# THE POLITICS OF BANK FAILURES: EVIDENCE FROM EMERGING MARKETS\*

## CRAIG O. BROWN AND I. SERDAR DINÇ

This paper studies large private banks in 21 major emerging markets in the 1990s. It first demonstrates that bank failures are very common in these countries: about 25 percent of these banks failed during the seven-year sample period. The paper also shows that political concerns play a significant role in delaying government interventions to failing banks. Failing banks are much less likely to be taken over by the government or to lose their licenses before elections than after. This result is robust to controlling for macroeconomic and bank-specific factors, a new party in power, early elections, outstanding loans from the IMF, as well as country-specific, time-independent factors. This finding implies that much of the within-country clustering in emerging market bank failures is directly due to political concerns.

## I. Introduction

Do regulatory interventions in failing banks reflect the incentives of politicians? When macroeconomic factors are controlled for, no statistical relationship between the electoral cycle and the government interventions should exist unless politics influences regulatory actions. However, there are good reasons to expect the electoral cycle to affect regulatory actions if the politicians can influence regulators. First, as this paper shows, even a government takeover, let alone the closing, of a failing bank has large costs that are acute and fall on groups such as the bank owners, employees, borrowers, and depositors. However, the benefits from a healthy banking system are widespread and obtained only over time. Hence, politicians are more likely to be accommodating to the pressure from narrow interest groups before elections by avoiding large bank failures. Second, politicians have incentives to take actions to induce favorable economic outcomes before elections [Rogoff and Sibert 1988]. Failures of large banks

<sup>\*</sup> We would like to thank Sreedhar Bharath, Mihir Desai, Anil Kashyap, Randall Kroszner, William Megginson, Nejat Seyhun, Tyler Shumway, and Anjan Thakor; participants at the American Finance Association, Financial Intermediation Research Society Capri, National Bureau of Economic Research Summer Institute, Federal Reserve Bank of New York Beyond Pillar Three, and Darden Emerging Market Finance conferences; and seminar participants at the London School of Economics, the University of Michigan, and the University of Wisconsin for comments. Efraim and Sarit Chalamish provided excellent research assistance.

<sup>1.</sup> See, e.g., Olson [1965], and Stigler [1971] for the role of interest groups in politics.

 $<sup>{\</sup>hbox{@ }}2005$  by the President and Fellows of Harvard College and the Massachusetts Institute of Technology.

The Quarterly Journal of Economics, November 2005

may have an adverse effect on the economy, at least in the short run, so politicians have incentives to take the costly action of delaying drastic regulatory intervention in failing large banks until after the elections. Finally, government takeover or closing of failing banks typically requires large funds financed by taxpayers. Politicians might face questions about their competency in regulating banking when the magnitude of necessary funds is revealed. Consequently, politicians will prefer to avoid such questions before the elections. In sum, politicians have incentives to avoid large bank failures before the elections and defer the ultimate reckoning of bank failures until after the elections.

This paper studies whether the timing of the government takeover or closing of failing banks depends on the electoral cycle in 21 major emerging markets. It makes several contributions. First, it shows that bank failures among large banks are frequent. During the 1994–2000 period, 40 of 164 large private banks in major emerging markets either were taken over by the government or had their licenses revoked. Although the Asian crisis countries are prominently represented in these figures, the number of failing banks in the rest of the world is also substantial: twenty-six of 118 banks outside Southeast Asia failed. The importance of this problem is further highlighted by the fact that all banks in the sample are among the ten largest commercial banks in their countries.

More important, this paper provides evidence of politicians avoiding costly interventions to the banking sector before the elections. It shows that the distribution of government intervention follows the electoral cycle in each country. Nineteen of the 40 government interventions took place within twelve months following the elections. A further eleven banks were taken over or closed within eighteen months after the elections, while only four banks faced similar intervention during the twelve months before the elections. These results are robust to controlling for the macroeconomic factors, the changes in the governing party, early elections, as well as bank-specific factors such as capital ratio and profitability. They are also robust to all the time-invariant political, legal, institutional, historical, and geographic differences across countries.

This paper also shows that a failing bank is rarely closed with the government paying the depositors from the deposit insurance. Instead, by far the most popular method is the takeover of failing banks by the government, which operates the bank as a government-owned bank while reorganizing it. Although this method of intervention may be less disruptive than outright closure of the bank, the paper also documents that loans extended and the number of workers employed decrease substantially after the takeover. This decrease also seems to be larger in banks that are taken over during the first year after the election.

Finally, most of the literature on bank failures in emerging market countries is country-level analysis of banking crises.<sup>2</sup> This paper instead provides a bank-level study. This allows a more precise analysis of bank failures by incorporating bank-level factors, such as size, capital ratio, and income.

The role of politics and the incentives of regulators on intervening with failing banks have been studied before. Kroszner and Strahan [1996] show how regulators deferred the reckoning of costs in failing Savings and Loan (S&L) associations in the United States.<sup>3</sup> Bongini, Claessens, and Ferri [2001] examine the role of political connections in government intervention to failing banks in four Asian crisis countries. Hoshi and Kashyap [2001, pp. 277–280] discuss the politics that led to the major changes in Japanese bank supervision as the problem of nonperforming loans continued. This paper differs from the ones above in both scope and focus. It studies the 10 largest banks in 21 major emerging countries from 1994 to 2000. It also focuses on the role of the electoral cycle in the timing of government interventions.<sup>4</sup>

This paper also is related to the political economy literature on inaction and delay in adopting a beneficial policy, which emphasizes the uncertainties in the distribution of the switching costs [Alesina and Drazen 1991] or in the distribution of individual benefits [Fernandez and Rodrik 1991].<sup>5</sup> Dinc and Gupta [2005] show that politicians delay privatizations of firms located where the ruling political party faces large competition or where the election district of the minister in charge of that firm is located. By highlighting the role of elections in the delay of regulatory intervention, this paper also contributes to the politi-

<sup>2.</sup> See, e.g., Beck, Demirguc-Kunt, and Levine [2003], Caprio and Klingebiel [2002], Claessens and Laeven [2003], and Demirgue-Kunt and Detragiache [1998, 2002]. Two exceptions are Bongini, Claessens, and Ferri [2001] and Bongini, Laeven, and Majnoni [2002], who provide a bank-level analysis of the banking

crises in four East Asian countries.

3. Also see Kane [1989], Barth [1991], and White [1991] on the S&L crisis.

4. The role of politics in banking has been well studied in other contexts; see, e.g., Rosenbluth [1989], Kane [1996], and Kroszner and Strahan [1999, 2001]. 5. See Drazen [2000, pp. 403–454] for a survey.

cal economy literature on the elections and the career concerns of politicians [Rogoff and Sibert 1988].<sup>6</sup> However, the existing cross-country empirical studies show the effect of elections in macroeconomic settings, such as budget cycles [Shi and Svensson 2002].<sup>7</sup> To the best of our knowledge, with the exception of Dinç [2005], this paper is the first to demonstrate at the *firm* level the role of elections on politicians' incentives.

The rest of the paper is organized as follows. The next section provides three case studies. Section II describes the data. The regression analysis is presented in Section III, while the robustness checks are discussed in Section IV. Section V studies the aftermath of bank failures. Concluding remarks follow.

## II. THREE CASE STUDIES

Three case studies below—Agrobanka from Czech Republic, Bangkok Metropolitan from Thailand, and Banco Latino from Peru—illustrate the knowledge of the regulators about the banks' weak financial health for a long time and the regulators' ability to defer the eventual failure even in the middle of a substantial financial crisis, as in the case of Bangkok Metropolitan. In addition to geographic diversity, these case studies also provide diversity in their failure date across their relevant electoral cycle and hint at the political concerns involved in the bank takeover decision. For example, Agrobanka was taken over shortly after the election even though the government had already limited the banks' actions before the elections and the same party remained in power after the elections. On the other hand, top Peruvian politicians went to great lengths to emphasize the failure of Banco Latino as an isolated case when there were only sixteen months to the next elections. While there may be no typical bank failure, these case studies present many similarities despite geographic, institutional, legal, and historical differences.

7. See Alesina, Roubini, and Cohen [1997] and Persson and Tabellini [2003] for surveys.

<sup>6.</sup> In Rogoff and Sibert [1988] politicians take costly action before elections to signal their type. In the case of bank failures, the costly action is deferring the intervention in failing banks as the ultimate costs of bank failures increase through government inaction. See Drazen [2000, pp. 219–308] and Persson and Tabellini [2000, pp. 419–431] for surveys.

## II.A. Agrobanka (Czech Republic)

Agrobanka, founded in 1990, was taken over in November 1995 by Motoinvest, an investment company with alleged links to Russian organized crime. Amid concerns that Agrobanka would be used for money laundering, a government report, published on February 2, 1996, stated that the takeover was accompanied by a proper inspection of all the relevant documents by the supervisory authorities. There were also concerns about Agrobanka's financial health. In April 1996 Agrobanka reported a net profit increase of only 1.2 percent, and analysts argued that the bank's loan portfolio was a problem [The Wall Street Journal Europe 1996]. CS First Boston estimated that 33 percent of Agrobanka's consumer loans were nonperforming at the end of 1995.

The general election was held on June 1, 1996. Prime Minister Vaclav Klaus and his center-right coalition retained power. On September 17, 1996, the government took over the bank. Agrobanka was then the largest Czech private bank—and the fifth largest overall. Before the takeover, other banks had started refusing to lend to Agrobanka in the interbank market due to concerns about the bank's links to scandal-plagued Kreditni bank, which also was controlled by Motoinvest. Motoinvest chairman Pavel Tykac left the country immediately upon hearing the takeover news.

Financial markets did not seem to be very surprised by the takeover. One analyst at Atlantik Financni Trhy said, "The market had been expecting some problems [Reuters News 1996a]." Upon takeover, Vaclav Havel, then the Czech president, was forthcoming about the state of the banking system: "Tumors have grown in the whole body of the banking sector" [The Economist 1996]. One week later, Prime Minister Vaclav Klaus stated that the central bank was to look at its own behavior as a source of Agrobanka's problems [Reuters News 1996b]. Josef Tosovsky, then the governor of the central bank, promised to guarantee all Agrobanka deposits and fired the bank management. The healthy assets of Agrobanka eventually were sold to GE Capital Bank (GECB), a subsidiary of the General Electric consortium on June 22, 1998.

## II.B. Bangkok Metropolitan Bank (Thailand)

Shortly after the general election on November 17, 1996, Chavalit Yongchaiyudh, the head of the new Thai government, found the fixed exchange rate was no longer sustainable. On July 2, 1997, the government was forced to abandon the exchange rate peg, which resulted in severe currency devaluation. Foreign capital became scarce, and Thailand was forced to seek help from the International Monetary Fund (IMF) on July 28, 1997. Since the banks had borrowed substantially in foreign currency before the devaluation, a banking collapse followed. After permanently closing more than half of Thailand's financial institutions early in December 1997, the central bank moved to strengthen the remaining, and typically larger, 15 banks and 35 finance companies by requiring them to raise capital. At the same time, the central bank stated that no more financial institutions would be closed, but the central bank would seize control and replace the management of any institution that failed to raise adequate capital [The Asian Wall Street Journal 1998].

Despite systemic banking problems in 1997, Bangkok Metropolitan Bank (BMB) had been on and off the central bank's watch list even before. For example, in 1995, the U. S. Federal Reserve Board, citing falsified loan documents and other alleged violations of the banking law, ordered BMB to end its activities in the United States of America. On January 2, 1998, the central bank replaced the president and most of the board of directors of BMB. It also ordered the bank to raise 8.9 billion baht in new capital within three weeks. The action came after the bank failed to meet the year-end deadline to present a credible capital-raising plan. The government finally took full control of BMB on January 23, 1998.

Upon takeover, government officials did not try to maintain an appearance of normalcy; central bank governor Chaiyawat Wibulswasdi stated clearly that the government had become 99.9 percent owner of the bank [Dow Jones International News 1998a]. Chaiyawat maintained that the takeover would strengthen management and boost depositor and investor confidence. Over the course of the following year, the bank experienced a reduction in its workforce from 5760 employees to 5421 employees. BMB was eventually merged with another troubled state-owned institution, Siam City Bank, in April 2002.

# II.C. Banco Latino (Peru)

When Banco Latino was taken over by the government on December 9, 1998, it was the sixth-largest bank in Peru and had 11.10 percent of its loans behind schedule, the highest percentage

of past-due loans in Peru at the time. Upon takeover, Cofide, a state lending agency, injected \$60 million into Banco Latino to claim a majority stake. With sixteen months left to the next election, government officials tried to restore public confidence through numerous radio and television interviews. Jorge Baca, then the finance minister of Peru, stated that the problems with Banco Latino did not imply systemwide trouble. "The system is solid," Baca said [Dow Jones International News 1998b]. "All that happened was that a bank received new capital." President Alberto Fujimori stated that the cash injection was not a signal that the state had taken over the bank permanently [Dow Jones International News 1998cl. "When Banco Latino is in a better situation, Cofide will sell its shares," Fujimori said. One week after these initial statements were made, Lorena Masias, the head of economic studies for the Superintendency of Banking and Insurance, said that the action was just part of an orderly adjustment process in the sector that was overdue [Dow Jones International News 1998d]. Baca then issued yet another comforting statement that the worst was over and no more banks were in danger of closing or in need of government help [Dow Jones International News 1998el.

Upon takeover, Banco Latino's majority shareholders experienced a forced write-down in equity from 51 percent to 6.3 percent. Over the course of the year following the takeover, the bank's workforce was reduced from 1228 employees to 931 employees. The first round of a hotly contested presidential election was held on April 4, 2000. Alberto Fujimori won a third five-year term as president of Peru, receiving 51 percent in a subsequent runoff. Banco Latino was eventually sold to Peru's fourth-largest bank, Interbank, as part of the government's financial system consolidation policy. The deal was completed in April 2001.

#### III. DATA

## III.A. Banks

The 21 major emerging market countries included in this study are selected from the 23 emerging market countries covered weekly by *The Economist*. The countries that had free or partially free elections in the sample period according to *Freedom House* 

are kept; and two countries, China and Egypt, that did not, are dropped from the sample.<sup>8</sup>

The ten largest commercial banks are identified in each country based on their book value of assets as of 1993. These banks are followed from January 1, 1994, until one of the following three exit events takes place: (a) failure as manifested through takeover or license suspension/revocation by the regulators; (b) merger with or acquisition by another bank; (c) reaching December 31, 2000, the end of sample period. Government takeovers and license suspension/revocations are the only forms of bank failure in the sample, 9 so the first exit event covers all the bank failures.

Each bank merger is evaluated on a case-by-case basis to decide whether it is, in fact, a government takeover of a failing bank. If one of the merger partners is a private bank but the resulting entity is majority-owned by the government, that merger is considered a government takeover; hence, the failure of that private bank. Otherwise, the merger is not considered a bank failure. This definition excludes the potential cases where the government might pressure a private, healthy bank to rescue an unhealthy bank possibly by providing some regulatory rents. There are at least two reasons for that exclusion. First, virtually all large bank mergers must be approved by the government, and the government routinely mentions the importance of banking stability in its approvals. Whether the acquisition of an unhealthy bank by a healthier private bank is a disguised government rescue or a business decision then becomes largely a subjective and difficult decision. 10 Second, each bank in the sample is among the ten largest banks in their country, so it is not easy for the government to provide sufficient regulatory rents to the acquiring bank to compensate for the cost of a disguised rescue.

A merger or acquisition might still lead to the bank's exit

<sup>8.</sup> Indonesia is kept in the sample even though it was classified as "Not Free" during the early years of the sample period.

<sup>9.</sup> One failing bank sought bankruptcy court protection before its license was actually revoked. After the Czech authorities started the license revocation procedure on August 13, 1998, Pragobanka froze its operations that day and filed later for bankruptcy protection before its license was actually revoked. This case is classified as license revocation, and the date when the regulators initiated the procedure is taken as the failure date.

<sup>10.</sup> In one Korean case, the government made its support to two unhealthy banks conditional on their merger. It injected capital upon the completion of the merger and became the majority owner. That merger is classified as government takeover, hence, failure, of both banks.

from the sample even if no government takeover is involved. If the bank is acquired by another bank, it, naturally, exits the sample. For the acquiring bank, the convention *Bankscope* adopts is followed. If *Bankscope* keeps the acquiring bank as the continuing entity, the acquiring bank remains in the sample. If *Bankscope* starts a new account for the combined bank, possibly because the resulting entity is no longer comparable to the entity before the acquisition, the acquiring bank also exits the sample.

Bankscope is the source of balance sheet data and, to prevent survivorship bias, the past editions of Bankscope CD-ROMs are used in the process; 1993 is the oldest year the sample can be constructed without the survivorship bias. The most time-consuming aspect of data collection was identifying bank failures and ultimate ownership of the banks. As discussed in more detail below, a very large majority of bank failures was in the form of government takeover of the failing banks. These banks continue their operations after the takeover, so bank failures cannot be determined from the balance sheet data only. Press sources provided in Factiva are used to identify the failing banks and determine the exact date of government interventions. Using the search indices Funding/Capital, Ownership Changes, and Bankruptcy, all the news stories that contained information about each bank are downloaded and individually checked. Banks that are acquired by other banks also are identified in the process.

The ultimate owner of each bank is determined using *Bankscope*, *Factiva*, and various Internet sources. Based on the ultimate owner, each bank is classified into one of two groups depending on whether it is private or controlled by the central government at the 50 percent level or higher. Ownership changes throughout the sample period also are recorded to construct a panel.

The sample is split into two groups based on ownership. The banks in the first group are always 50 percent or more owned by the central government throughout the sample period. The second group consists of the banks in which government ownership, if any, was less than 50 percent in at least one year during the sample period. <sup>11</sup> In particular, this group includes banks that were owned by the government at more than the 50 percent level

<sup>11.</sup> Five banks that are owned by the state or city governments in Argentina and Brazil are classified as private banks in this study because the federal government, not the local government, has regulatory jurisdiction over them.

in 1993 and were subsequently privatized during the sample period. There were no bank nationalizations in the sample countries during the sample period other than the takeovers of failing banks by regulators.<sup>12</sup>

Table I reports the number of bank failures in 1994–2000 among the ten largest banks (as of 1993) in each country. There are at least three findings that are worth emphasizing in Table I. First, bank failure is very common in the sample countries. Out of 164 private banks, 40 banks, or about 25 percent, failed during the sample period. This figure is not just a reflection of the Asian crisis. Although fourteen, or 30 percent, of private banks in Southeast Asian countries failed, Latin America and the rest of the world also are well represented. In total, twelve countries had at least one bank failure among its largest banks during the sample period.

Second, the regulatory intervention in failing banks by suspending the banking license of the failing bank, paying the depositors from the deposit insurance, and liquidating the bank is a big exception. In 34 of 40 failures the government actually took over the bank and continued to operate it. The remaining six cases in which the government suspended the banking license of the failing banks are concentrated in two countries: Czech Republic and Russia.

Third, and perhaps unsurprisingly given the intervention choice of the government, no government-owned bank in the sample ever lost its banking license<sup>13</sup> despite the numerous studies that document their poor performance and the role of politics.<sup>14</sup> Instead, the governments around the world seem to subsidize their poor performance through frequent recapitalization.

Given that no banks failed during the sample when they were majority-owned by the government, the analysis in the rest of the paper focuses on the bank-years when the banks were

<sup>12.</sup> Some aspects of the Malaysian bank consolidation plan in which banks were forced to merge so that only six large banks would remain may be considered as effective nationalization because some private banks were forced to merge with government-owned banks. However, these forced mergers took effect as of January 1, 2001, after the end of our sample period.

ary 1, 2001, after the end of our sample period.

13. The second group includes banks that were government-owned at the beginning of the sample period but were later privatized. By definition, no such bank lost its license and was closed before privatization since that would place the bank in the group of banks that were always government-owned until failure.

14. See Sapienza [2004], Dinc [2005], and Khwaja and Mian [2005]. La Porta,

<sup>14.</sup> See Šapienza [2004], Dinc [2005], and Khwaja and Mian [2005]. La Porta, Lopez-de-Silanes, and Shleifer [2002] show in country-level analysis that government ownership of banks is associated with subsequent low growth.

TABLE I
BANK FAILURES BY COUNTRY

|                              |                                    |              | lways<br>nent-owned | Private banks |                                    |                                     |
|------------------------------|------------------------------------|--------------|---------------------|---------------|------------------------------------|-------------------------------------|
| Country                      | Total number<br>of banks<br>(1993) | Total number |                     |               | Taken over<br>by the<br>government | License<br>revoked or<br>liquidated |
| Southeast Asia               |                                    |              |                     |               |                                    |                                     |
| Indonesia                    | 10                                 | 5            | _                   | 5             | 5                                  | _                                   |
| Malaysia                     | 10                                 | 2            | _                   | 8             | _                                  | _                                   |
| Singapore                    | 10                                 | _            | _                   | 10            | _                                  | _                                   |
| South Korea                  | 10                                 | 2            | _                   | 8             | 5                                  | _                                   |
| Taiwan                       | 10                                 | 3            | _                   | 7             | _                                  | _                                   |
| Thailand                     | 10                                 | 2            | _                   | 8             | 4                                  | _                                   |
| Total (Southeast Asia)       | 60                                 | 14           | 0                   | 46            | 14                                 | 0                                   |
| Latin America                |                                    |              |                     |               |                                    |                                     |
| Argentina                    | 10                                 | 2            | _                   | 8             | _                                  | _                                   |
| Brazil                       | 10                                 | 1            | _                   | 9             | 3                                  | _                                   |
| Chile                        | 10                                 | 1            | _                   | 9             | _                                  | _                                   |
| Colombia                     | 10                                 | 2            | _                   | 8             | 1                                  | _                                   |
| Mexico                       | 10                                 | 2            | _                   | 8             | 3                                  | _                                   |
| Peru                         | 10                                 | 1            | _                   | 9             | 1                                  | _                                   |
| Venezuela                    | 10                                 | 1            | _                   | 9             | 4                                  | _                                   |
| <b>Total (Latin America)</b> | 70                                 | 10           | 0                   | 60            | 12                                 | 0                                   |
| Rest of the World            |                                    |              |                     |               |                                    |                                     |
| Czech Republic               | 10                                 | _            | _                   | 10            | 4                                  | 2                                   |
| Hungary                      | 10                                 | 1            | _                   | 9             | 1                                  | _                                   |
| India                        | 10                                 | 9            | _                   | 1             | _                                  | _                                   |
| Israel                       | 10                                 | 2            | _                   | 8             | _                                  | _                                   |
| Poland                       | 10                                 | 3            | _                   | 7             | _                                  | _                                   |
| Russia                       | 10                                 | 2            | _                   | 8             | 2                                  | 4                                   |
| South Africa                 | 10                                 | 1            | _                   | 9             | _                                  | _                                   |
| Turkey                       | 10                                 | 4            | _                   | 6             | 1                                  | _                                   |
| Total (rest of the           |                                    |              |                     |               |                                    |                                     |
| world)                       | 80                                 | 22           | 0                   | 58            | 8                                  | 6                                   |
| Total (WORLD)                | 210                                | 46           | 0                   | 164           | 34                                 | 6                                   |

The table provides the number of bank failures among the 10 largest banks (as of the end of 1993) in each of the 21 sample countries during the sample period 1994–2000. Each bank is followed from January 1, 1994, until the first occurrence of one of the three exit events: a) takeover or license revocation/liquidation by the government; b) acquisition by another bank; c) surviving to January 1, 2001. The table splits the sample based on ownership. Banks that are **always government-owned** are the banks that were always owned by the central government at least at the 50 percent level throughout 1994–2000. **Private banks** are the remaining banks. The banks that were owned by the government in 1993 but were later privatized are included among the Private Banks unless one of the three exit events occurred first.

private. In particular, the following entry and exit events are adopted for analysis: bank i enters the study in year  $t_i$ , which is the later occurrence of one of the following two "entry" dates: (a) January 1, 1994, the start of our sample period; (b) the date the bank is privatized so that ownership of the central government

drops below 50 percent. Bank i exits the study in year  $T_i$ , which is the earliest occurrence of one of the following three "exit" events: (a) the bank is taken over or has its license suspended/revoked by the government; (b) the bank is acquired by another bank so the balance sheet data are no longer available for that bank as a separate entity; or (c) the bank survives until December 31, 2000, the end of the sample period.

Table II presents sample statistics for selected balance sheet items of these banks between their entry and exit dates. Table II reveals some similarities as well as differences between the banks that eventually failed during the sample and the other (private) banks in the sample. There is little difference between the failed banks and other banks in absolute size, and the sample average of the book value of assets for all banks is \$10.5B. However, as a percentage of their country's GDP, failed banks are smaller, and the difference is statistically significant at the 5 percent level. There is little difference between the failed banks and other

TABLE II SAMPLE STATISTICS

| Variable name           |                       | Failed banks | Other banks | All banks |
|-------------------------|-----------------------|--------------|-------------|-----------|
| Assets (in \$B)         | Mean                  | 10.048       | 10.533      | 10.451    |
|                         | $\operatorname{sd}$ . | 11.708       | 13.239      | 12.988    |
|                         | N                     | 140          | 691         | 831       |
| Assets/GDP              | Mean                  | 0.056**      | 0.070       | 0.067     |
|                         | $\operatorname{sd}$ . | 0.069        | 0.092       | 0.089     |
|                         | N                     | 691          | 140         | 831       |
| Total loans/assets      | Mean                  | 0.588        | 0.574       | 0.577     |
|                         | sd.                   | 0.205        | 0.155       | 0.165     |
|                         | N                     | 138          | 684         | 822       |
| Total deposits/assets   | Mean                  | 0.766        | 0.752       | 0.754     |
|                         | sd.                   | 0.149        | 0.153       | 0.152     |
|                         | N                     | 138          | 683         | 821       |
| Capital ratio           | Mean                  | 0.044***     | 0.092       | 0.084     |
| _                       | sd.                   | 0.163        | 0.054       | 0.085     |
|                         | N                     | 140          | 691         | 831       |
| Operating income/assets | Mean                  | -0.019**     | 0.015       | 0.010     |
|                         | sd.                   | 0.196        | 0.024       | 0.084     |
|                         | N                     | 137          | 684         | 821       |

The table provides sample statistics for the banks in the sample. Failed Banks are the banks that were taken over by the government or had their licenses revoked by the government during the sample period. N denotes the number of bank-years. Assets are in billion dollars. Capital ratio is the book value of shareholder equity divided by total assets. All variables are book values. \*, \*\*, and \*\*\* denote statistical significance at the 10, 5, and 1 percent levels, respectively, in a two-sided test of the mean with the failed banks and the other banks.

banks in their ratio of loans to total assets and in their ratio of deposits to total assets. Fifty-eight percent of all assets are in loans on average, and there is no statistically significant difference across bank types. The ratio of total deposits to assets is 75 percent with no statistically significant difference between failed banks and other banks.

Failed banks are substantially undercapitalized relative to other banks. The capital ratio, defined as total equity divided by total assets, is only 4.4 percent for failed banks, while it is 9.2 percent for other banks. The difference is statistically significant at the 1 percent level. Similarly, annual income per assets is lower in failed banks with -1.9 percent, while the same ratio is 1.5 percent for other banks. The difference is statistically significant at the 5 percent level. What is perhaps more interesting is that the average income per asset is negative for failed banks, which suggests that, unless these banks experienced very big losses in the year immediately before government intervention, the failed banks experienced losses for several years before the government intervened.

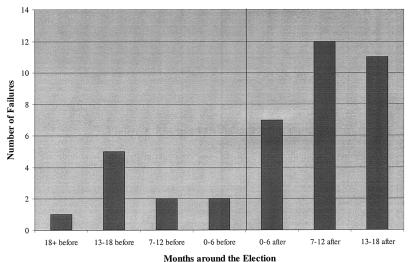
## III.B. Politics

First, whether the president or prime minister is the head of government is determined from the constitution of each country, as provided by Maddex [2001]. Then, the dates of all the elections that decided the head of government between 1992 and 2002 are recorded using the *Europa Yearbook*, *World Political Almanac*, *Elections Around the World*, and various Internet sources.

A preliminary analysis of the data for the role of politics on bank failures reveals interesting differences in the behavior of bank regulators in the preelection period versus the postelection period. Figure I shows the striking difference between the number of failures that occur in the first half of the electoral cycle (after the election) and the second half (before the election). Seventy-five percent of all government interventions in failing banks, 30 out of 40 bank failures, take place within 18 months

<sup>15.</sup> In classifying bank failures, we considered the number of days since the previous election to the failure date with the number of days from the failure date to the next election; if the former is smaller, the failure is considered as taking place in the first half of the electoral cycle. In one Indonesian early election case, the electoral cycle is shorter than two years and a bank failure falls within one year of each election. Since the forthcoming election date was closer than the previous election, that failure is considered in this study as occurring "one year before the elections" rather than "one year after the elections."

#### **Electoral Cycle and Bank Failures**



The figure presents the distribution of government takeovers and closures of the failing banks around the nearest election date in the bank's domestic country.

after the elections. By contrast, only four takeovers or license revocations occur in the year immediately before the elections. The average number of days since the previous election to the failure date is 441 for 40 bank failures in the sample, but the average number of days to the next election is 1041. The difference is statistically significant at the 1 percent level.

## IV. REGRESSION ANALYSIS

The null hypothesis that bank failures, defined as government takeover or license revoking of a bank, do not depend on the electoral cycle is tested in an exponential hazard model given by 16

16. Shumway [2001] shows that hazard models are superior to single-period models in forecasting bankruptcy. In an earlier version of this paper, we used a discrete hazard analysis in a dynamic logit framework instead of proportional hazard and obtained similar results. Studies that use hazard models in analyzing bank failures include Lane, Looney, and Wansley [1986], Whalen [1991], and Molina [2002]. Financial studies that use hazard models in other contexts include Dennis, Dennis, and Sarin [1997], Pagano, Panetta, and Zingales [1998], Kroszner and Strahan [1999], and Gross and Souleles [2002].

(1) 
$$h(t) = \exp(\mathbf{\beta}' \mathbf{x}_{it-1} + \gamma^* BeforeElection_{it} + \theta_t), \quad t = t_i, \ldots, T_i,$$

where  $\mathbf{x_{it}}$  is the vector of explanatory variables including both bank and country level variables;  $BeforeElection_{it}$  is a dummy variable that takes the value of one if the government intervention takes place within one year before the next election or, in the case of no failure, the end of bank i's accounting year t falls within one year before the elections;  $\theta_t$  is a time dummy. The Regressions also include country dummies. The entry year  $t_i$  and the exit year  $T_i$  for bank i are as defined in the previous section. Since government intervention in a bank may not be independent from another intervention within the same country, all the errors reported in this study are corrected for clustering at the country level in addition to being robust to heteroskedasticity.

The main regression results are reported in Table III. The first regression does not include any election-related variable and serves as a benchmark. *Total assets/GDP*, which is the bank's total assets normalized by the GDP of the country where it is located, has a negative but statistically insignificant coefficient. On the other hand, *Capital ratio*, defined as the book value of shareholder equity divided by total assets, has a negative and statistically significant coefficient. This confirms that undercapitalized banks are more likely to be taken over or closed by the government. *Operating income*, which is defined as the operating income divided by total assets, also has a negative but statistically insignificant coefficient.

The second regression at Table III adds to the benchmark regression the main variable of interest in this study, namely, *BeforeElection*. It is a dummy variable that takes the value one if the bank fails within one year before the elections or, in the case of no failure, the bank closes its books within one year before the elections. *BeforeElection* has a negative coefficient that is statistically significant at the 1 percent level. In other words, govern-

<sup>17.</sup> When a full set of time dummies is included among the explanatory variables, the exponential hazard model essentially allows any base-line hazard function, just like the Cox proportional hazard model. In fact, Stata's streg, d(exponential) command used in the estimation below gives the same numerical coefficient estimates and standard errors as the stcox command used in Cox hazard model estimation up to three digits beyond the decimal point in virtually all the estimates below (and up to two digits in the remaining few cases) except for the time dummies and the constant term, which are not estimated in the Cox model. However, with as few time periods as in our case, streg with time dummies tends to be faster.

TABLE III
ELECTIONS AND GOVERNMENT INTERVENTIONS IN FAILING BANKS

|                         | (1)        | (2)        | (3)       | (4)        |
|-------------------------|------------|------------|-----------|------------|
| Total assets/GDP        | -0.023     | -0.025     | -0.012    | -0.020     |
|                         | (0.033)    | (0.035)    | (0.029)   | (0.036)    |
| Capital ratio           | -6.495*    | -7.047**   | -13.915** | -8.129*    |
| -                       | (3.577)    | (3.442)    | (6.779)   | (4.550)    |
| Operating income        | -2.765     | -3.473     | -7.305    | -5.436     |
| -                       | (5.980)    | (6.523)    | (9.112)   | (6.365)    |
| BeforeElection          |            | -1.203***  | -1.670**  | -1.382***  |
|                         |            | (0.440)    | (0.798)   | (0.521)    |
| GDP growth              |            |            | 0.009     |            |
|                         |            |            | (0.088)   |            |
| GDP per capita          |            |            | 5.969***  |            |
|                         |            |            | (1.793)   |            |
| Currency depreciation   |            |            | 0.758**   |            |
| -                       |            |            | (0.311)   |            |
| Log(1 + inflation rate) |            |            | -0.998    |            |
|                         |            |            | (7.306)   |            |
| Real interest rate      |            |            | 0.005     |            |
|                         |            |            | (0.004)   |            |
| Total IMF loans         |            |            |           | -20.144    |
|                         |            |            |           | (30.819)   |
| Constant                | -20.505*** | -21.146*** | -74.621*  | -18.161*** |
|                         | (1.341)    | (1.404)    | (42.108)  | (1.372)    |
| Country dummies         | Yes        | Yes        | Yes       | Yes        |
| Year dummies            | Yes        | Yes        | Yes       | Yes        |
| p-value of Wald test    | 0.001      | 0.000      | 0.000     | 0.000      |
| Num. of banks           | 156        | 156        | 155       | 156        |
| Num. of bank-years      | 854        | 854        | 797       | 854        |

The table presents Exponential hazard analysis for the bank failure. Total assets/GDP is the bank's total assets normalized by the country's GDP; Capital ratio is total equity divided by total assets; Operating income divided by total assets; all are book values and as of year t-1. BeforeElection is a dummy variable that takes the value one if the bank fails within one year before the elections or, in the case of no failure, the end of the bank's accounting year falls within one year before the elections. Currency depreciation is the decrease in the local currency's exchange rate against US dollars; it is negative if the local currency appreciates. Total IMF loans is total IMF loans outstanding to the country, normalized by the country's GDP. All macroeconomic variables are as of t-1. p-value of Wald test that all variables other than country and time dummies are jointly zero is reported. Heteroskedasticity-robust standards errors, corrected for clustering at the country level, are in parentheses. \*, \*\*, and \*\*\* denote statistical significance at the 10, 5, and 1 percent level, respectively.

ment takeovers or license revocations of failing banks are less likely to occur within one year before the elections even when the bank-specific factors are controlled for. The coefficient of *Before-Election* is economically significant. It implies a decrease in the hazard rate of about 70 percent in the year before elections.

Notice that time-independent political, legal, historical, institutional, and geographic differences across countries are already controlled for by country dummies. Once they are controlled for, the cross-country nature of the analysis strengthens the tests because elections occur in different years in different countries. In fact, countries even have different election frequencies. Together with the time dummies, this diversity prevents a spurious correlation between the election year and some other one-time event in the world economy. The next section provides the robustness checks of our main result.

#### V. Robustness

#### V.A. Macroeconomic Factors

Given the literature on the relationship between the electoral cycle and macroeconomic variables, it is important to study the robustness of the results presented in the previous section to potential macroeconomic changes. Five different macroeconomic variables are studied: GDP growth rate, GDP per capita, currency depreciation, inflation rate, and real interest rate. All macroeconomic variables are as of year t-1. Table III regression (3) reports the results of the regression that includes these macroeconomic variables.

The two macroeconomic variables that have statistically significant coefficients are GDP per capita and currency depreciation. Both have a positive coefficient, which implies an increasing hazard as the country's GDP per capita increases or its currency depreciates. Since the regression includes a country dummy, the former in fact represents the annual change in the GDP per capita. Its positive and statistically significant coefficient suggests that government takeover or closures of failing banks are more likely after an increase in the GDP per capita. The latter, on the other hand, might reflect the increased likelihood of a bank takeover or closure after a sharp decline in the country's exchange rate.

The main variable of interest in this study, the dummy variable *BeforeElection*, continues to have a negative and statistically significant coefficient when the macroeconomic variables are included. In fact, the magnitude of the coefficient further

declines, which implies even less likelihood of government takeover or closure of failing banks before elections once the macroeconomic factors are controlled for. Hence, the absence of government takeover or closure of failing banks in the months leading to elections is not a proxy for macroeconomic factors. Instead, it represents a secular effect of political factors.

## V.B. The Role of IMF Programs

Many developing countries obtain loans from the IMF. These loans often are conditional on pursuing economic reforms, which also may include addressing problems in the banking sector. Hence, IMF lending may play a role in government intervention to failing banks. One problem in studying the role of IMF lending is the potential endogeneity. Countries may obtain loans to finance banking reforms instead of undertaking reforms due to IMF pressure. To mitigate this problem, regression (5) in Table III uses lagged IMF borrowing instead of contemporaneous borrowing.

Total IMF loans is the total IMF loans outstanding to that country in year t-1 and is scaled by that country's GDP. It has a negative but statistically insignificant coefficient. However, the main variable of interest, BeforeElection, again has a negative and statistically significant coefficient. IMF programs do not seem to have a strong effect on bank reforms, and the absence of government takeovers or closures of failing banks before elections is robust to IMF lending.

# V.C. Early Elections

In some countries, the electoral cycle is not fixed. Instead, the elections can be called early. There is a possibility that elections might be scheduled early to deal with a banking crisis after the elections without delay. Naturally, such rescheduling of elections due to the health of the banking sector would confirm our broader hypothesis that the timing of government takeover or closure of failing banks is motivated by political concerns. However, it is still desirable to check the robustness of our regression analysis to early elections.

Out of 44 elections relevant for our study, 14 of them took place before the month it was originally scheduled for by law by an average of slightly over two years. Four of them were early by less than a year, our sampling frequency. Regression (1) in Table IV tests for the effects of early elections by including, in addition to *BeforeElection*, an interaction term of *BeforeElection* and *Early*-

TABLE IV
ELECTIONS AND GOVERNMENT INTERVENTIONS IN FAILING BANKS:
EARLY ELECTIONS AND NEW GOVERNMENTS

|                              | (1)        | (2)          | (3)        |
|------------------------------|------------|--------------|------------|
| Total assets/GDP             | -0.024     | -0.256***    | -0.028     |
|                              | (0.034)    | (0.020)      | (0.044)    |
| Capital ratio                | -7.322**   | -9.026***    | -7.662*    |
| _                            | (3.355)    | (3.115)      | (4.219)    |
| Operating income             | -3.440     | -4.574       | -4.775     |
|                              | (6.416)    | (9.235)      | (6.472)    |
| BeforeElection               | -0.993**   | -2.637***    | -1.844**   |
|                              | (0.416)    | (0.638)      | (0.760)    |
| BeforeElection*EarlyElection | -0.410     |              |            |
|                              | (0.691)    |              |            |
| NewGovernment                |            |              | -1.810***  |
|                              |            |              | (0.427)    |
| Constant                     | -21.060*** | -19.013***   | -18.878*** |
|                              | (1.422)    | (1.792)      | (1.359)    |
| Country dummies              | Yes        | Yes          | Yes        |
| Year dummies                 | Yes        | Yes          | Yes        |
|                              |            | Presidential |            |
| Sample                       | Full       | Countries    | Full       |
|                              |            | Only         |            |
| p-value of Wald test         | 0.000      | 0.000        | 0.000      |
| Num. of banks                | 156        | 71           | 156        |
| Num. of bank-years           | 854        | 407          | 854        |

The table presents exponential hazard analysis for the bank failure. Total assets/GDP is the bank's total assets normalized by the country's GDP; Capital ratio is total equity divided by total assets; Operating income is operating income divided by total assets; all are book values and as of year t - 1. BeforeElection is a dummy variable that takes the value one if the bank fails within one year before the elections or, in the case of no failure, the end of the bank's accounting year falls within one year before the elections. EarlyElection is a dummy variable that is one if the elections are called ahead of the original schedule. NewGovernment is a dummy variable that is one if a new party has come to power within a year. Wald test-statistic for all the variables other than country and time dummies to be jointly different from zero is also reported. Heteroskedasticity-robust standards errors, corrected for clustering at the country level, are in parentheses. \*, \*\*, and \*\*\* denote statistical significance at the 10, 5, and 1 percent level, respectively.

Election. Early Election is a dummy variable that takes the value one if the elections take place earlier than the originally scheduled date. This interaction term does not have a statistically significant coefficient. However, the coefficient of Before Election remains negative and statistically significant. Using the Persson and Tabellini [2003] classification of countries as presidential or parliamentarian, Regression (2) repeats the basic regression only for countries classified as presidential systems, where the electoral cycle tends to be predetermined. Before Election again has a

negative and statistically significant coefficient. Hence, the absence of government interventions in failing banks is robust when the elections are called early.

# V.D. The Role of a New Government

It is possible that the preelection effect detected may represent just the difference a new government makes after the election. A party incompetent in dealing with the banking problem may lose the election; and another, more competent, party may come to power. If that is the case, the preelection effect detected above will only reflect the change from an incompetent party to a competent one. This subsection analyzes the robustness of the preelection effect to changes in the party in power.

Naturally, the changes in the party in power are correlated with elections. However, the correlation is not perfect for at least two reasons. First, the incumbent party may win the elections and stay in power. Second, particularly in countries with parliamentarian systems, the party in power may lose a vote of confidence in the middle of the electoral cycle and a new party may come to power without elections. These differences will allow the analysis to distinguish the effect of a new government from that of elections.

Regression (3) in Table IV includes *NewGovernment*, a dummy variable that is one if a new party has come to power within a year. *NewGovernment* has a negative coefficient, but it is not statistically significant. On the other hand, the coefficient of the *BeforeElection* dummy variable remains negative, has a magnitude comparable to the previous regressions, and is statistically significant. This result indicates that the absence of government takeover or closure of failing banks in the months leading to the election is different from any effect a change of government after the election may have.<sup>18</sup>

# V.E. Interaction Effects

Although the regression analysis above includes country dummies to control for many time-independent differences across the countries, such differences may play a role through elections, or, technically speaking, through the slope of the *BeforeElection* 

<sup>18.</sup> It is interesting to note that some banks are taken over by lame duck governments after they have lost the election but before the new government takes the office.

variable. For example, to the extent that literate population is more likely to vote in elections, the before-election effect we detect above may be stronger in countries where adult literacy is high. To test this hypothesis, we obtain data on adult literacy for each country in the sample mainly from United Nations. We use the 1990 figures whenever they are available and construct a *Literacy* dummy variable, which takes the value one if the adult literacy in that country is equal to or higher than the median in our sample. We add the interaction term *BeforeElection\*Literacy* to our basic regression. <sup>19</sup> The results are reported in Table V. The interaction term does not have a statistically significant coefficient, while the coefficient of *BeforeElection* remains negative and statistically significant.

In countries with bank-based financial systems, a bank failure may be more disruptive to the economy in the short term. Hence, the government may be more inclined to avoid such disruptions before the elections in countries with bank-based financial systems. To test this hypothesis, we follow the classification of financial systems by Demirguc-Kunt and Levine [2001]. We use an interaction term *BeforeElection\*BankBased*, where *BankBased* is a dummy variable that takes the value one for countries with bank-based financial systems. Both the interaction term and the election year dummy have negative coefficients but neither coefficient is statistically significant. This might be due to political factors that might play a more important role in government takeover or closure of failing banks in countries with a bankbased financial system.

Finally, politicians might have even more incentive to wait until after the elections if the failing bank is large. To test this hypothesis, we use the interaction term of our election variable with our size variable. The interaction term has a negative but statistically insignificant coefficient, while *BeforeElection* has a negative and statistically significant coefficient. This suggests that, at least in our sample where all the banks are among the ten largest banks in their country and, therefore, play an important role in the country's economy, each bank is sufficiently large for the politicians to try to avoid the repercussions of taking over or closing a failed bank before elections.

<sup>19.</sup> Due to large multicollinearity between the interaction term and country dummies, this regression and the next do not include country dummies.

| TABLE V  |
|--|
| ELECTIONS AND GOVERNMENT INTERVENTIONS IN FAILING BANKS: |
| Interaction Terms  |

|                      | (1)        | (2)        | (3)        |
|----------------------|------------|------------|------------|
| Total assets/GDP     | -0.039     | -0.118***  | -0.022     |
|                      | (0.045)    | (0.033)    | (0.034)    |
| Capital ratio        | -12.540*** | -26.022*** | -7.208**   |
| _                    | (2.935)    | (4.786)    | (3.399)    |
| Operating income     | -1.729     | 8.812*     | -3.457     |
|                      | (3.966)    | (5.117)    | (6.305)    |
| BeforeElection       | -1.760**   | -0.665     | -0.912*    |
|                      | (0.718)    | (0.829)    | (0.534)    |
| Interaction terms:   |            |            |            |
| BeforeElection*      |            |            |            |
| Literacy             | 0.644      |            |            |
|                      | (0.945)    |            |            |
| Bank-based           |            | -1.756     |            |
|                      |            | (1.188)    |            |
| Total assets/GDP     |            |            | -0.092     |
|                      |            |            | (0.111)    |
| Constant             | -1.965**   | -1.037     | -20.179*** |
|                      | (0.847)    | (1.126)    | (1.364)    |
| Country dummies      | _          | _          | Yes        |
| Year dummies         | Yes        | Yes        | Yes        |
| p-value of Wald test | 0.000      | 0.000      | 0.000      |
| Num. of banks        | 156        | 115        | 156        |
| Num. of bank-years   | 854        | 667        | 854        |

The table presents exponential hazard analysis for the bank failure. Total assets/GDP is the bank's total assets normalized by the country's GDP; Capital ratio is total equity divided by total assets; Operating income is operating income divided by total assets; all are book values and as of year t-1. BeforeElection is a dummy variable that takes the value one if the bank fails within one year before the elections or, in the case of no failure, the end of the bank's accounting year falls within one year before the elections. Literacy is a dummy variable that takes the value one if the country has a adult literacy rate equal to or greater than the sample median; BankBased is a dummy variable if the country has a bank-based financial system. Wald test-statistic for all the variables other than country and time dummies to be jointly different from zero is also reported. Heteroskedasticity-robust standards errors, corrected for clustering at the country level, are in parentheses. \* \*\* and \*\*\* denote statistical significance at the 10, 5, and 1 percent level, respectively.

#### VI. AFTERMATH OF BANK FAILURES

# VI.A. Borrowers and Employees

Our main analysis assumes that a takeover or closure of a failing bank might be costly in the short term, so politicians might want to avoid such costs before elections. It is relatively easy to visualize such costs if the bank is closed, but do such costs also exist if the failing bank is merely taken over and operated as a government-owned bank? This section examines what happens in failing banks immediately after a government takeover. Slovin, Shushka, and Polonchek [1993] show that when Continental Illinois Bank failed in 1984, the most recent failure among top ten banks in the United States, the firms for which Continental Illinois was a main lender had a negative average excess return before failure. Although these borrowers subsequently had a positive average excess return when the government announced a rescue package later, the excess return for these borrowers during a 75-day period that culminated in the bank's failure and its subsequent rescue was -11.7 percent. This episode suggests that the borrowers of failed banks, even if their banks are not closed but merely taken over by the government, still face losses. We do not have detailed information on the borrowers of failed banks in our sample so we will focus on the lending and employment pattern of the banks taken over by the government.

Table VI provides sample statistics on the average change in lending, employment, and personnel expenses of failed banks. It focuses on the fiscal year the failure took place, which already reflects the impact of failure, and on the fiscal year immediately

 ${\bf TABLE~VI} \\ {\bf IMPACT~OF~BANK~FAILURES~ON~BORROWERS~AND~EMPLOYEES} \\$ 

| Percentage change in |            | Before<br>failure | Failure<br>year | Postfailure<br>year | ALL   |
|----------------------|------------|-------------------|-----------------|---------------------|-------|
| Total loans          | Mean       | 29.7              | -32.4***        | -5.6**              | 17.7  |
|                      | Median     | 12.2              | -28.6***        | -5.0**              | 7.0   |
|                      | sd.        | 93.5              | 28.0            | 56.0                | 86.8  |
|                      | Bank-years | 117               | 19              | 19                  | 155   |
| Number of employees  | Mean       | 2.0               | -17.4*          | -7.0***             | -2.4  |
|                      | Median     | 0.4               | -7.2*           | -4.8***             | -1.0  |
|                      | sd.        | 11.0              | 31.9            | 6.7                 | 17.5  |
|                      | Bank-years | 50                | 12              | 8                   | 70    |
| Personnel expenses   | Mean       | 32.4              | -12.7***        | -5.0**              | 20.0  |
|                      | Median     | 7.3               | 1.2**           | -10.2***            | 3.8   |
|                      | sd.        | 116.0             | 29.5            | 47.9                | 101.0 |
|                      | Bank-years | 80                | 18              | 16                  | 114   |

The table provides sample statistics on the annual change in key variables for failed banks in the sample. Before failure includes fiscal years that ended before the bank failed. Failure year is the fiscal year during which the bank failed; it starts before and ends after the failure. Postfailure year is the first full fiscal year after the bank failed; it starts and ends after the failure. The latter two are available only for some of the banks that were taken over while the former includes banks that were closed as well. Growth rates in total loans and personnel expenses are adjusted for inflation. N denotes the number of bank-years. \*, \*\*, and \*\*\* denote statistical significance at the 10, 5, and 1 percent levels, respectively, in a two-sided test of the mean (Pearson chi-square test of differences of median) between Failure or Postfailure year and the years Before failure.

following the failure; it compares these with the years before the failure. All data are from *Bankscope* and *Worldscope*. Unfortunately, data availability is an issue, especially for the failure and postfailure years, and for the data on the number of employees in each bank. Data for years before failure also include banks that were subsequently closed; but the data for the failure and postfailure years are, naturally, published only by the banks that were taken over.

Table VI shows that banks, on average, shrink substantially in the year of their failure and the following year. For example, lending, adjusted for inflation, shrinks by 32.4 percent in the failure year and by a further 5.6 percent in the following year. Employment is reduced by 17.4 percent in the failure year and by an additional 7 percent in the following year. Personnel expenses, adjusted for inflation, decreases by 12.7 percent in the failure year and by a further 5 percent in the following year. All these averages are statistically different at the 5 percent level or better from the averages during the years before failure. Since the data are available for only a few banks in some cases and, therefore, subject to potential outliers, Table VI also provides comparison of medians; the results are similar.

This evidence can be viewed from two opposite perspectives, and both are instructive. On the one hand, it is clear that banks that are taken over continue to lend and employ workers after takeover so the costs of failure for borrowers and employees are less than what they would be if these banks were closed. On the other hand, government takeovers of failed banks are not a mere change in ownership; the banks shrink substantially upon failure with both borrowers and employees incurring substantial losses. These results help explain why governments favor taking over failed banks instead of closing them and also why they prefer to wait until after elections even for takeovers.

Banks, on average, become substantially smaller after failure, but the decrease also seems to be related to whether the bank was taken over early in the electoral cycle or not. Table VII provides a comparison of sample statistics on the two-year change in lending, employment, and personnel expenses after the last annual report filed by failing banks before their failure. The comparison is between the banks that are taken over during the first year after the election and those that are taken over later in the electoral cycle. Both the mean and the median decreases in all three measures—lending, employment, and personnel ex-

TABLE VII
IMPACT OF BANK FAILURES ON BORROWERS AND EMPLOYEES:
THE ROLE OF THE ELECTORAL CYCLE

| Percentage change in | Failed in     | First<br>year after<br>the election | Other | ALL   |
|----------------------|---------------|-------------------------------------|-------|-------|
| Total loans          | Mean          | -49.5                               | -22.7 | -36.8 |
|                      | Median        | -52.5**                             | -32.2 | -41.8 |
|                      | sd.           | 54.4                                | 30.5  | 45.7  |
|                      | Num. of banks | 10                                  | 9     | 19    |
| Number of employees  | Mean          | -26.5**                             | 2.0   | -15.8 |
|                      | Median        | -30.6**                             | -0.4  | -14.7 |
|                      | sd.           | 14.0                                | 14.3  | 19.7  |
|                      | Num. of banks | 5                                   | 3     | 8     |
| Personnel expenses   | Mean          | -21.5                               | 3.2   | -8.3  |
| -                    | Median        | -16.6                               | -11.3 | -14.4 |
|                      | sd.           | 15.3                                | 65.1  | 48.8  |
|                      | Num. of banks | 7                                   | 8     | 15    |

The table compares the two-year change in key variables for banks that failed within the First year after the election with those that failed later. The change is measured from the last annual account filed by the bank before its failure. Growth rates in total loans are adjusted for inflation. N denotes the number of bank-years. \*, \*\*, and \*\*\* denote statistical significance at the 10, 5, and 1 percent levels, respectively, in a two-sided test of the mean (Pearson chi-square test of differences of median) between the banks that failed in the First year of the electoral cycle and those that failed in the later.

penses—are greater for banks that were taken over early in the electoral cycle. Powerful statistical analysis is not possible due to the small number of failed banks for which data are available after their failure and to the large variation across governments in dealing with failed banks. However, the median decrease in lending as well as both the mean and the median decrease in the employment for banks that were taken over early in the electoral cycle are statistically different at the 5 percent level or better from the respective change in the banks taken over later in the electoral cycle. Hence, the evidence suggests that not only do borrowers and bank employees incur losses in banks that are taken over by the government, but also these losses seem to be greater when the bank is taken over early in the electoral cycle.

#### VI.B. Other Stakeholders

A news article search was performed using *Factiva* to identify the events that affected various groups such as equity holders, management, employees, depositors, and other liability holders. This information was further augmented from other hard-

copy and Internet sources. Unfortunately, there were also many cases where no reliable information could be obtained. Though lack of news articles on issues such as default can be interpreted as the absence of default, we state separately when no explicit information is available about certain stakeholders. The findings are summarized in Table VIII.

Recall that out of 40 bank failures, 34 of them are taken over by the government and continue their operations while the remaining six are closed. Even among the former group, prefailure owners and managers do not seem to benefit from a government takeover in most situations. In 20 out of 31 cases for which information is available, the shareholding of the largest private prefailure equity holder is reduced to less than 1 percent after the bank is taken over by the government. In a further seven banks, it is reduced to less than 10 percent. This reduction is substantial because the largest shareholder was also the majority owner before the failure in 13 of these 27 banks. Prefailure top management fares slightly better. We could find detailed information for twenty banks that were taken over, and prefailure management was ousted in eighteen of them after failure.

Depositors tend to lose much less after a bank takeover, if anything. We identified only two cases in which depositors are restricted in the amount they can withdraw for at least one month after the government takeover of their bank. Though we

TABLE VIII
IMPACT OF BANK FAILURES ON OTHER STAKEHOLDERS

| Postfailure event  | Yes | No | No<br>information |
|--|-----|----|-------------------|
| 34 Banks That Were Taken over by the Government Largest (prefailure) private shareholder's equity becomes after takeover |     |    |                   |
| less than 10 percent   | 27  | 4  | 3                 |
| less than 1 percent  | 20  | 11 | 3                 |
| Management fired   | 18  | 2  | 14                |
| Delay in deposit withdrawal  | 2   | 13 | 19                |
| Default on Nondeposit liabilities<br>6 Banks that were closed  | _   | 6  | 28                |
| Delay in deposit withdrawal  | 4   | _  | 2                 |

The table summarizes the impact of bank failures on stakeholders other than borrowers and bank employees within one year after the failure. *Delay in deposit withdrawal* is coded as Yes if depositors are not allowed to withdraw 100 percent of their deposits for at least one month after the failure. *Default on nondeposit liabilities* is coded as Yes if the bank defaults on creditor claims other than deposits.

were not able to confirm any delay, or lack thereof, for nineteen banks, absence of any news about such delays may be interpreted as absence of any restriction. It is informative to compare the depositors of banks that were taken over with those of banks that were closed. In four out of six banks that are closed, the depositors are restricted in withdrawing their deposits after the failure; we have no information about the remaining two banks. This difference might be one reason why governments prefer to take over failing banks instead of closing them.

One interesting group of stakeholders that seems to benefit from government takeovers of failing banks is other liability holders. We have no confirmed case of default on nondeposit liabilities for banks taken over. This becomes especially striking if lack of any news in press about default can be taken as absence of default.

To summarize, borrowers and employees suffer substantially after a government takeover even though they avoid the worst a bank closure would bring. Management also tends to lose after a government takeover, but the depositors and other liability holders seem to be the main beneficiaries.

#### VII. CONCLUSION

This paper provides bank-level empirical evidence about bank failures in major emerging markets in the 1990s. It shows that bank failures are very common in those countries; about 25 percent of all the large private banks failed in that period. The paper also demonstrates that government interventions on these banks are delayed due to political concerns. Only 10 percent of bank failures take place within twelve months before the elections, while almost half of all government takeovers or closings of failing banks occur within the first year after the elections. This clustering is robust to macroeconomic and bank-specific factors, a new party in power, IMF borrowing, as well as the time-constant, country-specific factors.

The results are especially interesting given the worldwide evidence of large political business cycles. Shi and Svensson [2003] document that government expenditures tend to increase and government revenues tend to decrease before elections. Government takeover or closing of failing banks is typically financed by large government funds. The results reported in this paper suggest that the preelection increases in general government

expenditures are of different type from the government funds spent in dealing with bank failures.

The results presented in this paper have implications for the bank regulation and financial crisis literature. The results highlight the role of politics in the implementation of banking regulations. They show that banking regulations must take the incentives of politicians and regulators into account. Similarly, the same set of regulations may not have the same success rate in different countries with different political institutions. The results in this paper also imply that much clustering of bank failures over time in a country is due to political factors. Hence, using the number of bank failures as the start of a banking crisis is likely to miss the real start of the weaknesses in the banking system.

Political concerns in intervening with failing banks as demonstrated in this paper should not be taken as the only role of politics in banking in these countries. In addition to the political lending by the government-owned banks already shown in the literature, politicians also can use banking regulation to favor their supporters and punish their opponents. For example, the recent bank consolidation policy adopted in Malaysia forces banks to merge to form six large banks. Jayasankaran [1999] argues that the banks owned by the supporters of then-prime minister Mahathir were favored and are expected to control the newly formed banks, while the banks owned by his opponents received unfavorable terms.<sup>20</sup>

This paper focuses on bank failures, but governments also rescue nonfinancial firms. Faccio et al. [2005] show that politically connected firms are more likely to be rescued by the government. Whether these rescues also depend on the electoral cycle is an interesting research topic for the future.

The results also suggest other new research questions. One such question is the role of ideology in banking interventions. Another question is whether government interventions depend on the political strength of the party in power or how tightly contested the elections are. If the elections are expected to be particularly tight or the party in power is not very strong, the politicians' incentives to delay bank interventions may be greater.

<sup>20.</sup> Also see Johnson and Minton [2003] about political influences on private companies in Malaysia. See Fisman [2001], Faccio [2003], and Ramalho [2003] on the role of political connections in other countries.

This study focuses on the type of regulatory interventions that are the most drastic as well as with the highest immediate political costs. However, these are not the only government interventions in distressed banks. Common interventions by the regulators include requiring increases of reserves against problem loans, demanding an injection of capital, prohibiting the bank from certain activities, providing liquidity support against bank runs. In some cases, government interventions extend to the purchase of problem assets by the government at prices above the market and even to the recapitalization of distressed banks without taking them over or having a majority ownership. Similarly, government-owned banks are also frequently recapitalized. The extent of such interventions, their effectiveness, and the role of politics are very interesting topics for further research. Another interesting issue is the role of corporate governance in bank risk taking and bank failures in emerging markets, as it has been shown to be important in developed countries [Gorton and Rosen 1995: Dinc 2003].

Although this paper is the bank-level study with the widest geographic scope we are aware of, the cost of manual data collection about bank failures and bank ownership had to limit the number of countries included in the study; and we chose to focus on emerging markets because of their frequent banking crises. However, developed countries are unlikely to be immune to similar incentive problems of the politicians and regulators in the interventions to failing banks. In fact, it is interesting to note that, according to the FDIC's own chronology of the S&L crisis in the United States, 21 the crisis did not figure in the 1988 presidential election campaign. However, Congress passed the Financial Reform Act in 1989 and expanded the resources committed to dealing with the problem. Curry and Shibut [2000] document that 1989 also was the leading year in terms of both the number and total asset size of S&L failures. The slow pace of regulatory actions against distressed banks in Japan seems to be another example. 22 Extending the analysis to developed countries is an interesting topic for future research.

Ross School of Business. University of Michigan

<sup>21.</sup> www.fdic.gov/bank/historical/s&l 22. See Hoshi and Kashyap [2001].

#### References

- Alesina, Alberto, and Allan Drazen, "Why Are Stabilizations Delayed?" American Economic Review, LXXXI (1991), 1170–1188.
- Alesina, Alberto, Nouriel Roubini, and Gerald Cohen, Political Cycles and the Macroeconomy (Cambridge, MA: MIT Press, 1997).

  The Asian Wall Street Journal, "Central Bank Shakes up a Thai Institution—
- BMB Is Ordered to Raise New Capital As President, Board Are Replaced," January 2, 1998.
- Bankscope (http://www.bankscope.bvdep.com, Bureau van Dijk).
- Barth, James, The Great Savings and Loan Debacle (Washington, DC: AEI Press, 1991).
- Beck, Thorsten, Asli Demirguc-Kunt, and Ross Levine, "Bank Concentration and Crises," World Bank Policy Research Paper, 2003.
- Bongini, Paola, Stijn Claessens, and Giovanni Ferri, "The Political Economy of Distress in East Asian Financial Institutions," Journal of Financial Services Research, XIX (2001), 5–25.
- Bongini, Paola, Luc Laeven, and Giovanni Majnoni, "How Good Is the Market at Assessing Bank Fragility? A Horse Race between Different Indicators," Journal of Banking and Finance, XXVI (2002), 1011-1028.
- Caprio Jr., Gerard, and Daniela Klingebiel, "Episodes of Systematic and Borderline Financial Crises," World Bank Policy Research Paper, 2002.
- Claessens, Stijn, and Luc Laeven, "What Drives Bank Competition? Some International Evidence," Journal of Money, Credit and Banking, XXXVI (2003), 563-584.
- Curry, Timothy, and Lynn Shibut, "The Cost of the Savings and Loan Crisis:
- Truth and Consequences," FDIC Banking Review, XIII (2000), 26–35.

  Demirguc-Kunt, Asli, and Enrica Detragiache, "The Determinants of Banking Crises in Developing and Developed Countries," IMF Staff Papers, XLV (1998), 81-109.
- Demirguc-Kunt, Asli, and Enrica Detragiache, "Does Deposit Insurance Increase Banking Stability? An Empirical Investigation," Journal of Monetary Economics, XLIX (2002), 1373–1406.
- Dennis, David J., Diane K. Dennis, and Atulya Sarin, "Ownership Structure and Top Executive Turnover," Journal of Financial Economics, XLV (1997),  $19\bar{3}-221.$
- Dinc, Serdar, "Monitoring the Monitors: The Corporate Governance in Japanese Banks and Their Real Estate Lending in the 1980s," University of Michigan, 2003.
- Dinc, Serdar, "Politicians and Banks: Political Influences on Government-Owned Banks in Emerging Markets," Journal of Financial Economics, LXXVII (2005), 453-479.
- Dinc, Serdar, and Nandini Gupta, "The Decision to Privatize: The Role of Political Competition and Patronage," University of Michigan, 2005.

  Dow Jones International News, "Thai Central Bank Takes over Bangkok Metro-
- politan Bank," January 23, 1998a.
  - "Peru's Banco Latino/Debt Swap-2: Government Role Unclear," December 9, 1998b.
- , "Peru Fujimori: Banco Latino Cash Not State Takeover—Radio," December 10, 1998c.
- , "Peru's Banks Bruised But Not Beaten by Liquidity Squeeze," December 15, 1998d.
- , "Peru's Fin Min/GDP-3: No More Banks in Need of Govt. Help," December 17, 1998e.
- Drazen, Allan, Political Economy in Macroeconomics (Princeton, NJ: Princeton University Press, 2000).
- The Economist, "Czech Banking—Agrobanka," September 21, 1996.
- Elections Around the World (http://www.electionworld.org).
- The Europa Yearbook: A World Survey (London, UK: Europa Publications Ltd., various years).
- Faccio, Mara, "Politically Connected Firms," American Economic Review, forthcoming, 2005.

Factiva (http://www.factiva.com, Dow Jones and Reuters).

Fernandez, Raquel, and Dani Rodrik, "Resistance to Reform: Status Quo Bias in the Presence of Individual Specific Uncertainty," American Economic Review, LXXXI (1991), 1146-1155. Fisman, Raymond, "Estimating the Value of Political Connections," American

Economic Review, XCI (2001), 1095–1102. Gorton, Gary, and Richard Rosen, "Corporate Control, Portfolio Choice, and the Decline in Banking," Journal of Finance, L (1995), 1377–1420.

Gross, David B., and Nicholas S. Souleles, "An Empirical Analysis of Personal Bankruptcy and Delinquency," Review of Financial Studies, XV (2002), 319 - 347.

Hoshi, Takeo, and Anil Kashyap, Corporate Financing and Governance in Japan (Cambridge, MA: MIT Press, 2001).

Jayasankaran, Sankaran, "Merger by Decree," Far Eastern Economic Review, CLXII (1999), 10–14.

Johnson, Simon, and Todd V. Minton, "Cronyism and Capital Controls: Evidence from Malaysia," Journal of Financial Economics, LXVII (2003), 351–382. Kane, Edward J., The S&L Insurance Mess: How Did It Happen? (Washington,

DC: Urban Institute, 1989).

"De Jure Interstate Banking: Why Only Now?" Journal of Money, Credit and Banking, XXVIII (1996), 141–161.

Kroszner, Randall S., and Philip E. Strahan, "Regulatory Incentives and the Thrift Crisis: Dividends, Mutual-to-Stock Conversions, and Financial Distress," Journal of Finance, LI (1996), 1285–1319.

Kroszner, Randall S., and Philip E. Strahan, "What Drives Deregulation? Economics and Politics of the Relaxation of the Bank Branching Restrictions,

Quarterly Journal of Economics, CXIV (1999), 1437–1467. Kroszner, Randall S., and Philip E. Strahan, "Obstacles to Optimal Policy: The Interplay of Economics and Politics in Shaping Banking Reforms," in Prudential Supervision: What Works and What Doesn't, Frederic S. Mishkin, ed. (Cambridge, MA: National Bureau of Economic Research, 2001).

Khwaja, Asim Ijaz, and Atif Mian, "Do Lenders Favor Politically Connected Firms? Rent Provision in an Emerging Financial Market," Quarterly Journal

of Economics, CXX (2005), 1371–1411. La Porta, Rafael, Florencio Lopez-de-Silanes, and Andrei Shleifer, "Government

Ownership of Banks," Journal of Finance, LVII (2002), 256–301.

Lane, William R., Stephen W. Looney, and James W. Wansley, "An Application of the Cox Proportional Hazards Model to Bank Failure," *Journal of Banking* and Finance, X (1986), 511-531.

Maddex, Robert L., Constitutions of the World (Washington, DC: Congressional

Quarterly Press, 2001).

Molina, Carlos A., "Predicting Bank Failures Using a Hazard Model: The Venezuelan Banking Crisis," Emerging Markets Review, III (2002), 31–50. Olson, Mancur, The Logic of Collective Action: Public Goods and the Theory of

Groups (Cambridge, MA: Harvard University Press, 1965).

Pagano, Marco, Fabio Panetta, and Luigi Zingales, "Why Do Companies Go Public? An Empirical Analysis," Journal of Finance, LIII (1998), 27–64. Persson, Torsten, and Guido Tabellini, Political Economics: Explaining Economic

Person, Torsten, and Guido Tabellini, The Economic Effects of Constitutions

(Cambridge, MA: MIT Press, 2003). Ramalho, Rita, "The Effects of an Anti-Corruption Campaign: Evidence from the 1992 Presidential Impeachment in Brazil," Massachusetts Institute of Technology, 2003.

Reuters News, "Czech Bank Rescue May Prove a Boon, Analysts," September 17, 1996a.

"Czech PM Says Several Factors Pressured Agrobanka," September 24, 1996b.

Rogoff, Kenneth, and Anne Sibert, "Elections and Macroeconomic Policy Cycles," Review of Economic Studies, LV (1988), 1–16.

Rosenbluth, Frances McCall, Financial Politics in Contemporary Japan (Ithaca, NY: Cornell University Press, 1989).

Sapienza, Paola, "What Do State-Owned Firms Maximize? Evidence from the Italian Banks," Journal of Financial Economics, LXXII (2004), 357–384.

Shi, Min, and Jakob Svensson, "Political Budget Cycles in Developed and Developing Countries," Nordic Journal of Political Economy, XXIX (2003), 67–76.

oping Countries, Norate Journal of Fattical Economy, AAIA (2005), 61–16.

Shumway, Tyler, "Forecasting Bankruptcy More Accurately: A Simple Hazard Model," Journal of Business, LXXIV (2001), 101–124.

Slovin, Myron B., Marie E. Shushka, and John A. Polonchek, "The Value of Bank Durability: Borrowers as Bank Stakeholders," Journal of Finance, XLVIII (1993), 247-266.

Stigler, George, "The Theory of Economic Regulation," Bell Journal of Economics, II (1971), 3–21.

The Wall Street Journal Europe, "Agrobanka's Net Profit Advanced 1.2 percent in Year," April 29, 1996.

Whalen, Gary, "A Proportional Hazards Model of Bank Failure: An Examination of Its Usefulness as an Early Warning Tool," Economic Review (Federal Reserve Bank of Cleveland), XXVII (1991), 21–31.

White, Lawrence J., The S&L Debacle: Public Policy Lessons for Bank and Thrift Regulation (New York, NY: Oxford University Press, 1991).

World Political Almanac: From 1945 to the Present, 4th ed. (New York, NY: Checkmark Books, Facts on File Inc.).

Worldscope (http://www.rimes.com/wscp.xmp, Thomson Financial).

Copyright of Quarterly Journal of Economics is the property of MIT Press. The copyright in an individual article may be maintained by the author in certain cases. Content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use.