# Boom, Gloom, Doom: Balance Sheets, Monetary Fragmentation, and the Politics of Financial Crisis in Argentina and Russia

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*In the 1990s, Russia and Argentina both tied their currencies to the dollar to combat inflation. They later devalued under pressure, but only after an extremely costly delay, and only after an explosive spread of monetary surrogates substituting for official currency. This article explains these puzzling developments using an institutional-sociological approach to money, which relates exchange-rate preferences to financial context ("balance sheets") rather than sectoral position, as is common. It proposes a "lock-in" mechanism explaining delayed devaluation in both cases, as well as Argentina's greater delay, and explores the linkages between exchange-rate policy and the origins of monetary surrogates.*

***Keywords:*** *exchange rates; financial crisis; Russia; Argentina; money surrogates*

In the late twentieth century, many emerging markets adopted exchange-rate policies intended to provide a stable financial anchor. Instead, they found themselves drifting into a monetary maelstrom. The policy at fault was "exchange-

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rate-based stabilization" (EBRS), a variety of inflation-fighting program that links the value of domestic currency closely to the dollar or other authoritative international currencies. Such exchange-rate pledges were intended to rein in inflationary expectations. In this they usually had some immediate successes.

However, ERBS programs had other, more troubling financial consequences that ensued with depressing regularity.[1] The commitment to maintain fixed parities between domestic and international currency involves tying—more or less rigidly—the domestic money supply process to inflows and outflows of foreign currency. ERBS programs thus tend to pass through three phases: boom, gloom, and doom.[2] To make description of these phases easier, I'll call the domestic currency the peso and assume it has been tied to the dollar. In the boom phase, capital flows in, the domestic money supply expands, and prices rise in both peso and dollar terms.[3] Sectors that compete on world markets experience a dollar-cost crunch as they lose competitiveness and consumers find it easier to afford imports. In the gloom phase, capital flows reverse, creating deflationary impulses as monetary policy tightens. Businesses begin to experience a peso-cost crunch, as downward price pressure on sales makes it hard to pay for labor, inputs, and finance. Since dollar prices remain high, the cost crunch is now general. It affects government as well by reducing tax collection, prompting either difficult spending cuts or more government borrowing, and more doubts about whether it is sustainable. Devaluation looms. The government seeks to stem the tide of capital outflows by offering higher returns to holding the peso, implying higher interest rates and more contractionary policies. The usual endgame of an ERBS combines high interest rates with efforts to regain investor confidence to bring these rates down. Such efforts rarely succeed, though they can persist for a long time. Eventually, the program reaches its doom, when the authorities decide that devaluation is better than continuing to defend the peg.

In the course of the 1990s, this boom-gloom-doom sequence became sadly familiar. The Mexican crisis of 1994, several of the Asian crises of 1997, the Russian crisis of 1998, the Brazilian crisis of 2000, and the Turkish and Argentine crises of 2001 are examples. While the pattern finds a ready macroeconomic explanation in the effects of capital flow and flight, it is somewhat more puzzling politically. Although the tendency of fixed exchange rates to change too late and too much is one of the oldest charges against this policy, it remains surprisingly obscure why so many defenses of pegged exchange rates in the context of inflation-stabilization programs persist so long, and are taken to such extremes.[4] When gloom sets in, why don't proponents of exchange-rate flexibility begin to win some political battles? Why are desperate and expensive efforts made to maintain currency parities in the face of withering market skepticism? These questions are all the more difficult to answer insofar as any theory that successfully explains resistance to devaluation may encounter trouble in explaining why this resistance eventually comes to an end.

The present article seeks to shed light on these questions by investigating the politics of financial crisis in Russia (1998) and Argentina (2001). Both countries embraced an ERBS program after a period of high inflation. Argentine authorities promised to hold the peso-dollar exchange rate constant, at 1 for 1, permanently. In the event, the policy held from 1991 until late 2001. Russia's currency band, known as the "ruble corridor," allowed the exchange rate to vary within pre-announced parameters around a central value that at times itself underwent a scheduled devaluation. The policy survived from mid-1995 until mid-1998. Both countries contracted very large amounts of foreign debt in the final stages of their failed efforts to save their exchange rate. In both, the currency's fall was very large, likely much larger than it would have been with an earlier devaluation when more reserves were available. Thus, both countries pose in stark form the questions noted above: why didn't monetary authorities cut their losses by surrendering sooner? And why did they surrender when they did?

The cases chosen here offer a balance of similarities and differences that offer important empirical leverage on these questions. Both countries unarguably engaged in a futile and expensive delay of devaluation. Yet, as shown below, Argentina delayed far longer than Russia, whether in terms of simple chronological time, of financial complications braved, or of the spread of expectations about impending devaluation.

Below, I argue that delay of devaluation in both cases stemmed from a desire to avoid harming powerful interests, especially interests that expected to use domestic-currency receipts to cover foreign-currency obligations. These foreign-currency obligations reflected the capital inflows of the boom period. By stimulating such inflows, ERBS programs had set off a dynamic of political "lock-in," creating interest groups opposed to a devaluation that would end the program.[5]

The cases also demonstrate that the strength of the lock-in effect can vary, depending on the power of interest groups and the character of their interests. In simple terms, one can explain Argentina's more protracted delay of devaluation by the fact that while Russian supporters of the fight against devaluation were playing for time, Argentina's were playing for keeps. The ruble assets of powerful businesses in Russia were relatively liquid, and could be unwound given time and acceptable prices. Russia surrendered its defense of the ruble when a run on its government debt made further unwinding impractical, at a moment when many ordinary depositors, and some more sophisticated investors, were still not aware devaluation was impending. In Argentina, leaders fought devaluation until very many more liquid peso positions had been unwound. They did so in the interests of businesses with illiquid peso-denominated assets but dollar liabilities, for whom devaluation meant financial destruction. Thus Argentina fought much harder and longer, and surrendered only in the face of a bank run that occurred after even ordinary depositors became certain devaluation was inevitable.

In explaining the common points and distinctions between the cases, I focus on the distributional implications of exchange-rate policy, in line with an important body of literature spearheaded by Jeffry Frieden.[6] But I go beyond this literature by emphasizing that relative currency values have distributive effects not solely, or directly, via their impact on relative prices for goods and services.[7] *Rather, the distributive impact of exchange rates results from an institutional and historical context that determines the financial significance of monetary events, and is shaped by the sociological character of financial ties.* The different debt and asset situations in Argentina and Russia are examples of how historical and institutional context affect the politics of devaluation.

This approach to exchange rates derives from an institutional-sociological view of money.[8] Institutionally, money is at the core of contemporary capitalism, insofar as individuals and businesses engage in ongoing financial undertakings, rather than occasional arbitrage between various spot markets. Conducting an ongoing financial undertaking involves constantly reckoning with the balance of money-denominated assets against money-denominated liabilities.[9] Money is also institutionally required to pay contractual, debt, or tax obligations, and is thus a "creature of law" insofar as law defines what constitutes settlement of an obligation.[10] Sociologically, these money-denominated legal obligations are embedded in a broader "relational context" that structures parties' interactions and attitudes to the prescriptions of the law.[11] In sum, the institutional-sociological view of money emphasizes money's role in organizing financial connections between economic actors, rather than reducing money to a convenient way of pricing goods and services.

The institutional-sociological approach to money offers insights into the puzzle of why those who suffer from delayed devaluation are not more politically potent. Legal regulation and relational context may offer actors three kinds of opportunities to address their monetary interests without devaluation. Changes in the *legal status of debts* can reduce the burden of liabilities or increase the security of assets. Likewise, *government market interventions*—ranging from tariff barriers to price-setting regulations—can increase profits or reduce costs without affecting exchange rates.[12]

Finally, in some kinds of relational context, networks of actors are themselves able to negotiate the creation of *monetary surrogates* that mitigate the effects of the restrictive monetary policies required to ward off devaluation. In the run-up to their dramatic devaluations, both Argentina and Russia saw a proliferation of alternative means of payment, ranging from bartered goods to surrogate currencies issued by private actors or government organs. Due to their spontaneous and decentralized character, estimating the volume of these alternative means of payment is an inexact science. But this volume was nevertheless large. In Russia on the eve of its August 1998 devaluation, from 50 to 70 percent of all transactions in industry employed alternate means of payment. Close to half of federal tax

receipts and still more of local tax receipts took a nonmonetary form.[13] In Argentina, surrogate currencies issued by provinces and the national government were over 23 percent of the total pesos in circulation by the end of 2001.[14]

The existence of such alternative ameliorative measures—protection from imports or from creditors, or the use of monetary surrogates—weakened the political weight of devaluation supporters. Where devaluation opponents had interests that were almost absolute (no feasible alternative to exchange-rate policy could address them) and necessarily joint (the exchange rate affects the entire group), potential supporters of devaluation had interests that were neither as absolute nor as inseparable.[15] Alternatives to devaluation did not necessarily encompass all victims of the cost crunch, and could sometimes be attained in the local rather than the national arena. Thus, the political resilience of exchange-rate pegs despite the harsh measures needed to maintain them reflected not just the strength of devaluation opponents, but also the diversion of potential devaluation supporters into pursuit of alternate ways of addressing their interests.[16]

To recapitulate, the puzzles posed above on the political base and varied speed of dilatory devaluation find answers in three main points. First, ERBS programs create constituencies for their continuation by promoting the matching of dollar liabilities to domestic-currency assets. Second, when and how ERBS programs end in devaluation depends on the particular interests of these constituencies, especially how liquid their domestic-currency assets are. Third, victims of the currency overvaluation and tight money associated with ERBS programs do not push vigorously for devaluation due to the presence of alternative ways of addressing their interests, including government protection from competitors and creditors or the use of monetary surrogates. All three points about politics derive from a particular, institutional-sociological understanding of money as a financial institution embedded in social relations rather than a mere convenience for expressing market prices. Table 1 depicts the argument.

The balance of this article is divided into six sections. The first elaborates on the institutional-sociological approach to money, arguing it allows better insights into the political effects of international capital mobility than the prevalent approach to the politics of exchange rates. Then three sections deal in turn with the boom, gloom, and doom phases as experienced by Russia and Argentina. There follows a brief discussion of potential alternative hypotheses for procrastination on devaluation, which do not improve on the lock-in mechanism proposed here. Finally, the conclusion draws some implications for the study of national economic policy making in the presence of international capital flows.

## AN INSTITUTIONAL-SOCIOLOGICAL VIEW OF MONEY: CONSEQUENCES FOR EXCHANGE-RATE PREFERENCE

A key working assumption of extant literature on the politics of exchange rates is that politicians and bureaucrats engaged in exchange-rate management, and

Table 1
*Summary of the Argument*

| BOOM | | GLOOM | | DOOM |
|---|---|---|---|---|
| Capital Inflows | | Capital Outflows | | Further capital outflows |
| ↓ | ↓ | ↓ | | ↓ |
| Accumulation of dollar liabilities and peso assets | Domestic inflation | Contractionary monetary policy | | *If peso assets liquid* → delay devaluation as long as liquidation practical |
| ↓ | ↓ | ↓ | | OR |
| Anti-devaluation constituency | Dollar-cost crunch for international competition | Peso-cost crunch | | *If peso assets illiquid* → delay devaluation until self-sustaining general flight from currency |
| ↓ | ↓ | ↓ | ↓ | |
| *Devaluation alternatives* | *Protectionism or export subsidy* | *Relaxed debt enforcement* | *Monetary surrogates* | |

those economic actors who seek to sway them, give heavy weight to distributional concerns. As already noted, the present article does not dispute this assumption. Indeed, the empirical cases given below should be regarded as additional evidence for its utility. What is at issue on a theoretical level is how to approach the distributional issues exchange-rate policy raises. This section makes the case that an institutional-sociological approach to money, involving a detailed understanding of the place of money in economic practice, has two advantages over the standard alternative. First, it allows for a more accurate perception of the ways that economic interests are transformed in circumstances of global capital mobility. Second, it provides better guidance into the *form of politics*—the relevant actors, the arenas in which they contend, and the resources they employ—associated with distributional conflict over exchange-rate policies in these circumstances.[17]

In his pioneering work on exchange-rate politics, Frieden specifies two kinds of distributive interests in exchange-rate policy, "level" interests in a more or less appreciated currency and "regime" interests capturing preferences on the degree of flexibility in setting exchange rates.[18] He discusses the level preferences of four kinds of economic actors. International investors prefer a strong currency to purchase assets.[19] Producers of goods or services sold only on the domestic market—termed "nontradables" producers—prefer a strong currency because it makes their domestic market receipts more valuable in international currency terms. Import-competing and export-competing businesses prefer a weak currency to improve their competitive position.

Frieden and his collaborators have been explicit about the schematism involved in this sectoral classification, and have noted a number of special cases and extensions. One recent refinement is description of a tradeoff between purchasing power and competitiveness, which may complicate sectoral categories.[20] For instance, import-competing firms that use imported inputs may not be able to afford them with the otherwise attractive depreciated currency.[21] Likewise, debtors with obligations denominated in foreign currency should prefer an appreciated currency to pay off these loans.[22]

These extensions reveal that the sectoral categories rest on implicit, and potentially incomplete, assumptions about the overall financial circumstances of firms. The presumption that import competing firms prefer a weak currency, for example, stems from a focus on their domestic currency expenditures. The later recognition of their potential purchasing power interest in an appreciated currency adds in two other financial circumstances: expected receipts in the domestic currency, and dollar-denominated expected purchases. Similarly, the need to pay dollar-denominated loans is a financial circumstance not considered in the sectoral breakdown. In short, to understand the distributive stakes in monetary phenomena, one needs a fuller picture of their financial consequences than a sectoral classification is able to give.

*Balance-Sheet Analysis*

To acquire such a picture, it is helpful to rely on the notion of a *balance sheet*, consisting of liabilities, associated with a stream of expected payments, and assets, associated with a stream of expected revenues.[23] This is a broad construal of assets and liabilities. Thus, business may rate such assets as future sales against such liabilities as expected purchases of inputs, while also accounting for more institutionally concrete assets like accounts receivable and liabilities such as loans to be repaid. Balance-sheet terminology can express all of the usually specified sectoral interests, as well as the extensions and exceptions discussed above (see Figure 1). It also immediately reveals ambiguities in these specifications. For instance, an "import-competing" firm postulated to have a clear interest in a depreciated currency is implicitly assumed to have exclusively domestic-currency denominated liabilities. But insofar as assets are also denominated in domestic currency, the interest in a weak currency is much less clear.

Thus, making balance-sheet analysis explicit has the advantage of synthesizing insights about the schematism of the sectoral approach already well understood by its advocates. This advantage is, perhaps, modest. However, balance-sheet analysis has some additional virtues. One is that by treating the firm as a financial entity, it reveals the potential impact on exchange-rate interests of financial catastrophe. Consider two firms that would fall into the sectoral category of "non-tradables producers." Firm 1 has outstanding obligations denominated largely in domestic currency, Firm 2 largely in foreign currency. An appropriately

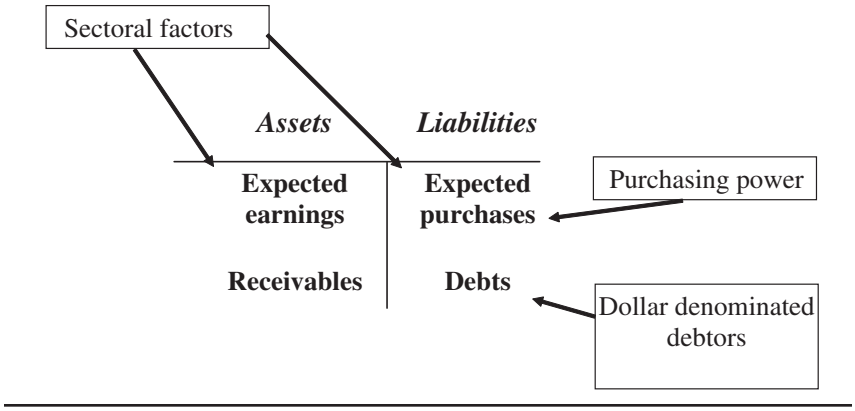


*Figure 1.* A balance-sheet synthesis of exchange-rate interests.

large devaluation would drive Firm 2 into bankruptcy while leaving Firm 1 intact. Firm 2 would therefore resist devaluation with far greater intensity than Firm 1. A purely sectoral analysis offers no way to differentiate between these two firms.[24]

Another, and more significant, advantage of the balance-sheet approach is how it facilitates analysis of the dynamism of exchange-rate interests, something that the presumption of a fixed sectoral position renders quite difficult. Balance sheets record an accretion of choices—of how much and in what currency to borrow, of what physical capital to purchase, of whom to hire under what contractual conditions—that in sum determine how the financial position of a firm will be affected by monetary disturbances. Balance sheets and the interests they imply change over time. An argument about the influence of balance sheets is, of necessity, an argument for the path-dependent influence of history.[25]

Highlighting the importance of historical trajectory for exchange rate interests makes possible a much-improved account of the politics of international capital mobility. Frieden's analysis of the political role of capital mobility steers clear of analyzing the balance-sheet transformations capital mobility brings about. Emphasizing that mobile capital allows national governments to stabilize the exchange rate only by sacrificing monetary policy autonomy, Frieden argues that exchange rate regime interests are determined by which of these goals was valued more highly.[26] This focus on the macroeconomic implications of capital flows ignores the fact that capital flows are also *micro*economic events that rearrange the assets, liabilities, and interests of the particular actors who make and accept the investments of which capital flows are composed. Capital flows are thus a crucial part of the history determining the balance-sheet interests firms hold in the level of exchange rates. However, this aspect of firms' balance sheets is nowhere reflected in the sectoral analysis. In effect, *the sectoral analysis describes a world in which capital moves, but does not arrive anywhere*.

A parallel contradiction arises from the distinction between regime and level interests. Firms would have no interest in exchange-rate stability unless they

intended to make use of the predictability a stable currency allows, by choosing to balance investments against liabilities in ways that would be advantageous if stability holds. Thus, actors' "regime interests" reflect how they would like to *acquire* level interests. However, this implied endogeneity of level interests contradicts the exogeneity of level interests assigned to representatives of particular sectors. The analysis of regime interests is based on the assumption that actors can shape the balance sheets that determine their stake in the level of the exchange rate, but the analysis of level interests takes these balance sheets as given.[27] This contradiction finds concrete expression in the difficulties in giving a sectoral analysis of the exchange-rate interests of (outward) international investors. Frieden suggests these investors' attitude toward an appreciated currency is ambiguous: "A strong currency makes assets relatively cheaper in home-currency terms, but also makes the income stream less valuable."[28] What is in fact described here is not ambiguity but a *transformation* of level interests as a result of investment choices, revealing the inadequacy of treating investors as a sector with predictable, consistent interests in the level of the exchange rate. And this point applies *mutatis mutandis* to other sectors as well. In a world of mobile capital, even firms that seek inputs and sales entirely within domestic markets might seek international financing.

In short, seeking to simplify the analysis of exchange-rate interests by applying a regime-level dichotomy has the effect of eliding how yesterday's regime interests are today's level interests, forestalling discussion of the extent to which mobile international capital transforms the fixed sectoral interests the theory presumes. These difficulties argue in favor of beginning the analysis of distributive interests in monetary policy directly from balance-sheet situations and their transformation.

### *Real and Nominal*

Keeping in mind the image of assets and liabilities expressed in monetary terms on a balance sheet makes it much easier to see the way that monetary phenomena have distributive effects. Monetary phenomena make firms better or worse off only when they have *differential* effects on the two sides of the balance sheet. Creditors hate inflation because the amount owed to them (an asset) stays the same, but they have to pay more for what they're planning to buy (a liability, in our broad sense). There would be no distributive effects of monetary phenomena if firms hit with an increase in liabilities could simply increase the value of their assets (for instance, by raising prices on what they sell when devaluation raises the costs of imported inputs), or if those experiencing falling assets could simply reduce their liabilities accordingly (for instance, reducing wages when sales fall due to deflation).

Economists have developed a useful vocabulary to describe the difficulty of recalibrating assets and liabilities in response to monetary changes. An asset or lia-

bility is said to be *nominally rigid*, or simply nominal, if its value is fixed in units of a particular currency and does not change when the domestic or international value of the currency changes. A common example of nominal rigidity is wages. To the extent that they are fixed in contract, wages are not easy to adjust downward, even if prices are falling. (In this case nominal rigidity takes the form of "downward stickiness," another term of art.) Debts are also often nominally rigid—the amount owed does not usually rise to compensate for inflation. The antonym of nominal is "real;" equivalently, real assets have low nominal rigidity. A bond indexed to inflation is a real asset, because its nominal value changes in line with inflation. When sellers can raise their prices in line with inflation, the revenue they receive from sales is a real asset.

Understanding the roots of differences in nominal rigidity is crucial to a full account of political contention over exchange-rate policy (and associated monetary policy). Those who wish to redress the distributional impact of exchange rate policies always have at least two potential targets: exchange-rate policy itself, or the patterns of nominal rigidity that give that policy its particular distributional consequences. While changing the currency's nominal value will address nominal rigidity of any sort, for some kinds of nominal rigidity it is not the only policy measure available. When nominal rigidity problems can be addressed by other means, action by victims of exchange-rate policy may focus on these alternate means rather than the policy itself.

The institutional-sociological approach to money, stressing on one hand money's legal role as means of payment and on the other the embeddedness of monetary relations in a sociological context, offers a powerful means of classifying the sources of nominal rigidity.[29] One can describe nominal rigidity as the outcome of a bargaining situation, shaped by legal and sociological context, in which the party that benefits from nominal rigidity has the advantage. For instance, when creditors are unable to raise their demands on debtors to compensate for inflation, the debtors hold a bargaining advantage. To understand possible ways around nominal rigidity, one needs to understand the origins of the bargaining advantage nominal rigidity involves. I describe four types of nominal rigidity, susceptible to distinct policy interventions and negotiated solutions: flight-enforced, demand-enforced, law-enforced, and network-enforced.[30]

*Flight-enforced* nominal rigidity exists when creditors can punish debtors for seeking to change the nominal value of an asset by exiting the relationship. It is characteristic, for instance, of bonds that are designed to trade on liquid markets for broad investor populations. A bond issue of this sort will be composed of a number of obligations that are interchangeable, and that can therefore trade on a price-setting market. Interchangeability limits nominal flexibility, since it prevents obligated parties from treating different holders of the "same" asset differently. If this standard is violated, bondholders can sell, lowering the price of the bonds and probably limiting the issuers' access to credit in the near term. To the

extent that bondholders find themselves in a race to exit the market, the loss in bond value and borrowing power can be quite large. So the threat of flight enforces nominal rigidity if this is built into the initial bond contract.[31]

Flight-enforced nominal rigidity is difficult to address via means other than a change in currency values. Negotiations are complex, insofar as creditors will be concerned to exit a declining asset before their fellows, reducing the shadow of the future needed to ensure a successful outcome.[32] Thus, debtors with liquid liabilities that find themselves in financial difficulties have no one to ask for forbearance, and must unilaterally declare that they will not pay their obligations.

*Demand-enforced* nominal rigidity emerges from limits on consumer willingness to pay for goods. For instance, Frieden has noted the relevance of economic arguments that imported differentiated goods will tend to be priced to what the target market will bear, and thus will see limited "pass through" of exchange-rate changes to prices.[33] Revenue on sales from such goods is thus more like a nominal asset than a real one. For instance, a Japanese car that is priced at $10,000 in the U.S. market based on competitive considerations will remain at this price whatever the value of the yen—thus, revenue from the sale of these cars will have a "nominal" character.

An example of demand-enforced nominal rigidity more relevant to our cases affects what might be termed "exportables," goods such as oil that can be sold on both world and domestic markets. Suppose that shifting oil supplies from domestic to world consumption only becomes profitable beyond a certain price differential. Then oil on the domestic market will behave as a real asset as long as the domestic price does not fall below the international price by more than this differential. At that point, the price can fall no further without prompting a shift to sales abroad, so revenue from the sale of oil begins to behave like a nominal asset, denominated in the units in which world oil is priced. Another case is import-competing goods. Here the price is real up to a cap placed by world prices and becomes nominal thereafter: raising the price any further would mean consumers would shift to imported alternatives.

When nominal rigidity has its roots in market demand, one way of overcoming it is state intervention to expand or restrict autonomy to set prices and enter markets. The familiar use of protective tariffs to increase the domestic-currency value of sales of import-competing goods is one example. In the case of exportables, a similar function is served by export barriers.[34] Likewise, governments have regularly sought to address the rigidity of labor costs by intervening in markets to affect the terms of bargains between employers and employees.[35]

*Law-enforced* nominal rigidity obtains when nominal obligations are written into enforceable contracts. How effective such legal obligations are in practice will depend in part on enforcement—meaning that strengthening or weakening enforcement is a relevant policy measure. Another, less familiar measure is to enact legal changes in what constitutes debt fulfillment. For instance, in both Rus-

sia and Argentina after their financial crises, authorities converted bank deposits made in dollars to the domestic currency at an above-market exchange rate, making banks' obligations to deliver a nominal sum of dollars far less burdensome. To the extent that law is at the root of nominal rigidity, the legal sovereign is in a position to overcome it.

The final category is *network-enforced* nominal rigidity, which arises when asset holders must seek to maintain their nominal income stream because of their own nominal obligations. Thus, it is a network of nominal obligations that renders any individual obligation nominally rigid. For those above the subsistence threshold, consumption desires and earning expectations are not rigid; in principle, one need only to change one's mind. If liabilities include institutionalized nominal debts, however, scaling back earning expectations is more difficult. This could be one of the reasons why nominal wage decreases have such devastating effects on worker morale.[36]

Like those stemming from other sources of nominal rigidity, the problems caused by networks of obligations can be resolved via an overall change in currency value. To the extent that a creditor's ($C_1$) objection to a reduced nominal payment from a debtor (D) rests on nothing more than the demands of her own creditor ($C_2$), a more local accommodation may also be possible. $C_1$ must get D to pay in a form that $C_1$ will be able to use to pay $C_2$. Monetary surrogates—alternate means of payment for legal obligations—may fill this role.[37] The forms these monetary surrogates can take are discussed more fully below.

A summary of forms of nominal rigidity and measures to address them are found in Table 2.

### *Monetary Politics*

Two hypotheses about exchange-rate politics can be derived from an institutional-sociological approach to money. First, the various causes of nominal rigidity, and the various measures that can address these causes, suggest that the political consequences of exchange-rate policy will be felt in a variety of political arenas.[38] When exchange rates are causing economic tension, political authorities will hear demands to limit or expand market access, or to relax or strengthen debt enforcement. Creditors and debtors, or suppliers and customers, may even bargain their way to local monetary arrangements. An exclusive focus on exchange-rate policy, or even on the monetary policy measures that exchange-rate policy requires, will miss these other locations of political struggle.

The second implication is that historically emergent balance sheets shape the interests actors bring to this multifaceted political struggle. Actors similarly situated with regard to the markets for goods and services that serve as the basis for sectoral classifications may still find themselves in distinct financial situations. The following sections support these hypotheses with evidence from the experiences of Argentina and Russia.

Table 2
*A Typology of Ways of Addressing Nominal Rigidity*

| | Measure | Form(s) of Nominal Rigidity Addressed |
|---|---|---|
| Most general | Change currency's value<br>• Exchange rate policy<br>• Price level monetary policy | Flight-enforced and all others |
| Less general | Market intervention<br>• Export or import tariffs<br>• Restrict unions or cartels<br>• Regulate prices | Demand-enforced |
| | Debt or contract law measures<br>• Strengthen or weaken debt enforcement<br>• Change units of obligations contracted under domestic law | Law-enforced, network-enforced |
| Least general | Monetary surrogates | Law-enforced, network-enforced |

## BOOM

Policy makers in Russia and Argentina launched their ERBS programs to rein in domestic price inflation by restricting depreciation of their currencies against the dollar. They thereby committed themselves to a "real appreciation," in which domestic prices denominated in dollars would grow faster than domestic prices denominated in pesos or rubles.[39] Without a real appreciation, an ERBS can do nothing to restrict domestic prices, since the exchange rate moves in lines with them. As Anne Krueger has perceptively argued, this commitment to a real appreciation creates possibilities for arbitrage through manipulating transcurrency balance sheets. As long as peso interest rates are greater to or equal than the rate of peso inflation, there will be positive returns to a strategy of selling dollars, buying pesos, investing them, and converting the receipts back to dollars (since the peso-dollar exchange rate will not have depreciated as fast). Another way of making the same point is that a commitment to an ERBS is a government affirmation that dollars converted to pesos today will have a greater purchasing power than those converted to pesos tomorrow. Although there has been some economic debate over the roots of the capital inflows and consumption booms that regularly accompany the launching of an ERBS, Krueger's argument compactly reveals the incentives both to spend dollars today rather than tomorrow, and to incur dollar liabilities to purchase peso assets, especially before a program has had time to fail.[40]

Both Argentina and Russia experienced substantial levels of capital inflow under their ERBS programs.[41] They also experienced growth in the dollar size of their economy, which increased the dollar value of domestic sales by producers of import-competing, exportable, and nontradable goods. Tradables producers suffered competitively, and won various sorts of changes in market-intervention policies. Creation of transcurrency balance-sheet positions proceeded in tandem

with real appreciation, but the pattern differed noticeably in the two countries. In Russia, the key domestic assets purchased were highly fungible ones, such as ruble-denominated government debt or stock market shares. Nontradables producers did not contract much dollar debt, and exportables producers did so only on security of export receipts, although both groups derived some benefits from the increase in the dollar size of the domestic market. In Argentina, almost all the most fungible assets (including government debt and the bonds of large firms) were dollar denominated. Peso-generating assets were less fungible, including especially expected sales to domestic consumers by infrastructure and other nontradables businesses. These businesses, which benefited from real appreciation, came increasingly to rely on dollar liabilities. Argentine banks—many of which were also purchased by multinationals—preferred to make loans in dollars, despite the predominance of pesos among their liabilities. These distinctions, which had important implications for the endgame of the pegs in both cases, are described in more detail in the following paragraphs.

*Russia*

Russia launched a currency band in July 1995, three and a half years after the country broke with its decayed command economy by liberalizing most prices. Monthly inflation was 6.7 percent/month, equivalent to 217 percent a year, despite efforts to use restrictive monetary policy to tame it.[42] Interest rates on business loans were 316 percent/year. Once the currency band was announced, inflation declined slowly, while the real exchange rate shot up, appreciating 27 percent by the end of the year. Despite this rapid real appreciation, little capital entered the country in 1995-1996, due mainly to huge political uncertainties surrounding the reelection of Boris Yeltsin, who until the late spring of 1996 was running quite poorly against a Communist Party candidate with fundamentally anticapitalist economic views. It wasn't until after Yeltsin won the election in the summer of 1996 that capital entered the country in any great volume; capital flows continued through October of the following year. The extent to which investors were willing to engage in interest-rate arbitrage can be gauged by calculating the rates of return for arbitrage implied by the ruble corridor's upper boundary and prevailing interest rates on ruble-denominated assets (see Table 3). These are the minimum returns one could expect to earn by exchanging dollars into rubles, loaning them out until the end of the corridor's term, and converting the proceeds back into dollars, assuming the ruble sank to the lowest value specified in the corridor.[43] Until the August 1998 collapse of the corridor, realized dollar returns on such arbitrage transactions were much higher than these minimums

That the returns on interest-rate arbitrage were declining reflected both increased confidence that the ruble corridor would hold, and eventually substantial capital inflows, especially in the second half of 1996 and into 1997.[44] Russian commercial banks were a major way these flows were intermediated, and their

Table 3
*Interest-Rate Arbitrage and Russia's Currency Band*

| | Average Annual Dollar Returns on Ruble Loans at: | | | |
|---|---|---|---|---|
| | Interbank Overnight Rate | | Government Bond Rate | |
| | Minimum Implied by Ruble Corridor | Realized (to Scheduled End of Band) | Minimum Implied by Ruble Corridor | Realized (to Scheduled End of Band) |
| July-November 1995 | 10% | 35% | 38% | 70% |
| December 1995–June 1996 | 13% | 19% | 44% | 51% |
| July-November 1996 | –18% | 17% | –10% | 29% |
| December 1996–November 1997 | 7% | 13% | 10% | 16% |
| December 1997–July 1998 | 27%[a] | 32%[b] | 25%[a] | 31%[b] |

*Source:* Calculated from statistics from Central Bank of Russia, http://www.cbr.ru.
a. To end December 1998 rather than end 2000.
b. To end July 1998.

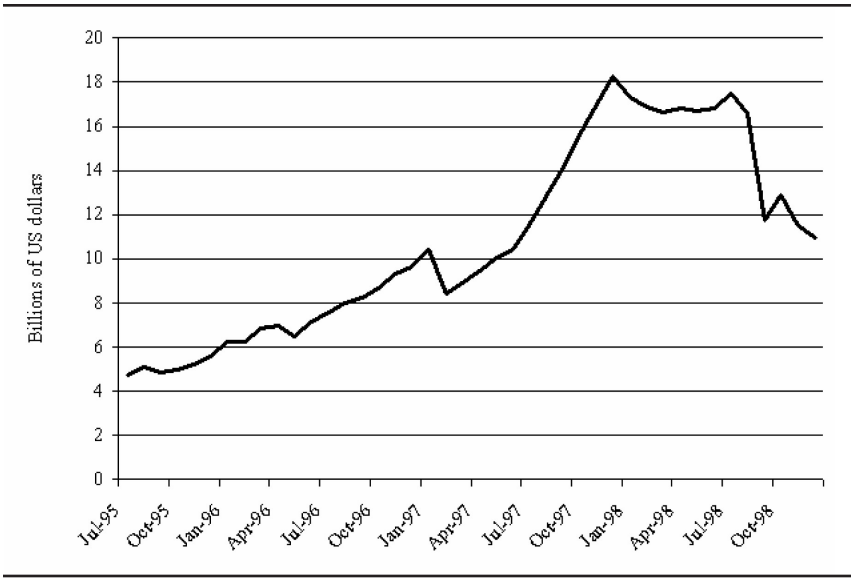


*Figure 2.* Russian banks' foreign liabilities.
*Source:* Statistics from Central Bank of Russia, http://www.cbr.ru.

foreign liabilities grew dramatically in 1997, part of a general shift that increased their share of dollar-denominated liabilities and the share of ruble-denominated assets (see Figure 2). In 1997-1998, about 25 percent of deposits were in dollars; the reserves for dollar deposits were held in rubles, another source of exchange-rate risk. Because depositors were also switching to ruble deposits, and because a falling but still high share of domestic lending was in dollars, in the aggregate banks' dollar assets more than covered their dollar liabilities. However, in 1998 Russian banks acquired additional, off-balance-sheet exposure to the risk of devaluation by selling of forward contracts to sell dollars, used by foreign investors to hedge their currency risk.[45]

Both local and federal governments also sought to borrow in dollars at interest rates far lower than domestic ones—when calculated on the assumption the ruble corridor would be sustained. There were many willing lenders.[46] The Russian national government issued $16.8 billion in Eurobonds in 1996-1998, while the city of Moscow issued $1 billion, Petersburg $300 million, and the province of Nizhniy Novgorod $100 million. By early 1998, many other provinces were seeking access to dollar-denominated loans.[47] Russian exporters were also able to borrow abroad, with some success, especially in the energy sector.[48] Meanwhile, foreign capital stoked a huge appreciation in the Moscow stock market. From January through October 1997, the benchmark stock market index nearly tripled in dollar terms, rising 185 percent. This proved to be the high point of the boom phase of Russia's ERBS.

Dollar borrowers were not the only domestic constituency to acquire a stake in exchange rate during Russia's brief boom. The substantial growth in the dollar

size of the economy under the ruble corridor also made the internal market far more significant to exportables producers, especially large oil companies and the huge parastatal natural gas firm Gazprom. Despite significant export capacities, most of the Soviet energy infrastructure was geared to supply domestic demand, making switching supply to foreign markets difficult. Thus, the increased purchasing power of domestic consumers was of benefit to these sectors.

This was true even though domestic prices remained well below foreign ones, a circumstance that prompted much confusion—since analysts tended to assume that the distinction between domestic and foreign prices represented a subsidy.[49] However, the energy exporters' pricing policies made sense in the context of price discrimination. Price discrimination seeks to maximize sales revenue by selling to each customer at a price equal to the most he or she is willing to pay, if it is greater than marginal costs and customers offered a low price can be prevented from reselling the product. Since foreign consumers were able to pay more than Russian ones, a pricing policy under which foreigners paid more was reasonable, as long as Russian customers were able to pay more than marginal costs and the price differentials involved were not so great that segregation between the markets could not be maintained. This pricing pattern is "reverse dumping," in contrast with the more familiar "dumping" pattern of price discrimination involving lower prices for foreign consumers and higher prices for domestic ones.[50]

Close examination of the policy changes and the political behavior of the firms involved gives support to the view that they were practicing reverse dumping, and benefited from the purchasing power of their Russian customers. For the Russian natural gas industry, detailed evidence of reverse dumping has been presented elsewhere.[51] For the oil industry, one can note the gradual dismantling of export barriers as the ruble appreciated in real terms—suggesting that there was no need for market intervention to keep domestic prices lower. As economist Padma Desai concludes, "By early 1996, Russia's oil prices were approximately 70 percent of world prices and oil shipments were effectively constrained by pipeline allocations rather than by quotas."[52] That same spring, the oil producers showed in several instances of joint lobbying against proposed policies concern to *avoid* raising prices for domestic consumers to world levels, suggesting by this point they were practicing deliberate and voluntary price discrimination.[53] Gazprom also resisted pushing domestic prices closer to world levels.[54] Neither sector mounted any detectable public criticism of exchange-rate policy until after devaluation.

Not all industries benefited from the real appreciation touched off by the ruble corridor. Import-competing tradable-goods producers, from carmakers to farmers, were ill equipped to meet the challenge of foreign products. However, key officials sought to compensate for the effects of the real appreciation by the market intervention of protective tariffs, a policy pursued quite vigorously.[55] Protection was not universal, and in any event did nothing for exporters reliant on foreign demand, especially metals producers. The dollar-cost crunch brought on

by exchange-rate policy was especially devastating for tradables producers due to the extreme forms of downward nominal price stickiness they faced, rooted in fiscal regulations. However, the rigidity of nominal prices affected nontradables producers as well. In face of general cost crunch characteristic of the gloom phase, both groups found their way to monetary surrogates—as discussed below.

*Argentina*

Argentine authorities initiated a one peso–one dollar currency peg in March 1991, and touched off a classic ERBS boom.[56] The economy grew by 10.6 percent in 1991 9.6 percent in 1992, and 5.8 percent in each of the next two years. Capital inflows were very large, allowing the Central Bank to add $8.3 billion to its reserves from 1991 to 1994, more than doubling them. The creation of transcurrency balance sheets proceeded in tandem, as corporations, the government, and individuals borrowed abroad, creating an important dollar-debtor constituency for the continuation of the peg.[57] In November 1992, when trade deficits were causing concern about sustainability of the peg, the government further promoted construction of transcurrency balance sheets by allowing reserve requirements on dollar deposit accounts to be satisfied in pesos.[58]

After the late 1994 Mexican crisis, Argentina suffered a "Tequila effect" as capital inflows came to a sudden halt (currency reserves remained essentially constant through 1995) and the economy shrank by nearly 3 percent. Following a brief gloom phase, growth restarted in 1996. A new wave of dollar-denominated borrowing ensued, fueled in part by provincial governments refinancing debts to employees and suppliers accumulated during the Tequila crisis.[59] After the crisis, banks concentrated an increasing share of their assets in dollars; by 1996, only about 35 percent of their assets were peso denominated.[60]

Alongside dollar debtors, key beneficiaries of the ERBS-induced economic changes were foreign investors who had participated in the privatization of energy and other public-service firms in the early 1990s. The privatized firms included many public services with sales exclusively on domestic markets. Since foreign investors were using dollars to purchase peso-generating assets, they demanded income guarantees, which took the form of contractual promises to set prices in dollars and index them at least at the rate of the U.S. CPI. Another major privatization was that of the large oil company YPF, which although an exporter made roughly two-thirds of its sales on the domestic market. These sales, and large reserves, made YPF an attractive target for the Spanish oil major Repsol, which acquired YPF some four years after its initial privatization. The multinational corporations that purchased Argentine industrial assets had direct access to international capital markets at attractive rates, and preferred to rely on such dollar-denominated financing. In short, even when capital inflows did not take the form of arbitraging dollar-peso interest rates, they often created transcurrency capital structures premised on a strong peso.[61]

The real appreciation that attracted such investments also raised dollar costs for exporters and import-competing firms. However, this seems to have been of little political or economic impact for some years. As Pastor and Wise note, much like in Russia, Argentina's tradable-goods producers had often seen exports as a " 'vent for surplus' rather than a primary goal."[62] With domestic sales dominant, the strong peso was welcome. Exports were only 6.7 percent of GDP in 1992, and actually rose from that point, perhaps due to the elimination of export taxes and a policy of rebating value-added tax (VAT) payments to exporters.[63] Exports were helped by sales to Brazil, which after 1994 saw a rapid real currency appreciation under its own ERBS, and with which Argentina (from 1995) shared common external tariffs as part of the Mercosur trade bloc, coming to form a major part of Argentina's exports.[64]

Thus, in both countries, the initiation of ERBS programs led to capital inflows and the use of dollar liabilities to fund domestic-currency assets. In both countries, exportables and nontradables producers with domestic sales benefited from the appreciation. However, in Russia, the reliance on dollar-denominated financing to fund investments bringing ruble-denominated returns was far less widespread. Credit to Russia firms from Russian banks amounted to around 12 percent of GDP during the ruble corridor, compared to a figure of over 25 percent of GDP in Argentina in 1997-2000. Moreover, somewhat less than half of Russian banks' loans were in dollars in this period, compared to about 70 percent in Argentina.[65] This difference was to be extremely consequential as the pegs in the two countries were challenged.

## GLOOM

When capital inflows were not forthcoming, recessionary conditions obtained in both Argentina and Russia, setting off parallel political and economic dynamics. Recession meant a domestic-currency cost crunch, and a community of interest between firms whose costs and sales were both denominated in pesos (rubles) and internationally competing firms for whom these same prices expressed as dollars were the main issue. The general cost crunch pitted sellers of widely used inputs, especially credit and energy, against their buyers. Recessionary conditions also placed strains on relations between creditors and debtors. In these circumstances, the full arsenal of alternatives to devaluation (see Figure 3) saw use. Efforts to drive costs to tolerable levels took the form of market interventions to create downward flexibility of prices for inputs and (in Argentina) to restrict interest rates. Debtors called, with some successes, for forbearance in the enforcement of contracts and debts. In both countries, monetary surrogates emerged. These alternative ways of addressing nominal rigidity found support among actors whose attitudes to devaluation ranged from hostile to enthusiastic, but who had to deal with their balance-sheet squeeze in real time. Why these alternative forms of addressing nominal rigidity, rather than devaluation, became the program of

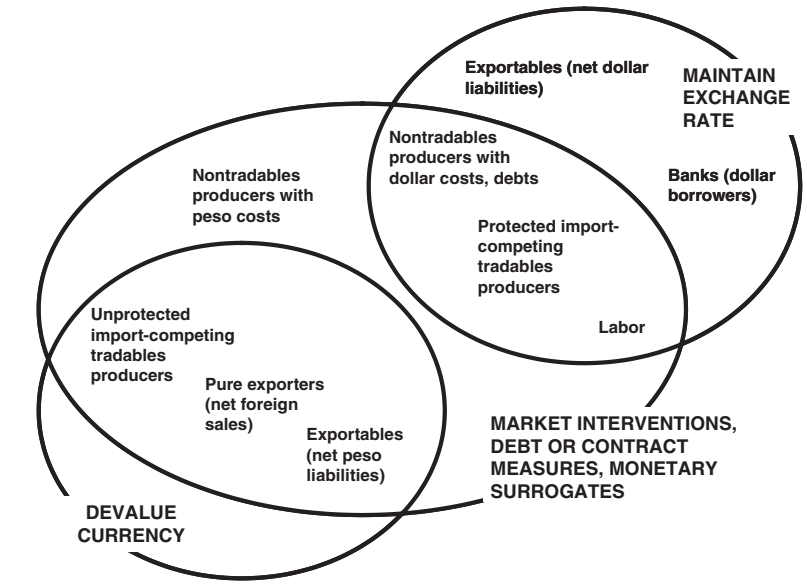


*Figure 3.* Coalitional possibilities for devaluation and substitute policies.

choice can be seen from the constellation of exchange-rate and pricing interests, depicted in Figure 3. While it abstracts from differences in the system of organized interest groups and the political process, the diagram reveals why advocacy of devaluation was a politically marginal position.[66] Absent a dominant position in the political system for devaluation supporters—which neither polity featured—a political coalition for devaluation would be far harder to build than one for lower domestic costs for inputs and credit.

Although the battle over how to relieve businesses' balance-sheet squeeze displayed many parallels in Argentina and Russia, there were contextual distinctions that led to strong differences in the course it took. In particular, Russia saw much more general use of monetary surrogates than Argentina. In Russia, surrogate means of payment quickly came to dominate interbusiness debt settlement, and serviced an alternate financial system built on trade credit. Some money surrogates were issued by local or national governments, but many were the product of interfirm dealings, though they also found their way into the fiscal system. The money surrogates that emerged in Argentina, by contrast, took the form of substitute cash, issued through government spending, and completed only short circuits from consumers to retailers or service providers and back to fiscal authorities.

To understand these distinct outcomes, it is first necessary to understand the logic of monetary surrogates in more detail.[67] Monetary surrogates begin not from the apex of the financial system, but from its base: from a bargaining situation between a creditor and a debtor who face nominal rigidity problems. Monetary surrogates are a solution to the problem of an unenforceable debt—a debt the

debtor is unable to cover at its full nominal value, even in the face of creditor threats to invoke legal measures or to cease future dealings. If the creditor nevertheless has some leverage over the debtor, which gives the debtor some stake in returning the debt, a negotiated solution is possible. Without nominal rigidity, it could take the form of simply writing off a portion of the debt. With nominal rigidity, the negotiated solution is only possible if an alternate means of payment is found with an equivalent nominal value but a lower real value. For instance, the creditor may take goods valued at an unrealistically high price, or accept scrip whose face value exceeds its market value. Such alternate means of payment become surrogates for money, accomplishing money's legal function of payment of nominal sums.

While nominal rigidity may be at once law-enforced and network-enforced, it is the latter that especially complicates the adoption of monetary surrogates. Creditors or suppliers usually have under law, or under energetically sought loopholes in the law, some autonomy in what to accept in payment. It is network-enforced nominal rigidity that makes widespread and repeated use of alternate means of payment difficult. A creditor accepting a monetary surrogate may need to use it to cover debts to her own creditors, who in turn have creditors of their own. . . . If the required chains of payment are not to be painstakingly negotiated by hand, some key actors to whom many payments are due must agree to accept monetary surrogates—for instance, fiscal agencies and, significantly, energy-sector firms. Also, without their participation, alternate means of payment cannot be used to cover major costs, so firms will need to require that most payments be made in official money. Furthermore, the nominal equality between alternate means of payment and official money, despite the greater value of the latter, creates opportunities for arbitrage that can drive alternate monies out of existence. Organizations receiving large numbers of payments have the capacity to manage the circulation of alternate monies to minimize such collapses.

Such payment-accepting actors can only facilitate the use of monetary surrogates if their own balance-sheet circumstances permit it. They must be able to employ the surrogate means of payment they accept to cover their own nominal obligations. This requires, first, that the liabilities of a potential recipient of a surrogate means of payment must be denominated in the same currency as the debt being cancelled. A surrogate ruble may be of use to pay ruble obligations, but it is of no use in paying dollar ones. And even ruble obligations must not display flight-enforced nominal rigidity—think of an energy company or fiscal authority with negotiable bonds—if monetary surrogates are to work. Widely dispersed bondholders are too unlikely to be able to coordinate on accepting and using money surrogates, and would instead rush to be the first to sell the obligation in question as soon as such surrogates were offered.

The balance sheets of Argentina's energy firms were heavy on dollar-denominated liabilities and negotiable securities, available due to their multi-

national owners' excellent international credit. Russia's, by contrast, had ruble-denominated liabilities (or limited dollar-denominated liabilities secured by exports). Their obligations took the form not of negotiable securities but of debts for supplies and taxes.

This explains why monetary surrogates in Russia were able to take hold in the energy sector, whence they spread to encompass much of the economy.[68] They began in the context of a ruble-cost squeeze that preceded the introduction of the ruble corridor in mid-1995, and continued after it. That a cost squeeze could exist in an inflationary context might be surprising. But two factors contributed to it. First, real interest rates were quite high.[69] Second, Russian managers confronted exceptional forms of law-enforced nominal price rigidity. High inflation lubricated the price system, but as inflation came down, these nominal rigidities grew more significant. Beyond all the ordinary factors that make it difficult for firms to lower nominal prices, Russia had strict regulations on price setting, designed to curb tax evasion and promote inclusion of capital expenses in costs.[70] These exceptional rigidities ruled out forms of pricing commonplace in market economies, and made nominal price adjustment in the face of slack sales extremely difficult. Monetary surrogates were an alternative, one that was spreading quickly even before the introduction of the ruble corridor.

The ruble corridor did accelerate the trend, however. When the ruble was weak, these nominal rigidities had little effect on exporters, whose dollar earnings easily covered costs, but the problem become more acute when the ruble strengthened. One of the key losers from the strong exchange-rate policy was the metal sector, the third-largest component of Russian exports after oil and gas. Those pretending to political leadership of the sector complained bitterly about how relative prices were moving against metal producers, and called for the government to intervene to hold down the prices of critical nontradable inputs such as electricity and railway services. At times, the government did adopt these and other market-intervention measures, such as removing export restrictions, in explicit compensation for changes in exchange-rate policy.[71]

Nevertheless, by early 1996, industry representatives were claiming that virtually all export of metal happened at a loss, a pattern that was to continue through 1998.[72] The loss was nominal, however. Russian energy producers, faced with accumulating debts for service from metal firms that were often their largest customers and would have little to offer if shut down, found themselves forced to strike deals with metal firms amounting to a de facto price reduction. Because of the stickiness of nominal prices, these price reductions took the form of accepting metal valued at an unrealistically high price as a means of payment for electricity debts. To make these deals feasible, they had to find ways to pass the metal on further, which they did, thanks to the acquiescence of tax authorities and the national scope of the power network. The upshot of these contorted struggles over prices was a paradoxical situation in which metal firms exported at low nominal prices

that, on paper, seemed to make losses, while charging higher formally profitable prices on the internal market. However, virtually no internal market purchasers paid these prices in money; in fact, by early 1996, estimates of the share of internal-market metal sales done through money surrogates reached as high as 90 percent. Metal producers were using their "overpriced" metal to purchase their nontradable inputs, paying the high nominal prices the real appreciation of the ruble had made burdensome while reducing them de facto.

Province-level governments were critical facilitators of the metal industry's shift to surrogate means of payment. In part this was because local governments had substantial influence over local electricity producers and could prod them to compromise. Also, they themselves participated in the organization of debt-netting and barter chains, using tax obligations, making it possible to sustain large circuits. This fracturing of the means of payment created tremendous organizational difficulties, including that of arbitrage across official money and monetary surrogates. More significantly for the fate of Russia's ERBS, this widespread demonetization created huge fiscal difficulties, reducing government tax take and mandating further borrowing, especially to meet those obligations for which surrogate means of payment would not do—such as payments on liquid government debt.

In Argentina, something quite different happened. Monetary surrogates did not make substantial inroads into business-to-business trade. They appeared, instead, in the form of surrogate monies issued by the local or national governments. The conditions under which Russian enterprises had turned to monetary surrogates did exist in Argentina. In particular, as recession deepened in 1999-2001, businesses experienced increasing delays in collecting payment for goods sold on credit. A late 2000 survey concluded that the average collection time on business credit had doubled over the preceding two months.[73] Power company executives complained of rising levels of late payment.[74] From the third quarter of 1998 through the first quarter of 2001, receivables at three of the largest power companies grew by 36 percent.[75] Tax debts also accumulated. There appear to be no official government data on their volume, but officials of the incoming administration of President Fernando de la Rua stated that tax debts amounted to $3 billion in late 1999.[76] This represented more than 5 percent of the taxes collected in that year.

Accumulating arrears on payments for electrical power, commercial credit, and taxes did not, however, lead to the emergence of a system of surrogate means of payment in business, as they had in Russia. The energy sector—which had been privatized, largely to Spanish firms, in the early 1990s—never acceded to either explicit price reductions or the use of monetary surrogates. This, too, was a path-dependent development linked to balance-sheet interests. Privatization of public services in Argentina had given these firms a dollarized capital structure.[77] Privatization contracts explicitly guaranteed that prices would be set in dollars and

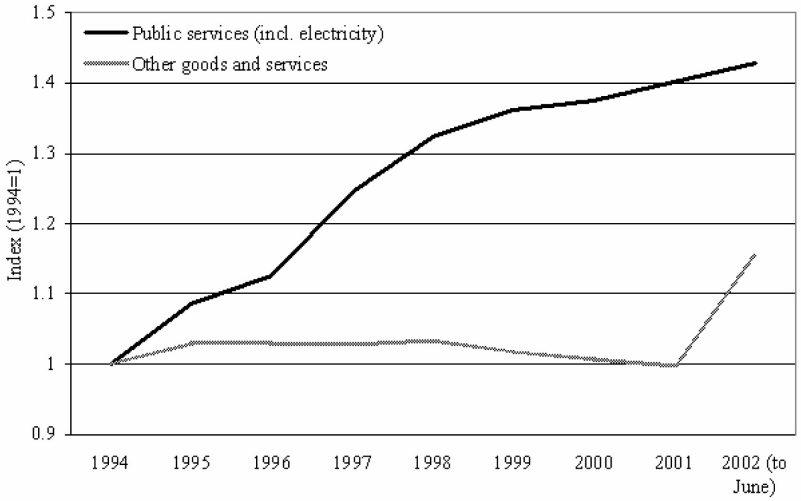


*Figure 4.* Relative prices in Argentina.
*Source:* Statistics from Ministry of Economy of Argentina, http://www.mecon.gov.ar.

converted into pesos only on the day of payment, a form of insurance against exchange-rate regime changes. Price regulation took the form of a price cap, intended to give firms incentives to achieve efficiency. The contracts provided that price caps would grow at a minimum in line with price indices in the United States (or, in the case of toll roads, to LIBOR). These dollar-denominated guarantees not only secured the initial investment, but also enabled the privatized companies to float large dollar-denominated loans on international markets.

During 1991-1995, when Argentine producer prices grew roughly by 20 percent, and consumer prices by 50 percent, the indexation of electricity prices to the U.S. price level made little difference. From mid-1996, however, the country entered a period of price stagnation alternating with deflation, and relative energy prices underwent an enormous rise (see Figure 4). Rising energy prices on the background of declining general prices meant that Argentine businesses were confronted with a price squeeze far worse than that implied by a general deflation alone. Interest rates also remained over 10 percent a year, despite deflation, and much of small business was cut out of the bank credit market altogether.[78]

Under these circumstances, business unity, strong in the boom years, began to fray. Prior to the convertibility plan, Argentina's business associations had long been weakly staffed and institutionalized, as well as fragmented, often by explicit government policy.[79] However, during the boom phase, leading businesses from the industrial, financial, and energy sectors joined together in the "group of eight," which provided a forum for consultation with the government and backing for President Carlos Menem's policies. In this "G-8," as it was known, representatives of foreign-owned banks and privatized utilities cooperated with domesti-

cally owned firms producing for the Argentine market. In 1999, with the economy shrinking in the aftermath of Brazil's January devaluation, but credit and energy costs continuing to rise, the G-8 fractured and, in effect, ceased to function.[80] Domestic business concentrated on its own grouping, the Argentine Industrial Union (UIA), which soon formed a coalition called "grupo productivo" together with a construction industry association and agriculturalists. Declaring that the internal market was key to growth, UIA was careful to profess its support for continuing the peso peg, suggesting that what was needed was a reduction of costs for inputs and forbearance on burdensome business debts. There was little sign that the UIA attached much significance to reducing labor costs, although the absence of labor reform and the downward stickiness of wages were major preoccupations of economist observers of Argentina's problems and the IMF.[81] Their proposals from late 1999 onward focused largely on other balance-sheet issues. On the costs side, the productive group demanded a general refinancing of all debts, for taxes, electricity, and credit, so that business could "begin again" and extract itself from the debt trap brought on by recession and failures to repay commercial credit. It also called for tighter control over privatized public services, and recalibration of the tax system to favor producers and exporters. On the sales side, the UIA wanted increased tariff protection and demand-stimulus measures, declaring that "the internal market is the pillar of economic reactivation." Fiscal restructuring should not touch consumer incomes, and indeed should offer new incomes to unemployed heads of family. The growth stimulated by these measures would ensure tax collection. The UIA's program serves as an excellent example of the kinds of measures that can substitute for devaluation and inflation.[82]

When Fernando de la Rua took over Argentina's presidency in late 1999, a longtime UIA economist, José Luis Machinea, became minister of the economy. However, his term proved a disappointment to his former employers. In office, Machinea focused on an alternate model for reactivating the Argentine economy. Budget cutting and tax raising would be expansionary, not contractionary, since they would start up a virtuous circle of restored market confidence, reduced country risk, new capital flows, and lower interest rates.[83] Bankers and foreign investors gave their backing. In practice, this model achieved little in the face of economic stagnation in 2000, which turned to sharp recession in 2001. Machinea did make an effort to reexamine the indexation mechanisms of the privatization contracts in the summer of 2000, but this came to naught in the face of pressure from Spanish investors.[84] Government measures, such as they were, targeted debt enforcement rather than relative prices. Small enterprises were offered access to bank loans, at 12 percent interest, to pay off their electric power debts.[85] Of the UIA's sales stimulus program, the only element that was adopted was, apparently, raising import barriers.

Open deflation, except for the price of public services, continued through 1999-2001. Tax collection limped. Monetary surrogates began to spread, al-

though only in 2001 did they begin to take hold on a large scale, with origins in the fiscal system rather than in business dealings. There were instances of provinces accepting taxes in kind.[86] Mostly, however, monetary surrogates took the form of special, peso-denominated currencies printed to pay wages and suppliers.[87] In the summer of 2001, Buenos Aires province began issuing a surrogate currency, the "patacón."[88] In fairly short order, arrangements were made for the patacón to be accepted in payment of federal taxes, with the federal fisc returning them to the local one for payments of its own. On this basis, the power companies agreed to accept them—but only in payment from state workers who could present pay stubs to demonstrate that they had received patacónes as salaries, and not from other businesses.[89] Thus their general spread was quite restricted. Other provinces began their own surrogate money issues, and by the end of the year surrogate pesos had been issued to almost a quarter of the volume of pesos.[90]

## DOOM

The passage of both Argentina and Russia through boom and gloom created splits between those who profited from transcurrency balance sheets and those who lost from shifting relative prices. In Russia, these splits led to a rapid fragmentation of the monetary system. In Argentina, these same splits expressed themselves first in the fragmenting of business political unity, and only later in a monetary fragmentation limited to the fiscal system. Government price-level and exchange-rate policy in both countries continued to privilege transcurrency balance-sheet concerns over domestic-currency balance-sheet concerns.

Whether its origin lay primarily in recession or primarily in monetary fragmentation, weak tax collection and the failure to balance the budget led to growing government debt in both countries. The government debt market became the flashpoint as gloom gave way to crisis. October 1997 proved to be the high point of the boom phase of Russia's ERBS. The gloom phase announced its arrival with a sharp fall in the price of Russia's bonds traded abroad, stemming first from falls on foreign financial markets and continuing due to news that an IMF mission had decided to withhold a transfer to Russia because of poor fiscal performance.[91] Stock prices began to fall, as did Russian government bond prices on domestic and foreign markets.[92] By December, implied dollar GKO returns (assuming no devaluation) had reached 32 percent a year, up from 18 percent in October.[93] Nevertheless, Russia fought to avoid devaluation until the following August.[94] Argentina also had little success in changing the market sentiments that had cut off capital inflows. After a late 2000 IMF package gave only a month of relief, Argentina spent most of 2001 trying unsuccessfully to bring interest rates back down to the already extremely high levels of the prior year.[95]

In both countries, tax collection and spending restriction were constant problems, and this provided at least some of the rationale for investor skepticism. However, there was no sense in which interest rates were a linear function of the

level of tax collection. Sudden negative market swings sustained the hope that positive confidence could reverse them. Both countries tried similar measures to change investor sentiment. Both appointed an internationally respected "market reformer" to a key post with responsibility for staving off crisis. In Russia, this was Anatolii Chubais, appointed in June 1998 as special representative for negotiations with international financial institutions; in Argentina, it was Domingo Cavallo, appointed March 2001 as minister of the economy. Both countries involved major international banks and finance companies in debt swaps, the economic rationale of which depended on avoiding devaluation. Russia undertook such a swap, managed by Goldman Sachs, in July 1998; Argentina had two in 2001, in March and July, jointly managed by a number of international banks. A plausible argument regarding these swaps, which in both cases wound up doing little to make debt more sustainable, is that countries pay bankers' commissions in tacit exchange for public endorsement of the country's prospects.[96] In Russia's case, Goldman Sachs, whose commissions were paid out of receipts from new issues of Eurobonds in the swap, took 20 percent of the issue on its own account. However, it sold these securities almost immediately after the deal concluded, and the debt and government currency markets quickly resumed sinking.[97]

Both Argentina and Russia also managed to win last-minute rescue packages from the IMF, also designed to achieve an expectations shock. In both cases, more or less explicitly, the IMF was put in the position that *not* offering an anti-devaluation package would lead immediately to devaluation by creating a run. To heighten this dilemma, Russian and Argentine officials took care to make public statements that a rescue deal was imminent, ensuring that markets would crash if the IMF failed to oblige. A former top IMF official claims that in Argentina, Cavallo made such an announcement without any factual basis whatsoever.[98] Chubais was only somewhat more circumspect.[99] The IMF's dilemma was especially apparent in Russia, when the government failed to achieve parliamentary passage of restructuring measures that had been a condition of the loan. The IMF disbursed the money anyway, albeit with a symbolic reduction in the amount.[100]

That both countries made maximal use of the instruments for delaying devaluation that the international environment offered, accepting new debt and incurring new expenses in the process, still leaves open the question of why these efforts were undertaken, and why Argentina's delay of devaluation was so much more protracted. Here the balance-sheet approach can again be helpful. There are at least three different balance-sheet situations that could motivate an effort to avoid devaluation in the face of clear market sentiment, reflected in debt price levels, that it is inevitable. Some actors with liquid peso assets can unwind their trans-currency balance sheets, given time and acceptable prices. For these "unwinders," devaluation tomorrow is better than devaluation today if there are confidence shocks, even temporary ones, that create selling opportunities.[101] A second kind of balance-sheet position consists of illiquid peso assets matched against dollar

liabilities that will be impossible to cover in the event of devaluation. When prospective losses are capped, or effectively infinite, "gambling for resurrection" can occur.[102] Such "go-for-brokers" have nothing left to lose by trying to hold the peg as long as possible. A final balance-sheet situation also involves illiquid peso assets, making unwinding impractical, but a large share of peso liabilities, such that devaluation has finite costs. Actors with such balance sheets should be "good fighters"—they want to see a good fight against devaluation, but will not pay any price whatsoever to support it. They may also engage in a "war of attrition" to push others to accept the costs of avoiding devaluation.[103]

Groups with these sets of preferences should behave differently, and endorse different policies, in a battle to avoid devaluation. Go-for-brokers will be willing to issue any number of "costly signals" of their commitment to maintaining the peg, since these signals will in fact add nothing to their costs in the event the peg fails. Unwinders will want to create situations of asymmetric information they can exploit to exit the market at a reasonable price, but will be unwilling to make irrevocable commitments of their own funds to communicate their opposition to devaluation. Finally, good fighters will show opposition to devaluation, but display concern about the costs to themselves.

These behavioral predictions offer a way to assess the motivations underpinning opposition to devaluation. In Russia, as the next several paragraphs seek to document, businesses opposing devaluation included both unwinders and good fighters. In Argentina, by contrast, the coalition was an uneasy mix of go-for-brokers and good fighters, which split apart when the good fighters' cost ceiling was reached. The following pages also seek to show that these distinct bases of opposition to devaluation shaped the persistence with which governments battled it. Whereas Russia's currency band was abandoned when unwinding became impractical, Argentina's policy continued well past the point at which powerful groups were able to unwind their positions.

In Russia, the country's big banks were an obvious unwinding constituency.[104] As noted earlier, they had purchased liquid ruble assets while acquiring dollar liabilities, and held large forward obligations to sell dollars at rates within the ruble corridor. Even before devaluation, deep falls in the value of ruble-denominated government debt faced these banks with a balance-sheet implosion, which given their liquid liabilities could easily have touched off a bank run if broadly known. As devaluation loomed, bankers publicly supported government policy, while privately doing all they could to unwind their position by selling GKOs, and by exiting ruble-denominated assets for dollar-denominated ones.[105]

As argued earlier, exportables producers in the energy sector were also beneficiaries of the strong ruble, although their limited reliance on dollar-denominated liabilities meant devaluation would not spell financial collapse. They should have been "good fighters" during the fight against devaluation, and available evidence suggests they were. Oil and gas interests did not push strongly, if at all, for devalu-

ation in the course of Russia's gloom phase. Instead, they contributed to the management of expectations. In early June, in a rare show of unity among the business elite, prominent oil and gas industry leaders signed a public letter backing harsh government policies on taxes and bankruptcy, and supported the decision to dispatch Chubais as a special representative to the IMF.[106] In July, as Chubais engaged in desperate negotiations in Washington to secure funds for Central Bank reserves, oil and gas companies feuded with the government over taxation, but avoided any and all reference to devaluation.[107] The significance of this "dog that didn't bark" argument is more than it might appear at first blush. Russia's elites were thoroughly aware of the highly charged mood on the currency markets, and any public prediction of or support for devaluation drew heavy political fire.[108] If leaders of the energy exporters had wished to use their public prominence to push for devaluation, their advocacy alone would almost certainly have accomplished their aim. When the conditions of the IMF package turned out to be more costly for the energy-sector firms than they had expected, they objected strongly, but most took explicit care to avoid denouncing the IMF, and none called for devaluation.[109] Additional evidence for the claim that exportables producers' behavior reflected tacit support for a good fight against devaluation comes from their strikingly different postdevaluation actions. After the ruble had lost 60 percent of its precrisis value, oil companies openly proposed a program that would weaken it further.[110] By this point, it was obvious that the massive depreciation had lowered the domestic price of oil to the point that segregation of the domestic and international markets was impractical. Resisting efforts to force them to make low-price domestic sales would become oil companies' major political preoccupation over the following year, in direct contrast to their earlier behavior.[111]

Even if the above is an accurate statement of how balance sheets shaped preferences about devaluation, this does not demonstrate that these preferences determined government policy. But the evidence is at least consistent with the position that the government acted in the interests of an unwinding constituency.[112] The financial situation of banks was certainly uppermost in Russian policy makers' minds through 1998. Russia's Central Bank privately used devaluation's devastating consequences for the banking system's solvency to urge President Yeltsin to support negotiations with the IMF.[113] The desire to avoid harm to banks was a motivation for delaying devaluation to which Russian policy makers would later readily admit.[114]

So Russian leaders wished to help the banks—and the banks, as we know, were unwinding their ruble positions. An examination of Russian policy in the final weeks before devaluation strengthens the impression that the government was engaged in an effort to achieve a brief delay in devaluation rather than fighting to avoid it at all costs. To receive its major support package from the IMF, the Russian government agreed to all but impossible conditions, virtually guaranteeing that the agreement would not be fulfilled and that any positive boost its announce-

ment gave to expectations would be short-lived. The loan agreement involved sweeping pledges on structural reforms across a broad front, including a major labor reform not even previously publicly debated. But the most obviously implausible promise in the package was that the government would refuse any future taxation via monetary surrogates, for the agreement *also* specified that Gazprom, the country's largest taxpayer, would be taking in no more than 80 percent of its income in kind by the end of the year, with other big taxpayers in the form of the electricity sector and railways at 70 percent and 40 percent respectively.[115] How nonmonetary taxation was to be avoided in a nonmonetary economy was not specified.

A second sign of short-term thinking was the failure to subordinate monetary policy to battling devaluation. Issuing more of a currency that is under attack is a policy economists often liken to throwing fuel on a fire one is trying to douse, but this is just what Russia's government did. In July, the government overdrew its accounts at the Central Bank in order to retire government debt, in effect making a secret issue of additional rubles.[116] And through July and August, as conversions of rubles to dollars were drawing down the domestic money supply, additional ruble issues compensated—giving new ammunition to those betting a devaluation would soon occur.[117]

The timing of devaluation also lends support to the thesis that its delay was designed to enable positions to be unwound. Information asymmetries persisted to the end. The ruble corridor was abandoned at a moment when there were still many who felt this would not happen. Although there was a slight tendency to shift deposits to dollars before the crash, most bank depositors continued to hold rubles to capture the high interest rates.[118] And many foreign-owned banks retained very large portfolios of ruble-denominated GKOs right until they were repudiated.[119] The defense of the ruble stopped at a moment when it could no longer help banks to unwind their positions after banks' efforts to convert all their available funds to dollars drained the banking system of so much liquidity that transactions could not proceed.[120]

In Argentina, it is clear that desire to permit unwinding was not a crucial part of the motivation for delaying devaluation. The banking system acted as a go-for-broke player, aiding delay of devaluation at all costs in hopes that the situation would turn (and in knowledge that there was little left to lose). The banks' attitude clearly derived from their balance-sheet situation. Argentine banks had unwound their position to the extent possible well before the crisis entered its final stage (see Figure 5). Banks had already become effectively dollarized on the asset side. Postponement of devaluation just gave depositors more time either to withdraw their funds or to dollarize the banks' liabilities side. Delay, therefore, hurt the banks: but only if they had something to lose. With their debtors all dependent on peso income, devaluation would destroy the quality of even dollarized loans. The banks did not even have much room to be restrictive in their credit policies. Big Argentine enterprises had borrowed heavily in dollar-denominated bonds, which

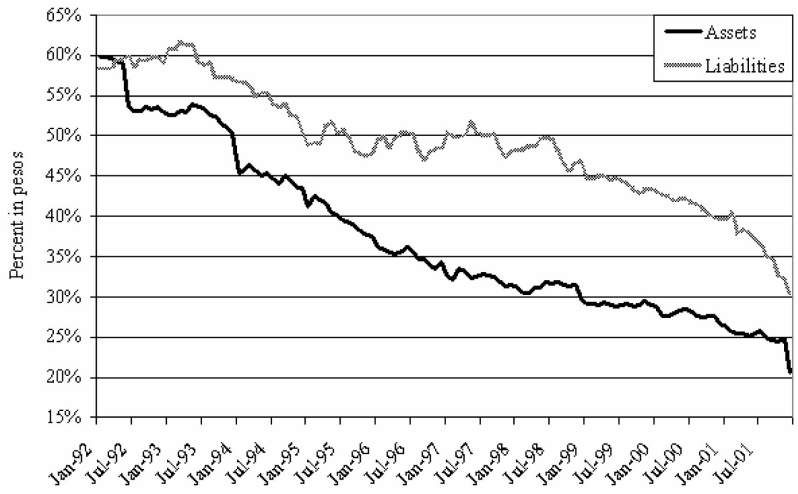


*Figure 5.* Currency of assets and liabilities in Argentine banks.
*Source:* Statistics from Central Bank of Argentina, http://www.bcra.gov.ar.

had already sunk to default levels by October; with billions of dollars in payments coming due, there was no prospect of rollover. Banks, therefore, put up funds of their own to help their biggest clients avoid defaulting, which they feared would set off a chain of bankruptcies.[121] This cost-insensitive lending for a nonexcludable public good makes sense in the context of gambling for resurrection.

Another excellent example of apparently cost-insensitive behavior on the part of the banks and privatized firms dependent on domestic sales comes from the so-called Patriotic Bond, a plan Cavallo launched in July. This plan intended to collect $1 billion from major businesses at 7 percent interest, well below the prevailing rates, which would be reimbursed through tax exemptions several years later. The money was destined to clear the central government's debts to the provinces from revenues due the government but not forthcoming. In the event, $800 million was collected, including substantial sums from the privatized utilities, the largest producer of exportable oil, and banks, on terms that would have been completely impossible on the open market.[122] Argentine banks actually increased the share of government bonds in their assets in the final months of 2001.[123]

Though the go-for-broke element of opposition to devaluation was clearly strong, as in Russia "good fighter" groups less damaged by devaluation were publicly supportive of government policy. Even as late as August 2001, leaders of the "grupo productivo" were backing tough zero-deficit provisions, while maintaining their program for reactivation and support of tradables producers, but not devaluation. In November, however, the productive group refused to join the banks in urging unconditional support for convertibility, preferring instead Aesopian calls for devaluation and open ones for reconstruction of government debt.[124]

The timing of Argentina's eventual devaluation is consistent with actions on behalf of a go-for-broke constituency. Argentine authorities borrowed all the money available to them for several years, and especially energetically in 2001. Though they launched a plethora of stopgap measures to loosen the monetary strictures imposed by the currency board, these were highly and deliberately public, part of a campaign to convince investors that continued one-for-one convertibility was viable.[125] Argentina's final IMF agreement was far more plausible than Russia's, making pledges largely about fiscal matters, while forthrightly declaring the intention to expand the use of monetary surrogates.[126] When devaluation occurred—in the course of an enormous constitutional crisis—it was only after a run on the banks that had forced weeks of shutdowns. When unwillingness to hold the peso had become virtually universal, the gamble for its resurrection had failed.

## ALTERNATE HYPOTHESES

The institutional-sociological approach to money and balance-sheet analysis imply that the politics of exchange rates depend crucially on intricate patterns of financial and business interactions. Whether this increased theoretical complexity is warranted should be judged not solely by the empirical narrative just given, but also by the performance of more parsimonious alternative theories. This section presents three such alternative explanations for the delay of devaluation, arguing that they fail to attain the explanatory reach of the approach proposed here.

### *Fears of Financial Market Reactions?*

One argument sometimes given for why governments delay devaluations is that they fear market reactions. For instance, a government that has chosen exchange-rate policy as a symbol of its broader credibility may feel backing off of exchange-rate pledges will hit market confidence across a broad front.[127] Or policy makers may fear that devaluation will touch off a market panic that will "overshoot" the reasonable currency parities, and thus carry high costs.[128] The major problem with these arguments is that they "overexplain" resistance to devaluation, without explaining the circumstances under which it might end. Because they do not offer any tools for understanding the timing of devaluations either within or across cases, they are difficult to test.

### *Sectoral Interests?*

Frieden and colleagues, examining Latin American experience, have recently argued that increased prevalence of sectors affected by international competition raises the likelihood of devaluations.[129] On the eve of devaluation, Argentina's economy was far less oriented toward imports and exports than Russia's. In 1997,

exports were around 25 percent and imports 23 percent of Russia's GDP, while in Argentina in 2000 the corresponding figures were 11 percent and 12 percent of GDP.[130] Might these brute structural facts be sufficient explanation of why Argentina's defense of its currency peg was more tenacious?

There are two reasons to reject this suggestion. First, as shown above, the case material does not bear out an important role for tradable sectors in pushing Russian devaluation. Major Russian exporters also had a stake in the size of the internal market and were *not* making a powerful case on behalf of devaluation, instead giving explicit public support to the fight to avoid it. It could be that Russian policy makers saw devaluation as less catastrophic than Argentine policy makers due to the benefits it would bring to the large tradable goods sector. However, this contrast implicitly relies on balance-sheet reasoning: the only reason that devaluation was more catastrophic in Argentina's nontradables-dominated economy was due to the presence of dollar-denominated liabilities. In any event, there is no discernible evidence that Russian policy makers saw promoting recovery in tradables as a reason to devalue.[131]

Second, and more important, claims about how sectoral composition affects the probability of devaluation simply do not address the puzzle of the motivation for expensive efforts to delay devaluation despite its apparent inevitability.

### *Stronger Institutions Underlying Argentina's Peg?*

Argentina's peg was based on legal enactment, and abandoning it required public parliamentary action. Since preparations for such proceedings would create an opportunity for flight from the currency, this institutional structure made devaluation extremely unattractive.[132] Russia's currency band was merely an announced policy of the government and the Central Bank, changeable at their discretion. The significantly stronger institutional constraints on exchange-rate policy facing Argentine policy makers are thus another possible explanation for the Argentina-Russia contrast.

However, this institutional argument gives little purchase on the timing of devaluation in the two cases. To state that Russia lacked institutional constraints on devaluation leaves entirely open the question of why it delayed as long as it did. As for Argentina, it was not parliamentary procedures for devaluation that initiated the flight from the currency. Even before devaluation, virtually all peso positions that could be liquidated had been, and deposits remained in the banking system only due to a ban on withdrawals (see above). Black market peso-dollar exchange rate changes also indicate that the parliamentary debate, and even an awkward delay in arranging implementation of devaluation, had a relatively small impact on the currency's value, whereas removal of restrictions on official trading had a much bigger effect (see Figure 6).[133] This suggests that the institutional barriers to devaluation created by the convertibility law may have been overrated.

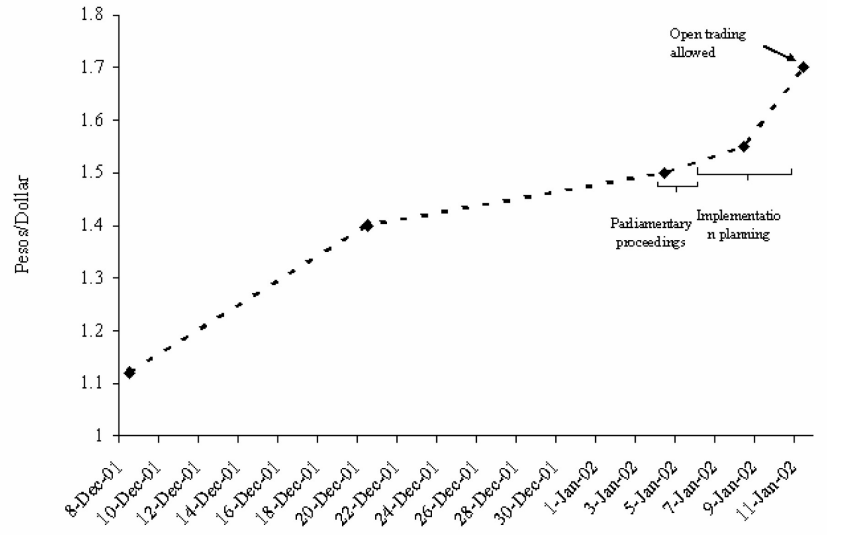


*Figure 6.* Black market rates for the peso before official devaluation.
*Source:* Compiled from press reports: "Economy minister in talks with IMF about budget," Financial News December 10, 2001; Alejandro Alonso, "Argentina sees joyless Xmas as govt seeks Cavallo replacement," Market News International December 20, 2001, 11:59 a.m.Chris Kraul, "Argentina's new president is expected to devalue peso," Los Angeles Times January 3, 2002; Alejandro Alonso, "Argentina's new devalued peso finally set to debut Friday," Market News International January 10, 2002, 11:58 p.m.; Hector Tobar and Chris Kraul, "Floating Argentine peso declines by about 40%," Los Angeles Times January 12, 2002.

## CONCLUSION

Discussions of international finance regularly rely on metaphors of motion: capital *flow*, capital *flight*, capital *mobility.* The contribution of an institutional-sociological analysis of money is to reveal these metaphors as deeply misleading. When an object moves through space, it passes from one set of surroundings to another—but these are mere surroundings, circumstances *around* the object, which retains its original integrity. Capital—investment in debt or equity—is not this sort of self-sufficient entity, a tossed ball indifferent whether it is caught or missed. Capital exists *only* as a relationship among parties, as rights and obligations, more or less perfectly specified in law or shared expectations. When capital "moves," what happens in practice is reconfiguration of a network of such rights and obligations. Those who enjoy these rights or labor under these obligations can ascribe significance to them only in the context of their broader financial situation, consisting in other assets and other liabilities. This is another sense in which the image of capital as a self-sufficient object moving through space is misleading: the particular balance-sheet contexts in which capital is situated have a powerful influence on its effects.

Since social science does not have a strict prohibition against mixed metaphors, talk of capital in motion does not necessarily obscure capital's relational character. Nevertheless, as noted above, discussions on the politics of capital mobility within the sectoral approach have emphasized the macroeconomic effects of capital flows—their aggregate consequences for exchange rates, interest rates, money supply, and other macroeconomic variables—rather than their effect on the patterns of connections within and between economies, and the accompanying transformations in balance-sheet situations. An institutional-sociological approach to money highlights precisely these relational consequences of capital mobility.

Contrasts in the unfolding of the boom-gloom-doom cycle in Russia and Argentina demonstrate how money's relational context has direct relevance for political outcomes. As argued above, the differences between Russia and Argentina, both in how they resisted devaluation and how they employed monetary surrogates, stemmed from differences in how their ERBS programs transformed international financial ties and actors' local balance-sheet circumstances. The distinction between Russian and Argentine electricity-generating companies typifies the relevant pattern. Russian electricity generators, with assets and liabilities denominated in a single currency, emerged at the center of a system of surrogates for the overvalued ruble. But the foreign owners of Argentina's electricity generators, constrained to cover dollar liabilities with their peso receipts, did all they could to avoid being drawn into the use of surrogate monies and to pressure the Argentine government to avoid devaluation. It was financial, not sectoral, position that determined economic interests.

Social sciences theories serve not just to make predictions but also to shape perceptions of which facts are relevant.[134] The institutional-sociological approach to money allows scholars to perceive how new policy difficulties and political conflicts emerge from the decisions of the ongoing financial undertakings that comprise contemporary capitalism. Generally, students of financial globalization have sought to understand how political forces affect national governments struggling to strike a true course through the powerful tides of international finance. But the Russian and Argentine experiences suggest they would do better to view national financial authorities not as captains at sea but as Gullivers, constrained in specific ways by the thousands of connecting threads of which international finance consists. To appreciate the nature and strength of these constraints, one must understand the circumstances and purposes of those holding the threads.

## NOTES

1. For an exhaustive survey of economists' models of the course of ERBS programs and their effects on real exchange rates and output, see Guillermo A. Calvo and Carlos A. Vegh, "Inflation, Stabilization, and BOP Crises in Developing Countries," working paper 6925 (Cambridge, Mass.: National Bureau of Economic Research, 1999).

2. Cf. Jeffry A. Frieden, "The Politics of Exchange Rates," in *Mexico 1994: Anatomy of an Emerging-Market Crash*, ed. Sebastian Edwards and Moisés Naím (Washington, D.C.: Carnegie Endowment for International Peace, 1997), 88; Calvo and Vegh, "Inflation, Stabilization, and BOP Crises in Developing Countries"; and Guillermo A. Calvo and Carlos A. Vegh, "Inflation Stabilization and Nominal Anchors," *Contemporary Economic Policy* 12, no. 2 (1994):35-45. My stylized depiction of this historical progression draws on these sources.

3. Key motivations for these capital flows include opportunities for interest-rate arbitrage built into the ERBS strategy and expectations of asset-price inflation. Anne O. Krueger, *Nominal Anchor Exchange Rate Policies as a Domestic Distortion* (Cambridge, Mass.: National Bureau of Economic Research, 1997); and Paul Krugman, "Dutch Tulips and Emerging Markets," *Foreign Affairs* 74, no. 4 (1995):28-44.

4. Milton Friedman, "The Case for Flexible Exchange Rates," in Milton Friedman, *Essays in Positive Economics* (Chicago: University of Chicago Press, 1953). For convenience, I use "peg" throughout as shorthand for any exchange-rate regime based on a preannounced parity or range of parities between the domestic currency and one or more international ones. For a typology of exchange-rate regimes, see Jeffrey A. Frankel, "No Single Currency Regime Is Right for All Countries or at All Times," working paper 7738 (Cambridge, Mass.: National Bureau of Economic Research, 1999).

5. On "lock-in" effects, see Dani Rodrik, "The Rush to Free Trade in the Developing World: Why So Late? Why Now? Will It Last?" in *Voting for Reform: Democracy, Political Liberalization, and Economic Adjustment*, ed. Stephan Haggard and Steven B. Webb (New York: Oxford University Press, 1994), 83; and Paul Pierson, "The Path to European Integration: A Historical Institutionalist Analysis," *Comparative Political Studies* 29, no. 2 (1996): 123-63. On how transcurrency balance sheets (peso assets, dollar liabilities) can delay devaluation, see especially Hector E. Schamis, "Distributional Coalitions and the Politics of Economic Reform in Latin America," *World Politics* 51, no. 2 (1999):236-268; and Eugenio Diaz-Bonilla and Hector E. Schamis, "From Redistribution to Stability: The Evolution of Exchange Rate Policies in Argentina, 1950-98," in *The Currency Game: Exchange Rate Politics in Latin America*, ed. Jeffry A. Frieden and Ernesto Stein (Washington, D.C.: Inter-American Development Bank, 2001). Both papers deal with Argentina and stress how the currency board created a balance-sheet constituency. Other scholars who have noted such balance-sheet effects include Frieden, "The Politics of Exchange Rates"; Timothy P. Kessler, "Political Capital: Mexican Financial Policy under Salinas," *World Politics* 51, no. 1 (1998): 36-66; and Robert Wade, "Wheels within Wheels: Rethinking the Asian Crisis and the Asian Model," *Annual Review of Political Science* 3, no. 1 (2000): 85-115. Economic analyses of recent emerging-market crises, from a variety of perspectives, have also devoted much attention to transcurrency balance sheets. Lance Taylor, "Capital Market Crises: Liberalisation, Fixed Exchange Rates and Market-Driven Destabilisation," *Cambridge Journal of Economics* 22, no. 6 (1998): 663-676; Paul Krugman, "Balance Sheets, the Transfer Problem, and Financial Crises," in *International Finance and Financial Crises: Essays in Honor of Robert P. Flood, Jr.*, ed. Robert P. Flood et al. (Boston: Kluwer Academic, 1999); and Michael Pettis, *The Volatility Machine: Emerging Economies and the Threat of Financial Collapse* (Oxford: Oxford University Press, 2001).

6. Jeffry A. Frieden, "Invested Interests: The Politics of National Economic Policies in a World of Global Finance," *International Organization* 45, no. 4 (1991): 425-451; Jeffry A. Frieden, "Exchange Rate Politics: Contemporary Lessons from American History," *Review of International Political Economy* 1, no. 1 (1994): 81-103; Jeffry A. Frieden, "Making Commitments: France and Italy in the European Monetary System, 1979-1985,"

in *The Political Economy of European Monetary Unification*, ed. Barry Eichengreen and Jeffry A. Frieden (Boulder, Colo.: Westview Press, 1994); Frieden, "The Politics of Exchange Rates"; Jeffry A. Frieden, "Monetary Populism in Nineteenth-Century America: An Open Economy Interpretation," *Journal of Economic History* 57, no. 2 (1997): 367-395; J. Lawrence Broz and Jeffry A. Frieden, "The Political Economy of International Monetary Relations," *Annual Review of Political Science* 4, no. 1 (2001): 317-343; Frieden and Stein, *The Currency Game*; and Jeffry A. Frieden, "Real Sources of European Currency Policy: Sectoral Interests and European Monetary Integration," *International Organization* 56, no. 4 (2002): 831-860.

7. The difference here is indeed one of emphasis, since Frieden and his collaborators are quite aware that exchange rates also have distributive effects via their effect on financial asset values. See the references below.

8. For an earlier formulation of this approach to money, see David M. Woodruff, *Money Unmade: Barter and the Fate of Russian Capitalism* (Ithaca, N.Y.: Cornell University Press, 1999).

9. Weber, among many others, insisted on this financial character of capitalism. See Max Weber, *Essays in Economic Sociology*, ed. Richard Swedberg (Princeton, N.J.: Princeton University Press, 1999), 43.

10. L. Randall Wray, *Understanding Modern Money: The Key to Full Employment and Price Stability* (Northampton, Mass.: Edward Elgar, 1998); and Georg Friedrich Knapp, *The State Theory of Money*, abridged ed., trans. H. M. Lucas and J. Bonar (London: Macmillan, 1924).

11. For "relational context" see Margaret Somers, "Citizenship and the Place of the Public Sphere: Law, Community, and Political Culture in the Transition to Democracy," *American Sociological Review* 58, no. 5 (1993): 587-620.

12. The discussion of protection as a substitute for devaluation has a long history. See Karl Polanyi, *The Great Transformation: The Political and Economic Origins of Our Time*, 2nd Beacon paperback ed. (Boston: Beacon Press, 2001); Rodrik, "The Rush to Free Trade"; and Beth A. Simmons, *Who Adjusts? Domestic Sources of Foreign Economic Policy during the Interwar Years* (Princeton, N.J.: Princeton University Press, 1994).

13. Woodruff, *Money Unmade*, 2.

14. Augusto De la Torre, Eduardo Levy Yeyati, and Sergio L. Schmukler, "Argentina's Financial Crisis: Floating Money, Sinking Banking," working paper (Washington, D.C.: World Bank, 2002), 15.

15. Broz and Frieden, "The Political Economy of International Monetary Relations," argue that the specificity of interests harmed by currency overvaluation makes it politically vulnerable; they note that these interests can pursue protectionist measures that can undermine exchange-rate policy. They also argue that those who benefit from currency overvaluation are too many and too diffuse to lobby for a nonexcludable public good. This ignores the fact that balance-sheet interests in currency overvaluation can be quite concentrated, self-aware, and influential, as demonstrated below.

16. Cf. Jeffry Frieden, Piero Ghezzi, and Ernesto Stein, "Politics and Exchange Rates: A Cross-Country Approach," *The Currency Game* 33, on "compensatory mechanisms."

17. These claims for theoretical advance, it will be noted, both amount to an assertion that the institutional-sociological theory brings certain phenomena into focus better than the alternative sectoral theory does. This is not to deny a fact I do my best to document: perspicacious advocates of the alternate approach have indeed noted some of these phenomena. However, the perspicacity of these scholars should not obscure the need for a theoretical approach that can build on such insights.

18. Frieden, "Invested Interests."

19. This refers to outward international investment; inward international investors are not discussed.

20. Broz and Frieden, "The Political Economy of International Monetary Relations," 319.

21. Ibid., 332.

22. Frieden, Ghezzi, and Stein, "Politics and Exchange Rates," 35.

23. Cf. the corporate finance notion of "capital structure," applied to exchange-rate crisis in Pettis, *The Volatility Machine*.

24. Such catastrophic scenarios are instances of "financial fragility." Hyman P. Minsky, *Stabilizing an Unstable Economy* (New Haven, Conn.: Yale University Press, 1986).

25. Minsky, *Stabilizing an Unstable Economy*, 197.

26. Frieden, "Invested Interests."

27. For a related point on how Frieden's sectoral analysis prompts arbitrary divisions between endogenous and nonendogenous, see Jeffrey A. Winters, "Power and the Control of Capital," *World Politics* 46, no. 3 (1994).

28. Frieden, "Making Commitments," 86.

29. For economists' discussions of the roots of nominal rigidity, see Alan S. Blinder, *Asking about Prices: A New Approach to Understanding Price Stickiness* (New York: Russell Sage Foundation, 1998); Truman F. Bewley, *Why Wages Don't Fall during a Recession* (Cambridge, Mass.: Harvard University Press, 2000); Robert J Shiller, "Public Resistance to Indexation: A Puzzle," Brookings Papers on Economic Activity no. 1 (1997); and Sujoy Mukerji and Jean-Marc Tallon, *Ambiguity Aversion and the Absence of Indexed Debt*, Department of Economics Discussion Paper 28 (Oxford: University of Oxford, 2000).

30. Only the first of these appears to be an original proposal, though my terminology is new; cf. Blinder, *Asking about Prices*. What is novel about the analysis of the rest is organizing them as types of bargaining situations. This approach is inspired by American "legal realists" and (old) "institutional economists," who developed an enduringly valuable analysis of the importance of situating economic interactions in a bargaining context. See John Rogers Commons, *Legal Foundations of Capitalism* (Madison: University of Wisconsin Press, 1957); and Barbara Fried, *The Progressive Assault on Laissez-Faire: Robert Hale and the First Law and Economics Movement* (Cambridge, Mass.: Harvard University Press, 1998).

31. Such bond contracts are also enforced by law, but almost any bondholder would wish to have sold out before matters reach such a pass.

32. Cf. Kenneth Oye, "The Sterling-Dollar-Franc Triangle: Monetary Diplomacy 1929-1937," *World Politics* 38, no. 1 (1985): 173-199.

33. Frieden, "Real Sources of European Currency Policy," 839.

34. Rodrik, "The Rush to Free Trade," gives a rare discussion of the understudied issue of export barriers.

35. Polanyi, *The Great Transformation*, 241; for another example see the battle over the "scala mobile" in Italy: Frieden, "Making Commitments."

36. Bewley, *Why Wages Don't Fall during a Recession*. Other arguments on why individuals might prefer contracts defined in nominal terms rely on reasons for dissatisfaction with price indices. Mukerji and Tallon, *Ambiguity Aversion and the Absence of Indexed Debt*; and Shiller, "Public Resistance to Indexation."

37. On monetary surrogates as a way around nominal rigidity, see Woodruff, *Money Unmade*; William Tompson, "The Price of Everything and the Value of Nothing? Unravelling the Workings of Russia's 'Virtual Economy,' " *Economy and Society* 28, no. 2 (1999): 256-280; Andrei Aleksandrovich Iakovlev, "The Causes of Barter, Nonpayments, and Tax

Evasion in the Russian Economy," *Problems of Economic Transition* 42, no. 11 (2000): 80-96; and De la Torre, Yeyati, and Schmukler, "Argentina's Financial Crisis."

38. Cf. Polanyi, *The Great Transformation*, 220.

39. A nominal appreciation has occurred when it takes fewer pesos to buy a dollar than previously; a real appreciation means that it takes fewer constant pesos (correcting for inflation) to buy a constant dollar than previously.

40. Calvo and Vegh, *Inflation, Stabilization, and BOP Crises in Developing Countries*; and Krueger, *Nominal Anchor Exchange Rate Policies*.

41. Krueger, *Nominal Anchor Exchange Rate Policies*.

42. Except as noted, figures cited in the text are from IMF, "International Financial Statistics Online," http://ifs.apdi.net/imf/.

43. These calculations, based on average yields and omission of transaction costs, are only indicative. Data from Central Bank of Russia, http://www.cbr.ru.

44. Homi Kharas, Brian Pinto, and Sergei Ulatov, "An Analysis of Russia's 1998 Meltdown: Fundamentals and Market Signals," Brookings Papers on Economic Activity no. 1 (2001), 19, and Sheila A. Chapman and Marcella Mulino, "Explaining Russia's Currency and Financial Crisis," *MOCT-MOST: Economic Policy in Transitional Economies* 11, no. 1 (2001): 4-6.

45. Chapman and Mulino, "Explaining Russia's Currency and Financial Crisis," 5-6; and Enrico Perotti, "Lessons from the Russian Meltdown: The Economics of Soft Legal Constraints," working paper (Amsterdam: University of Amsterdam, 2001).

46. "Russia in the International Debt Markets: Here Comes the Russian Bond Wave," *Euroweek*, May 30, 1997.

47. "Forthcoming Issues: Russia and Her Regions Set to Dominate," *Central European*, April 10, 1998.

48. "Russia in the International Debt Markets."

49. Anders Åslund, *How Russia Became a Market Economy* (Washington, D.C.: Brookings Institution, 1995), 156-61; Tompson, "The Price of Everything"; and Clifford C. Gaddy and Barry W. Ickes, "Russia's Virtual Economy," *Foreign Affairs* 77, no. 5 (1998): 53-68.

50. David M. Woodruff, "It's Value That's Virtual: Rubles, Bartles, and the Place of Gazprom in the Russian Economy," *Post-Soviet Affairs* 15, no. 2 (1999): 130-148.

51. Woodruff, "It's Value That's Virtual."

52. Padma Desai, "Russa," in *Going Global: Transition from Plan to Market in the World Economy*, ed. Padma Desai (Cambridge, Mass.: MIT Press, 1997), 324.

53. Viz., oil companies' efforts to avoid higher depreciation allowances for equipment, which would have required charging higher prices to account for this "expense." "Press Conference of the Representatives of the Oil Companies Lukoil, Slavneft, Sidanko, Surgutneftegaz and Iukos," Federal News Service—Kremlin Package, February 8, 1996.

54. Woodruff, "It's Value That's Virtual."

55. Desai, "Russa," 326; and Oleg D. Davydov, *Inside Out: The Radical Transformation of Russian Foreign Trade, 1992-1997* (New York: Fordham University Press, 1998).

56. For overviews of exchange-rate policy see Diaz-Bonilla and Schamis, "From Redistribution to Stability"; Walter T. Molano, "Argentina: The Political Economy of Stabilization and Structural Reform," in *The Political Economy of International Financial Crisis: Interest Groups, Ideologies, and Institutions*, ed. Shale A. Horowitz and Uk Heo (Lanham, Md.: Rowman & Littlefield, 2001); and Manuel Pastor Jr. and Carol Wise, "Stabilization and Its Discontents: Argentina's Economic Restructuring in the 1990s," *World Development* 27, no. 3 (1999): 477-503.

57. Diaz-Bonilla and Schamis, "From Redistribution to Stability."

58. Molano, "Argentina."

59. "La bonanza duró poco," *Casas: Reporte Económico y Financiero*, December 4, 1997.

60. Central Bank of Argentina, http://www.bcra.gov.ar.

61. Pastor and Wise, "Stabilization and Its Discontents," 481. On foreign investors as supporters of the strong peso due to their investment in nontradables, see Daniel Treisman, "Stabilization Tactics in Latin America," paper presented to the Annual Conference of the American Political Science Association, Boston, [August] 2002; note, however, that under fixed exchange rates these investors were supporters of inflation, not its opponents as Treisman suggests. It was devaluation, not inflation, to which they objected.

62. Pastor and Wise, "Stabilization and Its Discontents," 481.

63. IMF, "International Financial Statistics Online"; and Diaz-Bonilla and Schamis, "From Redistribution to Stability," 90.

64. Diaz-Bonilla and Schamis, "From Redistribution to Stability," 90; and Pastor and Wise, "Stabilization and Its Discontents," 487.

65. Central Bank of Argentina.

66. Frieden and other scholars advancing deductive accounts of economic interests have often been criticized for failing to specify the process whereby these interests are articulated politically (see, for instance, Winters, "Power and the Control of Capital"). Such criticisms also apply to the present account, but perhaps with less force given that my point is merely that prodevaluation efforts would have faced an overwhelming coalitional challenge under any plausible account of interest group action in the two countries in question. On the difficulties of evaluating "pressure-group" accounts for exchange-rate politics, see Broz and Frieden, "The Political Economy of International Monetary Relations."

67. Woodruff, *Money Unmade*, 110-76.

68. Ibid.

69. Central Bank of Russia.

70. Tompson, "The Price of Everything," surveys Russian price rigidity problems.

71. Vadim Bardin, "Valiutnyi koridor-96," *Kommersant-Daily*, December 1, 1995.

72. This and the following paragraph summarize Woodruff, *Money Unmade*, 163, and, more generally, 110-202.

73. "Se tensó otra vez la cadena de pagos," *El Cronista*, November 6, 2000.

74. "Edesur," IEl Cronista, October 18, 2000.

75. Calculated from company annual reports at Emerging Markets Database, http://www.securities.com.

76. Carlos Burgueño, "Darían créditos para deudas impositivas," *Ambito Financiero*, November 11, 1999.

77. Daniel Azpiazu and Martin Schorr, "Desnaturalización de la Regulación Pública Y Ganacias Extraordinarias," *Realidad Económica*, no. 184 (2001): 73-95.

78. Roberto Navarro, "Las cuevas," *Página/12*, March 4, 2001.

79. Ben Ross Schneider, "The State and Collective Action: The Politics of Organizing Business in Latin America," working paper (Chicago: Northwestern University, 2000).

80. Adrián Biglieri, "Crítico informe del G-8 contra Machinea," *Ambito Financiero*, December 20, 1999; Adrián Biglieri, "La UIA con excusa para salir del G-8," *Ambito Financiero*, May 31, 1999; Santiago Magrone, "Ahora es la UIA la que está en crisis," El Cronista, August 23, 1999; and David Cufré, "Guerra entre empresarios: Reaccion contra la UIA," *Página/12*, September 7, 2000, 13.

81. They called for a labor reform that would preserve workers' rights but allow more temporary contracts. I thank Marcela Natalicchio for insight on this matter. A UIA cost study stated that businesses were spending more on services (including finance) than on

wages (33 percent versus 20 percent of expenses). Maximiliano Montenegro, "Impuestos, salarios y servicios en costos empresarios: El peso de la boleta de servicios," *Página/12*, October 11, 2000.

82. Adrián Biglieri, "La UIA ya tiene sus 10 mandamientos," *Ambito Financiero*, October 8, 1999; Adrián Biglieri, "UIA presionará que se cree un ministerio de la producción," *Ambito Financiero*, May 5, 1999; Adrián Biglieri, "Definieron prórroga en el pago de la luz para PYMES," *Ambito Financiero*, August 15, 2000; Adrián Biglieri, "Machinea con medidas deficiles de aplicar quiere complacer a la UIA," *Ambito Financiero*, August 25, 2000; and "La UIA unifico su discurso. Fuerte reclamo de reactivacion ahora la palabra la tiene Machinea," *Página/12*, June 23, 2000, 15.

83. For a summary of this set of ideas, though already under Cavallo, see Stanley Fischer, "Remarks to the Argentine Bankers Association," http://www.imf.org.

84. "Presión española al gobierno," *Página/12*, June 9, 2000, 14.

85. César Illiano, "PYME: Podrán pagar la luz en cuotas," *La Nación*, September 2, 2000.

86. Instituto de Estudios de las Finanzas Públicas Argentinas, "Pagos en especie: Experiencias zonales," http://www.iefpa.org.ar/ix_encuentro_tecnico.htm; Justo L. Urbieta, "En Formosa, los morosos pagan con mercadería," *La Nación—Economía*, March 28, 2000; Julio Arceht, "La vuelta al trueque," *Noticias y protagonistas*, February 7, 2001; and "Los impuestos se podrán pagar mediante trueque," *Criterios Tributarios—Edición Digital*, January 2001.

87. "Catamarca insólita: Circulan cinco monedas en la provincia," *Ambito Financiero*, December 4, 1999.

88. Laura Vales, "Sola negocia con el sector privado la aceptacion de los bonos política de seducción con el patacón," *Página/12* July 23, 2001, 5.

89. Osvaldo Calello, "Buenos Aires empieza a pagar con cuenta gotas," *El Cronista*, September 3, 2001.

90. De la Torre, Yeyati, and Schmukler, "Argentina's Financial Crisis," 15.

91. Sergei Aleksashenko, *Bitva za rubl': Vzgliad uchastnika sobytii* (Moscow: Alma Mater, 1999), 108; and Jacqueline Doherty, "Market Week: Turmoil Widens to Brazilian, Russian Bonds; East European Currencies Could Be Next," *Barron's*, November 3, 1997.

92. Aleksashenko, *Bitva za rubl'*, 110; and Randall W. Stone, *Lending Credibility: The International Monetary Fund and the Post-Communist Transition* (Princeton, N.J.: Princeton University Press, 2002), 151-52.

93. Central Bank of Russia; Aleksashenko, *Bitva za rubl'*, 127; and Stone, *Lending Credibility*, 152.

94. Kharas, Pinto, and Ulatov, "An Analysis of Russia's 1998 Meltdown," is a good account.

95. Michael Mussa, "Argentina and the Fund: From Triumph to Tragedy," working paper (Washington, D.C.: Institute for International Economics, 2002), surveys events from the perspective of the IMF.

96. Thomas Catan, Stephen Fidler, and Peter Hudson, "Argentina Faces Up to Quandary over Its Creditors," *Financial Times*, May 16, 2001); and Walter T. Molano, *What a Joke!* report (Greenwich, Conn.: BCP Securities LLC, 2001).

97. Joseph Kahn and Timothy L. O'Brien, "Easy Money: A Special Report; for Russia and Its U.S. Bankers, Match Wasn't Made in Heaven," *New York Times*, October 18, 1998.

98. Mussa, "Argentina and the Fund."

99. "Markets Battle with Ruble Fears, Aid," *Moscow Times*, July 1, 1998.

100. Aleksashenko, *Bitva za rubl'*, 188; and Kharas, Pinto, and Ulatov, "An Analysis of Russia's 1998 Meltdown," 54.

101. Cynical explanations of delayed devaluation on such reasoning are quite common. For an example apropos of Mexico in 1994, see Andres Oppenheimer, *Bordering on Chaos: Guerillas, Stockbrokers, Politicians, and Mexico's Road to Prosperity* (Boston: Little Brown, 1996), 219-34. For Russia in 1998, see for example Andrei Illarionov, "The Roots of the Economic Crisis," *Journal of Democracy* 10, no. 2 (1999); and Perotti, "Lessons from the Russian Meltdown."

102. Defenses of Russia's delayed devaluation that employ reasoning consistent with gambling for resurrection are Stone, *Lending Credibility*, 154, 156; and former U.S. Treasury Secretary Lawrence Summers's comments in Kharas, Pinto, and Ulatov, "An Analysis of Russia's 1998 Meltdown," 53. For a discussion of the concept in general, see George W. Downs and David M. Rocke, "Conflict, Agency, and Gambling for Resurrection: The Principal-Agent Problem Goes to War," *American Journal of Political Science* 38, no. 2 (1994): 68-82. I thank Jeffry Frieden for suggesting the relevance of this concept.

103. For such an argument, which implies this balance-sheet structure, see Pablo E Guidotti and Carlos A Vegh, "Losing Credibility: The Stabilization Blues," *International Economic Review* 40, no. 1 (1999): 23-51.

104. Illarionov, "The Roots of the Economic Crisis."

105. Sergei Aleksashenko et al., "Bankovskii krizis: Tuman rasseivaetsia?" *Voprosy Ekonomiki*, no. 5 (1999): 4-42, presents strong evidence of this unwinding.

106. Andrei Bagrov, "Chubais opiat' vernulsia," *Kommersant*, June 18, 1998.

107. Petr Sapozhnikov, "Oligarkhi protiv Prezidenta," *Kommersant-Daily*, July 23, 1998; "Krupneishie kompanii TEK opublikovali pis'mo rezkogo antipravitel'stvennogo soderzhaniia," *WPS—TV and Radio Monitoring—Economics*, July 24, 1998; and Dmitrii Kuznets, "Neft' razdelilas' na fraktsii," *Russkii Telegraf*, July 23, 1998.

108. See for example "Joint Press Conference with Central Bank Chair Sergei Dubinin and Minister of Finance Mikhail Zadornov (RF Government House, 17:00, July 30, 1998)," Federal News Service—Kremlin Package, July 30, 1998.

109. Aleksandr Tatushkin, "My prishli izdat' predsmertnyi ston," *Vremia MN*, July 23, 1998. There is some evidence that energy-sector leaders privately counseled the government to choose a small devaluation at this point to avoid a larger one later. Andrei Bagrov, "Oligarkhi obsuzhdaiut deval'vatsiiu rublia," *Kommersant*, June 20, 1998; and Mikhail Khodorkovskii, "Krizis liberalizma v Rossii," *Vedomosti*, March 29, 2004. They did not make any public statements to this effect, however.

110. "Obrashchenie rukovoditelei 13 rossiiskikh neftianykh kompanii k Pravitel'stvu RF," *RIA Oreanda—Economic News from Regions*, October 6, 1998.

111. "Neftianiki protiv ogranichenii," *Kortes—Oil and Gas Complex*, October 23, 1999.

112. For assertions to this effect, see Perotti, "Lessons from the Russian Meltdown," 8; and Kharas, Pinto, and Ulatov, "An Analysis of Russia's 1998 Meltdown," 35.

113. Aleksashenko, *Bitva za rubl'*, 168.

114. For example, the remarks of Chubais in Evgeniia Al'bats, "Anatolii Chubais: Nas zhdut ochen' tiazhelye poltora-dva goda," *Kommersant-Daily*, September 8, 1998.

115. Government of Russia and Central Bank of Russia, "Memorandum of the Government of the Russian Federation and the Central Bank of the Russian Federation on Economic and Financial Stabilization Policies" July 16, 1998, http://www.imf.org/external/np/loi/071698.HTM.

116. Aleksashenko, *Bitva za rubl'*, 171.

117. Central Bank accounts for the period show no trace of the massive decrease in domestic money supply that should have accompanied the sale of billions of dollars in reserves. William Tompson, "The Bank of Russia and the 1998 Rouble Crisis," in *Anatomy*

*of the 1998 Russian Crisis*, ed. V. I. Tikhomirov (Carlton, Australia: Contemporary Europe Research Centre, University of Melbourne, 1999); and Central Bank of Russia.

118. Central Bank of Russia.

119. A. Astapovich and D. Syrmolotov, "Rossiiskie banki v 1998 godu: Razvitie sistemnogo krizisa," *Voprosy Ekonomiki*, no. 5 (1999): 58n19.

120. Evgeniia Al'bats, "Sergei Dubinin: My byli ne soglasny s pravitel'stvom," *Kommersant-Daily*, September 9, 1998.

121. Roberto Navarro, "Ni monedas," *CASH—Suplemento Económico de Página/12*, October 28, 2001.

122. Àngel Corragio, "El fondo patriótico no llega a los $1.000 milliones que pidió Cavallo," *El Cronista*, September 26, 2001. Notably, the international parent firms of these enterprises sought to cut themselves off from their Argentine subsidiaries' liabilities after devaluation, indicating that they might already have seen losses as capped before devaluation. Sonja Ryst, "Street Looks More Critically at Foreign-Owned Latin Cos," *Dow Jones Energy Service*, August 7, 2002.

123. Central Bank of Argentina.

124. "Primeras fisuras en nuevo agrupamiento empresarial," *Ambito Financiero*, November 29, 2001.

125. For example, "Argentina's Cavallo Wants 'Expansive' Central Bank," *Reuters News*, April 6, 2001, 6:34 p.m.. Cntrast this to Russia's secrecy on measures to loosen the money supply.

126. Government of Argentina, "Argentina: Letter of Intent, Memorandum of Economic Policies, Technical Memorandum of Understanding," August 30, 2001, http://www.imf.org/external/np/loi/2001/arg/02/index.htm.

127. Frieden, "The Politics of Exchange Rates."

128. Wade, "Wheels within Wheels."

129. S. Brock Blomberg, Jeffry Frieden, and Ernesto Stein, "Sustaining Fixed Rates: The Political Economy of Currency Pegs in Latin America," working paper (Cambridge, Mass.: Harvard University, 2003).

130. IMF, "International Financial Statistics Online."

131. For skepticism on the product-market benefits of devaluation from one relevant policymaker see Aleksashenko, *Bitva za rubl'*, 140.

132. Diaz-Bonilla and Schamis, "From Redistribution to Stability."

133. Black market rates were compiled from press accounts and should be taken only as indicative.

134. Barrington Moore, *Soviet Politics: The Dilemma of Power, the Role of Ideas in Social Change* (Cambridge, Mass.: Harvard University Press, 1950), 3.

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