# 1

# Bagehot or Bailout?
# Policy Responses to Banking Crises

On September 14, 2007, following the announcement that the Bank of England would provide liquidity support to Northern Rock, jittery depositors of this financial institution started long queues outside its main branches to withdraw their savings. A few months later, on February 17, 2008, British taxpayers woke up to the news that they had become the proud owners of Northern Rock after the British government's decision to nationalize the troubled bank. The bank's financial situation had taken a turn for the worse due to heavy exposure to mortgage loans in arrears; these non-performing assets saddled the bank's loan portfolio and had led the bank to the brink of insolvency. As new owners of Northern Rock, British taxpayers would be responsible for nursing the bank back to financial health or to arrange for its liquidation after paying off its creditors, in any case sinking resources into the bank without much hope of eventually making a profit. However, the decision to nationalize Northern Rock protected "the best interests of taxpayers" according to Prime Minister Gordon Brown.[1] Elsewhere, the "subprime mortgage crisis" that spelled Northern Rock's doom weakened the financial status of banks in the United States, continental Europe, and many other countries. The failure of Northern Rock was not an isolated instance, but part and parcel of a deeper crisis affecting financial markets and intermediaries—banks among them—around the world. The extent and depth of this crisis, as well as the fact that it has affected banks in countries where prudential supervision is presumably strong, has reignited policy debates about the proper role of government action in limiting risky behavior in financial markets.

[1] "Timeline: Northern Rock bank crisis," *BBC News online*, February 19, 2008, `http://news.bbc.co.uk/1/hi/business/7007076.stm`.

Banking crises are situations of widespread insolvency in a country's banking system (Sundararajan and Baliño 1991). They can be the consequence of exogenous shocks that shift the value of banks' assets and liabilities or of pressure from depositors that starts "panic runs" on banks (Calomiris 2008). The Northern Rock bank failure may have been the first event in a global crisis started in the core financial markets in recent memory, yet banking crises are nothing new: Tacitus registers one of the first banking crises—and what can be construed as a government bailout—in the year 33 A.D. (Davis 1913). In modern times, banking crises were common in the 19th century and throughout the Gold Standard era in the industrialized countries of the Atlantic basin (Bordo 1986, 2002; Calomiris 2007; Schwartz 1988). In the United States alone, Schwartz (1988) reports eleven banking panics in the antebellum period. The creation of the Federal Reserve System (1914) and of the Federal Deposit Insurance Corporation (1934)—which were instituted in the wake of banking panics—is often credited for the reduced incidence of banking crises in the United States, particularly after the Great Depression. Later on, regulatory controls, financial repression, and limited international capital flows combined to reduce the possibility of widespread insolvency in banking systems around the world. It was not until the demise of Bretton Woods that the frequency and severity of banking crises began to increase again.

Just over the past three decades, banking crises have wreaked havoc in a large number of countries at all levels of development. Over the last year, global turmoil in the wake of the subprime mortgage crisis has led to banking distress even in countries with developed financial markets and reputable systems of bank oversight and regulation. A recent tally of banking crises puts the total count at 204 events between 1975 and 2003, some of them lasting several years and affecting as many as 120 countries (Beim and Calomiris 2001; Caprio, Klingebiel, Laeven and Noguera 2005). The frequency of these events is as impressive as their economic costs. Indeed, banking crises tend to coincide with periods of depressed economic growth. In a sample of over 2,000 "country/years," mean economic growth in country/years with banking crises was −2.84%, compared to 1.36% in non-crisis country/years (Rosas 2002).[2] More importantly, the fiscal costs of restoring banks to solvency have been staggering across countries. The average fiscal cost of banking crises in a sample of 46 events exceeds 11% of GDP, with the cheapest recorded crisis exhausting 1.4% (Estonia in the early 1990s) and the most expensive one draining 55.3% of the country's product (Argentina in the early

[2] See Calderón and Liu (2003) for a recent empirical analysis of the broader causal connections between financial development and economic growth and Dell'Ariccia, Detragiache and Rajan (2008) for an analysis of the real economic effects of banking crises.

1980s).[3] Though these figures are per force inexact, the orders of magnitude reveal that banking crises are far from trivial events. Aside from the direct economic costs to taxpayers—indeed, perhaps as a consequence of these effects—banking crises literally break people's hearts: Systemic banking crises are associated with increases in population heart disease mortality rates of about 6% in high-income countries and as much as 26% in low-income economies (Stuckler, Meissner and King 2008).

One of the most fascinating and important aspects of banking crises—indeed one reason why fiscal costs vary so much—is that governments react differently to what are in essence very similar problems. Take the cases of Argentina and Mexico, two countries that have faced widespread insolvency in their banking systems at several points during the past decades. Their responses to banking crises have been diverse, depending as one might expect on policy tools at their governments' disposal, their degree of openness to international capital flows, and the institutional setup within which they conduct monetary policy. In the mid-1990s, these countries suffered the contemporaneous onslaught of banking crises, preceded by doubts about the extent of non-performing loans carried by domestic banks and deepened by severe capital outflows that eroded bank balance sheets. The *Tequila* crises of the mid-1990s, as these events were dubbed, had profound political, economic, and social consequences in these two countries. In the realm of banking, these crises eventually led to the total reconstruction of their systems of financial intermediation. Within five years, the process of gradual financial openness that Argentina and Mexico had started in the early 1990s was speeded up and completed. Small banks were closed and sold off to large banks; large banks, in turn, were slowly nursed back to solvency and eventually auctioned to newcomers. Among the newcomers, international banks made huge inroads into these banking systems, to an extent unprecedented in the recent history of Latin America.

But before working through the legislative changes required to carry out these momentous reforms, long before lining up potential buyers to purchase the bigger banks, governments in Argentina and Mexico had to deal with the more immediate consequences of widespread bank insolvency. Argentina's performance during the *Tequila* crisis can be portrayed as a case of market-friendly reconstruction of the banking system in which public officials avoided recourse to expensive bank bailouts. The Argentine government sorted out solvent from insolvent banks and forced shareholders and depositors of

[3] Based on data from Honohan and Klingebiel (2000). In fact, the cost of contemporary banking crises, as a share of a country's GDP, is much larger than it was for similar events in the 19th century. One possible explanation for this increase is the proliferation of government-sponsored safety nets, especially deposit insurance, that blunt depositors' incentives to monitor banks and permit imprudent risk-taking by banks (cf. Calomiris 2008).

insolvent banks to take their losses in a series of moves reminiscent of Sir Walter Bagehot's advice on confronting banking panics: lend freely and on good collateral to solvent banks, close down the rest (Bagehot 1873). A wealth of evidence supports this view: The government enforced the closure of a large number of banks in a relatively short period, the central government aided privatization of public provincial banks, and depositors of insolvent banks lost a fraction of their wealth. Not that these policies were cheap, but authorities still managed to restructure the Argentine banking system at meager cost to the taxpayer (0.5% of GDP, according to Honohan and Klingebiel 2000).

In contrast, the Mexican government's reaction to the *Tequila* crisis finds few apologists. In response to the debacle, Mexico engaged in an unprecedented bailout of its banking system, redistributing bank losses away from bank shareholders and big bank creditors. Liquidation of insolvent banks occurred at a very slow pace, the government sponsored a non-performing loans purchase program that was exceptionally generous to bankers, and upheld a blanket insurance scheme that protected all depositors. Years after the bank bailout, Mexico's erstwhile deposit insurance corporation (Fobaproa by its Spanish acronym) is still considered a symbol of government corruption, inefficiency, and crony capitalism. In the end, the process of bank restructuring in Mexico left a hefty bill that continues to burden public finances to this day. In 1999, government liabilities from the bank bailout were estimated at 52 bn. dollars, roughly 11.17% of GDP. This amounted to a debt of about $550.00 USD per capita.[4]

My goal in this book is to show that the political regime within which governments operate has a discernible impact on policy responses to banking crises. I argue that democratic governments, constrained as they are by links of electoral accountability, are more cautious in implementing costly policies that are ultimately shouldered by taxpayers, whereas authoritarian governments are more prone to bail out banks. Though the mechanism of electoral accountability is not airtight, it exerts enough of a constraint on policy-makers to leave noticeable effects in the way in which politicians address banking crises.

This argument may seem counterintuitive, to put it euphemistically, given that a number of governments in wealthy democracies have recently chosen to support banks and other financial intermediaries to contain the effects of the subprime mortgage crisis. Take the case of the United States itself, a country with a long and unchequered history of electoral accountability and with a relatively limited record of state intervention in the economy. This example

[4] Author's calculation. Per capita GDP figures are constant-dollar corrected for purchasing power parity and use 2000 as the baseline year (The World Bank 2006).

might suggest that there are no meaningful differences in the ways in which democratic and authoritarian governments choose to contain banking crises.

However, the case for or against the relevance of political regimes does not depend solely on the observation of democratic regimes that take measures to protect their financial systems, but rather on answering the following counterfactual proposition: Would the United States (or any democratic government) have reacted any differently to the subprime-mortgage crisis had its government been authoritarian? My answer to this counterfactual is unequivocally positive: I believe that this government could have engineered an even more expensive and generous bailout under a different regime form.[5] As a simple thought experiment, consider whether the rather cavalier 3-page bailout plan presented by Secretary of the Treasury Henry M. Paulson on September 19, 2008, would have elicited so many demands—through congressional hearings, media attention, and citizen outrage channeled through representative institutions—to limit the extent of government involvement in a non-democratic regime.

Needless to say, arguments about causal effects regarding a single observation are inherently undecidable; after all, we only get to observe the United States government as a democracy. The very counterfactual proposition of an authoritarian United States taxes the imagination because the world we live in is one where we seldom see authoritarian regimes among countries with high levels of development. The most we can strive for is to understand whether democracies have, *on average*, a lower or higher propensity to engage in bailouts. I posit that several factors aside from democratic accountability have a bearing on government responses to banking crises. For example, the very level of economic development of a society and its income distribution have an indirect effect on government choices because they affect the policy preferences of voters. These factors confound attempts to tease out political regime effects on policy choice, and consequently any strategy of empirical validation must take them into account. To compound the difficulty of arriving at sound causal inferences about regime effects, verification of hypotheses in the social sciences depends mostly on observational, rather than experimental, data. In fact, the problem of empirical verification of regime effects based on observational data is one to which I devote ample attention throughout the book.

[5]Not that current plans point to an extraordinarily efficient form of bailout. Indeed, at the moment of writing the jury is still out on the main features that the US bailout plan will take. The US government is set to spend up to 700 bn. dollars to purchase bad loans, inject capital into private banks, and perhaps even to help mortgage-holders remain current in their payments to banks. This fund, if spent in its entirety and sunk in irrecoverable losses, will amount to about 5% of the United States' GDP, which is on the low end of expenditures during recent banking crises.

### 1.1 The Puzzle of Bailouts

I define bank bailouts as *government-sponsored delays* in the exit of insolvent banks that are explicitly or implicitly funded by public resources. In other words, a bank, group of banks, or entire banking system benefits from a bailout whenever it continues to operate even after its solvency status is called into question. This definition is more or less in line with the colloquial use of the term. The colloquial use, however, suggests that all policies that seek to prop up banks are essentially identical. Press accounts abound in descriptions of policies that are meant to alleviate different aspects of bank insolvency but are ultimately bundled together under this rather vague term. In contrast to this view, I seek to convey that bank bailouts are not discrete "either/or" events. Rather, when thinking about government management of banking crises it is more helpful from an analytical standpoint to think of a policy continuum that ranges in the abstract from *no government help to banks* to *complete government absorption of all losses*.

The first pole of this continuum would correspond to a radical strategy in which governments refrain from intervening to stabilize banking systems under financial duress and simply let banks fail. Because bank balance sheets are tightly integrated and bank capital is highly leveraged, the failure of a single insolvent bank may threaten to upset the entire banking system and have effects on the real economy; this "systemic risk" scenario is blandished frequently during banking crises, and indeed I know of no government in recent times that has chosen to wait by the sidelines while banks collapse left and right. In consequence, what could be called the Market pole of this dimension is not approximated in practice.

The other pole of this continuum corresponds to a situation where governments support banks liberally and with no strings attached. In this situation, even banks that are manifestly insolvent receive government support to continue operating and their losses are entirely subsidized by taxpayers' money. The distinguishing feature of this kind of response, which I label Bailout, is that it lifts the burden of insolvency away from banks and beyond the level of support actually needed to avoid the immediate meltdown of the banking system. In between the Market and Bailout endpoints, the responses of many governments approximate a model that I refer to as Bagehot. I use this label to recognize Sir Walter Bagehot's contribution to a doctrine of containment of banking crises that continues to guide government action today (Bagehot 1873). In order to contain a banking crisis, Bagehot's proposal was to set up a lender of last resort with capacity to loan freely on good collateral. This proposal sets Bagehot away from the Market pole of the policy continuum in that it calls for policy intervention to avoid collapse of the banking system. At the same time, the requirement not to provide liquidity to banks that cannot post

"good collateral" underlines Bagehot's reluctance to artificially extend the life of insolvent banks. Hence, in practice, the Bagehot (rather than Market) and Bailout ideal-types of government response are the relevant endpoints of the policy continuum, with actual solutions to banking crises falling within these two extremes. I argue throughout the book that we can interpret the banking policy of governments, i.e., the choices they make in several policy arenas, as being driven by their positions along a latent Bagehot-Bailout continuum. In consequence, though we cannot directly observe the position that different governments take along the Bagehot-Bailout dimension, we can infer their bailout propensities from analysis of their banking policies during crises.[6]

What makes governments choose Bagehot over Bailout? To provide some intuition about the main dilemma, and thus to motivate the importance of political regimes as potential explanatory factors, consider the decision problem that governments face as they learn that insolvency threatens large portions of a country's banking sector. Governments can choose to enforce bank regulations strictly, forcing bankers to come up with fresh capital and write off insolvent loans or else face bank liquidation. In principle, this solution minimizes immediate public expenses, but has the potential downside of affecting other banks and non-financial actors, perhaps aggravating an existing economic crisis. Moreover, bank liquidation is itself costly: aside from the immediate administrative costs of taking banks over, paying off insured depositors, and losing a bank's pool of knowledge about creditors, banks support a nation's payments system, a service with some public good characteristics that may suffer damage if several banks are allowed to fail.

Alternatively, governments can choose to engage in regulatory forbearance, keeping insolvent banks alive in the hope that they can slowly redress their financial problems. In principle, this policy option diminishes the possibility and severity of a credit crunch and immediate disruption to the payments system, but entails the risk that insolvency may deepen, especially if banks and entrepreneurs "gamble for resurrection," i.e., if they take ever-increasing risks in the search to secure solvency once and for all. In the end, governments may still be called upon to liquidate insolvent banks at higher cost to taxpayers. Furthermore, regulatory forbearance requires a series of policies that subsidize the activity of banks and bank debtors at a hefty cost to taxpayers. Governments walk a fine line between discipline imposed by a

[6] In their analysis of the International Monetary Fund (IMF), Roubini and Setser (2004) also observe how everyday use of the loaded term "bailout" may be obfuscating. Their distinction between "bailout" and "bail-in" likewise captures the notion of a continuum going from IMF support to help countries meet debt payments, on the one hand, to semi-coercive postponement of payments to a country's creditors, on the other. As Roubini and Setser point out, a crucial difference between IMF "bailouts" of sovereign borrowers and taxpayer "bailouts" of banks is that the latter face true financial losses, whereas the IMF expects to be repaid in full.

Bagehot enforcer and moral hazard created by an imprudent and profligate spendthrift.

I purport to fulfill two goals in the following paragraphs: First, I sketch the main argument about the salutary effects of democracy on banking policy, an argument that I develop from explicit foundations and in a more rigorous framework in Chapter 3. Second, I place this argument within the literature on political institutions and financial crises. In this regard, I do not seek to provide an exhaustive record of the voluminous literature on finance and its many meanders in economics, industrial organization, political science, history, and anthropology, but rather to bring attention to aspects of the scholarly debate on the effects of political regimes that are more closely related to my research.

As a start, consider what we learn even from casual observation of banking crises: During a banking crisis, bank managers and shareholders, borrowers, and depositors face the prospect of concentrated losses; being a relatively small and powerful group, shareholders in particular are in a good position to lobby for protection. That "losers" organize to push for advantageous policies is no secret; that the characteristics of these groups would make it easier to organize successful collective action is also obvious (Olson 1965). As Honohan and Laeven point out:

> Governments come under tremendous pressure to buy all the nonperforming or problematic loans in a distressed banking system, to subsidize the borrowers and to put the banks back on to a profitable basis with a comfortable capital margin. The goal of lobbyists is that there should be "no losers," yet someone has to bear the losses that have been incurred and are reflected in the need for recapitalization. As a result of these pressures, governments often assume obligations greater than they should, given other priorities for the use of public funds. (Honohan and Laeven 2005, 109)

In contrast, the taxpayers that are called upon to shoulder costs derived from public support of banks are not a ready-made interest group capable of pushing for lower amounts of burden-sharing. Within a strict logic of collective action, democratic regimes would seem ill-equipped to withstand pressure from organized interests to bail out insolvent banks. Thus, bank shareholders and major depositors may successfully organize collectively and push to dump losses on disorganized taxpayers, a logic that has been suggested, among others, by Rochet (2003). In democratic regimes, however, taxpayers actually have recourse to elections to make politicians accountable for their actions. Imperfect as elections may be in furthering accountability, this basic difference across democratic and non-democratic regimes ought to have an impact on government responses to banking crises, a possibility suggested by Maxfield (2003) and substantiated, for example, in accounts

of voters' pressure on US politicians to avoid the transfer, from commercial banks to the public sector, of default risk by less-developed countries during the debt crisis of 1982–1983 Oatley and Nabors (1998).

Against the view that the ability of concentrated groups to engage in collective action will drive governments to choose Bailout, one must recall that the costs of these policies are so large and conspicuous that they excite the curiosity of taxpayers and invite their involvement. Over time, only a few issues stand a chance of becoming salient in the minds of voters. The heightened attention that mass media tend to place on banking crises, and their direct economic effects on citizens, all but guarantee that the main features of government response, if not the exact details, will turn into a salient political issue. Though taxpayers may see merit in implementing policies aimed to prop up distressed banking systems, they should also be wary of seeing governments assuming "obligations greater than they should." Only in democratic regimes are politicians forced to consider the policy preferences of disorganized voters.

I build on this basic insight and assume that democratically-elected governments, by virtue of electoral accountability, seek to implement the policy preferences of their constituents as they manage banking crises. The formal argument presented in Chapter 3, which I summarize here, suggests a number of consequences that should follow logically from this basic assumption. I start by recognizing that the condition of *asymmetric information* that characterizes financial markets affects all actors, including politicians and bank regulators. Governments act in an environment in which information about the exact risks that banks take—and, therefore, the probability that they may face insolvency in the future—is not known to parties other than banks themselves. Under these circumstances, governments are called to subsidize the continuation of banks that face a liquidity shortage. This liquidity shortage is not necessarily related to the underlying financial status of banks, which remains uncertain.

Politicians face a stark choice in democratic regimes, where they are bound by the accountability link to serve the preferences of typical constituents. On the one hand, providing liquidity support and engaging in regulatory forbearance will prolongue the life of distressed banks. This decision allows taxpayers to continue to enjoy the services that banks provide, especially the possibility of keeping deposits that gain interest and are callable on demand. Yet, if the financial situation of distressed banks is seriously compromised by imprudent risk-taking, keeping the bank open may ultimately lead to extreme costs that will be shouldered by taxpayers themselves. Under conditions of uncertainty about the true net worth of banks, democratic accountability provides politicians with incentives to implement a more conservative *closure rule* for distressed banks, i.e., to support distressed

banks only if they stand relatively good chances of prompt recovery. Because governments make these decisions in an environment of asymmetric information, they may err both on the side of generosity when no help should be forthcoming and on the side of conservatism when they should instead support banks.

I argue that the behavior of economic actors is affected by the *expectation* that politicians will respond to the preferences of taxpayers. To understand the full effect of this mechanism, consider the time inconsistency problem in banking policy noted by a variety of scholars (cf. Gale and Vives 2002; Mailath and Mester 1994; Mishkin 2006; Rochet 2003). Before a banking crisis occurs, governments have an incentive to declare that they will act as stern Bagehot enforcers. This declaration sends a signal to banks that they should be prudent and avoid unnecessary risks. After a banking crisis hits, however, the resolve to act as a Bagehot enforcer may flounder under the need to contain the spillover effects of a crisis (systemic risk) or under the desire to help out crucial political supporters. As in other public policy areas, the misalignment between *ex ante* and *ex post* preferences of actors is at the crux of credibility problems in public policy (Kydland and Prescott 1977). Presumably, the inability to commit to a no-bailout rule has economic consequences because it induces carelessness on the part of depositors, investors, and bankers—the well-known problem of moral hazard—and ultimately fosters bank crises and bank bailouts.[7] Since bankers and entrepreneurs anticipate that the careers of elected officials may come to an abrupt end if they act contrary to voter preferences, they see the commitment to a no-bailout rule in a democratic regime as gaining in credibility. In democratic regimes, we should expect this gain in credibility to translate into lower risk-taking on the part of entrepreneurs and banks.

The nexus of accountability that leads democratic governments to implement the preferences of typical constituents is attenuated, if it exists at all, in non-democratic regimes. In these regimes, politicians may prefer to support distressed banks in the expectation of personal gain. This is the essence of "crony capitalism," probably the most succored explanation of both the prevalence of banking crises and the occurrence of bailouts. Though definitions of this concept vary, crony capitalism basically refers to a situation in which bankers and private entrepreneurs accrue rents as a direct consequence of their connection to politicians and bureaucrats. This connection is considered to be close and non-transparent and to benefit politicians directly through side-payments or indirectly through contributions to campaign funds or loans channeled to politically desirable projects.[8] The mechanism through which

[7] Mishkin (2006, 991) reviews evidence that economic actors incorporate bailout expectations into their actions.

[8] "Looting" and "related lending," though distinct, share with crony capitalism the idea that

crony capitalism generates banking crises in this account is moral hazard—connected entrepreneurs and bankers engage in excessive risk-taking because they believe that government cronies will bail them out in case of trouble.[9] An alternative mechanism consists of the purposeful or inadvertent weakening of banking agencies. In this view, politics may corrupt and compromise the supervisory and regulatory functions of bank agencies beyond whatever technical deficiencies these institutions may suffer.[10] The ostensible rationale behind this view is that politicians stand to gain from governmental failure to discharge basic regulatory functions. Through both of these mechanisms, crony capitalism aggravates the problem of time inconsistency of government preferences. However, against the most pessimistic implications of this view, I propose that electoral accountability should also temper the willingness of politicians to provide implicit bailout guarantees to cronies.

Because of the electoral accountability mechanism, politicians in democratic regimes seek to avoid excessive public outlays over and above expenses needed to contain banking crises. Because economic actors understand this limitation, the commitment to a more conservative closure rule is more credible in a democratic than in an authoritarian regime. Thus, the policy preferences of taxpaying voters have traceable effects on the banking policy of democratic governments even prior to the occurrence of a bank crisis; that democracies are less prone *ex post* to bail out banks means also that democratic banking policy should have *ex ante* consequences on the behavior of economic actors, especially on the risk-taking propensities of entrepreneurs and bankers. These behavioral changes should lower the probability of observing banking crises in democratic regimes.

My emphasis on the existence of a democratic effect in banking crisis resolution places this book within a wider research program that investigates the economic consequences of political regimes. The notion that voters might exert a salutary influence on economic policy-making through electoral accountability adds to the appeal of liberal democracy above and beyond any normative defense that one can make of this regime form. Minimalist definitions already consider the possibility of accountability through elections as the most basic characteristic of democracy (Dahl 1971; Schumpeter 1942).

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bankers and entrepreneurs can act with guile to sabotage the net worth of banks (Akerlof and Romer 1993; La Porta, López de Silanes and Zamarripa 2003; Soral, İşcan and Hebb 2003).

[9]Crony capitalism has been invoked for example to explain the East Asian financial crisis (Backman 1999; Bartholomew and Wentzler 1999; Corsetti, Pesenti and Roubini 1999; Haggard 2000; Haggard and MacIntyre 1998; Kang 2002; Krugman 1998), general aspects of finance and banking policy (Haslag and Pecchenino 2005; Kane 2000; Kang 2002), and firm bailouts (Bongini, Claessens and Ferri 2001; Faccio 2006; Faccio, Masulis and McConnell 2006).

[10]Though not a mechanism I emphasize, one could think of crony capitalism as allowing interest groups to capture the design and implementation of financial regulation (Feijen and Perotti 2005; Kane 2000).

Rational choice theory has traditionally understood elections as devices that provide voters with the capacity to punish politicians that have failed to act as good agents; because politicians anticipate the possibility of electoral punishment as a consequence of bad policy, they face at least some incentive to act responsibly (Barro 1973; Ferejohn 1986). This point is also emphasized in the new institutionalist literature in finance, which poses the existence of a long-run "democratic advantage" in securing a government's ability to contract public debt through the mechanisms of limited government and elections as sanctioning devices (North and Weingast 1989; Schultz and Weingast 2003).

Admittedly, several arguments counter the rather sanguine view of democratic accountability as a mechanism that can potentially align policy choice with voters' preferences. Some of these arguments recognize that though elections may foster accountability, they can do so only imperfectly, and thus the link tying politicians to the electorate may be fragile. For example, voters may lack information about the degree to which unexpected economic outcomes are attributable to government policy, which is one of the many dilemmas of delegation to elected officials (Miller 2005). Even then, elections allow voters, at a minimum, the possibility of signaling displeasure with economic outcomes. A potentially more damning counterargument obtains when the very links of accountability meant to contain government action prove to be pathological. In this regard, a respectable argument can be made that democratic regimes actually provide politicians with incentives to choose political expediency over economic efficiency and to weight short-term consequences more heavily than long-term results. Previous scholarship on the topic of politics and financial crises has often emphasized these negative effects of democratic accountability. Thus, incentives for short-term behavior in democratic regimes may lead politicians to hide problems in the banking sector until after elections. Brown and Dinç (2005) have documented that bank closures tend to cluster immediately *after* elections much more so than at any other time during the electoral cycle, a finding that is robust to the possibility of endogenously-timed elections. Beim (2001) offers a controversial interpretation of this finding, which follows from his contention that governments have incentives to hide problems in the banking sector. Given this incentive, only newly-installed governments can afford to acknowledge bank insolvency. Failure to publicize insolvency during a new government's honeymoon period would leave it "owning" a problem inherited from the previous administration.[11] The accountability-as-culprit mechanism identified

[11] Further afield, scholars of the US Congress lay responsibility for deepening the US "savings and loans" crisis squarely on this institution (Romer and Weingast 1991); members of Congress succumbed to lobbying from mutual banks to postpone tougher regulation for as long as apparent costs to their constituents remained relatively low (see also Bennett and Loucks 1994).

by these studies seems to imply that in the absence of democratic elections governments would not hesitate to strike down insolvent banks.

The literature that focuses on variations *within* democratic regimes has also explored the possibility that the electoral connection between unorganized voters and organized interests on the one hand, and politicians on the other, might be mediated by electoral institutions. Rosenbluth and Schaap (2003) suggest that centrifugal electoral systems— i.e., systems in which politicians and political parties can thrive representing the interests of very small segments of the population (Cox 1990)—give politicians incentives to supply "profit-padding regulation" that transfers income from consumers of financial services to producers through use of policy that aims to protect banks. In centripetal political systems, conversely, politicians have an incentive to incorporate the policy preferences of unorganized voters, and are therefore more likely to choose "prudential" regulation that avoids pampering banks. Rosenbluth and Schaap inspect a set of advanced industrialized countries and find results that accord with this view.

From these strands of the political economy literature that emphasize variation *within* democratic regimes, we know that a short electoral horizon may predispose politicians toward regulatory forbearance and that centrifugal electoral systems provide incentives for politicians to choose profit-padding financial regulation. But these analyses are based on examination of banking systems in democratic polities, not on bank exit policies followed by authorities in non-democratic regimes. It is not possible to infer from these designs whether, despite potential pathologies, democratic regimes might still enjoy an advantage in banking policy over regimes where electoral accountability is muted or simply absent.

Within the literature that focuses on comparing policy-making *across* political regimes, Satyanath (2006) proposes an innovative variation on the commitment argument that leads him to conclude that democracies suffer from a particular defect not present in authoritarian regimes. He observes that informational asymmetries that plague the relationship between chief executives and finance ministers in democratic regimes make it difficult to credibly signal commitment to stringent regulation. The mechanism that he highlights is a miscommunication problem between chief executives and finance ministers, which is more likely to occur in democratic regimes because chiefs-of-government are not always in a position to select their ministers of finance. One observable implication of this argument is that democracies should be more vulnerable to suffering banking crises than non-crony authoritarian regimes, and indeed Satyanath finds support for this view in a detailed analysis of policy-making in seven East Asian economies during the financial crisis of the late 1990s.

Contrary to the view that stresses the negative effects of democratic

accountability on banking policy, Keefer (2007) suggests that elections may provide politicians with incentives to limit the costs of restoring financial solvency to banking systems. In his model, voters cannot know with certainty whether banking crises are the product of unfortunate economic circumstance or bad government policy. Politicians can decrease the likelihood of banking crises by implementing stringent bank regulation, but this policy reduces the margin for rent extraction from bankers. Accountability is understood as an implicit contract between voters and a reelection-seeking politician: If the politician delivers policy outcomes beyond a certain threshold, voters will vote for reelection. The politician sets policy output after learning a private signal about the state of the world, namely, whether circumstances are ripe for a banking crisis. In this delegation model, voters face an excruciating dilemma: If they set a very high threshold, the politician may simply renounce to implement stringent bank regulation knowing that he has no chance of avoiding a crisis and instead act venally, maximizing rents from bankers. But if they set a very low threshold, the politician will find it easy to avoid bad policy *outcomes* even after setting bad policy *output*. Electoral accountability may prevent extreme rent-seeking by the incumbent, but even this positive effect may be attenuated because voters cannot readily observe the effects of bad policy. Though Keefer shows that government measures to prop up banks during banking crises are less costly under democracy, he discounts the possibility that political regimes may have preventive effects. In this regard, he argues that the most dire consequences of bad policy—i.e., banking crises—are only realized after very long lags, so voters have difficulty gauging the degree to which incumbents carry out appropriate policy and politicians will have little incentive to invest in preventing the occurrence of banking crises.

Clearly, my own interpretation of the effects of political regimes is in line with a more optimistic view of democracy. Like Keefer (2007), I believe that electoral accountability can tie the hands of politicians, in this case strengthening their commitment to avoid outrageous bailouts. My main contribution to this debate lies in extending the implications of the electoral accountability argument to suggest that democratic regimes pattern the behavior of economic actors even *prior* to a financial crisis. It is by considering both the *ex ante* and *ex post* consequences of political regimes that we should judge the full policy benefits or disadvantages of democracy.

## 1.2 Organization of the Book

I provide in Chapter 2 a brief introduction to basic accounting terms used in banking and to the policies that governments can implement in order to address bank solvency and liquidity problems. Specifically, I group govern-

ments' choices in five policy issue-areas—exit policy, last resort lending, non-performing loans, bank recapitalization, and bank liabilities—and I underscore the connection between observed policy output and the theoretical Bagehot-Bailout construct that defines government responses. I lay out the main theoretical argument about the salutary effects of democratic regimes in Chapter 3. To develop this argument within a coherent framework, I build a formal analysis of the distributive politics of banking crises on an existing model of banking regulation (Repullo 2005*b*). I extend this model to analyze the strategic interaction between government and a set of entrepreneurs that seek bank loans to make investments with various risk-return profiles. After observing an exogenous liquidity shock, governments decide whether to support a bank whose financial status is suspected to be weak as a consequence of the risky investment decisions of entrepreneurs. I explore within the model how different assumptions about the political regime within which governments operate affect this decision.

Chapter 4 considers banking policy in a democratic regime (Argentina) and a semi-authoritarian regime (Mexico) during the mid-1990s. Though the banking systems of these two countries were not identical, I claim that the most consequential distinction between these two polities was the fact that Mexican policy-makers were not immediately beholden to the electorate, while Argentine politicians were constrained by the need to win elections. The main purpose of the narrative in Chapter 4 is to illustrate the difference between governments that approximate the model of a stern Bagehot enforcer and those that approach the Bailout ideal-type, and to analyze the closure rule that governments in these countries followed in response to the *Tequila* crises. In this regard, I consider two basic issues: the speed with which insolvent banks "exited" the banking system, and the importance of extraneous non-economic factors in determining the lifespan of insolvent banks.

Unfortunately, it is not possible to place much stock on inferences about the effects of political regimes based on only two cases. Though I selected these cases because they of their similarities across a bevy of relevant characteristics—size of the economy, levels of inequality, or size of their financial sectors—there are certainly important differences beyond the political regimes of these two countries that may affect government response. Consequently, in Chapters 5 and 6 I study a sample of forty-six documented instances of policy response to banking crises. I infer the unobserved tendency of politicians to prefer solutions close to Bagehot or Bailout based on dichotomous information about implementation of seven different crisis-management policies. In these chapters, I also consider the possibility that governments might make "disjoint" choices along two different policy dimensions, one corresponding to bank solvency considerations, the other to liquidity concerns. I conclude that the effect of political regimes on the choice

of Bagehot/Bailout occurs largely through the implementation of policies to cope with solvency problems, and make an effort to substantiate a causal interpretation of this effect. In Chapter 7, the final empirical chapter, I analyze two large-*n* cross-country time-series datasets to explore the occurrence of financial distress across political regimes. I conclude that aside from limiting government propensities to carry out bailouts, democratic regimes are indeed less likely to suffer financial distress and banking crises. Finally, I offer in the Conclusion a summary of main findings, discuss other implications of the main argument, and suggest potential avenues for further research on the politics of banking.

I finish this introduction with a word about my choice of empirical methods. Throughout the book, empirical verification of the theoretical arguments relies on multilevel data, and consequently on the estimation of hierarchical models. Multilevel or hierarchical models generalize standard regression techniques to scenarios in which observations are nested within groups, a situation I repeatedly encounter in my research—banks nested within ownership structures (Chapter 4), different forms of policy output nested within countries (Chapter 6), or banking crises nested within countries and years (Chapter 7). One problem with these data structures is that the assumption of independence across observations is not reasonable, i.e., one cannot sensibly claim that units nested within a group constitute independent draws from some data-generating process. Multilevel models provide a principled approach to analyze such data structures and, as a consequence, outperform more traditional approaches. Aside from providing more accurate forecasts, multilevel models furnish more realistic and honest estimates of uncertainty than models that assume independence across observations.

Multilevel models can be fitted through a variety of techniques, including maximum likelihood estimation, but I have chosen to estimate these models within the framework of Bayesian inference.[12] Bayesian methods offer a panoply of advantages over classical approaches to statistical inference. In contrast with the contrived confidence intervals of frequentist inference, Bayesian credible intervals provide intuitive estimates of uncertainty about parameters. Computer-based sampling algorithms permit full inspection of the probability densities of these parameters, allowing the researcher flexibility in computing relevant quantities of interest. Furthermore, the suitability of Bayesian estimates is not premised on large-sample assumptions, which can seldom be met in practice, and only very rarely in comparative political economy. In multilevel models, in particular, the number of observations available at higher levels of aggregation is typically not sufficiently large,

[12] See Gelman, Carlin, Stern and Rubin (2004); Gelman and Hill (2007); Gill (2002) for an introduction to Bayesian inference in the social sciences.

which means that the large-sample properties of maximum likelihood fail to apply. Under these circumstances, Bayesian standard errors are more realistic than under maximum likelihood (Raudenbush and Bryk 2002; Shor, Bafumi, Keele and Park 2007).

These advantages are part and parcel of Bayesian inference, which formalizes the process of updating prior beliefs about unknown phenomena from known data. A priori beliefs, codified in suitable probability priors, are fundamental in the Bayesian worldview, but many shudder at the possibility that informative priors inject a dose of subjectivity into empirical results. To dispel this concern, throughout the book I rely on diffuse prior probability distributions that have little bearing on inferences, and resort to informative priors only when required by model identification.