crises. Our aim is to illustrate how the problems of gaucho banking endured and ultimately brought down two convertibility experiments that for many years looked nearly indestructible.[13]

Gaucho Banking in Theory and History

In an earlier paper, we argue that a useful model of the internal-external convertibility nexus in the Argentine historical context can be found in an augmented version of the Dornbusch and Frenkel model, one that includes an allowance for possible gaucho banking behavior.[14] A theoretical appendix to this paper spells out this model in detail, but we discuss the core element here. The general intuition has much in common with several important advances in the recent theoretical literature that stress the linkages between fixed exchange rates, monetary policy inconsistencies, and banking crises.[15]

The dynamic assumptions are a critical part of the model and describe the forces affecting the evolution of inside and outside money under a currency board and a fractional reserve banking system. With regard to inside money, we consider the possibilities of "good" banks and "crony" (gaucho) banks, where the banking sector, for simplicity, is treated as consolidated.[16] Good bank policy is driven by a desired reserve-deposit ratio, $r^*(i)$, where r^* is a decreasing function of the (endogenous) interest rate, i. Here, better lending opportunities lead the bank to reduce the liquidity of its balance sheet in a prudent way so as to seek profits, but the actual adjustment of r to its target level, r^*, is a partial adjustment process, owing to the illiquidity of assets or other adjustment costs. Thus,

$$\frac{dr}{dt} = \nu[r^*(i) - r] + \phi(r),$$

13. Our discussion of the 1929 crisis draws on della Paolera and Taylor (2002).

14. Dornbusch and Frenkel (1984). See della Paolera and Taylor (2002).

15. See Velasco (1987); Chang and Velasco (2000); Burnside, Eichenbaum, and Rebelo (2001).

16. Following Dornbusch and Frenkel (1984), we ignore the role of other private banks in our model of the 1929 crisis. That is, we treat the Banco de la Nación, which already accounted for 50 percent of the banking sector by the 1930s, as a proxy for the entire system. An alternative view would be to integrate the balance sheets of the Banco de la Nación

where $r^{*\prime} < 0$ and $\nu > 0$ is an adjustment-speed parameter. The term $\phi(r)$ is assumed to be zero for $r > r_2 > 0$.

When reserves fall to dangerously low levels ($r < r_2$), however, we assume that $\phi(r)$ might be nonzero, and additional lending motives start to operate. We can imagine two possible ways in which the term $\phi(r)$ could operate. The first has $\phi(r) > 0$, $\phi'(r) < 0$, and $\phi''(r) > 0$ for $r > r_2$. We call this the conventional credit crunch dynamic: as reserves get precariously low, the good bank tightens credit even more, scrambling to liquidate loans and prop up r. The second possibility, with $\phi(r) < 0$, $\phi'(r) > 0$, and $\phi''(r) < 0$ for $r < r_2$, is what we call the crony bailout. In this case, the bank loosens credit as reserves tumble, choosing to sacrifice its own balance sheet to keep others afloat. Why private or public banks should choose to do this, of course, is a political economy problem, which we analyze shortly.

Outside money evolution is described by the dynamics of the stock of the reserves of gold (or hard currency), and we assume a rate of gold inflow that is driven by deviations of the (endogenous) local interest rate, i, from the world rate, i^*.[17] Thus,

$$\frac{dG}{dt} = \lambda G(i - i^* + \kappa; \ldots)$$

where $G_i > 0$. To enrich the discussion of comparative dynamics, we add two new parameters not in our original model: λ captures the responsiveness of external capital flows to price signals, and κ is the country's risk premium, which is exogenous for the present but could depend on the government's overall fiscal scenario.

This is a very simple myopic model, in which agents respond to instantaneous signals and there is no forward-looking behavior. There are no jumping (costate) variables, and the (G,r) variables define a classic deterministic dynamic system. Closure of the model depends on the specifica-

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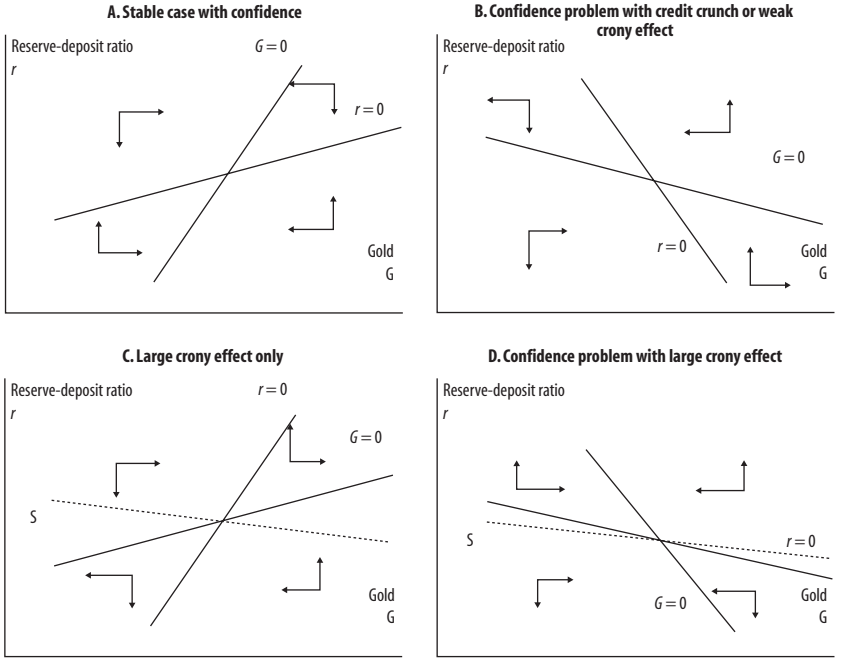
and the private banks and study the dynamics of the entire system. This is justified if the private banks have an implicit insurance guarantee from the state bank, which was actually the case. We repeated our empirical exercise with this aggregation of all the banks, and the results were unchanged.

17. That is, we assume gold flows are not (or at least not entirely) driven by the trade balance in the manner of David Hume's price-specie-flow mechanism. Indeed, in this short-run model, there is no real adjustment. Rather, we appeal to John Stuart Mill's view of an adjustment process driven largely by capital flows.

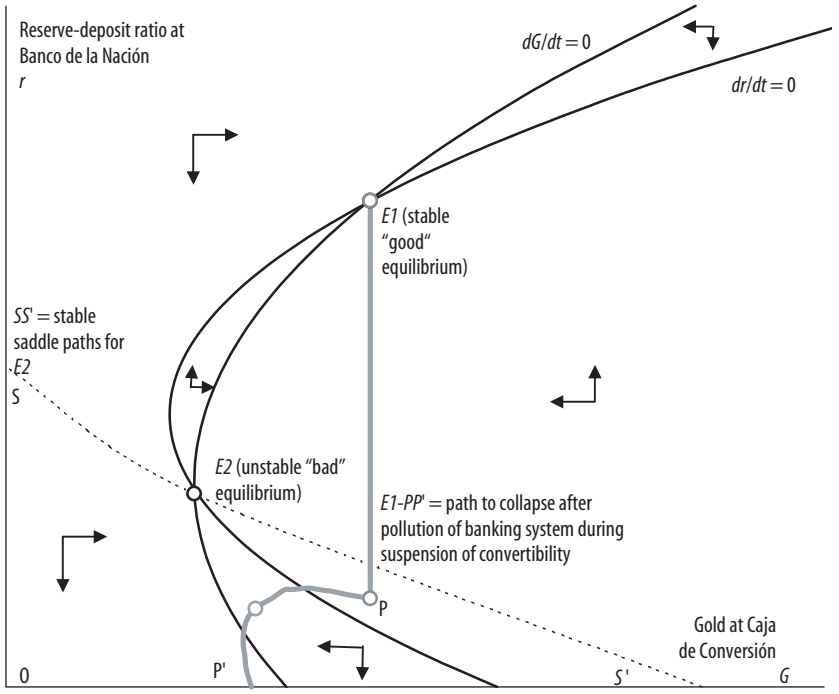
FIGURE 1. Equilibria in the Augmented Dornbusch-Frenkel Model



tion of a function, $i(G,r)$, to describe money market equilibrium as a function of bank balance sheets and the money base. A standard money-market equilibrium gives the model closure, and need not be repeated here (see the appendix). There are two possible cases: $\partial i/\partial r > 0$ and $\partial i/\partial r < 0$. In the former (normal) case, when bank reserves rise, ceteris paribus the money multiplier falls by the direct withdrawal of cash from the market, so the money market tightens. In the latter case, confidence effects dominate. When the public sees bank reserves rising, their demand for bank deposits (broad money) rises even more, because they feel that banks are safer; the switch from cash to deposits expands the money supply thanks to the money multiplier, and the money market slackens.

Which of these two scenarios prevails has important consequences for the overall dynamic solution of the model and the phase diagram in (G,r) space. So, too, does the presence or absence of the crony mechanism captured by the sign of $\phi'(r)$. There are thus four cases to consider, as shown in figure 1 and explained in the appendix. The characterization of such

FIGURE 2. Phase Diagram for Prewar and Interwar Argentina



local equilibria is simple, but it tells us nothing about the global dynamics. Therefore, an appeal to intuition is needed to posit the plausible nature and layout of potential equilibria in a real-world setting. As noted, the confidence effect will probably dominate at low levels of bank reserves, the kind of situation in which depositors get nervous. Also, the worst cronyism is likely to erupt in bad times in the economy—when bank reserves or gold stocks are low.

With such assumptions in mind, the configuration of the full dynamic system can be displayed once we set out the complete phase diagram in (G,r) space, as shown in figure 2. The direction of trends is marked in the various regions delineated by the curves $dr/dt = 0$ and $dG/dt = 0$. The intersections of the curves are two equilibria, labeled *E1* and *E2*. The point *E1*, with a high reserve level, corresponds to panel A of figure 1 and is a stable node, or a "good" equilibrium. The point *E2*, with a low reserve level, corresponds to panel C or D of figure 1: it is an unstable saddle point, or a

"bad" equilibrium. A possible stable saddle path for *E2* is shown as *SS′*, which delineates two regions in the plane. Above *SS′* is a stable zone where all paths lead to the sink at *E1*. Below *SS′*, however, is an unstable regime where all paths lead to collapse.[18]

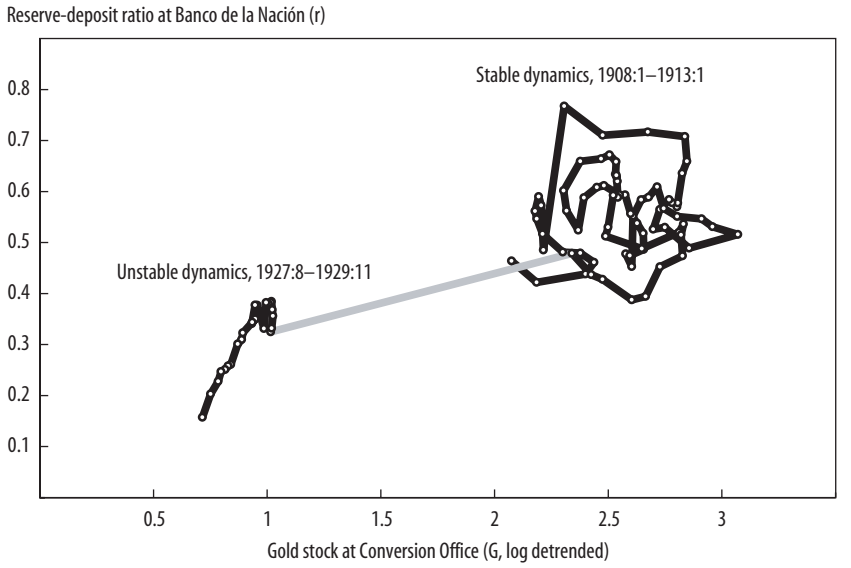
As originally devised, this theoretical framework was ideal for the purpose of studying the dynamics of internal and external convertibility in the Argentine case both before World War I, when the dynamics worked favorably, and in the interwar resumption of 1927–29, when they did not. The key question was how a well-defined dynamic system that had worked so well under the prewar gold standard could then fail so miserably just a few years later. Our model supplies an answer. The evidence suggests that during the Argentine belle époque prior to World War I, the money and banking system was operating in the stable zone of the phase diagram, in the vicinity of the stable equilibrium *E1*, with high confidence in the regime sustained by high reserve ratios. The resemblance of the upper-right zone of figure 3 to the stable equilibrium *E1* depicted in figure 2 is striking. The trend fluctuated but it did not explode unidirectionally. The gold standard system was stable at the beginning of the century because it was combined with prudent inside-money practices.[19]

This regime ended in 1914. External shocks and domestic policy choices made gradual, seemingly innocuous changes in the institutional framework. The emergency rediscount provisions of the Banco de la Nación and the Conversion Office introduced some implicit guarantees into the financial system and increased the scope for moral hazard and abuse. To its credit, the Conversion Office kept its emergency powers in reserve. This was not the case at the Banco de la Nación, where rediscounting and nonperforming loans grew steadily after 1914. The pollution of the balance sheet of the Banco de la Nación from 1914 to 1927 is represented in figure 2 by the line *E1-P*. The system had arrived at a point like *P* by the late 1920s. The dynamic system set to work again during the brief 1927–29 resumption, but this time it started from new initial conditions at a point like *P* and moved along a path like *PP′*. The path in the lower left

18. Note that this will not generate a crisis in the form of a complete drain of the gold stock—an external convertibility crisis—since the dynamics of G in the unstable region are such as to take paths away from $G = 0$. Rather, it is a region in which the bank collapses—that is, an internal convertibility crisis is the real threat.

19. Vector autoregression (VAR) analysis confirms this conclusion. See della Paolera and Taylor (2002).

FIGURE 3. Data for 1908–14 and 1927–29



zone of figure 3 reveals a trend much like the putative path *PP′* in figure 2. Again, the correspondence between the empirical paths and the phase diagram is striking.[20]

This is a clean theory that links the demise of gold convertibility to the pollution of the Argentine financial system in the 1920s through the persistence of gaucho banking practices. Yet does theory map into history so cleanly? We find a lot of additional historical evidence to support this notion, and we now summarize it briefly.

From the 1820s to the 1880s the multiple banks of issue in Argentina were noted for their exaggerated provision of cheap credit to finance federal and state administrations; the nominal anchors were very weak in that setting. After the Baring crisis in 1890–91, the Pellegrini government designed a new regime with two central institutions that were kept at arm's length so as to effectively isolate two functions. The note issue, which was ultimately backed by gold—that is, outside money and external convertibility—was the sole task of the Conversion Office. State and commercial

20. VAR analysis also confirms this claim. See della Paolera and Taylor (2002).

banking activities—that is, inside money and internal convertibility—were the domain of the Banco de la Nación and the rest of the financial system. It was hoped that this separation of powers would constitute a robust and credible regime by keeping inflationary pressures and banking activity separate from the institution that was ultimately responsible for the currency.

The Banco de la Nación maintained a clean balance sheet at first, as shown in figure 4. Then, in the 1913–14 crisis, an emergency rediscount law was enacted. Rediscounting surged as a fraction of all banking activity, nonperforming loans rose, and the capitalization level of the bank sank. This corrosion of balance sheets was in no way a function of crony lending relations with the government, but rather of crony loans to other banks and the private sector, as evident in the asset quality indicators in figure 5. Simple counterfactual liquidity calculations suggest that the Banco de la Nación helped a wounded banking system limp along for many years in the 1920s and 1930s.[21] Why? The bank did not have an explicit lender-of-last-resort mandate. It was not a true central bank, and it arrogated these powers in an ad hoc fashion. Why was the rediscount law enacted? And why did the bank take on the risks associated with rediscounting to private banks with weak collateral?

It is easy to identify one group that gained from the new policy. The state bank's rediscounting provided a bailout to the private banks once it became clear ex post that their balance sheets were in a bad state. The private banks essentially obtained highly subsidized banking insurance from a government that had made no such commitment ex ante. That such an inconsistent policy choice should have been made says a good deal about the machinations inside the Argentine corridors of power. Rich and powerful interests, including officers and shareholders of the banks, desperately needed cover from the risks they had taken, the loans that had gone bad—some of which were loans to the very same officers and shareholders or to their real or shadow corporations.

Gaucho banking has thus been very resilient. Even after the Baring Crash wiped out most of the Argentine banking system, the spirit of gaucho banking lived on into the interwar period. Ultimately, in 1935, the banks got the final bailout they sought as part of a political-economy solution worked out by the government and its new Central Bank to head off

21. See della Paolera and Taylor (2002).

FIGURE 4. Pollution of the Banco de la Nación Balance Sheet, 1890s–1930s

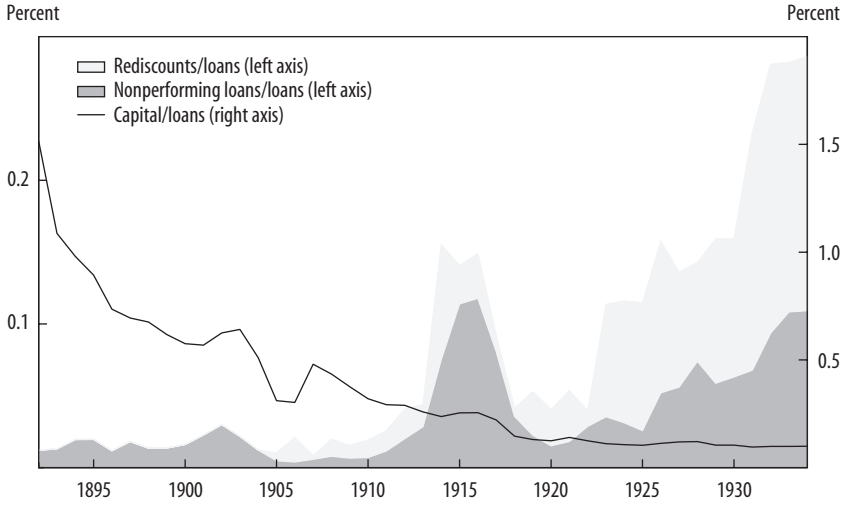
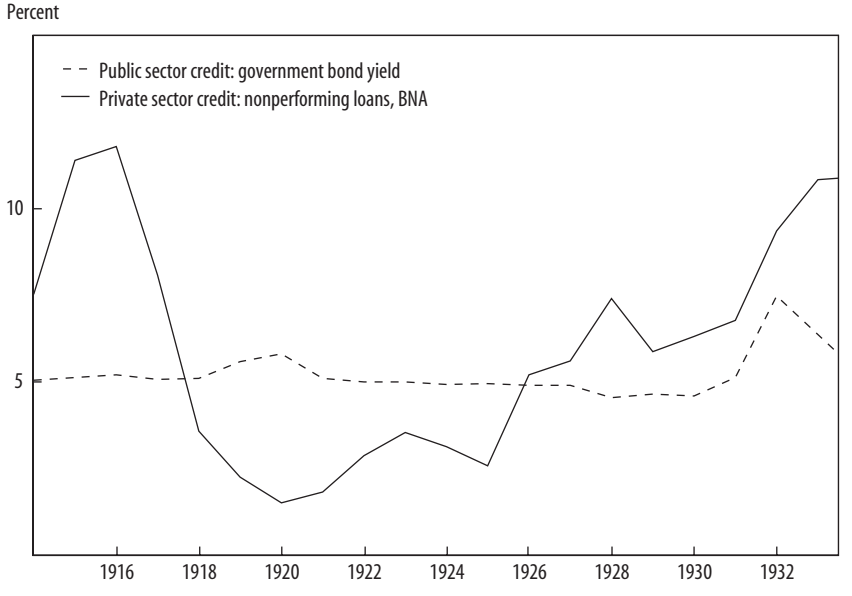


FIGURE 5. The Rot of Bank Balance Sheets, 1914–34: Public versus Private Debt Quality



an insolvency crisis arising from decades of bad loans. It cost about 7 percent of GDP and was perhaps the biggest single gaucho banking action of all time, at least until the present crisis.[22] One might imagine that after such a disastrous experience, gaucho banking would have been laid to rest, but this trait appears to have survived, from the financial repression of the early postwar period to the opening of the economy in the 1990s—albeit with a different twist today.

Gaucho Banking Today

A small country such as Argentina is naturally always vulnerable to foreign shocks—such as the Tequila crisis, the Asian contagion, the Russian default, and the Brazilian devaluation—yet all of these different shocks were handled perhaps as well as could be expected within a second-best hard-peg regime. However, while the Argentine outside money mechanism and banking regime were regularly proclaimed the darlings of the emerging markets, there has been a deep problem in the design of the money-banking nexus since the inception of the Convertibility Plan.

The 1990s Convertibility Law was, in fact, a dollar exchange standard and more. At first, everyone saw its short-run aim as establishing a nominal anchor and decisively ending the recurrent use of the inflation tax mechanism. It also respected the choice of agents to basically use the U.S. dollar for large transactions and as the medium for storing value and holding wealth. It was not immune to internal weakness, however, and a law that was supposedly robust in its respect for acquired property rights (that is, a fixed peso-dollar commitment) could not endure in the Argentine political economy nexus.

This flaw was visible in the earliest crises. During the Tequila crisis, good luck was on the Argentine side because Mexico was essentially bailed out by the United States and the crisis was short-lived. Even so, the

22. Many of the 1920s rediscounts eventually went bad and ended up on the state balance sheet, and the system was evolving incoherently toward a central banking idea. In its rediscounting actions, the Banco de la Nación was not engaged in pure lender-of-last-resort actions, like a true central bank following Bagehot's principle of lending freely at a penalty rate. Such actions would have left the bad loans with the private banks while extending temporary liquidity. Instead, the state bank lent cash at only 4.5 percent—far below even the rate offered on time deposits!

potential inconsistency between a dollar exchange standard and a banking system that "creates" money (even inside dollar money) was brought to the forefront. Few saw that this inconsistency would, in the end, serve as a crucible for the most extraordinary and rapid economic meltdown that has ever been seen in any emerging market economy. What should also become clear is that the real disaster began about the time when agents started to feel that even the most basic property rights were being repudiated by the monetary and fiscal authorities.

There is thus a crucial difference relative to the 1929 crisis. Back then, it was the rottenness of the private sector that hampered the solvency of the financial sector. In the present episode, the insolvency of the public sector (and the unwillingness, incompetence, weakness, or political fragility of the Alliance government) put in motion a catastrophic dynamic path that polluted the monetary, financial, and pension plan system.

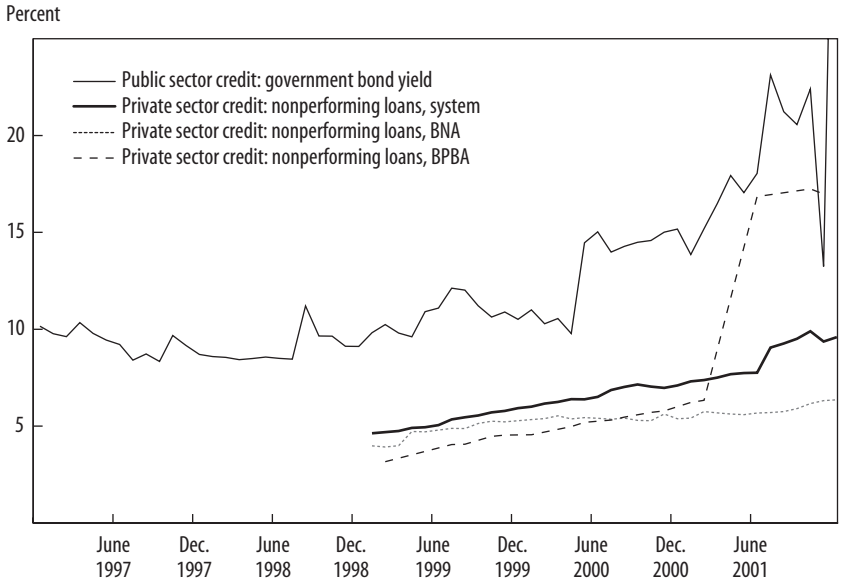
So why make a comparison with 1929? We argue that the transmission mechanisms were the same in both cases. Both systems were such that they could easily jump from a good equilibrium to a bad or terminal one if buffeted by a large enough exogenous internal or external shock, and in both cases the exogenous shocks were internal to Argentina and were generated by gaucho banking behavior that was unconstrained (indeed, encouraged) by the political economy structure. One key difference, however, is that because the Argentine economy was acutely dollarized in 2001–02, but was not "metallized" in 1929, today's meltdown process was inevitably much, much faster than in the past.[23]

In figure 6, we show proxies for the solvency situation of the private and public sectors. Although the activity level was already in a deep slump by 1999, the driving force behind worsening expectations was clearly the solvency of the government and some official banks like the Banco de la Provincia de Buenos Aires (BPBA). This is exactly what is shown in figure 7. The quality of banking assets displays a neutral evolution until around January 2000; after that, the driving force is expected solvency of the government's debt, and from April 2001 the banks and pension plan firms were absorbing more and more public bonds.

The augmented Dornbusch and Frenkel model presented in figure 2 can help explain the dynamics of the 2001 crisis. Unlike 1914–27 there was no

23. Economic agents in 1929 had not experienced monetary expansion abuses since 1891, whereas in 2001 memories of hyperinflation in 1989–90 and persistent inflation taxes since the 1950s were very fresh.

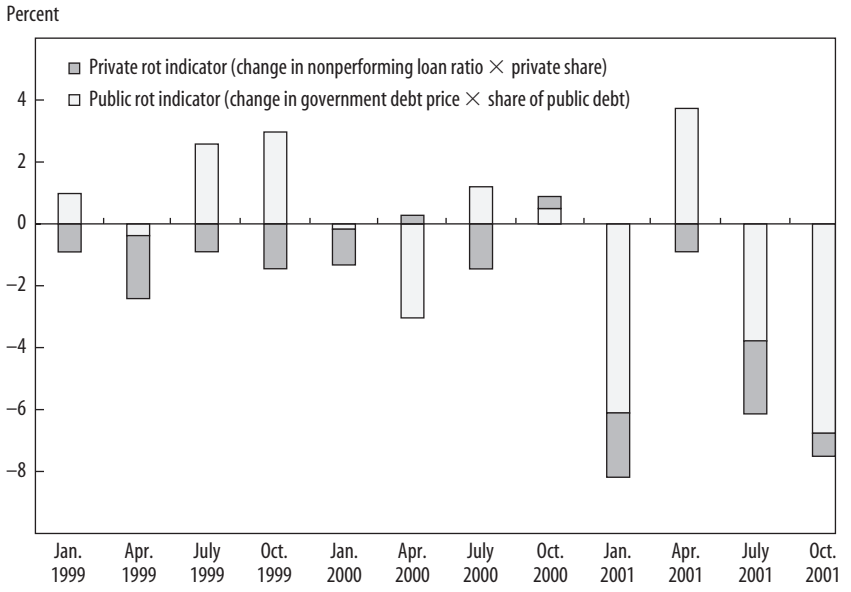
FIGURE 6. The Rot of Bank Balance Sheets, 1996–2001: Public versus Private Debt Quality



suspension of convertibility, in which case—one might ask—how could the dynamic system shift from a stable to an unstable zone? A number of exogenous shocks could have mattered, or, collectively, might have added to the probability of a transition to explosive behavior by causing the state variables (or initial conditions) to change discontinuously. Consider the following scenarios.

—Country risk shocks. News of underlying fiscal problems causes a sudden increase in country risk, κ. In figure 2, this corresponds to a need for higher equilibrium domestic interest rates to maintain external equilibrium. This means a leftward shift in the $dG/dt = 0$ curve and, therefore, a leftward and upward shift in the unstable equilibrium *E2* and an upward shift in the saddle path SS'. That is, the unstable area on the plane expands. If it expands to include the current (G,r) point, then the system becomes unstable. In fact, a large enough shock to κ could lead to a catastrophic outcome in which the qualitative behavior of the system changes: if the $dG/dt = 0$ curve moves so far to the left that it no longer intersects the $dr/dt = 0$ curve, then suddenly there are no equilibria at all.

FIGURE 7. The Rot of Bank Balance Sheets, 1999–2001: Public versus Private Debt Quality, Impacts



—Hotter money shocks. Structural changes in the markets lead to a sudden increase in the parameter λ (external capital flows become more responsive to prices, as might happen if external borrowing is terminated and gold flows must finance all imbalances). This causes the dynamics in the *G* dimension to speed up without shifting the location of the equilibria. The effect is to rotate the saddle path *SS′* around *E2* to a flatter position, again expanding the unstable zone.

—Illiquid asset shocks. Structural changes in the markets generate a sudden decrease in the parameter ν (banks must adjust their portfolios more slowly, as might happen if a real shock—a recession—leads to an increase in uncallable loans in the short run). This causes the dynamics in the *r* dimension to slow down without shifting the location of the equilibria. Again the effect is to rotate the saddle path *SS′* to a flatter position, expanding the unstable zone.

—A bank robbery shock. The government effects a one-time "theft" of reserves, *r*, from the banks in exchange for debt in a nonmarket type of transaction (that is, a forced loan). This causes the system to jump in (*G,r*)

space vertically downwards by the amount of the theft. In 2001 we associate this forced saving with the government's decision to impose the so-called megaswap on the financial sector. (The confidence function could also experience an exogenous shock if agents suspect additional future robberies, compounding the problem.)

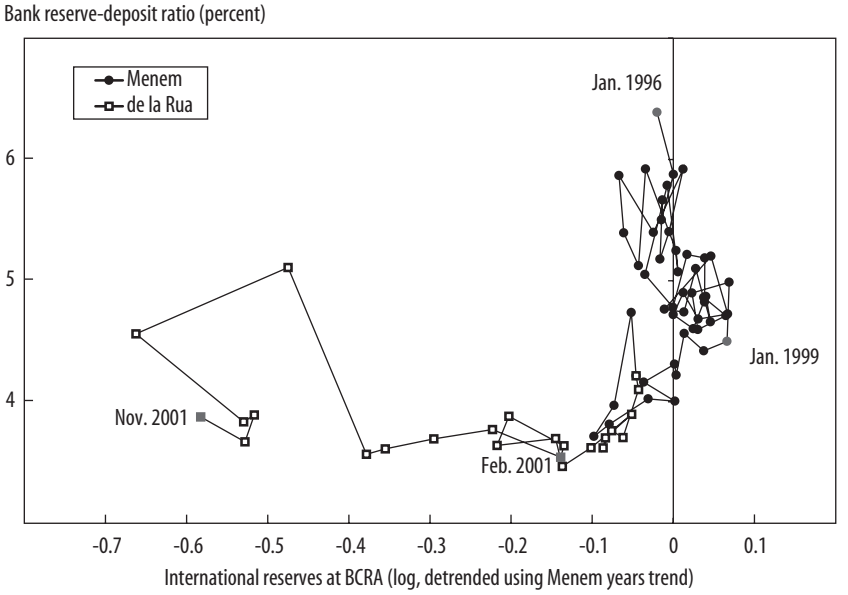
Of course, it is possible to tell a story of the 2001 crisis using some or all of these elements, and we do not wish to assert a monocausal explanation. All such factors surely contributed, but our reading of history, based on the timing and magnitude of the shocks, is that the fourth and final mechanism was the most important exogenous force. Moreover, the institutional pollution engendered by the megaswap bank robbery (scenario 4) also endogenously changed market reactions via increased country risk (scenario 1) and even hotter flows of hard currency (scenario 2). Our narrative henceforth pursues this line of argument.

The Argentine system withstood tremendous external shocks and recession in the 1990s. There were signs of increasing health, even. The level of monetization in the economy (the increase in the demand for financial assets within the system) was impressive until 1999 (see table 1), and voluntary dollarization—the choice in the denomination of deposits and loans by agents and banks—was stable at a high level of 62 percent. Overall, a fairly robust monetary and financial scenario held through 1999: official data show that financial deepening (M3 and deposits relative to GDP) was improving until early 2000 and nonperforming loans did not show any major alteration until 2001.

We thus share with many the view that the deep force in the crisis was fiscal: robbing the banks was merely a desperate attempt to alleviate that problem. Bad fiscal behavior need not have affected private banks, or international reserves, if the laws passed in 1991 had been respected. But economic agents understood all too well (based on Argentine history, we would argue) that these laws might not be enough to secure these parts of the economic system in the renewed presence of intense populist demands that put property rights in peril.

As shown in figure 8, a change in the political regime was under way by October 2000 and was concluded in early April with the change in the macroeconomic and central bank policy regime (the return of Cavallo and departure of Pou). From this perspective, April 2001 was the end: the fateful jump from a manageable and still reversible situation, technocratically speaking, to disaster. As in the 1914–29 episode, changes in laws (and

FIGURE 8. Phase Diagram for 1996–2001



hence in expectations and property rights) produced a jump from a sustainable money-banking nexus to an unsustainable one. The evidence supports this historical parallel. Figure 8 shows that the nexus of international reserves and the reserve-deposit ratio was stable for the 1996–99 period. What is very impressive is the speed with which economic agents adjusted to the change in the macroeconomic and central bank regime in April 2001, a change that was arguably foretold with the demise of Economy Minister López Murphy in March. Again, the alteration of the dollar exchange standard and the intervention of the Central Bank in early April 2001 mark a break, and from a dynamic point of view it was the end of the regime put in place in 1991.

Where then did the weakness of the money-banking nexus originate, and how was it obscured for so long? Our main argument is that the money-banking regime was fragile already within the 1991 Convertibility Law and given a political economy structure prone to disrespect property rights. And clearly it was fragile basically because the Central Bank of Argentina could not with one instrument attain the two goals of internal and external convertibility: to support the external value of the peso and to

shore up an eventual crunch in the (mostly dollar-denominated) monetary liabilities of the system. While the banks were creating "argendollars," the Central Bank could not, of course, print actual dollars.[24]

Economic agents were always well aware of this Achilles' heel in the system—and the only signal they needed to foresee a change in the regime was a populist government putting a tax levy on genuine resources. They ran to get their resources out as fast as they could. The period March 2001 to November 2001 was one of disaster dynamics, to paraphrase Pou.[25] Even if the dynamics were not exactly monotonic (the August hiatus is explained below), figure 8 plots a clear path toward a crash.

The path was assured when the government made its advance on banks and private pension funds with the megaswap that converted public debt into a thirty-year bond at a 16 percent interest rate. Two-thirds of this swap was absorbed by domestic financial institutions. Already in April, however, many in the public suspected that banks might end up colluding with the government in a fiscal freefall. It was then, in early 2001, that a war of attrition emerged, first between the sophisticated investors and the government-banking axis (Phase 1: April through June) and then between virtually all private agents and the government-banking axis (Phase 2: September through November).

The game played out as follows. With the banks supporting the government objectives, banks realigned their asset side to support the public sector. The private agents, meanwhile, detected the incipient cronyism and began to realign the banks' liability side. The banks started to recoup credits from the private sector, and the lending rate (thirty-day dollar) for AAA corporate debt rose from 13 percent in February 2001 to 27 percent in October 2001. At the same time, lending to the public sector jumped from one-third of total lending to almost a half by the end of 2001 (see table 2). The private sector was thus crowded out, and the banks became polluted.

To make things more dramatic, the public's voluntary dollarization increased from a stable two-thirds of loans and deposits (where it had been for many years) to almost 75 percent just before the implementation of the bank deposit freeze (*corralito*). Private agents thus increasingly tried to hedge against a domestic institution and adopted more dollar-denominated

24. An opportunity to change this state of affairs was clearly present after the warning events of the tequila crisis, but the chosen solution, which was then deemed satisfactory, was simply the negotiation of a substantial contingent credit line with international organizations. In the end, this proved inadequate.

25. Pou (2002).

TABLE 2. Monetary and Banking Evolution 1995–2001

	Financial fragility				*Evolution of dollarization*		*Crowding out ratio of public credit to total credit (percent)*
Year	*M3/M0*	*M0/ Reserves*	*M3/ International reserves*	*Change in deposits (percent)*	*D*/(D + D*)*	*L*/(L + L*)*	
1995	3.9	0.94	3.7	—	0.57	0.58	32
1996	3.9	1.03	4.0	19.5	0.58	0.60	33
1997	3.7	1.04	3.8	21.9	0.56	0.61	31
1998	4.2	0.88	3.7	11.8	0.58	0.62	30
1999	4.2	0.89	3.7	2.3	0.62	0.62	33
2000	4.5	0.90	4.0	3.3	0.65	0.62	35
2001	6.9	0.78	5.4	–17.7	0.74	0.71	47

Source: Authors' calculations, based on Central Bank and Finance Ministry data.

assets. Hence, even when uncertainty was paramount, the economic agents and the authorities (intentionally or not) were enhancing dollarization. At this point, the war of attrition was at its climax: either the system would break in favor of a discretionary soft-budget monetary regime or there would be total dollarization and a substantial adjustment in the cash flow in dollars of public (national and provincial) finances.

Depositors held one faint hope, namely, that the internationalization of the banks would play a role at a crucial hour in forcing a respect for the rules of the game. They may also have believed that external discipline from the IMF would protect the rule of law against abuses, but help continued to arrive even after Argentina was on the slippery slope. The IMF disbursed another loan tranche in August 2001, an action for which the Fund has been extensively criticized elsewhere.[26] This final loan explains the August jump in international reserves (seen in figure 8), which were replenished by the IMF funds—but of course there was no change in fundamental policy measures, and from the public's perspective the government's prior abuse of property rights in April and May appeared to be tolerated, if not vindicated.

With the arrival of the crisis seemingly unconstrained, gaucho banking tendencies emerged. The policy framework in late 2001 can only be described as one of chaotic desperation. In the last two months of the year, fiscal and debt measures became incoherent, and central banking

26. For example, Mussa (2002).

resolutions accelerated dollarization. Some Argentines held on to the conviction that it would be more complicated for the government to sack their assets if they were in a foreign bank and if they were in genuinely dollar-denominated assets—but in the end not even these obstacles stood in the way of the *corralito* in December and the pesification in January 2002.

The Political Economy of Gaucho Banking in 2001

Why do we characterize the banks' behavior as gaucho banking? Is this a fair description of what happened in 2001 in Argentina? Were banks coerced or did they collude with political forces? And what pressures drove the political operators into such schemes?

Banks clearly colluded with the Argentine Republic's government in the first half of 2001. Our interpretation is that during this brief period, bank behavior bore the legacy of recurrent bailouts in not-so-distant Argentine financial history. The records of the 1981, 1985, and 1989–90 bailout episodes, carried out under the auspices of the 1977 Banking Law, were still fresh in the minds of agents and bankers alike. The presence of a radically different monetary regime, the dollar exchange standard, was surely underestimated and did not prevent bankers from engaging in a gamble to temporarily bail out the government. The initial switch by banks in April 2001 and May 2002 toward investing in high-yield sovereign bonds was the start of an extremely risky policy—one that can be transparently seen as a collusive outcome between most banks and the government. The implicit agreement was simple: you help me now and I will help you in the immediate future.

These dangerous liaisons are well recognized, as in de la Torre, Levy Yeyati, and Schmukler:

> Instead of accepting that an orderly approach to debt reduction was needed after the failed attempts to restore growth, the government averted debt service arrears temporarily by absorbing the liquidity of the financial system—mainly of banks and pension funds. In particular, in April 2001, the government used moral suasion to place U.S.$2 billion of bonds with banks in Argentina, allowing banks to use those bonds to meet up to 18 percent of the liquidity requirement. The banking system thus became less liquid and more exposed to a government default. . . . As options for financing the deficit through debt rapidly shrank, the specter of money printing loomed large.[27]

27. De la Torre, Levy Yeyati, and Schmukler (in this volume).

Moral suasion, which is far weaker than coercion, could have been resisted by the banks, but it was not. To an extent that was unknown under the Convertibility Plan, fiscal needs and the monetary base were again firmly intertwined from April 2001. Thus began the pollution of the entire regime.

Banks were also subject to moral suasion to take the megaswap in mid-2001, and by then they were quite convinced that they would somehow be bailed out by the government if the high returns did not materialize. It is beyond the scope of this paper to speculate on where they thought these resources would come from ex ante—and whether it would involve pesification. By the end, however, they surely saw pesification as a potential answer if the scheme were to fail.[28] Our approach suggests one way in which it did fail: the government and the banks neglected to include in their calculation an even more intelligent group of agents, the public. If the banking sector is weakened, disaster dynamics can take over as the "war" between the agents and the state unwinds. We have documented this progression for Argentina from early 2001.

In addition to the direct relationship between the private banks and the state, however, the central government was engaged in a war on another front—with the provincial governments (and their own banks), especially the large and opposition-controlled Province of Buenos Aires. The fiscal war of attrition is an old idea, but the Argentine crisis saw an expansion of the battlefield. Specifically, provincial policies turned the Banco de la Provincia de Buenos Aires into a very large bomb. This had important consequences for the implosion of the banking sector and reveals a severe political economy constraint in a *caudillo* world.

Looking back at figure 6, we can see that the national government was not the sole bank robber. The behavior of the Banco de la Provincia de Buenos Aires is singularly characterized by a massive explosion in crony lending as judged by the evolution of nonperforming loans for the year 2000. The differential behavior between the Banco de la Nación Argentina, controlled by the national government, and the Banco de la Provincia de Buenos Aires, controlled by Eduardo Duhalde's supporters in the Peronist party, hints that a fiscal war of attrition between the government and the most important Argentine province controlled by the opposition was already emerging in 2000. Moreover, this war was not merely to be con-

28. See Hausmann and Velasco (2003).

tested on the usual battlefield of receipts, taxes, and the fight over provincial revenue sharing under the federal compact. Rather, because of the extraction of resources from the state bank, the BPBA, the new offensive had implications for the larger financial system, and it raised questions of the national government's lender-of-last-resort capability.

This game, its political economy, and its conduit through the BPBA have been neglected in the literature, but they are highly relevant for understanding the larger fiscal crisis, its transmission in part from the provincial to the federal level, and its infection of the banking system. The game unfolded as a contest between a national government that, initially, was desperately sticking to the established rules of the game and the opposing forces of Duhalde and the traditional political class, which could only survive if soft money was provided on a continuous basis. The soft money conduit was not threatened for most of the 1991–98 period: the national government was in Peronist hands, the economy was booming its way out of a long slump, and fiscal largesse was accommodated, thanks to the leeway provided by a highly liquid international capital market. Fiscal problems were present (for example, the country ran persistent public-sector deficits even during boom times), but they were not very apparent to most observers. When international liquidity ebbed, the war of fiscal attrition broke out in the banking and the monetary arenas with the printing of provincial quasi-monies, in particular, the *patacones*.

In the fiscal arena, therefore, the Convertibility Law forced the question for the nation and the provinces. Provincial governments ventured to use provincial and state banks just as the national government was using the financial system and the liquidity of convertible pesos for fiscal needs—and they assumed that all quasi-monies would always be accepted at par with the Argentine convertible peso. Convertibility and a sound banking system were essentially at odds with the old political economy status quo: pesification was thus a populist course of action that was building for almost a year, gathering support at home and abroad.

Ironically, although some of the worst fiscal leakages originated from the Buenos Aires provincial authorities, their leader (Eduardo Duhalde) was eventually installed as the President of the Republic in early 2002, just as pesification was implemented. During the power struggle that followed President de la Rua's resignation, reports were rife that Duhalde and his supporters usurped power through a crude power struggle on the street, although in many ways the key fighting had taken place much earlier—not

on the streets, but on the books. Leading the fiscal war with other provinces and running down the assets of the BPBA were major components of the economic coup d'état that ended the convertible regime and destroyed de la Rua's authority. The change of presidents was then something of a coup de grace that put the convertibility plan out of its misery, allowing space for default, pesification, property rights adaptation, gaucho banking, and the like.

Lessons from the Past and Present

The purpose of this paper was to compare two crises in detail, in the hope that the lessons of two failed convertibility plans might inspire better performance in the future. The two crises of 1929 and 2001 exhibit many similarities in their dynamics but important differences in their root causes. The monetary regime was undoubtedly a striking common factor in both cases. Under a gold standard (or dollar standard), adjustments in the money-banking nexus need to be decisive and fast. Attempts to use monetary and banking institutions in a discretionary way to lean against the wind can backfire once the (very tight) limits on room for maneuver are reached.[29]

This is not news to Argentines. Alec Ford's vision was of a gold standard that amplified economic cycles:

> It is easy to understand the dislike of some Argentines for a system which dictated that a slump must be aggravated by monetary reactions, although, doubtless, they had forgotten that the same system served to enhance booms.[30]

Silvio Gesell held a similar view:

> Our money is so intimately and solidly linked to gold, as the pound sterling is and even more so than the franc and the mark. . . . If, in some far-off country with a gold standard, a crisis develops, this crisis will have immediate repercussions for the Argentine paper currency. . . . And it should be that way, as that is what the Law of Conversion is all about. He that enjoys the advantages of an international money must also accept its inconveniences, the pros and the cons of monetary solidarity.[31]

29. This is not to say that hard pegs offer zero room for maneuver—just that it is not very much, relatively speaking (see Frankel, Schmukler, and Servén, 2002; Obstfeld, Shambaugh, and Taylor, 2002).

30. Ford (1962, p. 188).

31. Gesell (1909, p. 56).

Policymakers—whether in Buenos Aires or Washington—unquestionably knew that this was the price to be paid for the chosen anchor. They will again have to question whether they really can tolerate the limits imposed on them by ultrahard pegs, especially when the institutional superstructure of their economies is not as highly developed as their ambitions.

Hard pegs and open capital markets can expose soft money and banking regimes to harsh tests. This is an unavoidable implication of the trilemma. There can be no lender of last resort, and almost no monetary activism is possible except within tightly prescribed limits. In addition, there can be almost no policy independence whatsoever if fiscal options are closed off by a debt ceiling, as in Argentina in 2001. Paradoxically, when the options are most limited, the situation may become very dangerous indeed. Policymakers might then be tempted by desperate measures such as printing money or, what is essentially the same thing and arguably more forthright, actually robbing the banks.

The collapse of the first convertibility plan in 1929 can be traced to changes in money and banking laws in 1914, which set in motion a very slow train wreck—because convertibility was suspended until 1927, and only then was the instability exposed. Moreover, demand for money in peso form was still almost universal. The collapse of the second convertibility plan in 2001 was also due to changes in the money and banking regime. This was a fast train wreck, however, because there was no suspension, dollarization was already very high, and the institutional changes were so large. In 1929 asset pollution originated in the private sector (with bank complicity), whereas in 2001 it originated in the public sector (also with bank complicity). Either way, the cronyism of banks was a crucial factor in encouraging the destruction of seemingly robust monetary and financial institutions.

We agree with many observers that the root problem in 2001 was fiscal, and our paper merely suggests ways in which fiscal problems can be more or less dangerous depending on how their collateral damage is (or is not) contained by clean institutions. As we have noted, if the long-run budget constraint is to hold when fiscal conditions are unsustainable, then the authorities have to default on something. Perhaps the most pressing question is why the situation could not have been allowed to proceed via a simple and orderly default process, if indeed fiscal sustainability was the problem, since that at least might have avoided the collapse of the entire

money and banking system, too. The failure to navigate to such a position turned a serious but technically manageable default into a complete and utter meltdown of the economy and its institutions.

What are the alternatives? Given a gaucho banking world, more serious consideration could be given to an alternative second-best monetary regime: dollarization, plus a more robust separation between outside money and inside money than was seen in either the 1920s or the 1990s—a policy, perhaps, of narrow banking. Good property rights in money and banking can coexist even with a rotten fiscal regime. The latter means that the economy is going to be fragile, but the second-best situation would provide a degree of protection. Dollarization and narrow banking would prevent potentially catastrophic leaks from the fiscal side to the monetary and banking nexus. Separating outside money from inside money will not cure the problem of excess voracity in the fiscal domain, but economic agents would feel an immediate effect through the pricing of their assets in banks if the balance sheets of the banks were polluted by fiscal spillovers. In other words, it would be more transparent if the banks were being robbed. The value of deposits might be volatile, but the economy would not face a terminal state in which the losses are socialized ex post. The *corralito* and pesification solutions might then be avoided.

Another policy that might increase constraints on Gaucho activity would be free pricing of provincial debt, which formed a large and increasing share of bank assets in 2001, including the notorious quasi-monies such as the *patacones*. The provinces were (and still are) a polluting factor in the accelerating fiscal implosion, but this reflected in part their remarkable ability to float the bearer bonds. In 2001 the Argentine government, instead of accepting the provincial monies as fiscal receipts at a market (discounted) value, allowed the payment of taxes with those provincial monies at par. By unifying the federal and provincial balance sheets with this decree and effectively permitting all the provinces to print unlimited pesos, the administration technically ended the convertibility plan. The act of taking control of the note issue away from the Central Bank was remarkable—not only because it turned the clock back to the 1880s, but also because it generated a notable lack of dissent. In the face of an unwillingness on the part of the provinces to adjust, the better solution would have been to impose on the provinces a market discipline for their debt issue via a floating exchange rate for their quasi-monies, while still preserving a convertible regime (even short of dollarizing) at the national level.

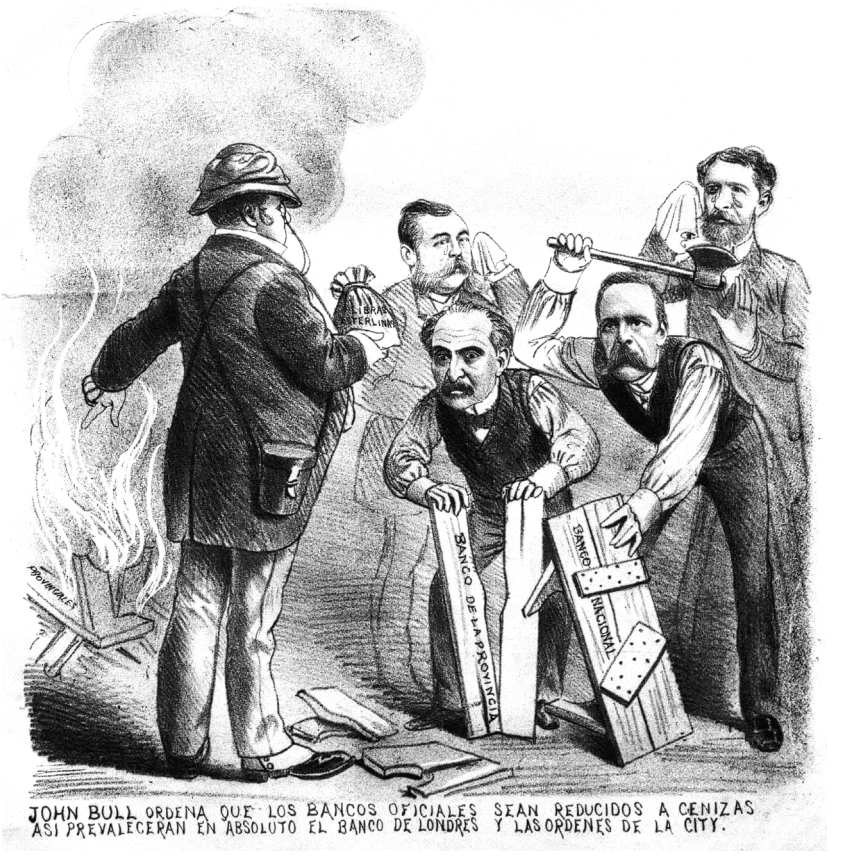
What next? Progress will be slow. A new political class could address the crony functions of the banks, especially the quasi-public banks, to remove the serious corruption problem from the money and banking regime. As in the 1890s this might mean the wholesale closure of the crony banks themselves, which happened back then under keen pressure from London (see illustration). Even then, it did not eradicate the problem forever. Taking such a step now would be a radical plan, but it might be the only way to end gaucho banking and deliver a clean money-banking nexus in an institutionally weak economy. It is quite hard to see this happening without strong external pressure, for example, through IMF conditionality. Robbing the banks was the only means for the old political class to survive—if only briefly—by socializing the losses, but it has left a heavy burden on future generations.

The gaucho banking problem identified by Lawson more than a century ago has yet to be solved. Without some fundamental changes to its monetary-fiscal-banking architecture, Argentina will experience instability problems for decades to come. To recapitulate, gaucho banking is a scenario in which either the public or the private sector, through complicity with the banks, imposes a capital levy (a grab from depositors). Given the perils of time-inconsistent behavior, no developed country today would countenance such expedients. There may be other problems in designing banking policies, but if anything they revolve around the reverse fear, namely, worries over a "negative capital levy" (a gift to depositors) arising from bailouts via moral hazard. In Argentina in 2001, the concern was that of an ancien régime: to use the banks as a fiscal source for a government bailout. Welcome to the Willie Sutton School of Public Policy: when modern economic orthodoxy collides with *caudillo*-style institutional backwardness and leadership complicity, a desperate regime with its hands tied in both the monetary and fiscal domains will be sorely tempted to impose a capital levy on the financial sector, because as Willie Sutton said when asked why he robbed banks, that's where the money is.

Theoretical Appendix

The model focuses on two major financial entities. The Conversion Office has a balance sheet that consists of liabilities in the form of circulating notes, H (high-powered money or monetary base), and assets composed of gold, G, and securities, S. By assumption, $H = G + S$. The banking sector

The Cure for Gaucho Banking? The "London Consensus" after the Baring Crash



Caption: *John Bull ordena que los bancos oficiales sean reducidos a cenizas así prevalecerán en absoluto el Banco de Londres y las ordenes de la City* [John Bull orders that the official banks be reduced to ashes, so that the power of the Bank of London and the orders of The City will prevail]. (*El mosquito* año 28, no. 1473 [12 April 1891].)

This cartoon is a reference to the massive shock to the financial system during the Baring Crisis, which left the domestic banking sector in ruins. Only the foreign banks survived, many of them British. Bench and bank are the same word in Spanish (*banco*), a play on words. Finance Minister Vicente Fidel López (left) and President Carlos Pellegrini (right) make firewood from benches bearing the names of the Banco de la Provincia de Buenos Aires and the Banco Nacional. Already in flames are the other provincial banks. The Englishman supervising the pyre clutches a bag of *libras esterlinas* (pounds sterling) as teary-eyed financiers look on.

(the public Banco de la Nación and others), which is treated here as a representative bank, has a balance sheet with liabilities made up of private and public banking deposits (D and D', respectively) and assets in the form of note reserves, R (vault cash), and loans, L. Here, $R + L = D + D'$.

The demand for broad money is assumed to be standard, given by $M = m(c,r)\ (G + S)$, where $m(c,r) = (1 + c)/(c + r\alpha)$ is the money multiplier, $\alpha = (D + D')/D$ is the ratio of total to private deposits, $r = R/(D + D')$ is the reserve-to-total-deposit ratio of the bank, and $c = (H - R)/D$ is the currency-to-private-deposit ratio of the (nonbank) public. Clearly, $\partial m/\partial r < 0$, and we can also assume that $\partial m/\partial c < 0$, since $r\alpha < 1$ is the empirically relevant range. The currency-to-private-deposit ratio, c, desired by the public is assumed to depend on how banks behave. A higher reserve ratio at the bank inspires confidence and leads to a lower demand for currency, so that $c = c(r)$, where $c' < 0$. Given the public's choice of c, we can then write broad money, M, as $M = \mu(r)\ (G + S)$, where $\mu(r) = m[c(r),r]$.

An important feature is that the relationship of the multiplier to the reserve-to-total-deposit ratio, r, is ambiguous, and the cases $\mu'(r) < 0$ and $\mu'(r) > 0$ are both possible. We argue for an intuitive mapping between this derivative and the reserve level. In the usual case, when bank reserves are adequate ($r > r_1$), we assume that $\mu'(r) < 0$, so that confidence effects, operating via $c(r)$, are not dominant. When bank reserves are sufficiently small ($r < r_1$), we assume that the public gets nervous, their currency holdings react more acutely to the reserve level, $\mu'(r) > 0$, and confidence effects dominate.

Money-market equilibrium will generate an equilibrium interest rate such that $\mu(r)\ (G + S) = L(i,y)$, where $L_i < 0$, $L_y > 0$. The model is purely a short-run model of crisis, so it is assumed that output, y, remains exogenous in the short run. We invert and solve for the interest rate, $i = i(r,G;\ldots)$, using the implicit function theorem. Clearly, $i_G < 0$; but the sign of i_r is ambiguous: it is of the opposite sign to $\mu'(r)$, and the latter is ambiguous because of the confidence problem. Dynamics complete the model as described in the main text.

As we show in an earlier paper, this dynamic system admits four types of equilibria, described as follows and shown in figure 1.[32] The first is the standard solution given by Dornbusch and Frenkel:[33]

32. See della Paolera and Taylor (2002).
33. Dornbusch and Frenkel (1984).

—Normal conditions: high reserves and a stable equilibrium. Assume that reserve ratios are sufficiently high, at $r > r_0 = \max(r_1, r_2)$. There is confidence: an increase in the reserve-deposit ratio by the bank tightens the money market and lures the public back into holding money balances. For the bank, nothing besides profit motives affects leverage choice, and $\phi(r) = 0$.

Other solutions obtain under conditions of financial fragility and generate potentially unstable equilibria. If reserve ratios are sufficiently low ($r < r_0$), there are three destabilizing possibilities.

—Confidence problems and weak or absent cronyism. Under these conditions, there are confidence problems. For the public this means that the money multiplier is an increasing function of reserves, $\mu'(r) > 0$, and hence $i_r < 0$. For the bank, under low reserves either a credit crunch operates, $\phi'(r) < 0$, or, at worst, a weak crony effect, $\phi'(r) < 1$. The steady state is a focus, stable or unstable depending on the parameter values. (Note that the unstable saddle-point equilibrium described by Dornbusch and Frenkel cannot exist without the addition of the crony bailout mechanism or some other force.)[34]

—No confidence problems and large crony problem. As in the stable case, there are no confidence problems, so $\mu(r) < 0$, and hence $i_r > 0$. For the bank, the crony bailout forces operate, and $\phi'(r) > 0$. We assume now that this crony effect is sufficiently large, $\phi'(r) > 1$. The steady state is a saddle point.

—Confidence problems and large crony problems. Here both of the abnormal forces operate. Confidence problems imply $\mu(r) > 0$, and hence $i_r < 0$. A large crony effect has $\phi'(r) > 1$. The arrows show that again the steady state is a saddle point.

Case 3 or 4 is the appropriate model for the 1920s, whereas case 1 is the likely characterization of the 1900–14 golden age.[35]

34. Dornbusch and Frenkel (1984, pp. 258–59).
35. See della Paolera and Taylor (2002).