

## Gaicho Banking Redux

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Argentina's economic crisis has strong similarities with previous crises stretching back to the nineteenth century. Regardless of the exchange-rate regime, a common thread runs through all these crises: the interaction of a weak, undisciplined, or corruptible banking sector, and some other group of conspirators from the public or private sector that hasten its collapse. This pampean propensity for crony capitalism was dubbed "gaicho banking" more than one hundred years ago. What happens when such a rotten structure interacts with a convertibility plan? We compare the 1929 crisis to the events of 2001—the two instances where rigid convertibility plans failed—and reach two main conclusions. First, a seemingly robust currency-board can be devastated by an ill-conceived approach to the problems of internal and external convertibility (or, to rephrase Gresham, "bad inside money drives out good outside money"). Second, when modern economic orthodoxy collides with *caudillo*-style institutional backwardness, a desperate regime with its hands tied in both monetary and fiscal domains will be sorely tempted by a "capital levy" on the financial sector (for, as Willie Sutton said when asked why he robbed banks, "because that's where the money is").

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## 1. Argentina's Crisis in Historical Perspective

An Argentine economic experiment has come to 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 triage is minimal and 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, already badly burned, are ill disposed toward the country when such assistance is badly needed. All agree that the political class has failed and some observers 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 sound 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.

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.<sup>1</sup>

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 fully-fledged emerging market crisis, the Baring Crash of 1890.<sup>2</sup> As is well known, 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, we think that from now on Argentine economic history will be rewritten from a very different perspective and 2001 will be on center stage. Yet

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<sup>1</sup> In the original "foreign" reads "European."

<sup>2</sup> In the historical treatment our work draws on della Paolera and Taylor (2001).

the lessons from the past are hauntingly familiar, and, as is perhaps obvious, are here once again to be relearned.

How will history be rewritten? It is not just that we think the events of 2001–02 are more catastrophic than those of 1890–91. Indeed, Argentina has suffered a steady stream of economic crises throughout her history, and one purpose of this article is to highlight the common features of these episodes and place the present debacle in some historical perspective. Yet we will also be careful to spell out the important differences that separate the present from the past.

In terms of economic losses, nobody has any doubt now that this crash will be more severe than anything seen before, even the harsh downturn of 1914 which exceeded the Baring Crash in depth and duration. It is also clear that the special exchange rate arrangements that prevailed at the onset the present crisis have been present during only one previous crisis—that of 1929—when the country’s first currency board, created in 1891 after the Baring Crash, finally met its demise. Accordingly, we make the case for our comparative approach, one that will center on two analytic narratives, one for the 1929 crash and one for the 2001 crash, where we find the parallels strongest.

Table 1 shows the major “twin crisis” episodes involving the collapse of hard or soft exchange rate pegs since the unification of the modern Argentine state in 1862, and a classification of the monetary and banking arrangements is given.<sup>3</sup> Exchange rate experiments throughout Argentine history have generally oscillated between periods of generalized floating (or “freely falling,” as Reinhart and Rogoff 2002 say), and periods of more or less hard pegs. 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 the English correspondent 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

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<sup>3</sup> The crisis of the 1870s, although very important in economic terms, did not embody all of the twin crisis attributes that would allow us to choose it as the earlier example 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, and we can see that this episode 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 as a comparison here.

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.<sup>4</sup>

Just as exchange rate regimes have changed over time, so have banking regimes—at least on 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, an unsustainable regulatory framework that was replete with moral hazard and other defects, and which was swept away after 1890. Thereafter, banks were regulated by the commercial code until the 1930s with no special banking code whatsoever. Although the Central Bank was given broad responsibilities for banking oversight at its creation in 1935, it was not until comprehensive banking laws were promulgated in 1977 that any modern basis for oversight was set in place—not that any of these regimes have prevented banking crises, of course, as the table clearly shows.

In terms of real economic costs, the table shows that painful crises have been associated with the demise of both hard and soft pegs. For example, in 1890 the Argentine regime had floated away from gold parity by a cumulative 100% over the previous five years of overheated boom; the Baring Crash accelerated existing nominal movements, and sharply reversed real growth trends. 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, except in the case of the global inflation after 1914 and deflation after 1929, times when the foreign price level was more volatile.

As a little bit of guesswork in Table 1 suggests, in real terms the present crisis seems already set to break the record; output is far below the peak of 1997–98, may go still lower, and seems unlikely to regain its former peak before 2004–05 based on even the most optimistic projections. In terms of the nominal criteria, 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, and certainly anything witnessed during the breaks in earlier hard pegs in 1914 and 1929.

Lastly, the table shows some monetary and banking statistics that allow us to compare the financial contours of this crisis with earlier episodes. One interesting feature of these data is how they 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 still lower the multiplier as the public fled bank money 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.)

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<sup>4</sup> *Banker's Magazine* (1899, p. 691), quoted in Ford (1962, p. 90).

Path dependence, a collective institutional memory, has been one result. As some have described it, after a century or more of money and banking fiascos, Argentines are very wary of putting their assets in peso cash (outside money) or in peso deposits (inside money). Hence, recent measures of money velocity and the money multiplier register little improvement over figures seen a hundred years ago. Even in times devoid of crisis, such as the long postwar interlude from the 1940s to the 1970s, were not really times of great success because the techniques used to contain banking crises—policies of financial repression—were also inimical to long run financial development (McKinnon 1973).

Arguably the one episode that had the potential to reverse the trend of financial involution was the second currency board (convertibility) plan of 1991. It did not do so by simply introducing an ultra-hard fixed exchange rate regime—and a failure to grasp this point has been one of the common misunderstandings of Argentina policy during the last decade. The Argentine experiment of the 1990s was harder still, a law that established the principle of 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 still further for any government tempted to countenance devaluation (and, as a consequence, making even a prudent “exit strategy” difficult to devise).

Clearly, then, if the regime was to fail, one could anticipate that it would do so spectacularly. In this respect, it did not disappoint. In the short run, the violation of contracts caused by “pesification” has damaged much more than the economy, raising questions about the basic rule of law and the institutional basis for any form of civilized government. Yet even if these constitutional cracks are smoothed over, deep problems remain. No previous crisis has involved such a reputational disaster for the currency and contracts, for all the elemental money and banking institutions of the country. In past crises at least 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 some default was needed, of course. One or two levers could be pulled: maybe to default selectively on debt, either just internally or just externally; or to default on money holdings via inflation; or to temporarily freeze assets and impose forced conversions. This time, with a mix of hubris and desperation, the authorities have pulled *all* the levers at the same time. Thus, in terms of bounds on a worst-case scenario, we are afraid to admit that the past may be no guide whatsoever.

However, this would be a brief article indeed if the thrust for presentism were constrained by such gloom. When Bishop, writing in 1890 summed up his article, 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 Avellaneda, the leader who guided the country through a crisis in the 1870s, and who said that “we will suffer thirst and hunger rather than not pay our debts” (Bishop 1891, 538).

Whilst such an outburst would be unlikely from a president today, if a leader could navigate the present crisis as well as his predecessor did the 1890s, there would be much less to fear in terms of economic suffering in the short run. Back then a new commitment to fiscal prudence ensued under Carlos Pellegrini. The Baring Crash had brought down the economically reckless regime of 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.

Our view of Pellegrini, and one we think future historians will share, is that his management of a debilitating economic crisis was courageous and inspired, and certainly addressed the major problems in a swift and decisive manner. But priorities have to be set, and the political process allows some reforms to proceed faster than others. Pellegrini and subsequent administrations failed in one key respect, leaving a major weakness at the heart of the Argentine economy that was exposed in 1929. The same flaw, obscured for many years by the strictures of financial repression at home and isolation from the global economy abroad, has now returned to center stage.

In this paper we argue that the inability of Argentina to ever develop sound banking institutions doomed to failure all the attempts that were made to reform the monetary regime using exchange-rate based stabilizations. In other words, we see the “twin crisis” problem, as noted by Kaminsky and Reinhart (1999) as being endemic in the Argentine economy given the underlying structures. This begs the question: what are the problematic structures that have never been properly fixed?

At the deepest level, the problem for Argentina is similar to that of other developing countries, such as the Asian economies faulted for their “crony capitalism” after the 1997 crises. The failure of key banking and financial institutions to follow prudent, transparent, accountable, and non-corrupt practices is, we think, as central to understanding the Argentine crisis of 2001 as the Asian crisis of 1997. It is also a recurring theme in the long history of Argentine crises noted in Table 1. When this problem emerged on the River Plate, a memorable moniker was crafted by our correspondent, the same Lawson, who wrote of the Baring Crash in his 1891 article “Gaicho Banking”:

[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.<sup>5</sup>

Unfortunately for Argentina, the spirit of Gaucho Banking has remained alive and well during the twentieth century, affecting 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 present a discussion of the 1929 and 2001 crises to illustrate how this problem endured and ultimately brought down two convertibility experiments which for many years had looked nearly indestructible.<sup>6</sup> The main lesson we draw is that without some fundamental institutional changes to the monetary-fiscal-banking nexus, Argentina will experience persistent problems of this kind for decades to come.

## 2. Gaucho Banking in Theory and History

We have argued 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 (1984) model, one which includes an allowance for possible “Gaucho Banking” behavior (see della Paolera and Taylor 2002). A theoretical appendix to this paper spells out this model in detail, but we discuss the core element here.

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. Regarding inside money, we consider the possibilities of “good” banks and “crony” banks. 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, due to the illiquidity of assets or other adjustment costs, so that

$$dr/dt = v (r^*(i) - r) + v \phi(r),$$

where  $r^{*\prime} < 0$  and  $v > 0$  is an adjustment-speed parameter. The term  $\phi(r)$  is assumed to be zero for  $r > r_2 > 0$ . However, when reserves fall to dangerously low levels  $r < r_2$  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

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<sup>5</sup> *Banker's Magazine* (1891, p. 38), quoted in Ford (1962, p. 100).

<sup>6</sup> Our discussion of the 1929 crisis draws on della Paolera and Taylor (2003).

might call this the conventional “credit crunch” dynamic, since as reserves get precariously low the good bank might tighten credit even more, scrambling to liquidate loans and prop up  $r$ . But there is another possibility, with  $\phi(r) < 0$ ,  $\phi'(r) > 0$ , and  $\phi''(r) < 0$  for  $r < r_2$ ; in this case the bank *loosens* credit as reserves tumble; this we call the “crony bailout” dynamic, where the state bank chooses to sacrifice its own balance sheet to keep others afloat.

Outside money evolution is described by the dynamics of the gold stock, and we assume a rate of gold inflow that is driven by deviations of the (endogenous) local interest rate  $i$  from the world rate  $i^*$ .<sup>7</sup> Thus,

$$dG/dt = \lambda G(i - i^* + \kappa; \dots),$$

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

It is important to state unapologetically at the outset that this is a very simple myopic model, where agents respond to instantaneous signals and there is no forward-looking behavior. There are no jumping (co-state) variables and the  $(G, r)$  variables define a classic deterministic dynamical system. It is, in other words, an unsophisticated low-tech model with no deep microfoundations. Whilst this might be a matter of concern, we also need to face up to the possibility that in the real world such models could still be useful in scenarios where, as the chief economist of the IMF has pointed out, we can be “confronted with policy problems just a little bit more difficult than anything in our mathematical models.”<sup>8</sup>

Closure of the model depends on the specification of a function  $i(G, r)$  to describe money market equilibrium as a function of bank balance sheets and the money base. A standard static (i.e., myopic) money-market equilibrium supplies the closure, and need not be repeated here (see the appendix). There are two possible cases, one where  $\partial i / \partial r > 0$  and one where  $\partial i / \partial r < 0$ . 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 and when the public sees bank reserves rising their demand for

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<sup>7</sup> 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 the gold adjustment process as being driven in large part by capital flows.

<sup>8</sup> Kenneth Rogoff responding to Joseph Stiglitz at a World Bank press conference, June 28, 2002.

bank deposits (broad money) rises even more, because they feel that banks are safer; thanks to the money multiplier, the switch from cash to deposits expands the money supply, so the money market slackens.

Which of these two scenarios prevails has important consequences for the overall dynamic solution of the model in the phase diagram in  $(G,r)$ -space. So too does the presence or absence of the crony mechanism captured by the sign of  $\phi'(r)$ . Thus, there are four cases to consider, as shown in Figure 1, and explained in the appendix. The characterization of such local equilibria is simple, but some appeal to intuition is needed to imagine the nature and layout of potential equilibria in a real-world setting. As noted, we think it likely, if not obvious, that the “confidence” effect will dominate at low levels of bank reserves, the kind of situation where depositors get nervous. Also, we claim, the worst cronyism is more likely to erupt in “bad times” in the economy—when bank reserves are low or when gold stocks are low. With such assumptions in mind, the configuration of the full dynamical system can be displayed once we set out the complete phase diagram in  $(G,r)$ -space, as shown in Figure 2.

The direction of trajectories 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 Figure 1(a) and is a stable node, a “good” equilibrium. The point E2, with a low reserve level, corresponds to Figures 1(c) or (d) and is an unstable saddle point, a “bad” equilibrium. A possible stable saddle path for E2 is shown as  $SS'$  and it is important to note that this curve delineates two regions in the plane: above  $SS'$  is a stable zone where all paths lead to the sink at E1. Here, the money and banking regime is stable and sustainable in the long run. But below  $SS'$  there is an unstable regime where all paths lead to collapse. 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.

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 One, when the dynamics worked favorably, and in the interwar resumption of 1927–29, when they did not. The key question was: how could a well-defined dynamical system that had once worked so well under the old prewar gold standard then fail so miserably just a few years later? Our model supplies an answer. The evidence suggests to us 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 trajectory fluctuated but it did not explode

unidirectionally. The gold-standard system was a stable one at the beginning of the century because it was combined with prudent inside-money practices. (VAR analysis confirms this conclusion.)

This regime ended in 1914: external shocks and domestic policy choices made gradual, seemingly innocuous changes in the institutional framework. The gold standard was suspended, albeit with the intention of resuming. The 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. It was not so at the Banco de la Nación, where rediscounting and nonperforming loans grew steadily after 1914, as a narrow banking orientation gave way to expanding quasi-lender-of-last-resort activities. 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. Thus, we argue, the system arrived at a point like P by the late 1920s. The economy could “safely” cross into the unstable region of the phase diagram during the years of suspension, since the dynamics of the model were switched off. The dynamical system set to work again during the brief 1927–29 resumption, but this time from new initial conditions at a point like P, with movement along a path like PP'. A cursory inspection of the trajectory in the lower left zone of Figure 3 reveals a trajectory much like the putative path PP' in Figure 2. Again, the correspondence between the empirical trajectories and the phase diagram is striking. (VAR analysis also confirms this claim.)

This is a clean theory that links the demise of the gold standard convertibility regime to the pollution of the Argentine financial system in the 1920s through the persistence of “Gaicho Banking” practices. Yet does theory map into history so cleanly? Is historical evidence is there to support this notion? We think there is quite a lot, and we 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; in that setting the nominal anchors were very weak. After the Baring crisis in 1890–91, the Pellegrini government designed a new regime. Two institutions were central to the plan and they were kept at arm’s length so as effectively to isolate two functions. The note issue, ultimately backed by gold—that is, outside money and external convertibility—was the sole task of the Conversion Office. State and commercial 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 more 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 we can see from Figure 4. Then, in the crisis 1913–14 an emergency rediscount law was enacted. The implications

of this new environment for the state bank's balance sheet after 1914 were dire. Rediscounting surged as a fraction of all banking activity, non-performing 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 crony loans to the other banks and the private sector, as we can see from 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 (della Paolera and Taylor 2002). Why? We know the bank did not have an explicit lender-of-last-resort mandate. It was not a true central bank and 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, *ex post*, it became clear to them that their balance sheets were in a bad state. In essence, the private banks obtained, if not free, then 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 those same loans, we also know from confidential records, were loans to the very same officers and shareholders, or to their real or shadow corporations.

We see here how Gaucho Banking has been very resilient. Even after the Baring Crash had wiped out most of the Argentine banking system, the spirit of Gaucho Banking lived on into the interwar period. Ultimately, in 1935, as part of a political-economy solution worked out by the government and its new central bank, the banks got the final bailout they sought to head off an insolvency crisis arising from decades of bad loans. It cost about 7% of GDP and was perhaps the biggest single "Gaucho Banking" action of all time, at least until the present crisis.<sup>9</sup> One might imagine that after such a disastrous experience, Gaucho Banking would have been laid to rest. But from the years of financial repression of the early postwar period to the opening of the economy in the 1990s, this trait appears to have survived, albeit with a different twist today.

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<sup>9</sup> Thus, many of the 1920s rediscounts eventually went bad and would end up on the state balance sheet. In this way, we see that the system was evolving toward a central banking idea in a very incoherent manner. It is important to stress that 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 whilst extending temporary liquidity. Instead, the state bank was offering a much sweeter, and therefore more risky deal. It allowed the private banks to shed their risks, with bad paper used as collateral, and lent them cash at only 4.5 percent—far below even the rate the Banco de la Nación offered its customers on time deposits!

### **3. Gaicho Banking Today**

By now it is, we hope, widely accepted that the 1990s Convertibility Law was in fact a dollar-exchange standard regime and more. It consisted not only of a definition of a particular peg for the peso but—most importantly—it was a generally accepted and well-understood new form of contractual law. This was true even if primarily, and at first, everyone saw its short-run aim as establishing a nominal anchor and decisively ending the recurrent use of the inflation tax mechanism that was perceived as a system of taxation without representation. Nor was it a capricious or externally-imposed choice of monetary regime; rather it respected the choice of agents to basically use the US dollar for large transactions and as the medium to store value and held wealth.

That the Convertibility Law was, arguably, a second-best monetary regime compared to such choices as inflation targeting is just another way of saying that in 1991 credibility was at such a low ebb in Argentina that first-best policies were not an option, and it is hard to demonstrate that such credibility was ever so secure during the 1990s as to invite some exit strategy from the peg. So the regime stood, even through many external shocks. Yet it was not immune to internal weakness. The sad conclusion, however, is that a law which was supposedly robust in terms of its respect for acquired property rights (i.e., a fixed dollar-peso commitment) could not in the end overcome the deeply persistent time-inconsistencies and moral hazard flaws of the political economy nexus inside Argentina.

As we explain below, it is a matter of fact that a small country such as Argentina, is always vulnerable to foreign shocks—such as the Tequila Effect, the Asian Contagion, the Russian default, and the Brazilian devaluation—and all of these different shocks were handled perhaps as well as could be expected within a second-best hard-peg regime. However, we claim that while the Argentine outside money mechanism and banking regime were regularly proclaimed as the darlings of the emerging markets, there was always, since the inception of the Convertibility Plan a deep problem in the design of the money-banking nexus.

This flaw was visible even during the earliest crises. During the Tequila crisis, good luck was on the Argentine side because Mexico was bailed out essentially by the United States and the crisis was short-lived. But there too, the potential inconsistency between a dollar-exchange standard and a banking system that “creates” money (even inside dollar money) was brought to the forefront. Curiously enough, few saw that this inconsistency was in the end going to serve as a crucible for the most extraordinary and rapid economic meltdown effect that we have ever seen in any emerging market economy. What also should become clear is that the real disaster began about the time when agents started to feel that even the most basic property rights were to being repudiated by the monetary and fiscal authorities.

Thus, there is a crucial difference as compared 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 will argue that still, in both cases, the transmission mechanisms were the same. In both cases, we are in the presence of a system that can easily jump from a good equilibrium situation to a bad or terminal one, if it is buffeted by a large enough exogenous internal or external shock. And in both cases, the exogenous shocks were internal to Argentina and generated by Gaicho Banking behavior that was unconstrained (indeed, encouraged) by the political economy structure. However, one key difference is that because the Argentine economy was in 2001–02 acutely dollarized, but was not in 1929 “metallized”, it was inevitable that today’s meltdown process would be much, much faster than in the past.<sup>10</sup>

In Figure 6, we show proxies for the solvency situation of the private and public sectors and it is clear that, even when we know that the activity level was already in a deep slump by 1999, the driving force behind worsening expectations was the solvency of the government and some official banks like the BPBA. This is exactly what is shown in Figure 7, where there is a “neutral” evolution in the quality of banking assets until, one might, say January 2000; but then after that the driving force is expected solvency of the government’s debt, where we must also understand that from April 2001 the banks and pension plan firms were absorbing more and more public bonds.

It is opportune at this stage to recall Figure 2 and its underlying theory, and ask what help the Augmented DF model might be in understanding the dynamics of the 2001 crisis. Unlike 1914–27 there was no suspension of convertibility, in which case—one might ask—how could the dynamical system jump from a stable to an unstable zone? There are several candidate exogenous shocks that could have mattered, or, collectively, might have added to the probability of a transition to explosive behavior. Consider the following scenarios:

1. Country risk shocks. Due to “news” about underlying fiscal problems there is a sudden increase in country risk  $\kappa$ . In Figure 2 this corresponds to a need for higher equilibrium domestic interest rates to maintain external equilibrium. In other words this is equivalent to a leftward shift in the  $dG/dt=0$  curve. It is straightforward to see that this implies a leftward and upward shift in the unstable equilibrium E2 and an

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<sup>10</sup> Economic agents in 1929 had no experienced monetary expansion abuses since 1891, while in 2001, the hyperinflation of 1989/1990 and the Argentine traditional inflation tax scenario since 1950s were very much present in the memories.

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  $\kappa$  could lead to a “catastrophe” type of outcome where 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.

2. Hotter money shocks. Due to structural changes in the markets there is a sudden increase in the parameter  $\lambda$  (external capital flows become more responsive to prices, as might happen if external borrowing is terminated and “gold flows” must finance all imbalances). This leads the dynamics in the  $G$  dimension to speed up without shifting the location of the equilibria. The effect is to rotate the saddle path  $SS'$  about  $E2$  to a flatter position, again expanding the unstable zone.
3. Illiquid asset shocks. Due to structural changes in the markets there is a sudden decrease in the parameter  $\nu$  (banks must adjust their portfolios more slowly, as might happen if a real shock—a recession—leads to more uncallable loans in the short run). This leads the dynamics in the  $r$  dimension to slow down without shifting the location of the equilibria. Again effect is to rotate the saddle path  $SS'$  to a flatter position, again expanding the unstable zone.
4. A “bank robbery” shock. There is a one-time “theft” of reserves  $r$  from the banks in exchange for debt in a nonmarket (i.e., forced loan) type of transaction. 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 in 2001.

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

It should be recalled that this was, all the same, a period with tremendous *external* shocks and recession that the Argentine system nonetheless withstood. There were signs of increasing health, even. In these years 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 the evolution of “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 non-performing loans did not show any major alteration until 2001.

Thus, we 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 leave 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, an ongoing change in the political regime was underway by October 2000, which 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, technocratically speaking, reversible situation to disaster. As in the 1914–27–29 episode, changes in laws (and hence in expectations and/or 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 a stable one for the 1996–99 period. What is very impressive is the speed of adjustment of economic agents 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 marks a break: from an expectational point of view it was the end of the regime as we knew it from 1991.

#### **4. The Mechanics of Gaicho Banking in 2001**

Where then did the weakness of the money-banking nexus originate and how was it obscured for so long? Our main argument is that already within the 1991 Convertibility Law and with a political-economy structure prone to disrespect property rights, the money-banking regime was suboptimal. And clearly it was suboptimal basically because the Central Bank of Argentina cannot 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.<sup>11</sup>

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<sup>11</sup> An opportunity to change this state of affairs was clearly present after the warning events of the Tequila crisis but the 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 to the task.

Economic agents were always well aware of this *talon de aquiles* of 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. On that signal they had to run 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 (2002). Even if the dynamics were not exactly monotonic (the August hiatus is explained below) there is a clear path towards crash in Figure 8.

The path was assured when the advance of the government over banks and private pension funds took place with the famous (or infamous) “megaswap” that converted public debt into a 30-year bond but at 16 per cent interest rate. Two thirds of this swap was absorbed by domestic financial institutions. But already in April, in terms of dynamics, many in the public had a suspicion that banks might end up colluding with a government in fiscal freefall. It was then, in early 2001, that there emerged a war of attrition at first between the sophisticated investors and the government-banking axis (Phase 1: April–June) and then between virtually all private agents and government-banking axis (Phase 2: September–November).

The game played out as follows. With the banks aligned to the government objectives, banks realigned their asset side to support the public sector; the private agents, in the meantime, 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 (30-days dollar) for AAA corporate debt rose in eight months from 13 per cent in February to 27 per cent by 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 Table2). Thus the private sector was crowded out and the banks became polluted. What made things more dramatic, the public’s “voluntary dollarization” increased from a stable two thirds level (where it had been for many years) in terms of loans and deposits to almost 75 per cent just before the implementation of the *corralito*. The private agents thus tried to hedge more and more against a domestic institution and adopted more dollar denominated 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 culminating moment. Either the system would break in favor of a discretionary soft-budget monetary regime, or there was going to be (total) dollarization and a substantial adjustment in the cash flow in dollars of public (national and provincial) finances.

There was one faint hope for the depositors. At some point, the public had believed that the internationalization of the banks would play a role at a crucial hour in forcing a respect for the rules of the game. Perhaps they also believed that external discipline from the IMF would also protect the rule of law against abuses. Yet IMF help continued to arrive even after Argentina was on the slippery slope with another loan tranche disbursed in August 2001, an action for which the Fund has been extensively criticized elsewhere (e.g., Mussa 2002). We need not rehash these

criticisms here, but the final loan explains the August jump in international reserves (seen in Figure 8), replenished by the IMF funds—but of course there was no change in terms of fundamental major 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. By late 2001 the policy framework can only be described as one of chaotic desperation. In the last two months fiscal and debt measures became chaotic and inchoate, and central-banking resolutions accelerated dollarization. The aftermath continued to expose the institutional weakness of the Argentine state, its leadership, and advisors. The 2001 disaster dynamics were halted by still another mistake: the *corralito*, which basically froze the internal convertibility of sight, savings account and time deposits alike. Even a layman in monetary theory would have forecast a disastrous impact intermediation, investment, and activity. 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 politicians and banks at the point of denouement and the ultimate Gaucho Banking corollary came with the pesification of January 2002.

#### **4. The Political Economy of Gaucho Banking in 2001**

But why do we characterize the behavior of banks as Gaucho Banking? In other words, is this a fair description of what happened in the year 2001 in Argentina? Where banks coerced or did they colluded with political forces? And what pressures drove the political operators into such schemes?

The first fact is that banks colluded in the first half of 2001 with the Argentine Republic’s government. Our interpretation is that during this brief period bank behavior bore the legacy of past recurrent bailouts in not-so-distant Argentine financial history. The records of the 1981, 1985, and 1989/1990 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 risky play of trying to temporarily “bail out” the government. The initial switch by banks in April 2001 and May 2002 towards investing in high-yield sovereign bonds was the start of an extremely risky policy—one that we think 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 we think, as in de la Torre, Levy Yeyati and Schmukler (this volume, quote from the draft version):

Instead of recognizing that debt restructuring was becoming a necessity following the failed attempts to restore growth, the government averted debt service arrears by draining the liquidity of the financial system. 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 substantially less liquid and much more exposed to a government default...As choices to finance the deficit through debt rapidly shrank, *the specter of money printing loomed bigger...* (emphasis added)

In other words, to an extent that was unknown under the Convertibility Plan, fiscal needs and the monetary base were again firmly intertwined from April 2001. This is where the pollution of the entire regime began.

We know that banks were also subject to moral suasion to take the “megaswap” in the summer and by then, we believe, they were quite convinced that if the high returns did not materialize they would be (somehow) bailed out by the government. It is beyond the scope of this paper to speculate as to *ex ante* where they thought these resources would come from—and if this would involve pesification. By the end, however, they surely saw pesification as a potential answer (see Velasco and Hausmann, this volume) if the scheme was to fail. Our approach suggests one way to understand how 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.

However, in addition to the direct relationship between the private banks and the state, we argue that 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 a new twist in the Argentine crisis was the expansion of 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.

From Figures 6 and 9, we can see that the national government was not the sole bank robber. It is striking that 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 the *duhaldismo* wing of the Peronist party, hints that already, starting in 2000, there was an emerging fiscal war of attrition between the government and the most

important Argentine province controlled by the opposition. Moreover, this war was not merely to be contested on the usual battlefield of receipts, taxes, and the fight over provincial revenue sharing under the federal compact. Rather, by extracting resources from its state bank, the BPBA, the new offensive had implications for the larger financial system, and begged questions as to the national government's lender of last resort capability. This was an even more risky game of chicken, and "mutually assured destruction" of the entire financial system, provincial and national, could be seen as the main downside risk.

This game, its political economy, and its conduit through the BPBA, has been neglected by most analysts, but it is highly relevant for our understanding of 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 *duhaldismo* and the traditional political class, which could only survive if soft money was provided on a continuous basis. It need hardly be said that for most of the 1991–98 period, the soft money conduit had not been threatened: the national government had been in Peronist hands, the economy had been booming its way out of a long slump, and fiscal largesse had been accommodated, not least thank to the leeway provided by a highly liquid international capital market. Fiscal problems were present but, to most, they were not very apparent. When international liquidity ebbed, the war of fiscal attrition broke out in the banking and the monetary arena with the printing of provincial quasi-monies, in particular, the *patacones*.

In this way the Convertibility Law forced the question on fiscal matters for the nation and the provinces: are Argentines ever going to discuss the sustainability of their public finances for real or are they going to maintain an unsustainable status quo (and how)? The pretense of provincial governments was that they could use provincial and state banks just as the national government was using the financial system and the liquidity of convertible pesos for their fiscal needs—and 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: and hence pesification was the populist course of action that loomed closer for almost a year, with the encouragement of outside experts.

Ironically, for all that some of the worst fiscal leakages originated from the *bonaerense* authorities, these political economy dynamics produced eventually the December 2001–January 2002 outcome: after a few more moves in the endgame, the provincial leader was eventually installed as the President of the Republic at just the same time that we reached the bad equilibrium (or the pesification equilibrium) that we have alluded to. During the wars of Argentine succession, reports were rife that *duhaldismo* had usurped power with the help of a crude power struggle on the street; but 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 was a major part of the economic *coup d'état* that ended the convertible regime and de la Rúa's authority; the change of presidents was merely a *coup de grace* to put the convertibility plan out of its misery, allowing a return to default, pesification, and other seemingly lost arts of Argentine property rights adaptation, the laws of caudillo economics and, of course, Gaucho Banking.

#### 4. Lessons from the Past and Present

The purpose of this paper was to compare two crises in more detail, with the hope that the lessons of *two* failed convertibility plans can 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.

Undoubtedly, the monetary regime was the striking common factor in both cases. Under a peg, and as will certainly be enforced in any future *de facto* dollarized economy, 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. But this is old news about a second best regime. 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. (Ford 1962, p. 188).

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 faroff 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. (Gesell 1909, p. 56).

One cannot be in any doubt that policymakers, in the Casa Rosada or in Washington, knew that this was the price to be paid for the chosen anchor. In light of this, policymakers will again have to question whether they really can tolerate the limits imposed on them by ultra hard pegs, and especially whether the institutional superstructure of their economies is 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. And there can be almost no policy independence *whatsoever* if fiscal options are closed off by a debt ceiling, the situation in Argentina in 2001. Paradoxically, when the options are most limited, we think history shows that this is can be where the going may get very dangerous indeed. Policymakers can then be tempted by desperate measures: printing money or, what is in some ways 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 of 1914. But this 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 second convertibility plan in 2001 was also due to changes in money and banking regime. This was a fast train wreck because there was no suspension, dollarization was already very high, and because the institutional changes were so large. Yet the main thing to note, we think, is that in 1929 asset pollution originated in private sector (with bank complicity) but in 2001 it originated in public sector (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 the ways in which their collateral damage is (or is not) contained by clean institutions. Suggestions that Argentina didn't have a fiscal problem because debt or deficit levels were "small" by reference to countries such as Belgium missed the point. Belgium is a non-Gaucho country. Those who took solace in the zero deficit policy also missed the point. The importance of timing in economic policy, and in dynamic macroeconomics, is key—a good fiscal behavior (zero deficit) may turn out to be a farce once it is too late and politically unfeasible to do it and the debt dynamics are out of control. As we have noted, at the end of the day, if the long run budget constraint is to hold and fiscal conditions are unsustainable 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 at least that 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 economywide meltdown once all the country's institutions, assets, legitimacy and reputation had been polluted.

The meltdown became still worse, paradoxically, even after default and floating supposedly restored some "room for maneuver"—an outcome that refutes the idea that the Argentine crisis was all simply the fault of the so-called hard peg and a debt overhang. Pesification with devaluation meant, besides the devastating property-rights effects, a dramatic squeeze in real wages (which was felt especially by the low-income groups in the population), an

increase in the cost of capital, and a situation of default in the capital markets of the private sector. Pesification was a self-made Fisherian Debt-Depression Trap and, by augmenting the expectation of devaluation and default, the burden of the debt was raised for all Argentines.

What was (or is) the alternative? Assuming one is living in a Gaucho world, we have proposed (and still do) more serious consideration of 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 suboptimal, but in a more safe second best situation. Under dollarization and narrow banking you will not have to suffer 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 one advantage would be that economic agents would feel an *immediate* effect through the pricing of their assets in banks if the balance sheets of the banks had been polluted by fiscal spillovers. In other words, you would know more transparently if your bank was being robbed. The value of deposits might be volatile, but a terminal state in which the losses are *ex post* socialized would be avoided. The *corralito* and pesification solutions might then be avoided, and with them the disastrous unemployment and income distribution effects we have seen.

Another policy that could implement more constraints on Gaucho activity in the government-banking axis would be free pricing of provincial debt, which also 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) another polluting factor in the accelerating fiscal implosion, but this reflected in part their remarkable ability to float the bearer bonds. But this was only because the Argentine government in 2001, instead of accepting the provincial quasi-monies as fiscal receipts at a market (discounted) value, allowed the payment of taxes with those provincial monies *at par*. To state it baldly: by unifying the federal and provincial balance sheets with this decree, and effectively permitting all the provinces to this print unlimited pesos the convertibility plan was technically over. The act of taking control of the note issue away from the Central Bank was remarkable—not only in that it turned the clock back to the 1880s, but also because of the notable lack of dissent this plan generated. In the face of an unwillingness on the part of the provinces to adjust and to have a rational fiscal federalism, 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 being able to preserve a convertible regime (even 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 destruction of the crony banks themselves, which happened back then under keen pressure from London (Illustration 1). Even then, it did not eradicate the problem forever. To take such a step now would be a very radical plan. It might be the only way to end Gaucha Banking, though it is quite hard to see this happening without strong external pressure, for example, through direct IMF conditionality. But it might be the only way to deliver a clean (or at least, cleaner) money-banking nexus in this fragile and institutionally weak economy. 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 burden on future generations that is immensely high.

Can Argentina move beyond Gaucha Banking? To recapitulate, this is a scenario where either the public or the private sector through complicity with the banks imposes a capital levy (a fiscal grab from depositors). Knowing the perils of time inconsistent behavior, no developed country today would countenance such expedients. There now may be other problems in designing banking policies, but if anything they revolve around the reverse fear, worries over a negative capital levy (a fiscal gift to depositors) arising from bailouts induced by moral hazard. But for Argentina in 2001 the concern was not that of a modern regime: “how do we save the banks and prevent them from becoming a fiscal sink through a government-to-bank bailout?” Their concern was that of a more *ancien regime*: “how do we kill the banks by making them a fiscal source through a bank-to-government bailout?” Welcome to the Willie Sutton School of Public Policy: when modern economic orthodoxy collides with *caudillo*-style institutional backwardness, a desperate regime with its hands tied in both monetary and fiscal domains will be sorely tempted by a “capital levy” on the financial sector because, as the man said when asked why he robbed banks, “that’s where the money is.” Unfortunately that money doesn’t last forever.

### 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 comprised of gold  $G$  and securities  $S$ . By assumption,  $H = G + S$ . The banking sector (the public Banco de la Nación and others), treated here as a representative bank, has a balance sheet with liabilities comprised of banking deposits both private  $D$  and public  $D'$ , 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 (non-bank) public. Clearly,  $\partial m/\partial r < 0$  and we can also assume that  $\partial m/\partial c < 0$ , since  $r < \alpha < 1$  in 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  $r > r_1$  are adequate, we shall assume that  $\mu'(r) < 0$ , so that confidence effects, operating via  $c(r)$ , are not dominant. But when bank reserves  $r < r_1$  are sufficiently small we shall 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  $i = i(r, G; \dots)$  using the implicit function theorem. Clearly,  $i_G < 0$ ; but the sign of  $i_r$  is ambiguous, 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 della Paolera and Taylor (2002) this dynamical system admits four types of equilibria, described as follows and shown in Figure 1. The first is the standard solution given by Dornbusch and Frenkel (1984):

1. Normal Conditions—High Reserves and a Stable Equilibrium: Assume that reserve ratios  $r > r_0 = \max(r_1, r_2)$  are sufficiently high. 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 affect leverage choice and  $\phi(r) = 0$ .

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

2. 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 without the addition of the “crony bailout” mechanism, or some other forces, the unstable saddle-point equilibrium described by Dornbusch and Frenkel (1984, 258–59) cannot exist.)
3. Large Crony Problem and No Confidence Problems: 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.
4. 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.

In della Paolera and Taylor (2002) we argue that cases 3 or 4 are the appropriate model for the 1920s. Conversely, we see case 1 as the likely characterization of the 1900–14 golden age.

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TABLE 1  
MONETARY AND BANKING REGIMES AND MAJOR CRISES, 1890–2001

	Monetary regime	Banking regime	Peak to trough fall in real GDP	Years to regain peak	Devaluation (years 1-2)	Inflation (years 1-2)	[Min,max] velocity* GDP/M3	[Max,Min] multiplier* 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	~2000%	~750%	[3.8,5.7]	[4.0,1.1]
1988–90	Dirty float (crawling peg)	Law of 1977	8%	4	~60000%	~50000%	[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	Dollar standard (currency board)	Law of 1977	>30%?	>7?	>200%?	>80%?	[2.9,3.4]†	[4.0,3.0]†

\* M3 and M0 in pesos only, excluding dollar cash and accounts. † Up to the bank freeze, December 2001. §The multiplier rose during the hyperinflation.

Sources: From della Paolera and Taylor (2003) statistical appendix, except 1994–95 and 2001–02 ratios from Central Bank and Finance Ministry data. The other figures from 2001–02 are based on a GDP peak in 1998 and “?” indicates they are purely speculative based on conditions at the time of writing.

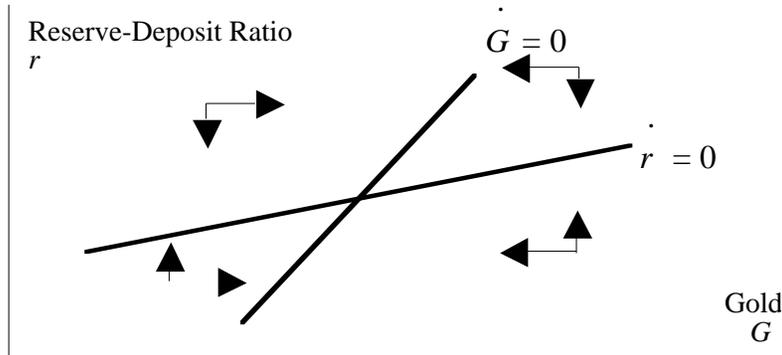
TABLE 2  
MONETARY AND BANKING EVOLUTION 1995–2001

	Financial Fragility				Evolution of Dollarization		“Crowding Out” Ratio of public credit to total credit
	M3/M0	M0/Reserves	M3/International Reserves	Change in Deposits (%)*	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%

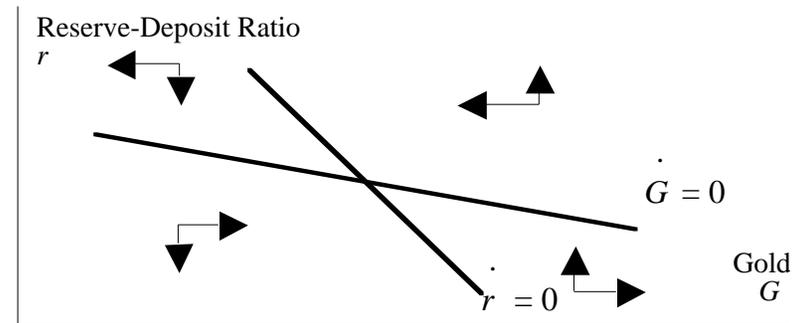
Sources: Central Bank and Finance Ministry data.

Figure 1  
Equilibria in the Augmented Dornbusch-Frenkel Model

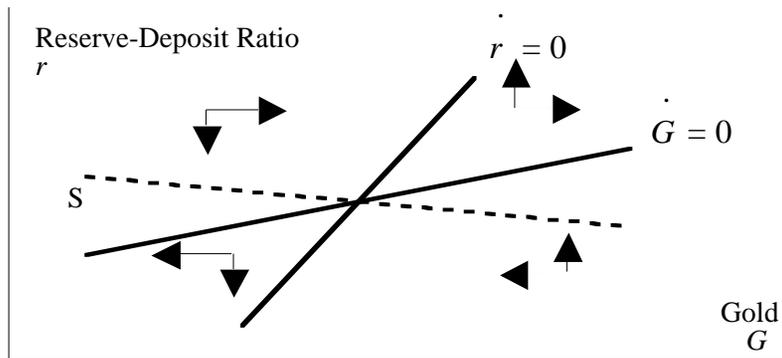
(a) Stable Case with Confidence



(b) Confidence Problem with Credit Crunch or Weak Crony Effect



(c) Large Crony Effect Only



(d) Confidence Problem with Large Crony Effect

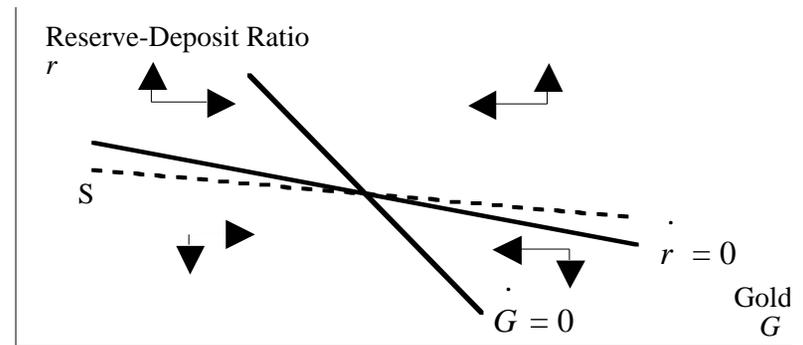


Figure 2  
Phase Diagram for Prewar and Interwar Argentina

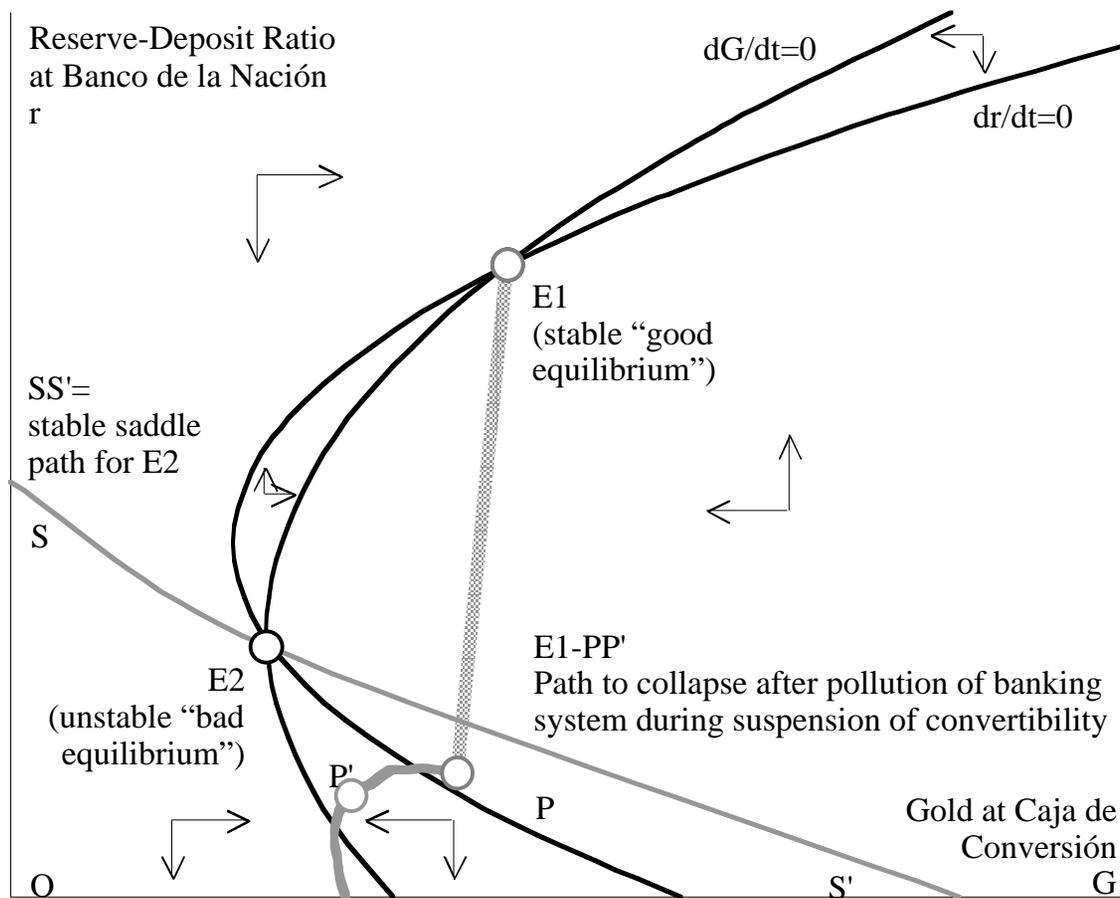


Figure 3  
Data for 1908–14 and 1927–29

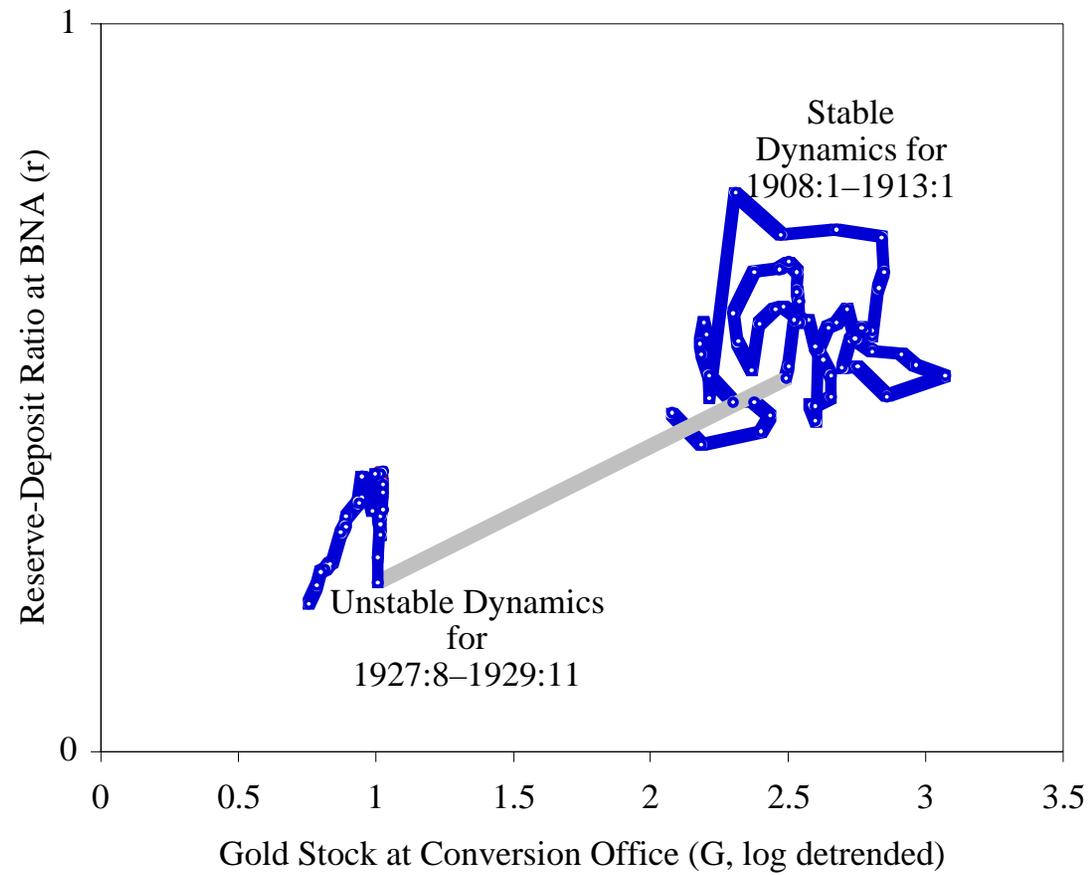


Figure 4  
Pollution of the Banco de la Nación Balance Sheet, 1890s–1930s

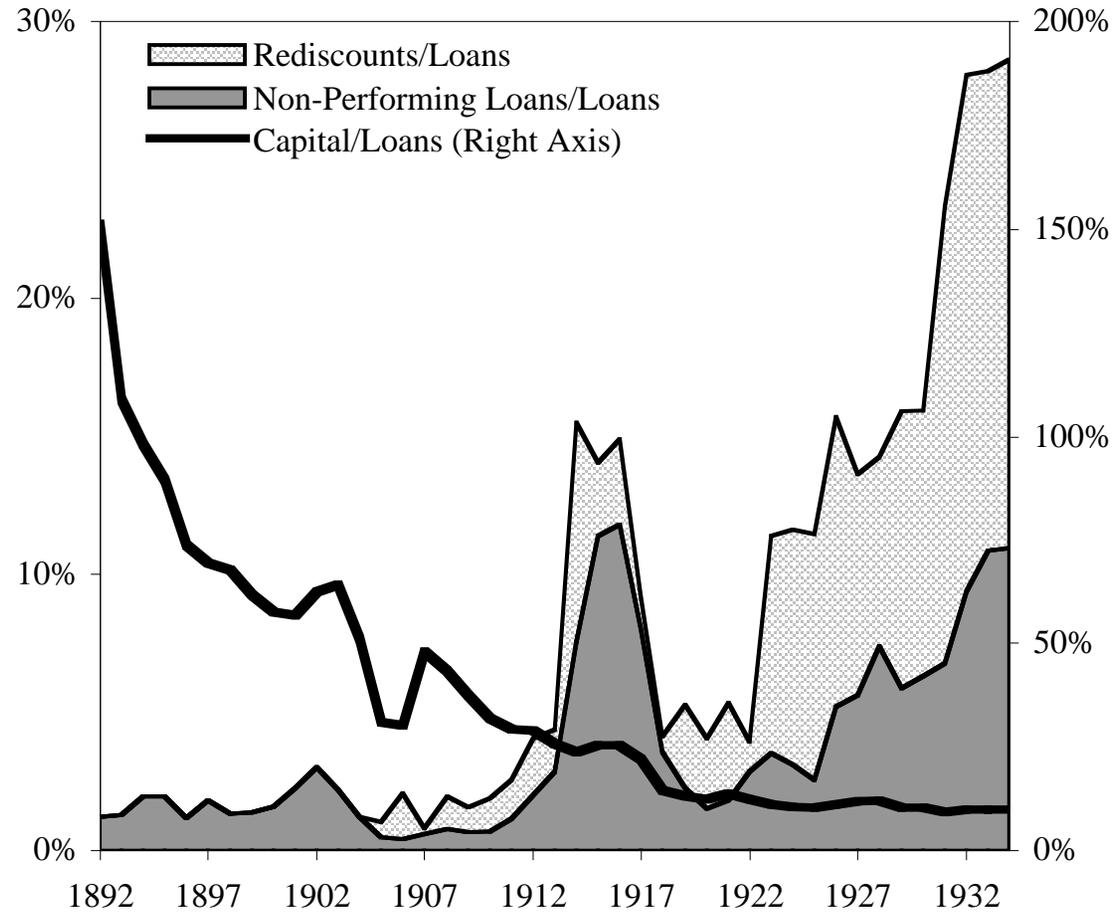


Figure 5

The rot of bank balance sheets 1914–34:  
public versus private debt quality

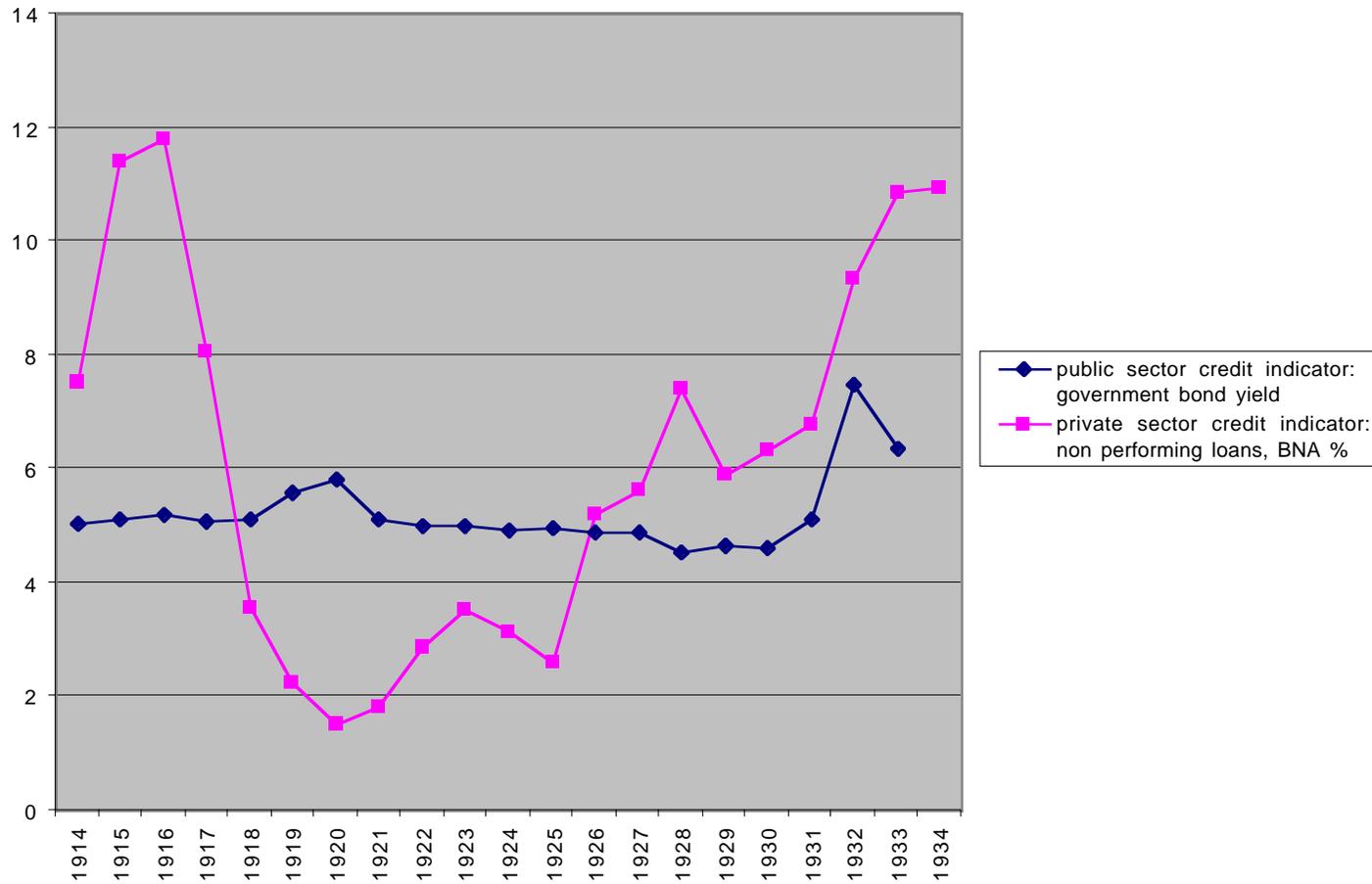


Figure 6

The rot of bank balance sheets 1996–2001  
public versus private debt quality

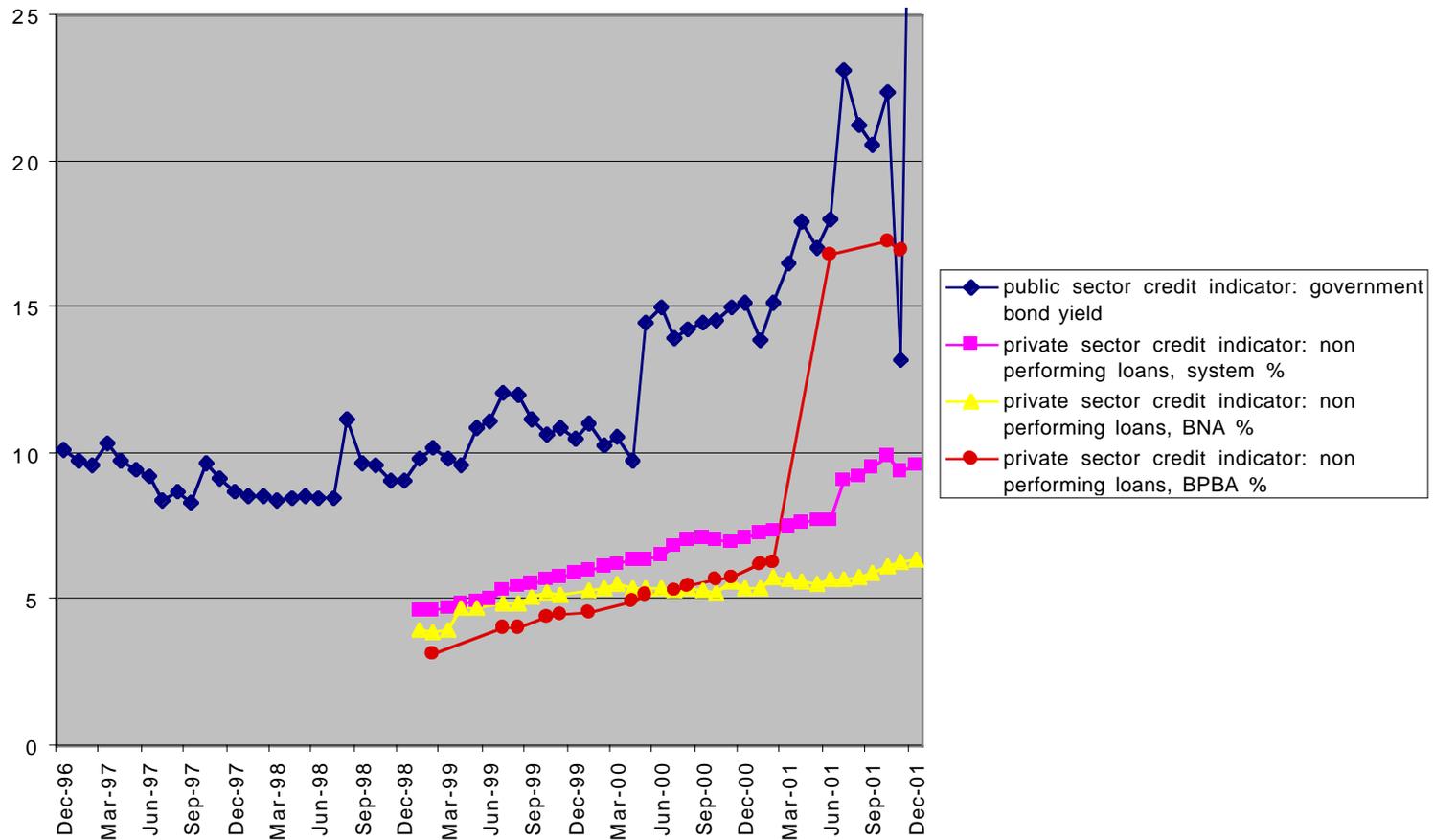


Figure 7

The rot of bank balance sheets 1999–2001:  
public versus private debt quality, impacts

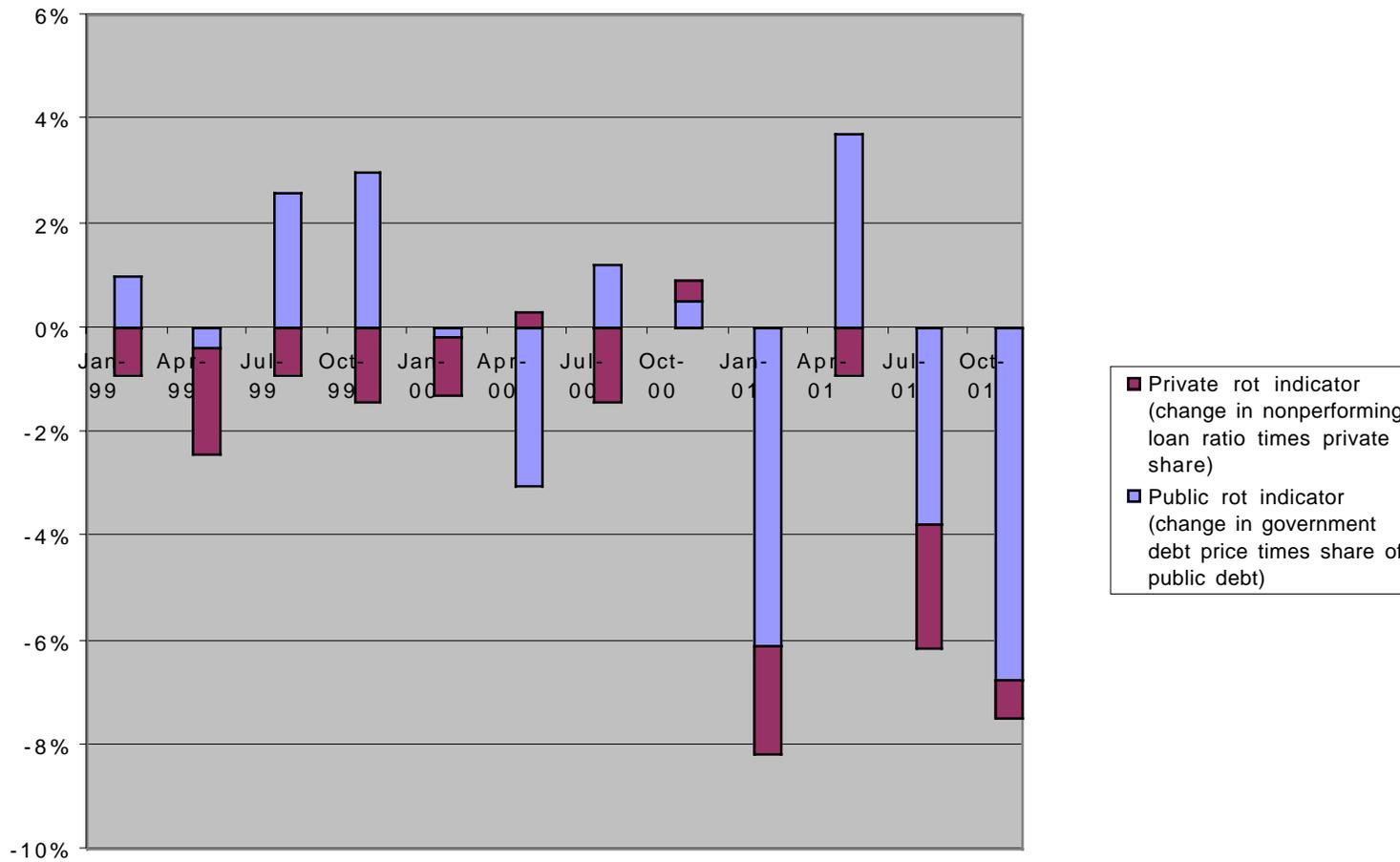


Figure 8

Phase diagram for 1996–2001

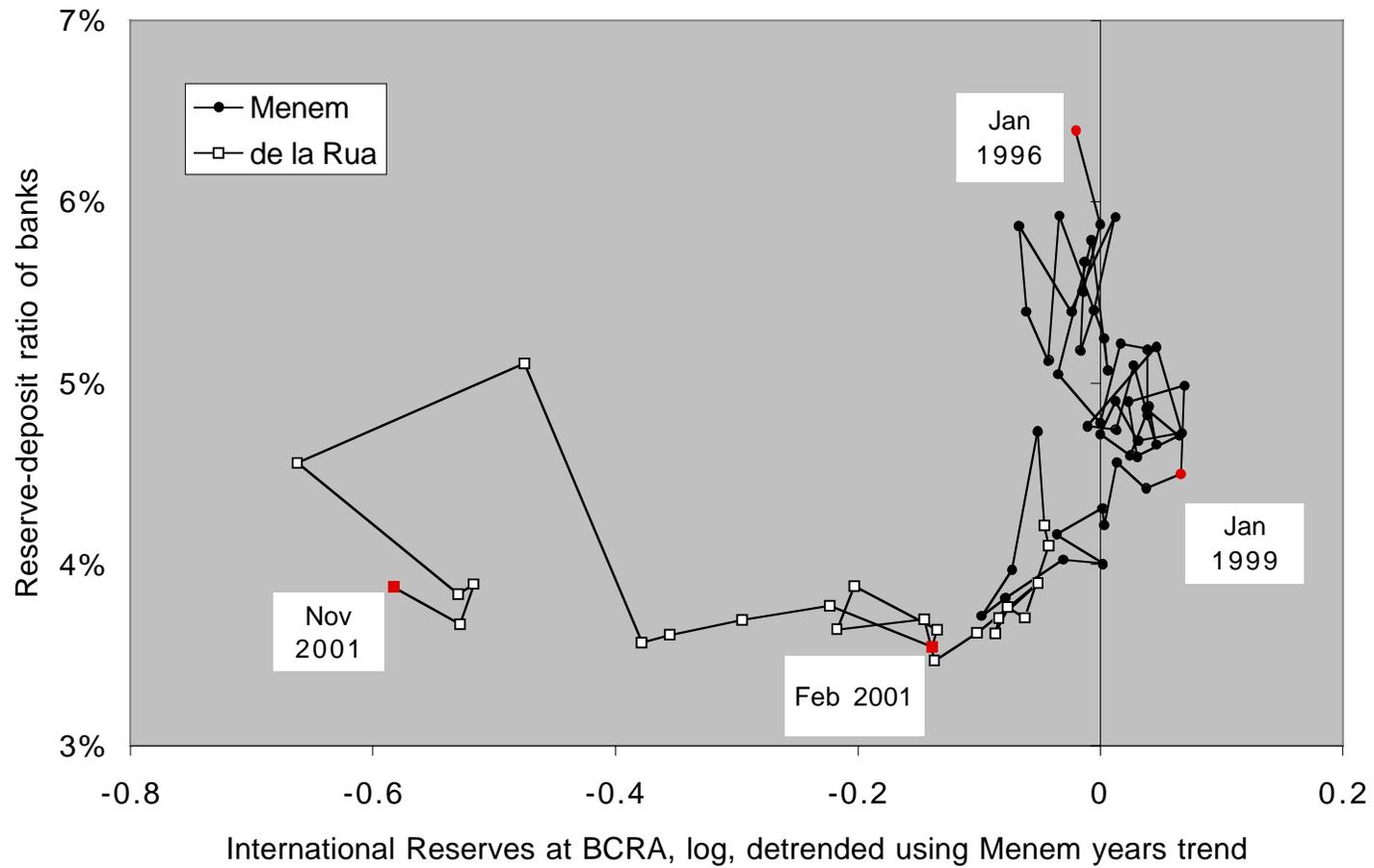
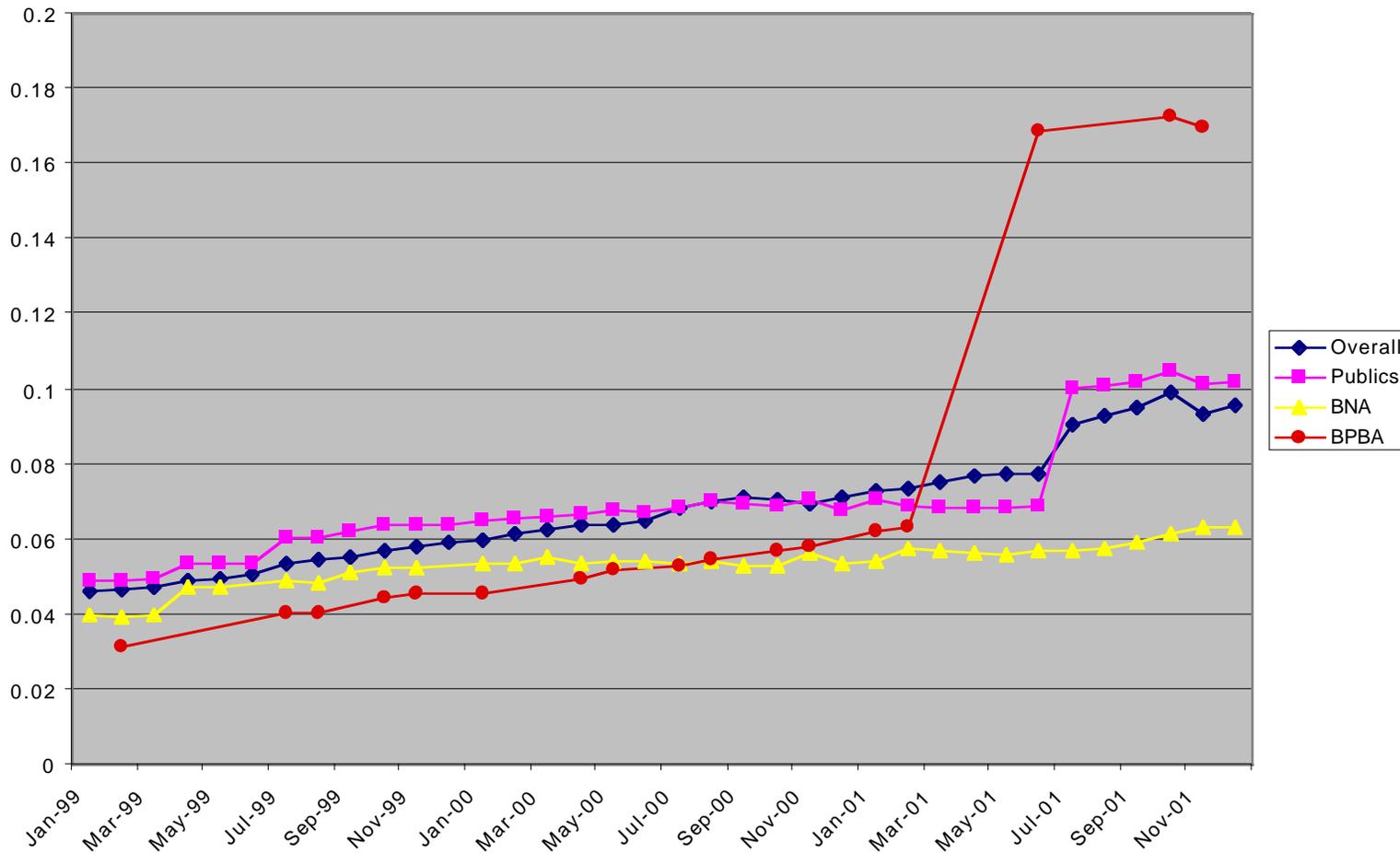


Figure 9

Nonperforming loans as a share of all loans



## Illustration 1

### The Cure for Gaicho Banking? The “London Consensus” After the Baring Crash

*Caption: “John Bull ordena que los bancos oficiales sean reducidos a cenizas asi prevaleceran 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.)*

*Notes: This cartoon is a reference to the massive shock to the financial system during the Baring Crisis that left the domestic banking sector in ruins. Only the foreign banks survived, many of them British. Seat 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 seats 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.*

*Source: El mosquito, año 28, no. 1473, April 12, 1891.*

