

Bank Privatization in Argentina

A Model of Political Constraints and Differential Outcomes

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Abstract

Based upon results from country case studies, many researchers have claimed that political constraints affect bank privatization transactions, which in turn affect the post-privatization performance of the banking sector. However, no paper has either econometrically tested how political constraints affect bank privatization transactions or theoretically modeled the privatization transaction. In this paper, we present a simple theoretical framework which models the inherent tradeoffs faced by governments and potential buyers in privatization transactions involving banks. The potential buyer is concerned about the probability that the bank will remain solvent, the profits that it will earn following privatization and the price paid for the assets and liabilities. In addition to price received for the assets, the government is concerned about layoffs and service coverage following privatization. We apply this framework to study provincial bank privatization transactions in Argentina, finding that contract features varied systematically with some factors captured in the theoretical model. In particular, provinces with high fiscal deficits were willing to accept layoffs and to guarantee a larger part of the privatized bank's portfolio in return for a higher price.

I. Introduction

Recent empirical work has indicated that privatized firms are often more efficient than comparable public enterprises (López-de-Silanes, 1997; Mueller, 1989; Vining and Boardman, 1992). Similarly, many enterprises become more efficient following privatization (Galal et al., 1994; Kikeri, Nellis, and Shirley, 1992; La Porta and López-de-Silanes, 1997; Megginson, Nash, and Van Randenborgh, 1994; World Bank, 1995).¹ Although a shift from public to private ownership has typically improved firm level performance, that shift has often proven insufficient by itself. At different times and in different places, dispersed ownership, entrenched interests, weak regulation and supervision, a lack of competitive pressure, and soft budget constraints, or a subset of those factors, have provided sub-optimal incentives for private owners of firms. Among the transition countries of Central and Eastern Europe, for example, recent studies indicate that the persistence of extensive insider (worker or manager) ownership is associated with limited progress in enterprise restructuring and poor post-privatization performance (Carlin and Landesman, 1997; Pohl et al., 1997; Frydman et al., 1999; Jones and Mygind, 1999). The variation in performance suggests that the question of *how* to privatize is, in many cases, at least as important as *whether* to privatize.

Moreover, the privatization literature has largely ignored the incentives of the politicians that craft privatization agreements. There are some exceptions. World Bank (1995) identifies a number of features of the policy environment that coincide with successful privatization, and López-de-Silanes et al. (1997) and Clarke and Cull (2000a) identify political factors that make privatization more likely, but none of those papers formally analyze how political incentives affect the privatization agreements themselves. In certain transition countries, it appears that privatization to insiders has been relatively unsuccessful, but what were the possible alternatives? Was privatization to outside or foreign investors possible in all transition economies? Did time constraints militate against lengthy negotiation with such investors?

¹ Laffont and Tirole (1991) note, however, that public ownership may be advantageous in some circumstances. For example, it might be easier for a government to pursue goals other than profit maximization through ownership rather than through regulation. Therefore, theory cannot resolve which form of ownership better promotes social

Without a better understanding of the motivations and the constraints faced by the politicians, it is difficult to assess whether a given privatization method could be successful in other cases.

In short, relatively little attention has been devoted to the ways political incentives affect privatization agreements, the ownership and incentive structures that result, and the performance of privatized firms. One reason is that there are few privatization episodes that offer enough variation across comparable privatization contracts. Within the context of a single country, most privatization decisions are made by the central government. Although the incentives of those politicians may vary over time, the changes are unlikely to yield sufficient variation for formal analysis. Cross-country analysis of privatization contracts may provide more variation in political incentives, but measuring differences in the political and institutional environments in a consistent, meaningful way is difficult. We study an episode, the provincial bank privatizations of the 1990s in Argentina that resolves many of these problems. Privatization decisions were made by the provincial governments, which provides us with variation along several important dimensions, including fiscal performance of the province, bank performance and the political incentives facing important players, while keeping other institutional details similar. To our knowledge, this is the first attempt to theoretically model the features of bank privatization contracts and to test whether the outcomes adhered to the model's predictions.

Section II offers background on the bank privatization process in Argentina, summarizes the relevant literature on private versus public ownership, and describes the bank privatization contracts themselves. Section III provides a simple theoretical framework and some simulations to illustrate the tradeoffs facing provincial politicians in crafting these agreements. Section IV tests empirically some of the key predictions of the model. Section V briefly analyzes the effects of contract features on post-privatization performance, and section VI concludes.

welfare in all cases. Also, see Williamson (1999), which discusses why a public bureaucracy might be better at managing some transactions, such as managing foreign affairs, than a private bureaucracy would be.

II. Background

A. Private versus Public Ownership: Relevant Literature

Although the bulk of this section will focus on performance differences between different classes of private ownership, we note at the outset that in Argentina, as in other countries, there are a number of reasons to expect privately owned banks to operate more efficiently than state-owned banks would. Laffont and Tirole (1991) point to three political reasons why private ownership might be superior to public ownership. First, governments may expropriate investment from public enterprises. Second, they may impose multiple, fuzzy, and changing objectives on public managers, and, third, they may be susceptible to the pressure of interest groups in directing those managers. Such opportunistic behavior by politicians affects the performance of public enterprises. It is well known that the simple principle-agent framework defining relations between voters (principles) and politicians (agents) is susceptible to breakdown. Since there are many votes in a legislative session, a politician might benefit from taking a position on a single issue that is supported by an intense minority, even if most voters lose from that decision (Downs 1957, 55-60). Consequently, politicians might gain by rewarding supporters with employment at a public bank or with subsidized credit, even if the cost to taxpayers is greater than the gain to the politician's supporters.

Those authors also describe a number of non-political failures in corporate governance that typically characterize state-owned enterprises. Because managers of public enterprises do not own stock or stock options and are not subject to corporate takeovers that could cost them their jobs, they typically have less reason to adopt a sufficiently long-term perspective focusing on productive efficiency.² Monitoring is, therefore, one reason to expect private firms to perform better than state-owned enterprises. Public enterprises also might perform worse than similar private enterprises because managers of public enterprises answer to many principals, who impose differing, and sometimes conflicting, objectives and constraints upon them, aside from the expressly political objectives mentioned above (Shirley and Xu, 1998). This is likely to

² Stiglitz (1985) notes, however, that when informational asymmetries between potential acquirers and firm managers are large, the disciplining effect of possible takeovers is unlikely to be great.

lead to sudden, unpredictable changes in the manager's objective function and to exacerbate standard principal-agent problems, since the manager might be able to manipulate the multiple principals by playing them off against each other. A final problem faced by public enterprises is that public managers often face a soft budget constraint. Although some money-losing public enterprises are shut down, many expect government subsidies rather than closure in response to poor performance. Without the threat of bankruptcy, public managers have less incentive to manage well than their private counterparts do (Kornai, 1980; 1986).

B. Provincial Banking in Argentina.

At the beginning of the 1990s, all Argentine provinces owned at least one bank (twenty provinces owned only one and three provinces owned two).³ The publicly owned provincial banks performed poorly in terms of portfolio quality, the efficiency with which they generated income, and their return on assets (Clarke and Cull, 1999,2000b). Although it may seem that the public banks' poor performance should have encouraged privatization, the federal system in Argentina reduced provincial politicians' incentives to privatize in several ways. First, the provincial banks provided the provinces with a cheap way of financing their operations. The provincial governments could borrow from the public provincial banks, which would then discount the loans to the Central Bank of Argentina.⁴ Second, the banks provided politicians with a cheap source of patronage. Because they could rely upon the Central Bank to help bail out public banks facing collapse, provincial politicians could potentially use the banks to reward supporters with access to cheap credit or employment.⁵ Further, since the provinces would not bear the full cost of bailing out poorly performing public banks, they had little reason to expend their own resources to closely monitor bank performance.

This comfortable arrangement ended in the early 1990s, when the newly elected Menem administration implemented the Convertibility Plan to stabilize the economy and bring inflation

³ An additional bank was jointly owned by several provinces and several private sector entities.

⁴ Dillinger and Webb (1996, p.6) note that the provinces financed about 60% of their credit needs through the provincial banks in 1990.

⁵ In a similar way, López-de-Silanes et al. (1997) find that state clean government laws and state laws restricting public spending encourage privatization at the county level in the United States. They suggest that this might be because these laws increase the cost of political patronage.

under control. The main pillar of the Convertibility Plan was the April 1991 Convertibility Law, which pegged the new Argentine peso to the U.S. dollar and forced the Central Bank to restrict the monetary base to the dollar value of international reserves.⁶ The Convertibility Law, and the new 1992 Charter of the Central Bank that supported it, had a profound effect on the provincial governments:

“First, the charter dictated that the central bank could not take any new domestic assets. This meant that the provinces could no longer count on the central bank to rediscount loans by provincial banks to provincial governments, ending their access to seigniorage and the inflation tax. Second, the charter prohibited the central bank from guaranteeing bank deposits. Then provincial banks had to rely on depositor confidence to maintain liquidity. Both measures reduced the central bank’s role as a lender of last resort and hardened the budget constraint on provinces, limiting their ability to borrow (indirectly) from the central bank or from depositors.” (Dillinger and Webb, 1999, p.16)

Because they could no longer rely upon the central bank, these changes meant that the provinces would have to bail out depositors from their own resources in the case of bank failure. In this way, by decreasing the benefits associated with owning a bank and increasing the risk, the Convertibility Plan made owning a poorly performing bank significantly less attractive than it had been before.

These changes had an immediate impact on several provinces.⁷ In November 1991, the provincial government of Corrientes passed a law authorizing the privatization of *Banco de Corrientes*, and by December 1994, when the “Tequila Crisis” hit Argentina, six provinces had authorized the privatization of their provincial banks. The Tequila Crisis had a large impact on the performance of the provincial banks, imposing substantial fiscal costs upon the provinces (Clarke and Cull, 1999). Nervous depositors withdrew deposits from weak banks in both the public and private sectors, hitting the weak public provincial banks hard. This forced the provinces to consider ways to re-capitalize their insolvent banks and to reassess the costs and benefits of privatization.

⁶ See World Bank (1998) for a discussion of the Convertibility Plan and its impact on the financial sector.

⁷ Clarke and Cull (2000a) discusses how different incentives in different provinces affected the timing of privatization in the separate provinces.

To further encourage privatization, the Menem administration, with the assistance of the World Bank and the Inter-American Development Bank, created the Fondo Fiduciario. This agency, which is a part of the federal government, extended loans to help the provinces privatize their provincial banks. Since provinces were only eligible to receive loans from the Fondo Fiduciario after they had privatized their banks, there was no risk that they would use the funds to re-capitalize the banks while retaining ownership. This innovation encouraged the provinces to split the public provincial banks into two parts before privatization – a healthy bank to be privatized and a residual entity that contained non-viable assets. Although the individual cases varied, the basic strategy was to first shift attractive assets to the privatized entity and then match those assets with liabilities. Liabilities were added up to the point that the privatized entity's net worth met Argentina's prudential standards. The main determinant of the size of the residual entity was, therefore, the attractiveness of the public provincial bank's assets. Consequently, the purchaser of the privatized entity did not have to assume ownership of all pre-privatization assets and liabilities and the province was able to receive a positive price for the bank.

Since the recovery of residual assets would not be quick enough, or on such advantageous terms, to cover all residual liabilities, the provinces needed a way to meet a substantial portion of their short-term residual obligations. The provinces used the loans from the Fondo Fiduciario to do this by converting short-term obligations to long-term loans. From a political perspective, financing obligations in this way was presumably beneficial, as the yearly loan payments due to the Fondo Fiduciario are less eye-catching than short-term obligation payments would have been. More practically, at this time, the provinces likely could not have afforded to pay off the short-term obligations immediately.

With this new incentive, and an uncertain liability hanging over their heads, many additional provinces decided to privatize their banks. Of the twenty-seven provincial banks, almost half had been privatized by the end of 1997, and several other privatizations had been authorized but not completed. This series of privatizations provides a unique opportunity to study the factors that affect politicians' privatization decisions. Although other players, for example the Federal Government of Argentina, the Central Bank of Argentina and international donors, might have been able to indirectly influence the privatization decision, the final choice was made by the provincial government.

C. Provincial Bank Privatization Contracts

Because the negotiations were principally over the level of assets and liabilities that the purchaser would assume, the prices fetched in the completed privatizations were relatively low, compared to the face value of the assets transferred. Table 1, therefore, focuses on the non-price features of the privatization agreements. In the Argentine context, two important ways opponents to bank privatization were bought off were through agreements to limit the number of layoffs or to compensate laid-off workers and to maintain branches in certain cities. Based upon a review of the requirements imposed on the purchasers of the privatized banks, it appears that limits on branch closings and layoffs were the rule rather than the exception (Table 1). Of the sixteen contracts, half had some restriction on the number of employees that could be dismissed. Another purchaser agreed to implement a job re-training program. Three of the contracts stipulated that the private purchasers maintain the existing branch network and ten permitted the closure of branches, but required that the purchaser maintain service provision in all locations served at the time of privatization. These contract features strongly suggest that the political buyoffs present in other privatizations were also evident in Argentina.

As noted above, the public provincial banks were chronic money losers frequently in need of re-capitalization. To pass a substantial share of their low-quality assets onto a private purchaser while, at the same time, imposing branching and labor restrictions on that purchaser would have been difficult, if not impossible, without concessions on other dimensions. The most attractive of these were the service contracts that were awarded to purchasers to provide banking services to the provinces and guarantees as to the quality of the acquired assets. The service contracts, which, among other things, provide income to the private owners for coordinating the payments activities of the provincial government, varied in duration from five to twenty years. Ten of the sixteen agreements provided service contracts of at least ten years. In interviews, the new private owners confirmed that these contracts are of vital importance, as an abnormally high share of the privatized banks' income is generated from services (see Clarke and Cull, 2000b).

Table 1: Terms of the Provincial Bank Privatizations

Province (Bank)	Object of Sale	Branching	Employees	Duration of Banking Service Contracts	Portfolio Guarantees
Chaco (6/94)	60% Class A shares	Maintain service	Keep at least 715 workers	20 years	None
Entre Ríos (12/94)	60% Class A shares	Maintain service, closures require approval	Up to 700 (of 1500) early voluntary retirement	7 years	Up to \$26 million maximum
Formosa (9/95)	60% Class A shares	Maintain service	--	10 years	35% recovered residual assets
Misiones (12/95)	100% Class A shares	--	No dismissals in first six months; <30% of workforce after	5 years	Up to \$16 million maximum
Río Negro* (2/96)	Determined by bidders	--	--	10 years	Up to 80% of portfolio or \$50 million
Salta (3/96)	75% Class A shares	Maintain similar geog. Coverage	--	10 years	None
Tucumán (3/96)	75% Class A shares	Maintain service	Workforce <= 200 at transfer	10 years	Up to \$32 million
San Luis (5/96)	100% Class A,B shares	Maintain service	--	10 years	\$16 million deposit from province, up to 5 years
Santiago del Estero (7/96)	95% Class A, B shares	Maintain service	Job re-training program, >= 1 yr.	10 years	None
San Juan (7/96)	75% Class A shares	Maintain similar geog. Coverage	--	10 years	None
Mendoza (7/96)	90% Class A shares	Maintain all branches	Keep at least 600 workers	5 years	Can substitute p-tized assets for residual assets, up to \$20 million
Mendoza (Prev. Social) (7/96)	90% Class A shares	Maintain all branches	Keep at least 500 workers	5 years	Can substitute p-tized assets for residual assets, up to \$10 million
Municipal de Tucuman (10/97)	100% Class A,B shares	Maintain service	Keep at least 70 workers	10 years	Can shift some assets to the residual
Jujuy** (1/98)	80% of capital	Maintain all branches	Keep at least 170 workers	10 years	Fund created w/ 35% recovered residual assets
Santa Fe (5/98)	90% of class A shares	Maintain service in all branches or through paid representatives	Keep at least 1500 workers	5 years	Up to \$43 million guaranteed by a bond
Santa Cruz (6/98)	Not available	Not available	Not available	Not available	Not available

Source: Fondo Fiduciario para el Desarrollo Provincial (FFDP)

*Río Negro – Portfolio guarantees and flexibility with respect to the object of sale were modifications to original pliego. Pliegos were initial announcements by the provinces of the proposed terms of sale. ** Jujuy – The original pliego was altered to allow for a higher share of capital to be transferred to the new owner, less stringent restrictions regarding firing, and slightly more generous guarantees.

In many cases, however, the lure of the service contract appears to have been insufficient to entice a private bank to acquire assets of dubious quality. Rather than verify the quality of each individual asset, which proved time-intensive, many provinces took to guaranteeing a substantial share of the assets transferred to the privatized entity. In six cases, the province guaranteed assets up to either a fixed dollar (peso) limit or a certain share of the total assets acquired. In two other cases, private owners were able to substitute assets from the residual entity for privatized assets during some trial period; in another, the buyer could shift low-quality assets to the residual for a period. Finally, in two cases the guarantee was set as a fraction of the residual assets recovered. Presumably, since the owner of the privatized entity was also charged with managing the residual entity, the idea was to increase incentives to recover residual assets. Only four cases did not guarantee the privatized asset portfolio at all.

Table 1 shows a number of dimensions over which provinces and potential buyers would negotiate. The single most important, however, was the amount of residual assets to be assumed by the purchaser. Table 2 shows the size of the privatized and residual entities for the sixteen completed privatizations that relied on Fondo Fiduciario assistance.⁸ The most striking feature of the data is the size of the residual entities. In only four of fifteen cases for which data are available did the province manage to transfer more than half of the pre-privatization assets to the purchaser and one of these (Entre Rios) is somewhat misleading. Both Entre Rios and Chaco had nearly finalized their privatizations before the Fondo Fiduciario became operational. A desire to provide some fiscal relief to these early privatizers enabled them to enter the program after the fact. Because most details of these two privatizations had been worked out, however, neither transaction was typical of those that followed. In particular, Entre Rios transferred all pre-privatization assets to the purchaser, and later used Fondo Fiduciario assistance to guarantee some of them.

⁸ We refer to the cases listed in Table 2 as provincial bank privatizations throughout the paper. One of the sixteen, Municipal de Tucumán, is referred to as a municipal rather than a provincial bank in Argentina. Because municipal bank privatizations were also eligible for Fondo Fiduciario assistance, we include that case in our analysis. Data for another, the Santa Fe privatization, were not yet available as of our last visit to Buenos Aires (January 1999).

Table 2: Sizes of Privatized and Residual Entities

Bank	Privatized Entity		Residual Entity		% Transferred to Private Owner		Residual	
	Assets (million pesos)	Liabilities (million pesos)	Assets (million pesos)	Liabilities (million pesos)	Assets (million pesos)	Liabilities (million pesos)	Asset recovery (mil)	As % of Assets
Chaco	42.9	34.5	245.3	233.1	15%	13%	0*	0%
Entre Ríos	425.5	414.5	0.0	0.0	100%	100%	--	--
Formosa	26.5	11.5	135.7	244.9	16%	4%	5.2*	4%
Misiones	67.2	57.8	133.9	340.8	33%	14%	6.1	5%
Río Negro	59.4	47.4	379.2	402.6	14%	11%	6.0	2%
Salta	42.9	41.0	70.0	68.4	38%	37%	17.6*	25%
Tucumán	66.9	56.9	261.7	262.9	20%	18%	5.3	2%
San Luis	38.6	38.6	29.7	81.8	56%	32%	1.7	6%
Sant. Estero	43.8	43.5	199.6	227.3	18%	16%	7.5	4%
San Juan	173.9	158.9	78.6	175.3	69%	48%	2.3	3%
Mendoza ^a	335.1	326.9	666.6	666.6	33%	33%	14.3	1%
Prev. Social	62.9	41.0	292.1	292.1	18%	12%	--	--
Mun. Tucumán	38.2	32.2	38.1	25.7	50%	56%	n.a.	n.a.
Jujuy	35.7	33.7	206.9	218.7	15%	13%	n.a.	n.a.
Santa Fe	--	--	--	--	--	--	--	--
Santa Cruz	157.9	142.9	37.7	126.9	81%	53%	n.a.	n.a.

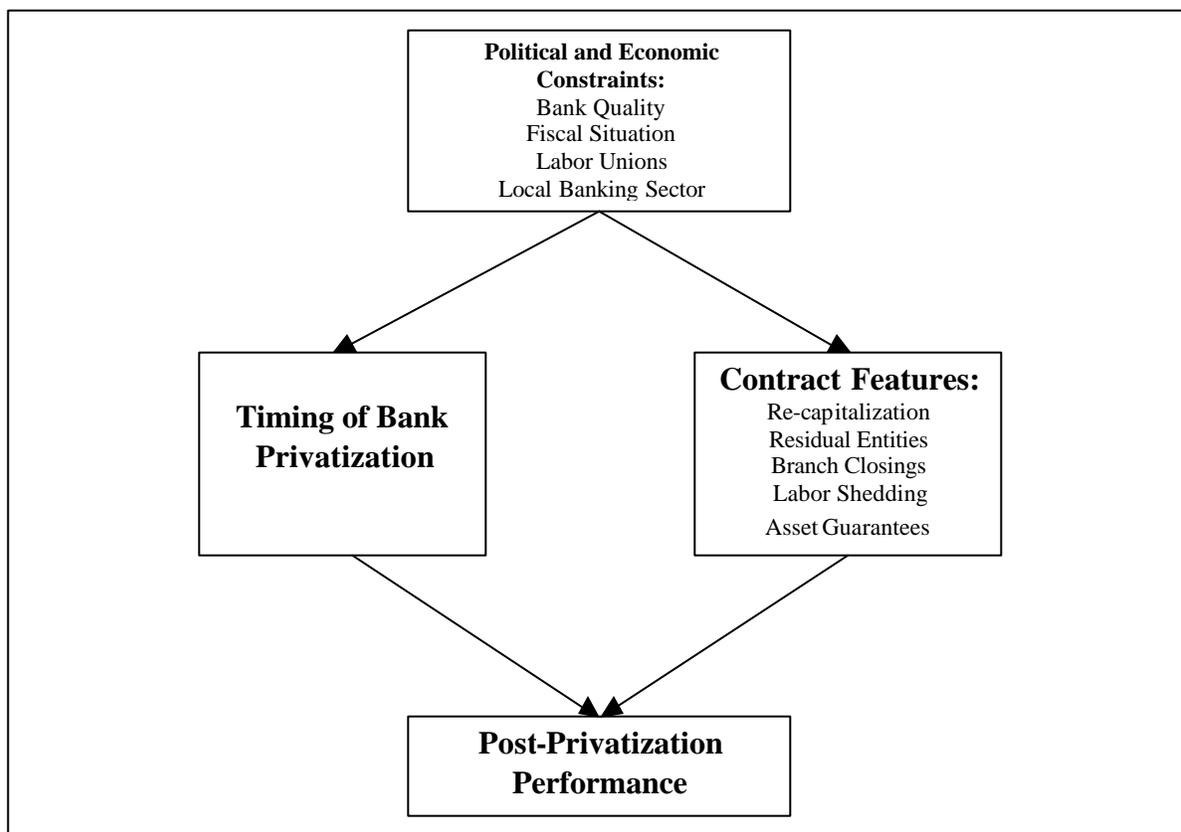
Source: Fondo Fiduciario.

* Province also refinanced some (less than ten percent) of residual assets. Refinancings are not included in the recovery figures presented here.

III. A Simple Model of Bank Privatization

A. Conceptual Framework

Our basic premise is that political and economic constraints dictate the timing and design of bank privatizations, and that timing and design, in turn, affect post-privatization performance. This will help us understand the second link in the framework, which will focus on how political and economic constraints affect features of the privatizations (including privatization contracts). We begin our study of privatization contract features with a simple theoretical model. We will then use the sample of Argentine bank transactions to test our predictions. Understanding the political economy of privatization decisions and contracts should also help us better assess the effect of these decisions on post-privatization performance.



B. The Model

Since many of the public banks were insolvent – or close to insolvent – at the time of sale, the provincial governments often considered restructuring the banks before the sale. For example, many of the banks were significantly overstaffed or had inefficient branch networks. Since the private buyers might want to reduce these problems by laying off surplus workers or closing branches (often in rural areas), governments had to decide how much of the cost saving restructuring they would allow. Another fundamental restructuring problem was handling the mountain of non-performing assets in the portfolios of insolvent state-owned banks. As Verbrugge, Megginson, and Owens (1999) note:

“Effective methods of dealing with bad loans prior to or during the privatization process are essential. This problem is especially severe in situations where uncollectable loans are outstanding to state-owned enterprises.”

Argentina’s relatively successful provincial privatizations centered on the creation of residual entities for the low-quality assets and liabilities not assumed by the private purchaser. In

addition, an insolvent state-owned bank could be sold in its entirety to whoever bids the least negative price.⁹ Whatever the method, however, most sources agree that handling accumulated bad loans is the vital aspect of bank privatization. In addition to increasing sales price, restructuring might also make the bank more attractive to better quality buyers, who might be worried about the effect of buying a large non-performing portfolio on their own credit rating.

Many decisions are affected by political considerations. For example, it seems plausible that governments that are willing to remove most, or all, of the non-performing loans from the banks' portfolios, will be able to demand more attractive terms from buyers along other dimensions. They might then be able to demand fewer layoffs or impose greater service requirements (e.g., in rural areas). In contrast, when the government retains a large stake in the bank after privatization, the buyer could probably demand concessions along other dimensions.

The theoretical model below summarizes the tradeoffs faced by two agents, a government and a potential buyer, in the sale of an insolvent state-owned bank. Although the model does not capture all the tradeoffs facing the players, it captures many of the features discussed above. The purchaser is concerned about the probability that the privatized bank will remain solvent, the profits earned if the bank does so, and the price paid for the assets and liabilities it assumes. The probability of solvency we denote $f(x_r)$, which is decreasing in x_r , the risky assets assumed by the purchaser. We assume that the purchaser takes on state-owned bank assets of decreasing marginal value, which adversely affect the probability that the privatized bank survives.

The purchaser's expected profit stream is composed of interest income from its portfolio of non-guaranteed assets, minus the privatized bank's operating costs.¹⁰ Interest income on performing assets we denote $h(x_r)x_r$, where $h(x_r)$, the expected average net interest rate on the portfolio of risky assets (net of losses on non-performing assets), is decreasing in x_r . In other words, as the purchaser assumes assets of declining marginal value, the probability that each additional asset will be non-performing increases, and the net expected average interest rate on

⁹ Ramachandran (1995) points out that this is essentially the approach taken by the Resolution Trust Corporation in the United States. However, in practice, it is difficult to sell banks for 'negative' prices for political reasons.

¹⁰ For tractability, the guaranteed assets themselves do not enter into this simple model.

the entire portfolio declines. Operating costs are denoted wL where w is the wage paid to bank employees and L the number of employees. The buyer, therefore, receives:

$$\Pi = f(x_r)[h(x_r)x_r - w\bar{L}]k \quad (1)$$

where $k \sim [0...1]$ is the share of the expected profit stream retained by the purchaser. The government receives a price P , which is equal to $1-k$ times the profit stream as payment from the purchaser for the assets and liabilities (and the charter) of the state-owned bank:

$$P = (1-k) \cdot f(x_r) \cdot [h(x_r) \cdot x_r - wL] \quad (2)$$

In other words, the share of the expected profit that is not retained by the purchaser equals the payment received by the government.

The government derives fiscal benefits from this transaction not only through P , but also from recovery of residual assets, denoted $g(x_{res}) \cdot x_{res}$, where x_{res} is the quantity of assets in a residual entity managed by the government. We assume that $g(x_{res})$ is increasing in x_{res} , which indicates that the marginal recovery rate of residual assets is increasing in the amount of assets assumed by the government. This stems from the decreasing marginal value of each additional asset assumed by the purchaser in these transactions.

The final component of the government's optimization function is the benefits it receives from patronage jobs at the privatized bank, which we denote $K_L L$, where K_L is the per-worker benefit to the government.¹¹ We include this component because limits on layoffs have been a recurrent feature when crafting politically feasible privatizations. We assume that the government chooses x_{res} and L to maximize the following:

$$\begin{aligned} \underset{x_{res}, L}{MAX} U &= K_M [g(x_{res}) \cdot x_{res} + P] + K_L \cdot L \\ \text{subject to } x_r + x_{res} &= \bar{x}_{pub} \end{aligned} \quad (3)$$

¹¹ We follow the model in Shleifer and Vishny (1994) in assuming that the government does not necessarily act in the public interest. They assume that, because the public is disorganized, politicians can cater to interest groups, such as labor unions, rather than the median voter. In our model, this concept is captured by K_L , the per worker benefit of an additional bank employee. Fiscal benefits to politicians, which need not be spent on projects that promote the public interest, are captured by K_M , which we describe below.

where K_M maps the net fiscal benefits of the transaction into the government's utility function, and x_{pub} denotes the total assets of the state bank (prior to privatization). The constraint implies that the assets of the state-owned bank end up in one of two places: as non-guaranteed assets assumed by the purchaser or as assets that remain with government in the residual entity.

Equilibrium bank privatization contracts are characterized by two first order conditions, which must be satisfied jointly:

$$\partial U / \partial L = -w(1-k)f(x_r)K_M + K_L = 0 \quad (4)$$

$$\partial U / \partial x_r = K_M [g'(x_{pub} - x_r)(x_{pub} - x_r) - g(x_{pub} - x_r)] \quad (5)$$

$$+ (1-k)[f'(x_r)(h(x_r)x_r - wL) + f(x_r)h(x_r) + h'(x_r)f(x_r)x_r] = 0$$

In equation (5), we substitute $x_{pub} - x_r$ for x_{res} , which enables us to express the government's decision to apportion assets between the residual and the privatized entity solely in terms of x_r . This simple framework captures many of the salient tradeoffs underlying most bank privatizations. The equilibrium contracts are described in terms of the assets assumed by the purchaser, the assets retained by the government, and the jobs preserved by the government.

C. Comparative Statics: Simulation Results

From this framework, we can generate comparative statics results that describe how the equilibrium contract varies with respect to the government's fiscal situation (through K_M), the political strength of workers and unions (through K_L), the government's ability to recover residual assets (through $g(x_{res})$), the repayment rates on risky assets managed by the privatized bank (through $h(x_r)$), and the prospects of future solvency for the privatized entity (through $f(x_r)$). In this section, we highlight a handful of the predictions from the model, which we then test in the next section.

One simple way to highlight these predictions is through a simple simulation exercise. We assume that the three key functional relationships in our model, $h(x_r)$, $f(x_r)$, and $g(x_{res})$, are all linear. The parameters used in the simulations are summarized in Table 3. The buyer's expected return on its portfolio of risky assets is of the form $h(x_r) = a_r - \beta_r x_r$; the government's expected return on the residual portfolio is of the form $g(x_{res}) = a_{res} + \beta_{res} x_{res}$. This construction is

intended to capture the buyer's ability to select the assets that it wanted in these transactions. Buyers, therefore, took on additional assets of increasingly poorer quality, which implies that sellers, that is, the provincial governments, took on assets of increasingly higher quality in their residual entities. We also assume that $|\beta_r| > |\beta_{res}|$, which implies that, for a given asset, the privatized bank is more likely to recover than is the government through its residual entity. This simply indicates that the bank is better at managing a loan portfolio than is the government. The probability of future solvency of the privatized bank, which is also decreasing in x_r , is of the form $f(x_r) = a_s - \beta_s x_r$. We assume that $|\beta_r| > |\beta_s|$, which implies that additional assets decrease the return on the loan portfolio more than they do the probability of the bank's insolvency. The results from simulations using these parameters are summarized in Figures 1-5.

Table 3: Parameters Used in Simulations

Future Solvency of Privatized Bank: $f(x_f) = 1 - .001x_f$
Buyer Management of Loan Portfolio: $h(x_f) = 1 - .01x_f$
Gov't Management of the Residual Entity: $g(x_{res}) = .005x_{res}$
Gov't Utility Weight for Money: $K_M = .001$
Gov't Utility Weight for Labor: $K_L = .000003$
Wage Paid to Labor: $w = .0066$
Share of Expected Profit Stream Retained by Buyer: $k = .5$
Size of the Public Bank: $x_{pub} = 100$

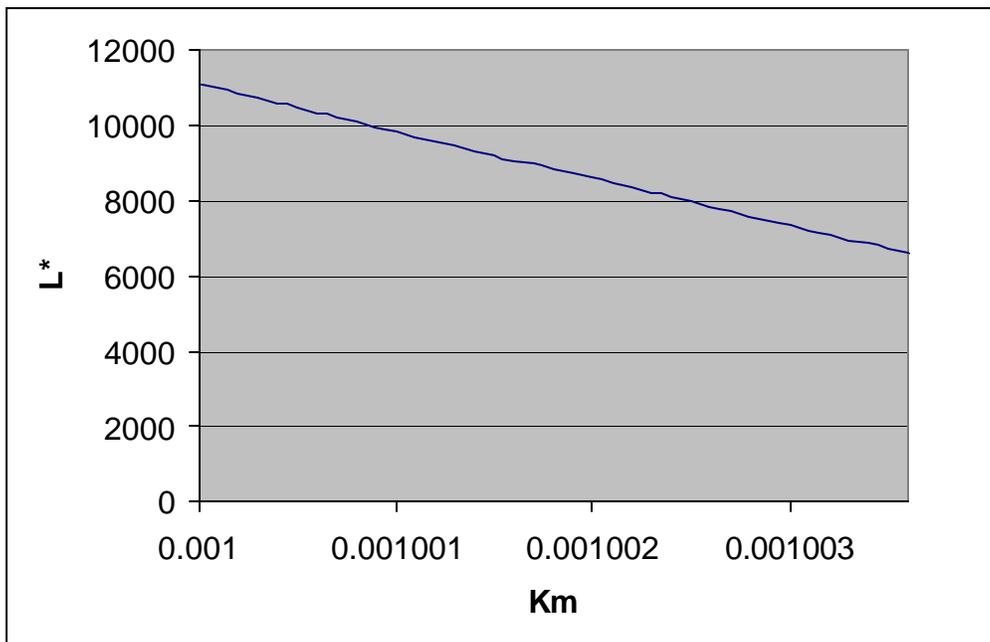


Figure 1: Equilibrium L as Gov't Fiscal Situation Worsens

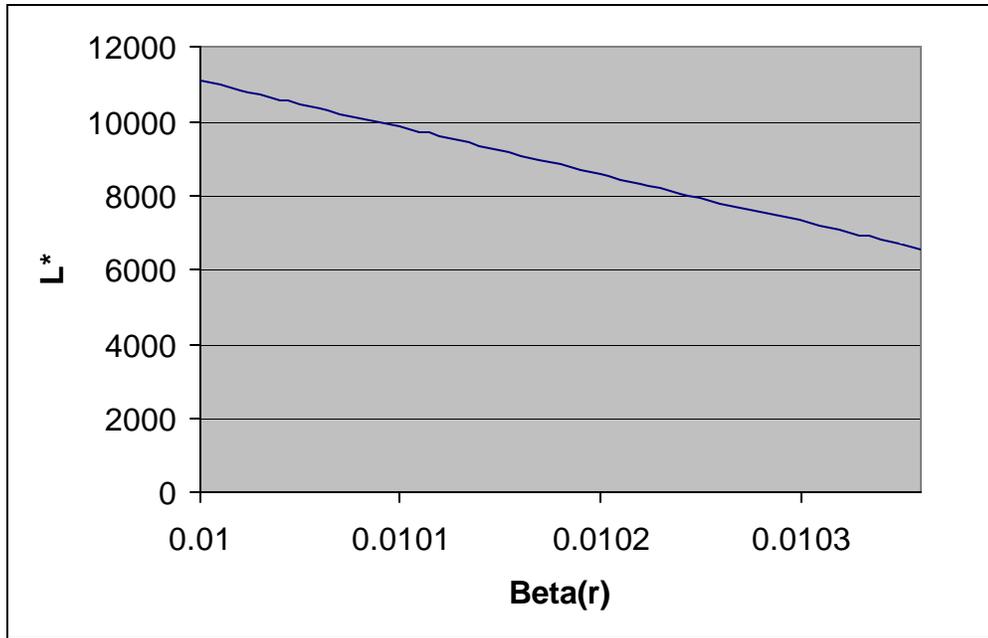


Figure 2: Equilibrium L as Buyer Management of Loan

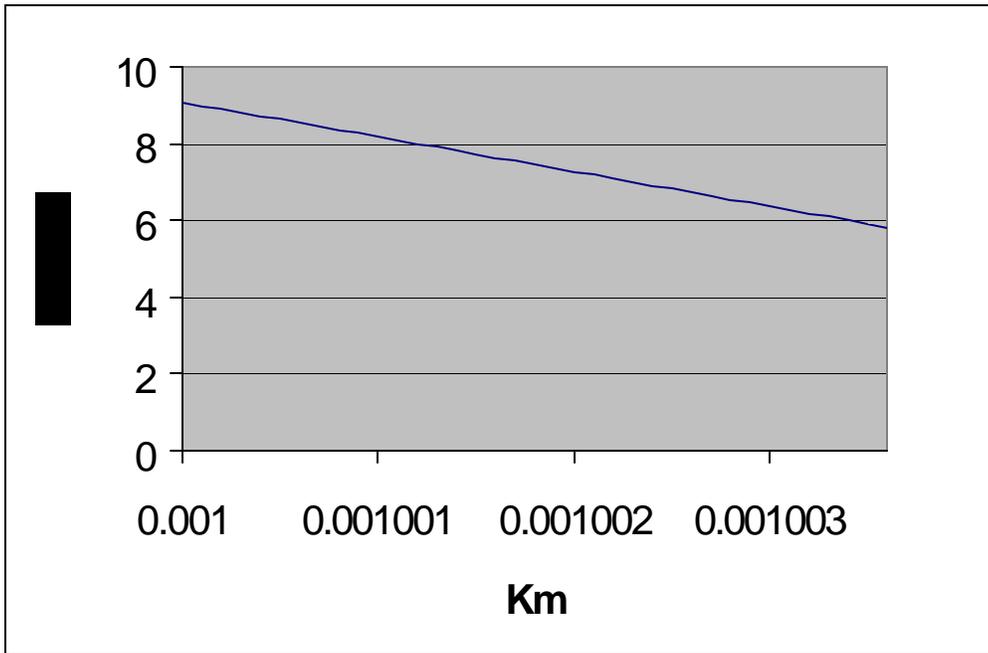


Figure 3: Equilibrium Residual Entity as Gov't Fiscal Situation

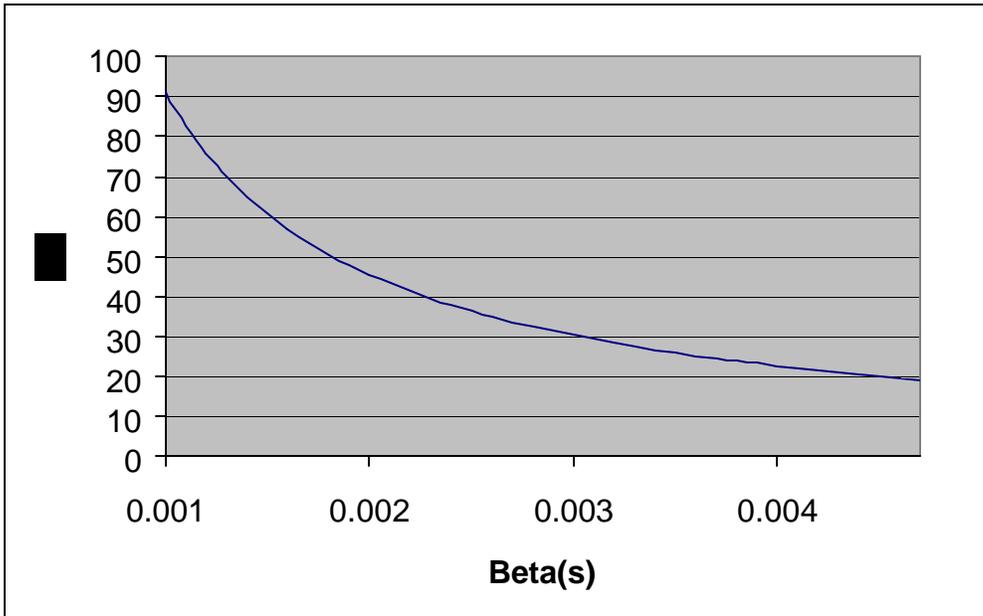


Figure 4: Equilibrium Portfolio of Risky Assets Assumed by

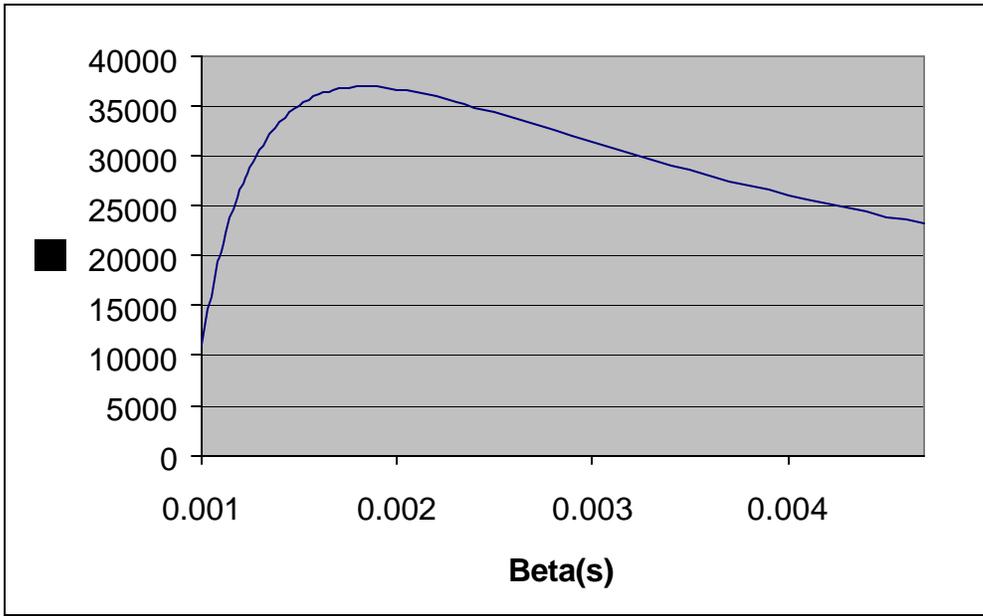


Figure 5: Equilibrium L as Prospects for Buyer's Future

The predictions that we can test focus mainly on the fiscal situation of the provinces and the probable effects of the Tequila Crisis. In our simple model, fiscal effects operate through K_M . Some of the comparative statics results for K_M are immediately evident from the first order conditions. For example, making the linear substitutions for $h(x_r)$, $f(x_r)$, and $g(x_{res})$ described above, and rearranging the first order condition in equation (4), yields:

$$x_r^* = \frac{\mathbf{a}_s}{\mathbf{b}_s} - \frac{K_L}{K_M \mathbf{b}_s w(1-k)} \quad (6)$$

This indicates that the equilibrium x_r is linearly increasing in K_M , which implies that the equilibrium residual entity (x_{res}) becomes smaller as the government's fiscal situation worsens. All else equal, provinces in dire fiscal situations should have been more likely to shift assets to the privatized bank to get them off their own books. Figure 3 provides the simulation results that illustrate this point.

The other testable predictions of the model are best illustrated by the simulation results rather than through algebra. Figure 1 illustrates that, as a province's fiscal situation worsened, politicians could afford to protect the jobs of fewer bank employees (i.e., L^* was lower). They became increasingly focused on ridding their balance sheet of the non-performing assets in their provincial banks rather than on protecting patronage jobs. Figure 2 illustrates that, as β_r (the rate at which the privatized bank's average return declines as it assumes more risky assets) increases, L^* declines. If we take β_r to be an indication of the ability of the buyer to manage the portfolio, this suggests that weaker buyers meant that provincial governments could afford to protect fewer jobs. This simulation result will be more difficult to test than the ones regarding the government's fiscal situation. As a proxy, we will use the size of the public provincial bank relative to the total provincial banking sector. In more remote places, the public provincial bank typically dominated the local banking sector, and it was very difficult to attract qualified buyers.

In the linear case of our simple model, many of the comparative statics results are also linear. Non-linearities are introduced through the future solvency parameters in $h(x_r)$. Figure 4 illustrates that, as β_s , the rate at which the assumption of additional assets negatively affects future solvency, increases, the buyer assumes fewer risky assets and the residual entity grows larger. Figure 5 illustrates that the effects of β_s on labor (L^*) are more complicated. For lower values, an increase in β_s implies more protection of jobs by the government. This suggests that,

up to a point, the government looks towards job protection as a source of utility as the prospects of the bank's future solvency decline. After that point, however, the solvency concerns become more severe, the government must give up some jobs, and L^* declines. We operationalize the Tequila Crisis as a shock to β_s – portfolios deteriorated so rapidly during the crisis that buyers had to worry more about future solvency, and these worries were, therefore, taken into account by the government in its optimization problem (equations 4 and 5). We expect the Tequila Crisis to have had a negative effect on both L^* and x_r^* .

IV. Empirical Results

A. The Timing of Provincial Bank Privatization

One way of gaining insight into politicians' motivations is to look at the timing of privatization. In general, it is not straightforward to empirically test what factors affect privatization decisions. Country case studies often describe bank privatization as occurring quickly or slowly, but the relevant question is “compared to what?” Even if it were easy to classify privatization processes by speed, uncovering the reasons for those outcomes in the context of a single country study requires that different policy makers make different decisions within the period being studied. In this way, the variation in privatization decisions could be linked to variation in both the constraints faced by policy makers and the quality of the banks to be sold. However, when the privatization decisions are made at the federal level, there will usually not be sufficient comparable data in a single country.

Clarke and Cull (2000a) analyzes the timing of provincial bank privatizations in Argentina. The transactions represent a unique opportunity for analysis because provincial policy makers in twenty-three different provinces were making something akin to a “one-shot” decision within a relatively short period. Consequently, there is significant variation along several important dimensions within a uniform institutional framework, allowing a detailed econometric analysis of some aspects of privatization decisions. This unique institutional backdrop means that it is possible to identify the effects of fiscal constraints, bank quality, and other political considerations on decisions to privatize. Not only did some provinces choose to privatize while others did not, those that did, chose to do so at different times.

To exploit this variation in both decisions and timing, Clarke and Cull (2000a) estimate a discrete-time hazard model using data from between 1992 and 1996. The probability of privatization was allowed to vary across periods, making it possible to disentangle factors that affected all provinces (e.g., the Convertibility Plan and the Tequila Crisis) from province-specific effects (bank quality, fiscal pressures, and internal political pressures). They find strong empirical support for the hypothesis that political economic incentives affected the likelihood of privatization. In particular, poor performance (which might reflect failures in corporate governance) encouraged privatization, while overstaffing (a reflection of the power of workers) and size (relative to the local banking sector) decreased the likelihood of privatization. Other factors, including political affiliation of policymakers and fiscal performance of the province, did not appear to have a consistent effect on the likelihood of privatization.

B. Determinants of Contract Features

In this sub-section, we study characteristics of the banks and provinces that affected the outcomes of the negotiations between the private buyers and the provinces. Ideally, we would be interested in factors that might affect either the preferences of policymakers or the attractiveness of the bank to potential buyers. Unfortunately, the small number of observations severely limits our ability to specify a complete model, test plausible variables and control for demographic factors that might affect contract provisions.

The contract provisions studied are: restrictions on layoffs; the percent of privatized assets guaranteed by the province; the percent of public bank assets taken by the privatized bank rather than put into the residual entity; the price paid relative to size of the bank; and the length of the service contract. We do not look at branching restrictions because there was not enough variation to estimate a model with this as the dependent variable.¹² In general, we would expect policymakers to prefer fewer layoffs, smaller residual entities, smaller guarantees and a higher price. Although it is not immediately clear that politicians would prefer shorter to longer service contracts, as noted above, the new owners tended to prefer longer contracts. Since we do not

¹² That is, if we estimate a simple probit model with a dummy variable indicating branching restriction, there are only two cases with no restrictions (see Table 1). A multivariate model would be far beyond the data constraints.

observe uniformly long contracts, this suggests policymakers preferred some limits. One plausible reason for this might be that policymakers believed they could reduce the price of these services, in the future, through competitive bidding.

The independent variables include two that might proxy for policymaker's preferences and three variables that might affect how attractive buyers find the bank. The variables that proxy for the preferences of provincial policymakers are the political affiliation of the governor and a measure of the province's fiscal deficit. Although the preferences of other policymakers might also affect contract provisions, past work has suggested that the political affiliation of the governor appears to be a reasonable proxy for preferences regarding bank privatization in Argentina.¹³

We find that provinces with governors who were members of the *Partido Justicialista* (PJ) tended to allow fewer layoffs, provide smaller guarantees, have relatively smaller residual entities and grant shorter service contracts (See Table 4). These results are somewhat surprising, since they do not indicate any tradeoff between different provisions. For example, we might expect parties that rely upon the support of labor to allow fewer layoffs, but assume larger residual entities or provide larger guarantees. Further, the coefficient on this variable is positive, but insignificant, in the price equation. One possible explanation for this result is that after controlling for bank performance, PJ governors appeared more willing to privatize their province's provincial bank (Clarke and Cull, 2000a).

Since provinces tended to become more willing to privatize the bank as its performance deteriorated, it is possible that banks privatized in provinces with opposition governors were, on average, less attractive overall. If this poor performance is not captured by the performance measure included in the regression (i.e., net worth of the public provincial bank before privatization), the dummy for PJ governor might be proxying for performance. In other words, it may be best to think of the PJ variable as a control for bank quality, and focus on other explanatory variables to describe the tradeoffs that were made to facilitate these transactions.

¹³ Clarke and Cull (2000a) find that this variable tends to be more highly significant in determining the likelihood of privatization than the political affiliation of the provincial legislature. Further, in practice, when a single opposition party had a majority in one, or both, chambers of the legislature, the governor belonged to that party.

The size of the province's fiscal deficit might also affect the preferences of policy makers. First, provinces with large fiscal deficits might put greater emphasis on the speed with which the transaction is completed (i.e., to quickly receive privatization proceeds and reduce the drain of supporting the public bank). If this were the case, they might not be willing to walk away from negotiations that are going poorly, or to take tough bargaining positions and risk the private partner walking away. Therefore, we might expect provinces with higher deficits to achieve generally worse outcomes than other provinces (i.e., more layoffs, more guarantees, and lower prices).

In addition, the fiscal deficit might also affect how policymakers weight different provisions. For example, they might be more willing to trade off restrictions on layoffs and guarantee a greater part of the loan portfolio in return for a higher price. The results in Table 4 support this second hypothesis. In general, provinces with high deficits imposed fewer restrictions on layoffs and guaranteed more assets, but received a higher price (relative to the size of the bank before privatization).¹⁴ Interestingly, they also tended to privatize a greater share of the public banks' assets (see Column 2), although this result is not highly significant. One possible reason for this might be that the Fondo Fiduciario loan often did not cover all the liabilities of the residual entity. Provinces with large deficits might have preferred to assume fewer liabilities (and poor quality assets), that would affect provincial finances in the near term, in return for more layoffs and higher guarantees.¹⁵

The analysis includes three variables to proxy for the attractiveness of the bank – the net worth (relative to liabilities) of the public provincial bank before privatization, the size of the public bank relative to the size of the provincial banking sector and a dummy for whether the contract was written before the Tequila crisis occurred. It seems reasonable that potential buyers

¹⁴ We measure price relative to pre-privatization assets because that measure is a better indicator of the eventual size of the privatized entity. The privatized banks have grown very quickly since privatization (Clarke and Cull, 2000b) and it seems likely that they will be similar in size to the public banks once they reach equilibrium. We are presuming, therefore, that buyers' bids primarily reflected the future value of conducting a banking business in the province (while retaining the name of the provincial bank, rather than as a new entrant).

¹⁵ Although guarantees have the potential to affect provincial finances, politicians with short time horizons might be less worried about the potential for future problems than about the immediate problems of large residual entities. In addition, disbursement of FFDP funds was tied to completing the privatization process. Those provinces most in

would be more interested in a public bank, if they believe that the bank was already operating relatively efficiently. For example, stronger performance might suggest that the bank's staff or assets are better quality. Consequently, this measure should be negatively correlated with allowed layoffs, positively correlated with the size of privatized bank (i.e., negatively correlated with the size of the residual entity), negatively correlated with the percent of assets guaranteed by the province and positively correlated with the price. The correlation with the length of the service contract is less clear. Although provinces might have to sweeten the deal with poorly performing banks by providing longer service contracts, they might also be less wary about signing long contracts with better quality provincial banks.¹⁶ The results in Table 4 are consistent with these hypotheses, although the coefficients are statistically insignificant in four of the five regressions.

The second variable is the size of the public bank's loan portfolio relative to the size of the provincial banking sector. The public provincial banks were quite large relative to the provincial banking sectors – typically accounting for between 40 and 70% of total lending in the province (Clarke and Cull, 2000b). If large provincial banks were able to exploit significant market power, then provinces privatizing large provincial banks might have believed that they would be able to extract monopoly rents through the bidding process. For example, prices might be higher or the provinces might be able to restrict layoffs more. The market power potentially exercised by the public provincial banks that we allude to is not the type that leads to restricted output (credit) and higher prices (interest rates).¹⁷ We mean, rather, their ability to drive private competitors from the market, perhaps through issuance of credit at subsidized interest rates. In places where they had done this effectively, the private owner of the provincial bank might have anticipated little competitive threat, at least in the near term. Because provinces would no longer be able to manipulate interest rates directly (and could not do so indirectly through regulation),

fiscal need may have been less willing to go through a lengthy asset quality verification process with potential purchasers, and thus were more willing to use guarantees to speed the transaction along.

¹⁶ The implicit assumption is that higher quality public banks are more likely to become high quality privatized banks.

¹⁷ The poor performance of the public provincial banks strongly suggests that they were not 'profit maximizing' in this sense.

they may have felt most justified in extracting rents from bidders in those places where the provincial bank had most dominated the pre-privatization provincial landscape.

In practice, the reverse seems true – provinces with dominant public banks managed to impose fewer restrictions on layoffs and had to assume a greater share of the public bank's assets and liabilities. This suggests that buyers did not see size (relative to the local banking sector) as a positive factor. Phrased another way, the dominance of the provincial bank signaled that it was located in an unattractive banking area rather than in an area ripe for extraction of large monopoly rents. The coefficient on the length of the service contract was also positive and significant. This is consistent with the previous two results – contract provisions were more generous to the buyer when the bank was relatively large. However, the last result might also be because in provinces with large provincial banks, there simply might not have been much possible competition for the service contract. Consequently, the provinces would have been less able to rely upon other banks for these services and, therefore, might gain less from competitive bidding. The coefficients on the size of the public bank relative to the provincial banking sector were insignificant in the other two equations (price and percent of the portfolio that was guaranteed). In summary, the first three results suggest that the public provincial banks were not exploiting market power so as to preclude pre-privatization entry (or, at least, the new private owners did not think that they would be able to continue do so).

Finally, the regression also includes a dummy variable indicating whether the contract was written before, or after, the Tequila Crisis.¹⁸ One reason for including this variable is that the early privatizations were started before the Fondo Fiduciario was operational. It is not immediately clear what effect the Fondo Fiduciario would have on contract provisions. For example, it might improve contract provisions (in the view of provincial policymakers) by reducing the pressure for quick privatizations, since the province would have to worry less about the bank deteriorating while it was waiting to be privatized. However, viewing the Fondo Fiduciario as a sort of free lunch program ignores the evolving bargaining situation between the provinces and the federal government. Since many poorly performing public provincial banks

¹⁸ The Tequila crisis began as an exchange rate crisis, following the devaluation in Mexico in December 1994. However, the loss of confidence also affected other Latin American countries, which led to shrinkage of Argentina's domestic economy and a run on many poorly performing domestic banks.

lost considerable deposits during the Tequila crisis and, therefore, required liquidity injections from federal sources, provincial politicians were in no position to request many favors. Their banks were adversely affecting the province's fiscal situation, they needed immediate relief, and they would have to accept the terms on which it was offered. Indeed, Fondo Fiduciario employees worked closely with provinces to draft the terms of sale and they determined the amounts to be disbursed to each province.¹⁹ In these ways, Fondo Fiduciario involvement might have actually increased pressure on the provinces to act more quickly.

The crisis itself, and the resulting deposit loss, also must have made the provincial banks less attractive to potential purchasers. The results in Table 4 suggest that the strict provisions imposed by the Fondo or the diminished attractiveness of the provincial banks following the crisis (or both) affected contract terms. Most provisions were better, in the view of provincial policymakers, before the crisis – fewer layoffs were allowed and more assets were transferred to the privatized bank. These results are interesting when combined with the results on the timing of privatization, which indicated that the external shock of the Tequila crisis and poor bank performance increased the likelihood of privatization. Here we find that the Tequila crisis, poor performance, and involvement with the Fondo Fiduciario are correlated with worse contract provisions from the viewpoint of provincial policymakers. This suggests that if policymakers wait until an external crisis or poor performance forces the province to privatize, then the outcome will be less good from their viewpoint. They will be able to guarantee fewer jobs, will be left with larger residual entities, and will be forced to guarantee more of the privatized bank's assets. However, some post-privatization performance data in Clarke and Cull (2000b) shows that the early privatizations were among the least successful. In the end, the best privatization outcomes may only come about when political decision-makers have fewer choices.²⁰

¹⁹ The terms of sale and the disbursements were also subject to World Bank approval.

²⁰ A more charitable interpretation would be that, in cases where a politician already recognizes the benefits of privatization, a crisis might help her win support for that position.

Table 4: Effect of political variables on restrictions in contract

	(1)	(2)	(3)	(4)	(5)
Estimation Method	Tobit	Tobit	Tobit	Least Squares	Least Squares
Dependent Variable	Minimum percent of workers that new owners must keep	Percent of assets assumed by privatized bank	Percent of portfolio guaranteed by province*	Price over pre-privatization assets	Length of service contract
Number of Observations	15	14	14	15	15
Degrees of Freedom	10	9	9	10	10
Constant (t-stat)	0.512 (1.77)	0.238 (1.54)	0.650** (2.26)	0.040 (1.82)	7.994** (3.64)
Dummy indicating PJ Governor (t-stat)	1.308*** (3.35)	0.275** (2.32)	-0.720*** (-3.44)	-0.005 (-0.27)	-5.090** (-2.93)
Net worth of public provincial bank (as % of liabilities) (t-stat)	-0.910 (-1.03)	0.480 (1.05)	-2.557* (-1.96)	0.031 (0.46)	1.442 (0.21)
Lagged Provincial deficit (over revenues) (t-stat)	-8.037*** (-3.72)	0.553 (1.77)	1.458** (2.53)	0.125** (2.65)	1.605 (0.34)
Loans by public bank (as % of loans in province) (t-stat)	-1.965** (-2.71)	-0.619** (-2.28)	-0.484 (-0.85)	-0.024 (-0.65)	10.654** (2.91)
Dummy indicating before Tequila Crisis (t-stat)	2.132*** (3.99)	0.442** (2.96)	-0.285 (-1.37)	-0.025 (-1.22)	2.449 (1.20)
R ² (pseudo R ² for Tobit regressions)	1.12	2.59	0.69	0.51	0.67

Excludes guarantees as percent of recovered residual assets

C. The Effect of Contract Features on Post-Privatization Performance

Clarke and Cull (2000b) indicates that the transition from a typical provincial bank portfolio has followed a predictable pattern – in most cases, there was a substantial reduction in credit to the financial and public sectors. The largest growth category has been personal lending. Interviews with owners of the privatized banks indicate that this lending is less risky than other types, because as bankers to the province, they assumed many payments systems responsibilities, including payments to public employees. Payments for many types of personal loans are automatically deducted from the accounts of the public employees. Growth in other, less secure, types of lending is much slower. Owners indicated that it requires time to build up a solid lending clientele among businesses, especially since many of the new owners have little experience in this area.

Signs of growing pains were, however, evident. As the equity and asset base of the new banks increased, their ROA and ROE figures tended to decline. One could argue that these were initially abnormally high due to the heavy reliance on service income and their low levels of assets and equity. Because the privatized banks are clearly going through an equilibration process, and because the post-privatization time-series is quite short (we have only one to three years of data), we have not been able to find strong associations between contract features and

performance. As time passes, and more data become available, we expect that such relationships, if they exist, will become more evident.

V. Conclusions

The privatization literature has not devoted substantial attention to the incentives of politicians in describing privatization outcomes, perhaps because it has lacked the kinds of evidence necessary to do so. Argentina's provincial bank privatizations of the 1990s offer a unique opportunity to study these issues. Multiple sets of provincial politicians, each one facing different constraints, crafted agreements with private purchasers for the sale of their loss-making public banks. The privatization contracts differed substantially. We offered a simple theory to illustrate the trade-offs faced by a self-interested (rather than a purely welfare maximizing) politician in creating these contracts.

A number of our theoretical predictions are supported by the evidence. For example, politicians in provinces with poor fiscal health were able to preserve jobs for fewer bank employees, had smaller residual entities, and received higher payments for their banks. In addition, the evidence suggests that the Tequila Crisis meant that politicians could protect fewer jobs and had to assume a higher share of their public banks' assets. Finally, our model predicted that buyers with less expertise in managing a loan portfolio would enable governments to protect fewer jobs. In locations where the provincial bank dominated the local financial landscape, and buyers were presumably difficult to attract, politicians were able to protect fewer jobs. The implications for post-privatization performance of these contract features are hard to discern given so little available data. However, there is some evidence that performance has been better at banks privatized after the Tequila Crisis, which suggests that, by tying politicians' hands, the Crisis may have wrought some unforeseen benefits. While that conjecture clearly awaits further empirical validation, our hope is that, by explicitly incorporating the incentives facing politicians into the analysis, we will be able to begin to address the question of why some privatizations are more successful than others.

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