## THE POLITICS OF BANK FAILURES

### **Evidence from Emerging Markets\***

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**Abstract**: 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% 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, outstanding loans from 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.

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Banking is one of the most regulated industries in the world,<sup>1</sup> and the role of politics in shaping bank regulation has been well established in many studies.<sup>2</sup> These studies show that the laws and regulations that govern banking are the equilibrium outcome of a political process. Therefore, neither the content of these laws nor the time of their passage is determined solely by their economic merits. Instead, banking laws and regulations reflect the political strength of different interest groups and the changes in their strength over time.

Many of these aforementioned studies assume the role of politics ends once the laws and regulations are determined. In particular, the implementation of these laws and regulations is assumed to be carried out by the regulators in a non-political manner. Although this may be a valid first approximation for the United States, it seems highly questionable to assume that regulatory oversight is completely divorced from politics in countries that have few checks and balances on the executive and have other weak institutions. These political and institutional problems are particularly important in most emerging markets, many of which also suffer from frequent banking crises. In this type of political and institutional environment, several questions naturally arise: Are political considerations irrelevant after the enactment of legislation concerning bank supervision and regulation? Does the political process have no effect on, for example, the closing or government takeover of failing banks? Do bank regulatory interventions reflect the incentives of politicians?

This paper addresses these questions by studying the government responses to the failing large banks in 21 major emerging markets. In particular, this paper focuses on whether the timing of the government interventions depends on the electoral cycle. When macroeconomic factors are controlled for, no statistical relationship between the electoral cycle and the

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<sup>&</sup>lt;sup>1</sup> See, e.g., Barth et al. (2003) for the World, Berger et al. (1995) for the United States.

<sup>&</sup>lt;sup>2</sup> See, e.g., Rosenbluth (1989), Kane (1996), Kroszner and Strahan (1999, 2001).

government interventions should exist unless politics influences regulatory actions. On the other hand, to the extent that politicians can influence regulators responsible for banking supervision, there are good reasons to expect the electoral cycle to affect regulatory actions. First, politicians have incentives to take actions to induce favorable economic outcomes before elections (Rogoff and Sibert, 1988). Failures of large banks may have an adverse effect on the economy, at least in the short run, so politicians have incentives to avoid large bank failures before the elections. Second, much of the costs of bank closings are acute and fall on groups such as the bank owners, employees, borrowers, and depositors but the benefits from a healthy banking system are widespread and obtained over time. Hence, politicians are more likely to be accommodating to the pressure from narrow interest groups before elections by avoiding large bank failures.<sup>3</sup> 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 and, potentially, to the next cohort of politicians.

This paper makes several contributions. 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 were either 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 largest 10 commercial banks in their countries.

More importantly, 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

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<sup>&</sup>lt;sup>3</sup> See, e.g., Olson (1965), Stigler (1971) for the role of interest groups in politics.

government interventions took place within 12 months following the elections. A further 11 banks were taken over or closed within 18 months after the elections, while only four banks faced similar intervention during the 12 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.

Finally, virtually all the literature on banking crises in emerging market countries is based on country-level analysis.<sup>4</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 associations in the United States.<sup>5</sup> Bongini et al. (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 non-performing loans continued. This paper differs from the ones above in both scope and focus. It studies the largest 10 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>&</sup>lt;sup>4</sup> See, e.g., Beck et al. (2003), Caprio and Klingebiel (2002), Claessens and Laeven (2003), and Demirguc-Kunt and Detragiache (1998, 2002). Two exceptions are Bongini et al. (2001) and Bongini et al. (2002), who provide a banklevel analysis of the banking crises in four East Asian countries.

<sup>&</sup>lt;sup>5</sup> Also see Kane (1989), Barth (1991), and White (1991) on the S&L crisis.

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>6</sup> By highlighting the role of elections in the delay of regulatory intervention, this paper also contributes to the political economy literature on the elections and the career concerns of politicians (Rogoff and Sibert, 1988). However, the existing crosscountry empirical studies show the effect of elections in macroeconomic settings, such as budget cycles (Shi and Svensson, 2002).8 To the best of our knowledge, with the exception of Dinc (2003), 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 discusses the hypothesis and the methodology. Section 2 describes the data. The regression analysis is presented in Section 3, while the robustness checks are discussed in Section 4. Concluding remarks follow in Section 5.

# **Hypothesis and Methodology**

This paper studies the role of politics on regulatory interventions in banking. More specifically, it focuses on whether license revoking or takeover of failing banks by the government is influenced by political considerations. If the regulators only implement the rules without any political influences, such regulatory intervention should not reflect any political factors once the macroeconomic factors, which might be correlated with the political factors, are controlled for. Hence, the null hypothesis of this study is:

<sup>&</sup>lt;sup>6</sup> See Drazen (2000, pp. 403-454) for a survey.

<sup>&</sup>lt;sup>7</sup> See Drazen (2000, pp. 219-308) and Persson and Tabellini (2000, pp. 419-431) for surveys.

<sup>&</sup>lt;sup>8</sup> See Alesina et al. (1997) and Persson and Tabellini (2003) for surveys.

 $H_0$ : Government takeover or closing of failing banks is <u>not</u> affected by political factors once macroeconomic factors are controlled for.

Naturally, government takeovers and bank closings are not the only interventions at the disposal of regulators. Common interventions 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, and even the purchase of problem assets by the government at prices above the market. However, takeovers and closings by the government require a lot of political capital and are considered the most drastic of interventions for several reasons. First, the immediate (as opposed to deferred) costs of bank failure to taxpayers are likely to be higher than in other forms of interventions. Second, the borrowers from the banks are directly affected, when the bank is closed or taken over by the government. Finally, a takeover or closing of a bank may signal the general vulnerabilities in the banking sector in general, which might have negative and immediate effects on the economy as a whole.

Although the hypothesis above is this study's main hypothesis, it is not sufficiently precise to be operational: There are many political factors that may potentially affect bank regulators. Instead, this paper tests a more restricted hypothesis, namely, whether the electoral cycle plays a role in regulatory interventions:

 $H'_0$ : Government takeover or closing of failing banks does <u>not</u> decrease before the elections once the macroeconomic factors are controlled for.

This is a more precise and operational null hypothesis but it is also more restrictive. For example, it not only excludes the role of political institutions such as the parliaments, parties, and ministries, but also ignores the role of political connections of bank owners. Hence, although the

rejection of  $H'_0$  implies the rejection of the main null hypothesis  $H_0$ , a failure to reject  $H'_0$  does not necessarily imply a failure to reject  $H_0$ .

There are good reasons to expect a difference in the pattern of government interventions before and after elections if politics indeed plays a role. Career concerns may lead the politicians to defer costly policies until after the elections (Rogoff and Sibert, 1988). Furthermore, much of the costs of bank closings are acute and fall on relatively small groups, such as the bank owners, employers, borrowers, and depositors; but the benefits from a healthy banking system are widespread and obtained over time. This discrepancy in the distribution of costs and benefits will increase interest group pressure to defer government interventions, and politicians will be more susceptible to such pressures before the elections. Finally, the incentives of regulators and politicians to defer the day of ultimate reckoning of the problems in banking have been well demonstrated for the savings & loan crisis in the United States. To the extent that political and economic institutions function less effectively in emerging markets, these incentive problems about timely interventions may be expected to be greater in the emerging market context.

The econometric analysis used in testing the hypothesis above is based on a hazard model. Hazard models incorporate not only the failure of a given firm but also the time until the failure. Such models have been shown to be superior to single-period models in forecasting bankruptcy.<sup>12</sup> More precisely, the multi-period logit model used in the analysis is given by

(1) 
$$\Pr(y_{it} = 1) = \Lambda(\beta' \mathbf{x}_{it-1} + \gamma * BeforeElection_{it} + \theta_t), \qquad t = t_i ... T_i,$$

<sup>9</sup> Even when the bank is closed but merely taken over by the government and operated as a government bank, the existing borrowers are affected because the government-owned banks have different lending patterns from private banks, see Sapienza (2002), Dinc (2003), Mian (2003a, 2003b).

<sup>&</sup>lt;sup>10</sup> See Drazen (2000) and Persson and Tabellini (2000) for surveys of political economy in general and the role of interest groups in particular.

<sup>&</sup>lt;sup>11</sup> See Kane (1989), Kroszner and Strahan (1996).

<sup>&</sup>lt;sup>12</sup> See Shumway (2001), who also shows the equivalency of the multi-period logit model to a discrete-time hazard model. Studies that use hazard models in analyzing bank failures include Lane et al. (1986), Whalen (1991), and

where the dependent variable  $y_{it}$  takes the value of one if the bank i is taken over by the government or has its license revoked in year t;  $\mathbf{x}_{it}$  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; and  $\Lambda$  is the logistic cumulative distribution.

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%. 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 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; and (c) the bank survives until December 31, 2000, the end of the sample period.

By the definition of 'entry' above, a government-owned bank is included in this study after its privatization, or, if it is never privatized, it is excluded. There are at least three reasons to exclude the banks and bank-years in which government ownership is at least 50%. First, as will be discussed in more detail in the next section, by far the most important form of government intervention in a failed bank is government takeover rather than license revocation or closing. Hence, the most common form of intervention is not relevant for government-owned banks.<sup>13</sup> In addition, no government-owned bank lost its banking license in the sample. Econometrically, the

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Molina (2002). Financial studies that use hazard models in other contexts include Dennis et al. (1997), Pagano et al. (1998), and Gross and Souleles (2002).

<sup>&</sup>lt;sup>13</sup> Though poor performance and, subsequently, government recapitalization of government-owned banks are not uncommon, they are fundamentally different from government takeover of failed private banks. The top management of a government-owned bank is seldom changed upon poor performance and recapitalization; they tend to keep their jobs until the party in power changes.

entry definition used in this study is equivalent to keeping all the government-owned banks in the regression sample but including a dummy variable for government ownership. Since no government takeover or license revocation took place in government-owned banks, the dummy variable for government ownership would perfectly predict the survival, and the observations in which this dummy variable is one would drop out of the regressions.

Second, it has been shown that government-owned banks have different objectives and lending patterns than those of private banks. For example, they tend to charge less to the supporters of the controlling party (Sapienza, 2002) or they make poor lending decisions (Mian, 2003a). Third, the identification strategy used in this study relies on elections. It has already been shown that the lending patterns of government-owned banks are affected by the electoral cycle; in particular, they increase their lending in election years relative to private banks and relative to other years (Dinc, 2003).

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. Finally, the analysis assumes the elections are exogenous to bank distresses, namely, that no election is called early to take drastic interventions in the banking sector without further delay. After all, calling elections early due to such reasons would already indicate the role of politics in bank failures and imply the rejection of the null hypothesis above.<sup>14</sup>

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<sup>&</sup>lt;sup>14</sup> As a further check, the main regression analysis is repeated while early elections are controlled for and the results are shown to be robust, see Robustness section.

#### 2 Data

#### 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>15</sup>

The 10 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, so the first exit event covers all the bank failures. An exit upon merger or acquisition depends whether the bank continues to publish accounts as the surviving entity or a new entity. If the bank is acquired by another bank, it 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, 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

<sup>&</sup>lt;sup>15</sup> Indonesia is kept in the sample even though it was classified as 'Not Free' during the early years of the sample period.

<sup>&</sup>lt;sup>16</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

be constructed without the survivorship bias. The most time-consuming aspect of data collection was indentifying 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* and *Factiva*, as well as 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 central government at the 50% 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% 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% in at least one year during the sample period. In particular, this group includes banks that were owned by the government at more than 50% level in 1993 and were subsequently privatized during the sample period. There were no bank nationalizations in the sample countries during the sample

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>&</sup>lt;sup>17</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.

period other than the takeovers of failing banks by regulators.<sup>18</sup>

Table 1 reports the number of bank failures in 1994-2000 among the largest 10 banks (as of 1993) in each country. There are at least three findings that are worth emphasizing in Table 1. First, bank failure is very common in the sample countries. Out of 164 private banks, 40 banks, or about 25%, failed during the sample period. This figure is not just a reflection of the Asian crisis. Although 14, or 30%, of private banks in southeast Asian countries failed, Latin America and the rest of the world also are well-represented. In total, 12 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 despite the numerous studies that document their poor performance.<sup>19</sup> Instead, the governments around the world seem to subsidize their poor performance through frequent recapitalization.

As explained in the Methodology section, only the private banks are studied in the regression analysis, and Table 2 presents sample statistics for selected balance sheet items of these banks between their entry and exit dates. Table 2 reveals some similarities as well as

<sup>19</sup> See Sapienza (2002), Dinc (2003), Mian (2003a, b) for bank level evidence. La Porta et al. (2002) show in country-level analysis that government ownership of banks is associated with subsequent low growth.

11

<sup>&</sup>lt;sup>18</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.

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 total size, ratio of loans to total assets, and ratio of deposits to total assets. For the book value of assets, the sample average for all banks is \$10.5B. Although the failed banks are somewhat smaller, the difference is not statistically significant. 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% with no statistically significant difference between failed banks and other banks.

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

#### 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. The change in the party in power is obtained from the Web site of *rulers.org*.

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 pre-election period versus the post-election period. Figure 1 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 after the elections. By contrast, only four takeovers or license revocations occur in the year immediately before the elections.

Table 3 shows the average time to failure in relation to the electoral cycle. In regard to the whole sample, a failure occurs about 15 months after the previous election but about 3 years before the next election, on average. This difference is statistically significant at the 1% level. The difference is even more pronounced in the case of Asia, where a failure occurs about 11 months after an election but 3 years before the next election, on average; this difference is also statistically significant at the 1% level. In other words, governments seem to avoid bank failures before elections even in countries facing a major crisis.

## 3 Regression Analysis

As discussed in the Methodology section, the analysis below aims to predict bank failure using elections while controlling for bank and country-specific factors. Toward this aim, the analysis uses multi-period logit panel regressions covering the years 1994 through 2000. The main regression results are reported in Table 4. The dependent variable is one if the bank fails that year or zero otherwise, conditional on having survived until that year. The failure is defined as the government takeover or license revoking of the bank. All the explanatory variables except the *BeforeElection* dummy are as of year *t-1*. The regressions include year dummies. 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 heteroscedasticity.

Ln (Total Assets), the logarithm of total assets, has a negative but statistically insignificant coefficient in all the regressions. On the other hand, Capital Ratio, defined as the book value of shareholder equity divided by total assets, also has a negative but statistically very significant coefficient. This confirms that undercapitalized banks are more likely to fail. Similarly, Operating Income, which is defined as the operating income divided by total assets, also has a negative coefficient. This coefficient is statistically significant at the 5% level or better.

The main variable of interest in this study is the *BeforeElection* dummy variable, which takes 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* always has a negative and statistically significant coefficient. In other words, government 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 *BeforeElection* is economically significant. It implies an odds ratio of 0.17-0.21. In other words, the chances that the government takes over or closes a failing bank are about 5 to 6 times greater in a year other than the 12 months leading to the elections.

#### 4 Robustness

#### 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 5 reports the results of regressions that include these macroeconomic variables.

The two macroeconomic variables that have statistically significant coefficients are GDP per capita and inflation rate. A higher GDP per capita makes a bank failure less likely, and the effect is statistically significant at the 1% level. However, banks are more likely to fail when the inflation rate is high, a statistically significant effect at the 5% level.

The main variable of interest in this study, the dummy variable *BeforeElection*, on the other hand, always has a negative and statistically significant coefficient when the macroeconomic variables are included. The magnitude of the coefficient also remains similar across different specifications. Hence, the absence of government interventions in failing banks in the months leading to elections is not a proxy for macroeconomic factors. Instead, it represents a secular effect. This implies the rejection of the hypothesis  $H'_0$  and, hence, the rejection of the main null hypothesis  $H_0$ : Government takeovers and closings of failing banks are affected by the political factors even when the macroeconomic factors are controlled for.

#### B. The Role of a New Government

It is possible that the pre-election 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 pre-election effect detected above will only reflect the change from an incompetent party to a competent one. This subsection analyzes the robustness of the pre-election 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.

Regressions presented in Table 6 include *NewGovernment*, a dummy variable that is one if a new party has come to power within a year. The first regression does not include the *BeforeElection* dummy variable. *NewGovernment* indeed has a positive coefficient but it is not statistically significant. The second regression also includes the *BeforeElection* dummy variable. The coefficient of the *NewGovernment* is again positive but still statistically insignificant. 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.

A change in the government after an election may have a different effect than a change in midterm. To control for that potential difference, the third and fourth regressions interact the *NewGovernment* dummy variable with *AfterElection*, which is a dummy variable that takes one if the bank fails within one year after the elections or, in the case of no failure, the end of the bank's accounting year falls within one year after the elections. This interaction term never has a statistically significant coefficient, but the coefficient of *BeforeElection* remains negative and statistically significant. This result indicates that the absence of government intervention in failing banks in the months leading to the elections is different from any effect a change of government after the election may have.

### C. The Role of IMF Programs

Many developing countries obtain loans from the IMF. These loans are often 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 rather than reforming their banking because of IMF conditions. To mitigate this problem, the regressions reported in Table 7 use lagged IMF borrowing instead of contemporaneous borrowing.

Regressions reported in Table 7 include *IMF Borrowing Dummy*, which is one if the country has outstanding IMF loans in year *t-1*. If timely interventions to failing banks are a general IMF condition, this dummy variable should have a positive coefficient. On the other hand, the IMF's ability to induce an unwilling country to reform its banking may depend on the size of IMF lending. To study that possibility, Regressions 3 and 4 include *Total IMF Loans*, which is the total IMF loans outstanding to that country in year *t-1*; it is scaled by that country's GDP. Both variables have indeed positive but statistically insignificant coefficients.<sup>20</sup> 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 interventions in failing banks before elections is robust to IMF lending.

#### D. <u>Early Elections</u>

In some countries, especially in parliamentarian countries, the electoral cycle is not fixed. Instead, the elections can be called early. Regressions reported in Table 8 test for the effects of early elections by including, in addition to *BeforeElection*, an interaction term of *BeforeElection* 

<sup>&</sup>lt;sup>20</sup> The coefficient of *Total IMF Loans* is only marginally insignificant with p<0.11.

and *EarlyElection*. *EarlyElection* is a dummy variable that takes one if the elections take place earlier than the originally scheduled date. This interaction term never has a statistically significant effect. However, the coefficient of *BeforeElection* remains negative and statistically significant. Hence, the absence of government interventions in failing banks is robust when the elections are called early.

#### E. Country Fixed Effects

There are myriad political, legal, historical, institutional, and geographic differences across countries. Hence, it is important to check the robustness of the results presented above to these differences. The main regressions reported in Table 4 are repeated with country fixed effects, and the results are reported in Table 9. Country fixed effects control for all the cross-country differences that remain constant throughout the sample period. One disadvantage of including country fixed effects is that the banks in countries where no bank failure took place are now dropped out of the regressions because the fixed effects for those countries perfectly predict the lack of bank failures.

The coefficient of *BeforeElection* remains negative and statistically significant. In other words, the absence of government interventions in failing banks before elections is a phenomenon robust to all the time-invariant political, legal, historical, institutional, and geographic differences across countries.

#### 5 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% 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% of bank failures

take place within 12 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 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 the 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>21</sup>

The results also suggest new research questions. One question for future research is the role of ideology in banking interventions. Another question is whether government interventions

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<sup>&</sup>lt;sup>21</sup> Also see Johnson and Mitton (2003) about political influences on private companies in Malaysia. See Fisman (2001), Faccio (2003), Ramalho (2003) on the role of political connections in other countries.

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.

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.

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, the regulatory delays in the thrift crisis of the 1980s in the United States have been well demonstrated.<sup>22</sup> The slow pace of regulatory actions against distressed banks in Japan is another example.<sup>23</sup>

<sup>&</sup>lt;sup>22</sup> See, especially, Kane (1989) and Kroszner and Strahan (1996).

<sup>&</sup>lt;sup>23</sup> See Hoshi and Kashyap (2001).

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# **Table 1: Bank Failures by Country**

The table provides the number of bank failures among the largest 10 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% 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.

		Always			Private Banks			
	Total	Governm	ent-owned					
	Number	T . 1	License		Taken-over	License		
COUNTRY	of	Total	revoked	Total	by the	revoked		
	Banks	Number	Or Liquidated	Number	government	Or Liquidated		
	(1993)		liquidated			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	60	14	0	46	14	0		
Asia)	00	14	U	40	14	U		
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			
Total (Latin America)	70	10	0	60	12	0		

	Total	Always Government-owned		Private Banks			
COUNTRY	Number of Banks (1993)	Total Number	License revoked	Total Number	Taken-over by the government	License revoked	
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	

# **Table 2. Sample Statistics**

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. \*, \*\*\*, \*\*\*\* denote statistical significance at the 10, 5, and 1% levels, respectively, in a two-sided test of the mean with the failed banks and the other banks.

Variable Name		Failed Banks	Other Banks	All Banks
Assets (in \$B)	Mean	10.048	10.533	10.451
	sd.	11.708	13.239	12.988
	N	140	691	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

# Table 3. Average Number of Days Between Bank Failures And Elections

The table provides sample statistics for the time between bank failures and the immediately preceding and following elections. Time is measured in the number of days. For elections with multiple rounds, the date of the first round is used. *Southeast Asia* includes Indonesia, Malaysia, Singapore, South Korea, Taiwan, and Thailand. \*, \*\*, \*\*\* denote statistical significance at the 10, 5, and 1% levels, respectively, in a two-sided test of the mean number of days before and after elections.

	World		Southeast Asia		Rest of the World	
	Before	After	Before	After	Before	After
	Elections	Elections	Elections	Elections	Elections	Elections
Mean	1041.1	440.7***	1028.6	320.9***	1047.8	505.3***
sd.	82.5	58.3	168.8	50.0	91.5	83.5
N	40	40	14	14	26	26

## **Table 4. Elections and Government Interventions in Failing Banks**

The table presents hazard analysis in a multi-period logit framework where the dependent variable is one if the bank fails that year and zero otherwise, conditional on the bank having survived until that year. *Ln (Total Assets)* is the natural logarithm of total assets; *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 one if the bank fails within one year before the elections or, in the case of no failure, the end of bank's accounting year falls within one year before the elections. Heteroscedasticity-robust standards errors, corrected for clustering at the country level, are in parentheses. \*, \*\*, \*\*\* denote statistical significance at the 10, 5, and 1% level, respectively.

Ln (Total Assets)	-0.012	-0.019	-0.135	-0.034	-0.048	-0.159
	(0.128)	(0.163)	(0.093)	(0.130)	(0.154)	(0.100)
Capital Ratio	-27.572***		-23.437***	- 27.392***		- 23.004***
	(7.910)		(7.783)	(7.257)		(6.746)
Operating Income		-27.756***	-14.405**		- 29.908***	- 16.427**
		(9.042)	(7.146)		(8.656)	(6.607)
BeforeElection				-1.553***	-1.704**	-1.796**
				(0.561)	(0.780)	(0.851)
Constant	-0.929	-2.894	0.445	-0.422	-2.118	1.023
	(2.246)	(2.899)	(1.928)	(2.341)	(2.809)	(2.071)
Year Dummies	Yes	Yes	Yes	Yes	Yes	Yes
Number of Banks	163	156	156	163	156	156
Number of Bank-years	881	854	854	881	854	854
Pseudo R-sq	0.218	0.230	0.275	0.245	0.260	0.305

# Table 5. Elections and Government Interventions in Failing Banks: Controlling for Macroeconomic Factors

The table presents hazard analysis in a multi-period logit framework where the dependent variable is one if the bank fails that year and zero otherwise, conditional on the bank having survived until that year. *Ln (Total Assets)* is the natural logarithm of total assets; *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 one if the bank fails within one year before the elections or, in the case of no failure, the end of bank's accounting year falls within one year before the elections. *Currency Depreciation* is the decrease in the local currency's exchange rate against U.S. dollars; it is negative if the local currency appreciates. All macroeconomic variables are as of *t-1*. Heteroscedasticity-robust standards errors, corrected for clustering at the country level, are in parentheses. \*, \*\*, \*\*\* denote statistical significance at the 10, 5, and 1% level, respectively.

Ln (Total Assets)	-0.153*	-0.070	-0.164	-0.145	-0.158
	(0.091)	(0.097)	(0.100)	(0.100)	(0.099)
Capital Ratio	-21.595***	-24.523***	-22.505***	-23.780***	-22.292***
	(7.438)	(8.387)	(7.267)	(8.364)	(7.248)
Operating Income	-13.515*	-14.464*	-15.114**	-16.191*	-14.951**
	(7.630)	(7.707)	(7.687)	(8.452)	(7.913)
BeforeElection	-1.301*	-1.424*	-1.459*	-1.532*	-1.384*
	(0.722)	(0.739)	(0.756)	(0.785)	(0.745)
GDP Growth	-0.078				
	(0.061)				
GDP per Capita		-0.752***			
		(0.281)			
Currency Depreciation			0.048		
			(0.081)		
Log(1+Inflation Rate)				2.567**	
				(1.081)	
Real Interest Rate					-0.0004
					(0.0004)
Constant	1.069	5.866**	1.204	-11.250*	0.990
	(2.014)	(2.881)	(2.062)	(5.874)	(2.038)
Year Dummies	Yes	Yes	Yes	Yes	Yes
Number of Banks					
Number of Bank-years	854	854	840	854	805
Pseudo R-sq	0.306	0.317	0.297	0.308	0.289

## Table 6. Elections and Government Interventions in Failing Banks: Controlling for New Government

The table presents multi-period logit analysis where the dependent variable is one if the bank fails that year or zero otherwise. *Ln (Total Assets)* is the natural logarithm of total assets; *Capital Ratio* is total equity divided by total assets. All the balance sheet variables are book values, normalized by total assets, and as of year *t-1*. *NewGovernment* is a dummy variable that is one if a new party has come to power within a year. *BeforeElection* and *AfterElection* are dummy variables that take one if the bank fails within one year before and after the elections or, in the case of no failure, the end of bank's accounting year falls within one year before and after the elections, respectively. Heteroscedasticity-robust standards errors, corrected for clustering at the country level, are in parentheses. \*, \*\*, \*\*\* denote statistical significance at the 10, 5, and 1% level, respectively.

Ln (Total Assets)	-0.132	- 0.158*	-0.168	-0.172
	(0.089)	(0.096)	(0.109)	(0.114)
Capital Ratio	- 23.057***	- 22.974***	- 25.114***	- 23.749***
	(7.205)	(6.349)	(7.167)	(6.537)
Operating Income	- 13.915**	- 16.381**	- 18.321**	- 18.064**
	(7.025)	(6.504)	(9.024)	(9.223)
NewGovernment	0.277	0.020		
	(0.668)	(0.724)		
NewGovernment * AfterElection			-2.779	-1.119
			(4.220)	(4.316)
BeforeElection		-1.792**		-1.641**
		(0.902)		(0.725)
Constant	0.318	1.011	1.050	1.259
	(1.695)	(1.834)	(2.117)	(2.241)
Year Dummies	Yes	Yes	Yes	Yes
Number of Banks	156	156	156	156
Number of Bank-years	854	854	854	854
Pseudo R-sq	0.276	0.305	0.282	0.306

# Table 7. Elections and Government Interventions in Failing Banks: Controlling for IMF Borrowing

The table presents multi-period logit analysis where the dependent variable is one if the bank fails that year or zero otherwise. *Ln* (*Total Assets*) is the natural logarithm of total assets; *Capital Ratio* is total equity divided by total assets. All the balance sheet variables are book values, normalized by total assets, and as of year *t-1*. *Total IMF Loans* is total IMF loans outstanding to the country in year *t-1* and normalized by the country's GDP. *IMF Borrowing Dummy* is a dummy variable that is one if *Total IMF Loans* is greater than zero. *BeforeElection* is a dummy variable that takes one if the bank fails within one year before the elections or, in the case of no failure, the end of bank's accounting year falls within one year before the elections. Heteroscedasticity-robust standards errors, corrected for clustering at the country level, are in parentheses. \*, \*\*, \*\*\* denote statistical significance at the 10, 5, and 1% level, respectively.

Ln (Total Assets)	-0.144	- 0.174*	- 0.197*	-0.223*
	(0.090)	(0.101)	(0.105)	(0.116)
Capital Ratio	- 23.191***	- 22.520***	- 21.400***	- 20.872***
	(7.891)	(6.940)	(7.381)	(6.600)
Operating Income	- 14.047**	- 16.176**	- 12.258*	- 14.876**
	(7.083)	(6.836)	(6.406)	(6.386)
IMF Borrowing Dummy	0.572	0.585		
	(0.676)	(0.656)		
Total IMF Loans			46.727	40.552
			(28.713)	(26.474)
BeforeElection		-1.797**		-1.658**
		(0.877)		(0.810)
Constant	0.088	0.718	0.743	1.432
	(1.753)	(1.820)	(1.681)	(1.851)
Year Dummies	Yes	Yes	Yes	Yes
Number of Banks	156	156	156	156
Number of Bank-years	854	854	854	854
Pseudo R-sq	0.280	0.310	0.293	0.318

# **Table 8. Elections and Government Interventions in Failing Banks:** Controlling for Early Elections

The table presents multi-period logit analysis where the dependent variable is one if the bank fails that year or zero otherwise. *Ln (Total Assets)* is the natural logarithm of total assets; *Capital Ratio* is total equity divided by total assets. All the balance sheet variables are book values, normalized by total assets, and as of year *t-1. BeforeElection* is a dummy variable that takes one if the bank fails within one year before the elections or, in the case of no failure, the end of bank's accounting year falls within one year before the elections. *Early Election* is a dummy variable that is one if the elections are called ahead of the original schedule. Heteroscedasticity-robust standards errors, corrected for clustering at the country level, are in parentheses. \*, \*\*, \*\*\* denote statistical significance at the 10, 5, and 1% level, respectively.

Ln (Total Assets)	-0.034	-0.048	-0.158
	(0.130)	(0.154)	(0.101)
Capital Ratio	- 27.457***		- 23.006***
	(7.439)		(6.731)
Operating Income		- 29.895***	- 16.388**
		(8.590)	(6.568)
BeforeElection	-1.627***	-1.736**	-1.839**
	(0.622)	(0.787)	(0.813)
BeforeElection * Early Election	0.230	-0.098	-0.137
	(1.248)	(1.475)	(1.704)
Constant	-0.416	-2.118	1.018
	(2.345)	(2.812)	(2.073)
Year Dummies	Yes	Yes	Yes
Number of Banks	163	156	156
Number of Bank-years	881	854	854
Pseudo R-sq	0.245	0.260	0.305

## Table 9. Elections and Government Interventions in Failing Banks: Controlling For Country Fixed Effects

The table presents hazard analysis in a multi-period logit framework where the dependent variable is one if the bank fails that year and zero otherwise, conditional on the bank having survived until that year. *Ln (Total Assets)* is the natural logarithm of total assets; *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 one if the bank fails within one year before the elections or, in the case of no failure, the end of bank's accounting year falls within one year before the elections. Heteroscedasticity-robust standards errors, corrected for clustering at the country level, are in parentheses. \*, \*\*, \*\*\* denote statistical significance at the 10, 5, and 1% level, respectively.

Ln (Total Assets)	0.057	-0.006	-0.022	0.002	-0.059	-0.078
	(0.200)	(0.226)	(0.224)	(0.208)	(0.234)	(0.230)
Capital Ratio	-31.137**		- 19.823*	- 31.289**		- 19.326*
	(15.359)		(11.742)	(15.126)		(10.643)
Operating Income		-28.289**	- 17.180*		- 29.947***	- 18.955**
		(11.767)	(9.042)		(11.065)	(8.740)
BeforeElection				-1.523**	-1.740*	-1.772*
				(0.699)	(1.005)	(1.052)
Constant	-0.581	-1.509	0.165	0.453	-0.412	1.278
	(3.652)	(3.669)	(3.863)	(3.715)	(3.821)	(3.924)
Country Dummies	Yes	Yes	Yes	Yes	Yes	Yes
Year Dummies	Yes	Yes	Yes	Yes	Yes	Yes
Number of Banks	97	87	87	97	87	87
Number of Bank-years	522	471	471	522	471	471
Pseudo R-sq	0.280	0.310	0.334	0.300	0.334	0.358

# Figure 1: 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.

