The Political Economy of Bank Bailouts*

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Abstract

In this paper, we examine how the regulatory design of bailout institutions affects the outcome of bank bailout decisions. In the German savings bank sector, distress events can be resolved by local politicians or a state-level association. We show that decisions by local politicians with close links to the bank are distorted by personal considerations: while distress events per se are not related to the electoral cycle, the probability of local politicians injecting taxpayers' money into a bank in distress is 30% lower in the year directly preceding an election. Using the timing of the distress event in the electoral cycle as an instrument, we show that a decentralized local bailout results in worse future performance and less efficient credit allocation of the affected banks. We also observe a significantly worse real sector performance of localities under decentralized political bailouts as compared with those under centralized association bailouts. Our findings illustrate that larger distance between banks and decision makers reduces distortions in the decision making process and has implications for the design of regulatory architecture.

Keywords: political economy, bailouts, state-owned enterprises, elections, decentralization
JEL Classification: G21, G28, D72, D73

1 Introduction

The optimal distance between regulators and regulated entities in the banking sector is one of the major issues in current discussions among academics and policy makers (Agarwal, Lucca, Seru, and Trebbi (2014), Colliard (2014)). For example, decisions on bank bailouts are often taken by politicians, and in many cases these politicians are closely linked to the banks in distress. Such links can range from personal relationships with top bankers to direct ownership relationships (in case of state-owned banks). On the one hand, such close proximity has the potential to improve the decision making process, as it provides politicians with good information about banks that get into distress. On the other hand, close proximity could imply that politicians' personal considerations distort the decision making process, which is clearly undesirable. Greater distance between banks and politicians would solve the issue, potentially at the expense of less informed decisions. Whether the informational benefits of proximity outweigh the costs of decisions distorted by personal interests is an empirical question that we aim to examine in our paper. Specifically, we analyze how the regulatory design of the regime affects the outcome of bank bailout decisions.

Identifying the effects of distance between decision makers and affected financial institutions on bailout decisions is empirically challenging for several reasons: First, bank distress and the subsequent bailouts are (fortunately) rare events, which greatly complicates the empirical analysis. Second, there is a lack of counterfactuals against which bailout decisions can be evaluated. It is hard or even impossible to say what would have happened if a specific bank had not been bailed out. Finally, it is cumbersome to identify the distance between decision makers and affected financial institutions, which is necessary if one wants to analyze the effect of this distance on the decision making process.

The German savings bank sector provides a unique laboratory in which we can address these challenges. There are 429 individual local savings banks with a combined balance sheet total of €1,084 billion, representing a relatively homogeneous group. Between 1995 and 2010, we are able to compile a sample of 148 savings banks distress and bailout events, which firstly allows us to carry out empirical analysis. One critical feature of our setting is that either *local politicians* or *savings bank associations* would organize bailouts for distressed banks. The savings bank association has an extensive guarantee system that ensures the solvency and liquidity of its member institutions. The association's decisions on capital injections and distressed mergers are driven by economic considerations, they provide an ideal benchmark against which the bailout decisions by local politicians can be evaluated. In the end—and perhaps most importantly—Deutsche Bundesbank provides detailed information about distress events of savings banks that allows us to identify the capital injections of different parties as well as other restructuring

measures around the events. The bailouts organized by local politicians and those organized by associations differ precisely in the distance between decision makers and the banks in distress.

To be more specific, there is a close connection between savings banks and municipalities which formally own the banks. Local politicians tend to be members of the banks' supervisory boards; most prominently, the city major or county administrator usually serves as chairman of the board. As such, he has a considerable amount of control over the bank, from which he plausibly derives both pecuniary and non-pecuniary benefits.[1] Moreover, individual savings banks are interconnected by state-level associations. These associations operate an extensive safety net that has ensured that no savings bank in Germany has ever failed (Sparkassen-Finanzgruppe (2004)). The safety net functions like an insurance scheme: Whenever one of the member institutions gets into distress, the other banks in the association have to step in and provide support. To prevent a recurrence of the distress event, the association imposes a so-called restructuring plan on the bank. The plan imposes tight restrictions on the operations of the bank and could, in the worst case, involve a merger of the bank with another bank in the association. The implementation of a restructuring plan is likely to constrain the power of the local politician who acts as a chairman of the bank; e.g., in the case of a distressed merger, he is very likely to lose his position, and with it his influence on the operations of the bank.

The crucial feature of our setup is that local politicians can avoid formal distress cases by making use of taxpayers' money to support the bank in distress. In this case, the distress event is resolved without involvement of the state-level association and no restructuring plan is implemented. Whether or not politicians intervene should ideally depend on economic considerations such as the future viability of the bank or implications of the intervention for the overall economy. As the local politicians are close to the bank, they could benefit from informational advantages and tailor their policies to local needs. However, as politicians have been found to maximize their probability of re-election, decisions could also depend on political considerations. Interventions could either be seen as negative, if voters perceive them as a waste of taxpayers' money, or as positive, if voters agree with the politician that tight restructuring measures should not be imposed on the bank. Regardless of voter preferences, we can test whether political considerations distort local politicians' decisions on bank bailouts by analyzing whether the likelihood of interventions depends on the extent to which these interventions could affect the politician's probability of re-election.

To do so, we have to identify situations in which potential effects on the probability of re-election are particularly large. One such situation can be derived from the electoral cycle, as a

[1]For example, he can influence the allocation of earnings of the bank. Besides profit maximization, savings banks are mandated to serve the local community. Therefore, their earnings are often used to fund community projects, local events, or other activities within the municipality. Anecdotal evidence suggests that politicians often use these funds as a 'shadow budget' that is not controlled by the local parliament and hence gives them more freedom in the allocation of funds. Moreover, the compensations for their position as a chairman are one of the few perquisites that local politicians are allowed to keep for themselves (Die Welt (2012)).

great number of papers have documented that voters tend to forget events that occurred early on in the electoral cycle (Rogoff and Sibert (1988)). Thus, if an election is imminent, interventions are more likely to have an impact on the politicians' probability of re-election. Another situation arises when political competition in the respective municipality is tight. With greater political competition, important events are more likely to actually affect the politician's probability of re-election. Finally, we also investigate whether politicians' ideology plays a role in decisions on bank bailouts. We find that occurrence of distress events of German savings banks between 1995 and 2010 is not correlated with the electoral cycle of politicians. Thus, local politicians are unlikely to be able to delay distress events until the election is over (see e.g. Brown and Dinc (2005), Liu and Ngo (2014)). The decision of a local politician to inject tax payers money in a distressed banks does however depend on the electoral cycle. Conditional on distress (148 cases) politicians are about 30% less likely to inject capital into a distressed bank in the twelve months preceding an election as compared with the twelve months following an election. If there is high competition in the electoral process, a political bailout is 15% less likely. The findings are robust to the inclusion of a wide set of macroeconomic as well as bank-specific control variables. Overall, these findings are in line with the notion that decentralized bank bailout decisions from a local politician are distorted by the their personal considerations.

On the one hand, the above findings allow us to understand how the incentives of local politicians affect the types of bailout decisions. On the other hand, they provide an identification strategy to evaluate bailouts organized at the local level and at the centralized association level. Thus, in the second part of the paper, we use the timing of the distress event in the electoral cycle as an instrument of the bailout type. Apart from its influence on the probability of a bailout by the local politician, the timing of the distress event in the electoral cycle should not have an influence on the affected banks or the local real sector in the long-run. One distinct feature of our setting is that the German local politicians are not able to endogenously affect the timing of distress events. Therefore, the distress events and the necessary following bailouts are unlikely to be triggered by election-related factors. Moreover, we show balance of covariates for banks/areas experiencing distress events before and after the election, verifying the exogeneity of our instrument. As business cycle does not seem to be directly affected by politicians' re-election considerations, the effects we find are likely to work through the bank bailout channel. Further we examine the average long run effects post bailouts, so any politician-induced cyclicality tends to be absorbed already by construction. As a result, an alternative channel that is driven by political considerations and thereby create electoral cyclicality in outcome variables, is not likely to lead to our findings. Taken together, the concern on exclusion restriction is alleviated. The main focus of our paper is the post-bailout evaluation of the two bailout regimes. In one regime the decision maker is closer to the bank in distress, and those bailouts are classified as decentralized bailouts organized by the local politicians. In the other regime due to the larger distance between the decision maker and the distressed bank, those bailouts are classified as

centralized bailouts organized by the state-level savings bank associations[2]. We first compare the long run performance of the affected banks following decentralized v.s. centralized bailouts. To better understand the potential inefficiencies caused by decentralization, we further explore the different patterns in state credit allocation. As a final piece of evidence, we compare the development of the corporate sector around the distress events.

We find that following the distress event, within a given county, the share of loans extended by state banks increases if the distress event is resolved by the politician rather than the association. For the affected banks, we find that restructuring activities are considerably less for those bailed-out by the local politicians. Even local politicians should in principle be better informed about their respective banks, the restructuring by them does not result in better long-term performance. The comparison of the long-run performance of banks under decentralized bailouts v.s. centralized bailouts yields a consistent pattern: Banks that obtained support from the association perform better and are also better capitalized in the years following the distress event. We further explore the drivers of these relatively undesirable outcomes under decentralized bailouts by focusing on credit (mis)allocation around bailouts. We find strong evidence that decentralized bailouts to distress banks may lead to distortions in their lending practices. Those banks are more likely to allocate credit to less efficient firms and engage more in connected lending compared to banks under association bailouts. When we turn to the local real sector, the most crucial finding is that the long run growth in the corporate sector is negatively affected if the capital injection is provided by the local politician as compared to the association. Entry and exit are also impeded in areas with decentralized political bailouts, which may potentially lead to a less dynamic macroeconomic environment, weakening growth prospects of the respective region. Overall, we observe a significantly worse real sector performance of counties under decentralized bailouts as compared with those under centralized ones. The above documented inefficient allocation of credit and preferential lending could partially account for the worse real sector performance. To sum up, both fiscal costs and real costs of the bail-outs carried out by decentralized decision-makers, can be quite substantial in particular for rather small municipalities.

There is now a growing literature that examines the various economic trade-offs that accompany bank bailout decisions.[3] Proponents of bank bailouts argue that bank failures generate significant negative externalities that can have debilitating real effects. Thus, every effort should be made to avoid bank failures. Critics, on the other hand, voice concerns about the fiscal costs and moral hazard problems that accompany bank bailouts. Most of these discussions, however,

[2]In this paper, *decentralized bailouts* stand for the *bailouts organized by local politicians*, or simply, *political bailouts*. *Centralized bailouts* stand for the *bailouts organized by state-level savings bank associations*, or in short, *association bailouts*. We use those terms interchangeably throughout the paper.

[3]See Merton (1977), Keeley (1990), Demirguc-Kunt and Detragiache (2002), Dam and Koetter (2012), Gropp, Hakenes, and Schnabel (2011). A detailed discussion of state-supported schemes for financial institutions is provided by Beck, Coyle, Dewatripont, Freixas, and Seabright (2010).

omit an important factor that could affect bank bailout decisions, namely the personal interests of politicians involved in these decisions.[4] Politicians may follow their own interests (i.e., constituents and special interest pressure in order to increase their probability of re-election) or their own ideological preferences (e.g., the conservative principle of limited intervention in private markets; see Peltzman (1985), Poole and Rosenthal (1996)). Since bailout decisions have dramatic consequences on the resulting market structure as well as on banks' risk taking[5], an understanding of the role of politicians is of major importance.

The paper furthers the literature examining how political variables affect bank distress events and bailout decisions.[6] The most related paper is Brown and Dinc (2005), who find for a sample of 21 emerging markets that failures of the largest banks in these countries are significantly more likely directly after an election as compared with the time before an election. While their paper is about the delay of bad news about bank failures prior to elections, we provide evidence that local politicians exploit their power to keep control of a bank if political circumstances allow it. Exploiting variation in the scheduling of gubernatorial elections to study the timing of bank failure in the US, Liu and Ngo (2014) find that bank failure is about 45% less likely in the year leading up to an election. Political control (i.e., lack of competition) can explain all of this average election year fall in the hazard rate. Halling, Pichler, and Stomper (2016) document that politicians with less secure reelection prospects are more prone to take advantage of their captive banks, and that this effect is more pronounced in areas with high GDP per capita. Another example of political influence on bank bailout decisions is provided by Imai (2009). He shows that bank regulators in Japan delay declarations of bank insolvency in counties that support senior politicians of the party in power.[7] While the previous literature documents the tendency to delay bank failure until after the election, local politicians in Germany do not seem to have the same ability to endogenously affect the timing of distress events in the electoral cycle. We argue that this is potentially due to strong supervision in the German banking sector, where banks are required to report monthly capital adequacy ratio. Politicians in Germany thus have some flexibility not over the *timing* of bailout (closely following the distress), but over the *type* of the bailout. Therefore, one contribution of our paper is that we point out this alternative degree of freedom when politicians' are dealing with failing banks under strong supervision. The empirical evidence on political business cycle remains inconclusive. Drazen (2000) summarizes that empirically there is little evidence of political factors influencing the macro economy. Dinc (2005) and Sapienza (2004) show that government-owned banks increase their lending in election years relative to private banks. For Germany, Vins (2008) and Englmaier and Stowasser (2013)

[4] A notable exception is Brown and Dinc (2005), who provide evidence that politicians in emerging countries delay bank failures until after the election.

[5] See Dam and Koetter (2012), Gropp, Hakenes, and Schnabel (2011).

[6] See Duchin and Sosyura (2012), Pana and Wilson (2012), Puente (2012).

[7] The influence of political incentives on bailout decisions is not constrained to the banking sector. Faccio, Masulis, and McConnell (2006) find that firms in 35 countries are more likely to be bailed out by the government if one of their top officers or a large shareholder is a member of the national government or parliament.

examine how savings banks adjust their behavior around elections. They find that layoffs of employees, closures of branches or merger activities of these banks are significantly less likely prior to an election. At the same time, savings banks increase their lending around elections in order to induce favorable economic outcomes for the politicians. One may interpret those findings as evidence against our identification strategy as any observed effects may result from the politicians' other election-induced behavior rather than the bailout decision. An important note is that our instrument is not the electoral cycle itself, but the timing of a distress event in the electoral cycle. Any politician-induced cyclicality tends to be irrelevant since we focus on changes in long run average values after the distress/bailout. For example, the lending cycle mentioned in Englmaier and Stowasser (2013) is absorbed by construction when we take a five-year average value of the outcome variable as the electoral cycle itself is five years.

Our paper has important policy implications on the optimal decision-making process that decide on bank bailouts. The two types of bailouts (political v.s. association) correspond to decentralized v.s. centralized decision making processes. Although a decentralized system may imply close proximity, thus more local knowledge for the decision maker and tailored policies to local needs, we document that bailout decisions are often driven by personal incentives and ideology. A centralized decision-making process, with larger distance between the decision makers and the distressed banks, requires policymakers to rely on a broader perspective. Centralization is also likely to reduce personal stakes of politicians, and may therefore result in more efficient decisions on financial sector interventions. The discussion on centralization v.s. decentralization of decision making is not new. The decentralization theorem raised by Oates (1972) argues that in the absence of any externalities or spillovers, decentralization is more efficient than centralization if regions are not identical. Prior theoretical work discussed the advantages and disadvantages of decentralization (See Oates (1972), Alesina and Spolaore (2003), Lockwood (2002), Harstad (2007) and Boffa, Piolatto, and Ponzetto (2016)). Specifically, Colliard (2014) put forward a model incorporating the trade-off between better knowledge and biased incentives for local supervisors as compared with a central supervisor. In this regard, we provide novel empirical evidence by carefully evaluating the outcome of centralized v.s. decentralized bailouts.

Our results illustrate the undesirable features of a decentralized decision-making regime in bank bailout decisions, shedding some light on the complex and obscure empirical literature on the consequences of decentralization (Treisman (2007)). More importantly, our findings can be considered as relevant for the debate about the optimal level of banking supervision in the United States (Agarwal, Lucca, Seru, and Trebbi (2014)), or the discussion about a unified banking supervision within the Euro zone. Boffa, Piolatto, and Ponzetto (2016) proves theoretically that centralization results in aggregate efficiency gains due to the decreasing and convex function of rent extraction on the share of informed voters. The key insight of their paper is that high diversity of information or institutional quality pushes towards centralization. Applying our results to a broader geographical level, for example, the Euro zone, when the voters' ability

to monitor the decision-makers is much more heterogeneous compared to Germany, the gains yielded by centralization in banking regulation can be even larger. The centralized banking regulation party is mainly monitored by the most informed and capable regions, resulting in better incentives and less distorted decisions than the average local regulator. This benefit, is more likely to surpass the cost to understand local banks for centralized regulators nowadays with advances in information technology and a more integrated banking system. One major purpose of Single Supervisory Mechanism (SSM) is exactly to facilitate the supervisory information collection in the European banking sector.

Finally, our paper is related to a broader literature on the political economy of finance. Especially in the aftermath of the recent crisis, several papers examine how legislation on the financial industry is affected by lobbying of special interest groups and voter interests (Mian, Sufi, and Trebbi (2010), Mian, Sufi, and Trebbi (2013) and McCarty, Poole, Romer, and Rosenthal (2010)). Lobbying by financial institutions affects the regulatory environment and might have negative consequences for financial stability (see Romer and Weingast (1991) for the U.S. in the 1980s). Kroszner and Strahan (1999) provide evidence that special interests of the financial industry affected the timing of bank branch deregulation in the U.S. Similarly, Nunez and Rosenthal (2004) show that both ideology and interest group interventions are important for U.S. legislation on bankruptcy. In another recent paper, Agarwal, Amromin, Ben-David, and Dinc (2017) examine whether the foreclosure decisions of banks during the recent crisis reflect these banks' political concerns and find that banks delayed foreclosures on mortgages located in districts whose representatives are members of the Financial Services Committee in the U.S. House of Representatives. Again, politicians and bankers seem to affect each others' actions. Compared to the papers mentioned above our study takes a somewhat different approach. Rather than investigating how decisions of politicians are influenced by the financial industry, we concentrate on politicians' incentives to keep control of a bank that is currently in their sphere of influence.

The remainder of the paper is organized as follows. The next section provides an overview of our institutional setup. In Section 3 we describe the construction of our dataset. Results on the influence of political variables on bailout decisions among German savings banks are presented in Section 4. In Section 5, we examine how the consequences of bailouts depend on the type of the bailout. Finally, we conclude in Section 6.

2 Institutional background

2.1 Distress events in the savings bank sector

The focus of our paper is on savings banks, which grant about a quarter of all corporate and consumer loans in Germany (see Sparkassen-Finanzgruppe (2010)). In 2010, the savings bank sector consisted of 429 individual banks with a combined balance sheet total of € 1,084 billion, 15,600 branches, and about 250,000 employees. By statutes, savings banks do not compete one with the other as their operations are constrained to the city or county that formally own them. The head of the respective local government, who is either a city mayor or a county administrator (referred to as local politician throughout the paper) acts as the chairman of the local savings bank's supervisory board.[8] Their position as a chairman of the board gives local politicians a strong influence on the operations of the bank (e.g., the appointment of bank management and the allocation of earnings).

Individual banks are connected by so-called savings bank associations that operate safety nets at the state level (referred to as the association throughout our paper).[9] Figure 1 illustrates the set-up of a savings bank association. The decision making board of the association consists of representatives from the individual banks (local politicians and bank executives) who are elected at general meetings of the association and serve for four- or five-year terms.[10] Savings bank associations collect data on the solvency and liquidity of their member institutions and transmit this information to the supervisor. Furthermore, they operate guarantee funds that function like an insurance scheme: If one of the member institutions gets into distress, the other banks in the association have to step in and provide support, where the main support measures are capital injections and debt guarantees.[11] Support is provided under the condition that the bank follows a restructuring plan which is proposed by the association. As often emphasized by the savings bank organization, the extensive safety net has ensured that no savings bank in Germany has ever failed. The claim is that distressed savings banks will always be bailed out by the association.

[8] The supervisory board of a savings bank has about 15 members. The members besides the chairman are representatives from local authorities (in most cases politicians from the local parliament who account for about two thirds of the board members).

[9] The associations do not exactly match the 16 German states (i.e., there are only 12 associations). For example, four of the former GDR states form a single association. The twelve state-level association are themselves connected in the "Deutscher Sparkassen- und Giroverband" at the federal level.

[10] General meetings of the association are attended by the chairmen of the individual banks, the directors, and one additional board member per bank. Among themselves, the attendees of the general meeting elect the members of the board of the association (see, e.g., Rheinischer Sparkassen- und Giroverband (2009)).

[11] The savings bank sector operates a three-layer liability scheme, where the regional guarantee funds constitute the first layer. In the second layer, state-level association would have to step in one for the other, and in the third layer there is a joint liability scheme with central savings banks ("Landesbanken") and central building societies ("Landesbausparkassen").

An interesting feature of this institutional setup is that local politicians can avoid formal distress cases by making use of taxpayers' money to support a savings bank that gets into distress. In this paper, we investigate how local politicians' decisions on support measures depend on political variables such as the time to the next election. To clearly illustrate the role of local politicians in our set-up, we outline the sequencing of decisions in case of bank distress below:

- The most common reason for distress events of saving banks is the default of one or more big borrowers of the savings bank. In case of material losses that could induce a capital shortfall below the regulatory minimum the savings bank has to inform the board of the association.

- The board of the association meets with the bank's management and its supervisory board to obtain background information on the distress event. Afterwards, the board of the association decides on the kind and the volume of support measures for the bank. Moreover, it decides on a restructuring plan to be imposed on the bank.

- As the association wants to avoid that it has to step in again at a later point, all support measures are conditional on the restructuring plan which has to be accepted by the bank's management and supervisory board. The plan may include an organizational restructuring, a dismissal of the management and—in the worst case—a merger of the bank with another bank in the association (so-called distressed merger). As it imposes severe restriction on the bank's operations, the plan is likely to limit the local politician's influence on the bank.[12]

- At this point, local politicians (serving as chairmen of the supervisory board) can step in and prevent the implementation of a tight restructuring plan. If the local parliament agrees, they can use taxpayers' money to save the bank in distress. In this case, the distress event is resolved without involvement of the association, and the implementation of a restructuring plan is not required.[13]

- In a few cases (i.e., 4 of the 148 distress events in our sample), support measures are jointly provided by the association and local authorities. These distress cases tend to be organized by the association.

In summary, while savings banks in distress will always be bailed out, there are two different ways in which the bailout can be organized. On the state level, the association operates a safety net for these banks. The decision on support measures and restructuring plan is made

[12] E.g., in the case of a distressed merger, the politician is very likely to lose his position as a chairman.

[13] We will show in the subsequent section that bailouts organized by local politicians are indeed characterized by considerably less restructuring compared with bailouts organized by the association.

by the board of the association, which consists of politicians and bank executives from other municipalities covered by the respective association. The board members have to rely on a broad perspective when deciding on support measures. Due to the distance between their own jurisdiction and the savings bank's municipality they do not derive any benefits from controlling the bank.

On the local level, the politicians who chair the supervisory board may step in by injecting taxpayers' money. Such interventions allow them to prevent the implementation of restructuring activities by the association. This could be efficient, since local politicians, compared with the board of the association, are much closer to the bank and thus have better information on the underlying causes of the distress event. Moreover, they might know better what a restructuring of the bank would mean for the local economy (which they govern in their function as city major or county administrator). However, decisions by local politicians could be distorted by personal considerations. Restructuring activities imposed by the association are likely to reduce the pecuniary and the non-pecuniary benefits that local politicians can derive from their position as a chairman. For example, their ability to influence the allocation of earnings—which gives them access to funds that are not controlled by the local parliament—is likely to be constrained. Such considerations might lead the politicians to intervene also in cases where tight restructuring (or even a distressed merger) would actually be the more efficient option.

2.2 The German electoral system

Since supervisory boards of our sample banks are chaired by local politicians, we briefly summarize the German political system. Germany is organized as a parliamentary democracy with three layers of government: The federal republic, 16 states ("Bundesländer"), and 402 county districts consisting of 295 rural counties that are headed by local administrators, and 107 urban cities that are headed by mayors. Separate elections on each layer take place in regular intervals.

The focus of our paper is on the elections in rural counties and urban cities, for which the laws are enacted at the state level. While the electoral cycle for county / city parliaments is five years in almost all German states (with the exception of Bavaria and Bremen, that have a six year and a four year cycle, respectively), there are some differences in the elections of local heads of government. In many German states, mayors or district administrators are directly elected in separate elections that take place on the same day as the election of the local parliament. Our focus is on parliamentary elections at the county or city level. In most cases these election take place on the same day as the election of the mayor / county administrator.

3 Data and Descriptives

Our analysis covers the German banking sector over the period from 1995 to 2010. We combine several confidential datasets from the Bundesbank's supervisory and statistics departments to compile a unique dataset that allows us to cleanly identify distress events of savings banks. In the first part of this section we explain the construction of this distress event variable. In the second part we describe bank-level and macroeconomic variables. The third part introduces the political variables and explains the motivation behind them. The final part describes the construction of outcome variables using contract-level lending information.

3.1 Distress events

We define distress events as cases where savings banks receive external support from the local politician under decentralized decision-making and / or the association under centralized decision-making, in response to a capital shortfall below the regulatory minimum (in the form of capital injections and / or guarantees), or when it is taken over by another savings bank in a distressed merger. Identifying distress events in the savings bank sector is cumbersome, since some types of support measures cannot be identified from banks' balance sheets (e.g., guarantees provided by third parties do not show up in the balance sheet). Furthermore many savings banks have been involved in mergers without being in distress. We therefore combine four sources from Deutsche Bundesbank's supervisory data to cleanly identify distress events; that is, the Bundesbank's prudential data base for banking supervision (BAKIS), the monthly balance sheet statistics (BISTA), the borrowers' statistics, and the Bundesbank's data base on distress events (see Appendix for a detailed description of the four underlying datasets). Additionally, we consult local media coverage on distress events obtained from the GENIOS data base in order to verify our event dates.

First, we identify capital support measures by the local politicians by exploiting a peculiarity in savings banks' balance sheets. For historical reasons, the equity of these banks usually consists solely of contingency funds (so called "Sicherheitsrücklage"). These funds were originally provided by the owner of the bank in the year of foundation and then accumulated over the years out of the bank's retained earnings. However, if the savings bank—besides its equity in the contingency funds—also has subscribed capital unequal to zero, then this usually indicates an undisclosed participation of the bank owner (so-called "stille Einlage"). We therefore define an increase in subscribed capital subsequent to the bank's losses as capital injections from the local politician, who acts as chairman of the bank's supervisory board .[14] By using historical

[14]We rule out increases in subscribed capital that can be explained by takeovers or restructuring of equity positions. In some German states the savings bank law allows undisclosed participation not only from the owner

data of subscribed capital from the monthly balance sheet data (BISTA) we are able to identify the size of the capital injection as well as the particular month in which the event occurred.

Second, we code capital support measures by the savings bank association. Whenever one of the associations provides support to a savings bank—most often in the form of guarantees—this event is recorded in the so called "Sonderdatenkatalog 1" of the BAKIS database.[15] The data source is, however, only available at annual frequency. To determine the month of these events within a given year, we consult two further databases: First, we obtain data on capital adequacy ratios from the monthly balance sheet database BISTA;[16] and second, we identify large write-offs from the borrowers' loan statistics that is available on a quarterly basis.[17] We are therefore able to verify our identified events from two distinct Bundesbank data sources. In those cases in which we can only identify the respective quarter, we always assign the mid month of the respective quarter as the event month. We cross-check our event dates with media coverage on local distress events obtained from the GENIOS data base and find that the dates are broadly consistent with the coverage in the local press. There are some cases where savings banks received support from the association and the local politician within the same year (four cases); we assign these events to the source that provided the larger amount of funds.[18]

Third, we obtain information on distressed mergers from the Bundesbank database on distress events.[19] A takeover of a distressed savings bank is organized by the savings bank association which identifies another savings bank in close geographic proximity to acquire the bank in distress. While capital injections as well as provisions of guarantees occur right after the bank falls short of regulatory capital (the distress event), there is generally a time gap between the actual distress event and the merger. In order to identify the actual date of the distress event we once more rely on large write-offs from the borrowers' loan statistics (as described above). For the savings bank that had a distressed merger before 2002 (the year when the borrowers' statistics database was initiated) we consult local media coverage from the GENIOS data base where

of the bank, but also from the savings bank association. However, this is the rare exception and we rule out these cases using the BAKIS database as described in the subsequent paragraph.

[15]Banks are legally bound to report this information to Bundesbank and BaFin. In contrast to pure balance sheet information this dataset contains confidential supervisory information.

[16]Large increases in the capital adequacy ratio in a certain month indicate that the savings bank received capital support at this time. Capital adequacy ratios in the BISTA are available on a monthly basis until the end of 2007, and on a quarterly basis from 2008 on.

[17]Large write-offs on loans in a given month indicate that the savings bank experienced a distress event at this time. Loan portfolio write-off data is available from 2002 on in the borrowers' statistics; therefore, it can be used to double-check the information on the timing of bailout events, in particular by the banking association, for roughly half of the time-period of our dataset. For the period before 2002 we have to rely on the evolution of the capital adequacy ratio in order to identify the timing of the distress event within a year.

[18]All results also hold if we exclude these cases.

[19]As the distress database is only available until 2006, we define distressed mergers in the years 2007-2010 as passive mergers where the bank that was taken over experienced a severe distress event in the three years before the merger (i.e., a moratorium, a capital support measure, or a capital ratio below the regulatory minimum).

it is available. For the remaining cases we consult the responsible local supervisors responsible for the respective saving bank to learn about the date of the distress event.

Overall, we identify 148 distress events of German savings banks during our sample period from 1995 to 2010. Among these 148 distress event, more than one third was resolved by capital injections from the local politician (55 cases). The remaining 93 events were dealt with by the association. Out of these 93 cases, 44 banks experienced a distressed merger in the year following the distress event (see Table 1, Panel A). On average, the capital support amounted to around 15% of the distressed bank's total equity. The size of the support is roughly the same for the banks bailed-out by the politician and those by the association. A definition of all variables is provided in Table A1 in the Appendix. The distress events are relatively evenly distributed over the sample period, with multiple events in each year, as illustrated in Figure 2.

3.2 Bank and macroeconomic variables

We use bank and macroeconomic control variables to account for potential differences between banks that were bailed out by the local politician and banks for which the distress event was resolved by the association. Annual bank balance sheet data for all German savings banks is based on the unconsolidated balance sheet and income statement reports provided by the BAKIS database.[20] Table 1, Panel B, provides sample statistics for balance sheet items used in the empirical analysis. We compare the values of banks that had a distress event during our sample period with those of the average savings bank (633 in total). Banks that received capital injections from the local politician are larger than average, both in terms of total assets as well as in terms of total assets divided by county-level GDP, while banks that were supported by the association are of similar size as the average bank.[21] Further, the bank's regional market share (proxied by the share of branches within the county) is slightly higher than the sample mean for banks that received support from the politician and significantly lower than average for banks that received support from the association. Overall, these descriptive statistics suggest that banks that are relatively important (as measured by size) tend to be bailed out by the politician.

Not surprisingly, the ratio of total equity to total assets is lower for banks that experienced either type of support measure. Moreover, these banks also have a lower ROA and a higher ratio of non-performing loans to customer loans on average. In contrast, the deposit ratio (savings deposits, term deposits, and time deposits to total assets) is significantly lower for banks that received support from the politician. The table further reports statistics on the amount of loans

[20] We apply a very thorough merger treatment to the dataset: After the merger of two banks we artificially create a third bank (for the time after the merger) in the dataset. Note that the merger treatment causes the total number of banks in the dataset to exceed the maximum number of banks in a given time period.

[21] A definition of all variables is provided in Table A1 in the Appendix.

granted by the bank to its owner divided by county-level GDP, which is slightly higher for banks that obtain support measures from the politician as compared to those banks that are supported by the association.

We define an additional variable that we use in the empirical analysis for the 148 distress cases. The dummy variable *Bank Chairman in Ass. Board* indicates whether the distressed bank's chairman is also a member of the board of the association.[22] As the board of the association makes the decision on potential support measures by the association, the bank's chairman might be able to influence this decision if he is a member of this board. Overall, the politician is also member of the association board in 20% of the savings banks considered.

Our regional variables are gathered from various data sources. We obtain information on county level GDP per capita, its growth rate as well as the ratio of government debt to GDP on the county / city level from the 16 German State Statistical Offices. Descriptive statistics for these variables are provided in Panel C of Table 1. On average, banks experiencing a bailout by the politician are located in a municipality with lower GDP growth in comparison to the municipalities of banks that are bailed out by the association. Furthermore, municipalities where politicians conduct bailouts have a higher GDP per capita and are less indebted than the average municipality.

Focusing on the 148 distress events, we provide direct descriptive statistics for changes in restructuring-related variables of affected banks in Table 2. Specifically, we examine the growth rates in customer loans, employees, personal expenditures and the number of branches of the bank around the bailout events. This allows us to get an idea whether local politicians tend to inject funds in specific type of banks. The first section of the table shows the average annual growth rate in the years preceding the distress event for the respective type of bailout. For example, banks that received support from the association during our sample period had an average customer loan growth rate of 6.3% in the years between the beginning of our sample period in 1995 and the year of the distress event. Similarly, column (2) shows that the average growth rate was 5.8% for those banks that received capital injections from the politician and column (3) shows that the difference between the two groups of banks is not significant. In the post bailout years, the average growth rate is significantly lower than the pre-event average for both types of events. However, the decline in the average growth rate is more than twice as large if the distress is resolved by the association, and column (3) shows that customer loan growth after the bailout is significantly higher if the bank is saved by the politician. In line with the implementation of a tight restructuring plan, also the development of the number of employees, and—to a lesser extent—personal expenditures and the number of branches indicates more restructuring activities for bailouts that are organized by the association.

[22]Information on the composition of the boards of the association at each point in time is hand-collected from the respective annual reports of the associations. We carefully match association board members with chairmen of the individual banks by comparing both the name of the chairman as well as the county/city he is from.

3.3 Political variables

We analyze whether political considerations affect the way in which distress events are resolved. On the one hand, it is possible that voters perceive an intervention by local politicians as a suboptimal usage of taxpayers' money. The savings bank organization has an extensive safety net in place, so that convincing voters of the economic necessity of using local funds to save the bank appears rather difficult. Following this argumentation, interventions by local politicians would decrease their chances to be re-elected. On the other hand, voters could be in favor of having an independent savings bank within the municipality. This would imply that interventions by local politicians are popular among voters and hence increase the politician's chances of re-election.

Irrespective of voters' preferences, such political considerations should not affect the decision making process. Decisions on bank bailouts should be based on economic considerations such as the bank's future viability or implications for the overall economy, and not on personal considerations of the involved politicians. As long as the occurrence of distress events themselves is independent of political considerations, also the way in which the distress events are resolved should be independent of such considerations. Hence, any influence of political considerations on the likelihood of interventions by politicians can be seen as a sign of distorted decision making.

To analyze whether political considerations matter we identify situations in which they should be more important. Several papers have documented that voters tend to forgive events that occurred early on in the electoral cycle (e.g., Rogoff and Sibert (1988)). In other words, if an election is imminent, interventions by politicians are much more likely to affect their probability of re-election. Thus, the timing of the occurrence of a bank distress event in the electoral cycle could affect the decision of a politician in case she / he cares about re-election.

For the empirical analysis, we hand-collect information on the identity and the position of distressed savings banks' chairmen from the banks' annual reports as published in the Bundesanzeiger.[23] We use various Internet sources in order to determine the party membership of these chairmen. Results and dates of elections on the county / city level are obtained from the 16 German State Statistical Offices. We carefully match counties and cities with owners of our sample banks.[24] In this way, we are able to obtain information on the elections in all cities or counties that own one of our sample banks.

We define *Electoral Cycle Dummies* as follows: The dummy variable *D(0-12 months after)* takes a value of one during the 12 months after the local election and zero otherwise. The dummy variables *D(12-24 months after)* takes a value of one for the time from the 12^{th} to

[23] This information is available online from 2006 onwards (www.bundesanzeiger.de). For earlier observations, we consulted microfiche versions of the Bundesanzeiger provided by the university and regional library in Bonn.

[24] In cases where several city or counties jointly own a savings bank there is generally one dominant county or city that owns the largest share of the bank. We account for this by matching the respective bank to the county or city in which its headquarters are located.

the 24^{th} month following the local election and zero otherwise. The dummy variables *D(24-36 months after)* and *D(36-48 months after)* are defined accordingly and *D(36-48 months after) is equivalent to D(12-24 months before)* as the length of the electoral cycle is usually five years. The 12 months preceding an election is denoted by *D(0-12 months before)* , which serves as the benchmark category against which the other time periods are evaluated in Section 4.[25]

A second proxy for political constraints is the degree of political competition in the respective city / county. If competition between different parties within the county/city is tight, a decrease in the probability of re-election is more material since a small swing can in fact reverse the election outcome. We thus define the variable *Competitive County* as follows: First, we calculate the vote share margin between the first and the second party within the county / city from the respective state election.[26] Second, we then define a dummy that is equal to one if the vote share margin is smaller than the median and zero otherwise. The intuition behind this dummy is the following: The smaller the vote share margin between the first and the second party, the more intense the political competition and the more effective the disciplining role voters can exert on politicians.

A politician's bailout decisions might be influenced by his / her ideology. To proxy for a politician's ideology we define the dummy variable *Cons. Bank Chairman:* The variable is equal to one if the chairman of the bank is a member of the German conservative party ("CDU/CSU"). A fundamental conservative principle is limited government intervention in markets. If politicians act according to this principle, we would expect less capital injections from the politician if the chairman of the bank is a CDU/CSU member.

3.4 Loan variables

The German credit register at Deutsche Bundesbank provides detailed contract-level information between all German firms and the banks extending credit to them[27]. We collect the location information for all those firms and map it to the municipalities they belong to. The municipality is the finest possible administration level in Germany, which can be identified by an eight digit official municipality numerical key, i.e. Amtlicher Gemeindeschlüssel, or AGS. The first five-digit of this numerical key denotes the county or the county-level city while the last three-digit denotes the municipalities within a county. There are more than 8,000 municipalities in Germany, identified by the same number of different eight-digit AGS keys. Essentially our analysis is

[25]The length of the electoral cycle is different for the states of Bremen (4 years) and Bavaria (6 years, see Section 2). For distress cases that occur in Bremen, *D(36-48 months)* is always set equal to 0. For distress cases that occur in Bavaria, *D(36-48 months)* is set equal to 1 in the first and in the second year following an election.

[26] We use county/city level state election results as a proxy for political competitiveness as these elections are relatively similar across states so that results from different states can easily be compared to one another.

[27]A lending relationship is reported as long as the total outstanding loans between the borrower and lender in a given quarter exceed €1.5 million

carried out at a geographical level as granular as zip code. For each loan contract we identify the originating municipality, which allows us to generate municipality-level measures for the local banking sector by aggregation. Importantly, the government-owned banks are organized at the county or county-level city level, but their exact coverage can be further pinned down to the municipality level. Sometimes only part of the county is covered by the business of those banks. We hand-collect information on the exact coverage of the distressed state-owned banks to identify the municipalities that are shocked by the distressed events and the following bank bailouts. Merged with the municipality-level measures constructed from credit registry, we put together a dataset to analyze the consequences of bailouts on the local banking and real sector. The outcome variables and the results are described in detail in Section 5.

4 Political determinants of bank bailouts

In this section, we model politicians' decision to bail out a bank conditional on a distress event. To do so, we investigate in how far political variables such as the electoral cycle, the vote share margin or a politician's ideology affect whether a local politicians use tax payers money to organize a bail out. If this decision is driven by the better information set local politicians have available, we would not expect a correlation between political factors and politicians' action.

4.1 The impact of the electoral cycle on the bailout decision by politicians

Figure 3 displays the distribution of all 148 distress events over the electoral cycle and Figure 4 displays the frequency distribution of political bailouts over the electoral cycle (see also Table 1). While we do not observe a clear relationship between bank distress events and the electoral cycle in Germany, the relative frequencies of capital injections by politicians display a clear pattern over the electoral cycle: In the 12 months before the election, the share of political bailouts in all distress events is considerably lower (15.4 %) than in the 12 months following the election (50.0 %). Only one out of 55 cases of capital support by the politician occurs in the six months directly preceding an election. This suggests that politicians are reluctant to use taxpayers' money in order to support a savings bank in distress right before an election. The percentage of capital injections from the politician in total distress events is shown in Figure B1. Again, there is a clear indication that the probability of injecting money into a distressed bank is considerably lower in the year preceding the local election.

To test this pattern more formally, we use a linear probability model in order to assess the relative likelihood of the two possible outcomes: bailouts by the politician and support measures by association. We use all 148 bank distress cases in our sample to estimate the

following equation:[28]

$$BLP_{it} = \alpha_t + ElectoralCycle'_{kt}\beta + POL'_{kt}\nu + C'_{kt-1}\delta + B'_{it-1}\gamma + \epsilon_{it} \quad (1)$$

where i denotes the individual bank, k the county or city of the bank, and t the year in which the distress event occurred. The dependent variable is a dummy called BLP_{it} and takes the value of one if the bank distress is resolved by the politician and the value of zero if the distress is resolved by the association.[29] The primary variables of interest are the dummies for years within the electoral cycle, denoted by $ElectoralCycle'_{kt}$. In the benchmark case, we include four dummies indicating all the non pre-election period. The other political variables include the political competition within the county and the ideology of the politician. They are summarized in the vector POL_{kt}. Bank level control variables are denoted by the vector B_{it-1} and include the bank's relative size to county / city GDP, the capital ratio, the return on assets, the non-performing loans ratio, the market share, and the deposit ratio. They are lagged by one year in order to obtain pre-event values. Regional control variables are also lagged by one year and include the level and the growth rate of county-level GDP per capita. They are summarized in the vector C_{kt-1}. The specification further includes time fixed effects and a random error term ϵ_{it}. Since the cycles of the local elections are to a large extent synchronized, year fixed effects would absorb the $Electoral\ Cycle_{it}$. Therefore, we define time fixed effects which take the value of 1 during one of the entire cycles (5 year intervals) and 0 otherwise.

Table 3 presents estimation results for Equation (1). We start with a benchmark specification without any political variables and bank/macro controls in columns (1) and (2). The coefficients on the four dummies indicating all the non pre-election years turn out to be positive and highly significant. This is robust to adding in time fixed effects in column (2). When we include bank and macro control variables, as shown in columns (3) and (4), the pattern is hardly affected. These findings confirm our descriptive analysis. The electoral cycle seems to have a strong influence on the type of the bailout for a savings bank in distress. In the twelve months before an election, the probability that a politician resolves a distressed bank is 23.0% to 39.0% lower as compared to the other years in the electoral cycle (column (4)). This finding is remarkable as it suggests that decisions on bank bailouts by local politicians are distorted by personal considerations about their probability to be re-elected.

The regression results in columns (3) and (4) also indicate that larger banks or banks with a higher deposit ratio are less likely to receive capital injections from the politician. The opposite is true for banks with a higher local market share. One could argue that these banks are more important for regional development within the county and therefore the local politician has a

[28] Using a nonlinear logit model gives results that are very similar to the results from our linear specification (see Table B2).

[29] Cases in which both the association and the owner/politician inject money into the bank are classified as the category that contributed the larger amount of capital. See Section 3.1 for details.

greater interest in keeping control of the bank and wants to avoid a painful restructuring plan or even a distressed merger. Finally, the regression shows that counties or cities with higher GDP per capita growth are less likely to use taxpayers' money in order to bail out a savings bank in distress.

Furthermore, there is evidence that other political variables also matter when we run a horse-race of all political variables in columns (5) and (6). Capital injections from the politician are less likely if the bank chairman is a member of the conservative party, which is in line with the conservative ideology of limited state interventions. The results are robust to the inclusion of time FE. Further, columns (5) and (6) show that politicians are less likely to support a distressed bank if political competition within the county or city of the bank is relatively high. This is in line with the personal interest explanation: Voters exert more discipline if the political competition is more intense. Although a politician might want to prevent restructuring of a distressed bank in order to keep it under her control, she cannot do so if this will be perceived as a waste of taxpayers' money and hence be punished in the next election. The more intense the political competition, the more severe the threat of punishment.

Instead of including separate dummies for all the periods around an election, we also run regressions using one dummy variable indicating whether the distress event is 0-12 months before the election or not[30]. The results are displayed in Table B1. The negative coefficient on $D(0-12\ months\ before)$ reconfirms that the electoral cycle has a strong effect on the type of the bailout for a distressed savings bank. The probability of capital injection from the politician is around 30% less likely if the distress event takes place 0 to 12 months before the election.

4.2 Political factors affecting the bail-out decision of the association board

We have shown that political factors tend to play an important role in determining the bail-out decision of local politicians. We next examine whether we can also find a similar pattern for political factors that are likely to affect the decision making of the association board. In Table 4, columns (1) and (2), we include a proxy for personal connections between the association board and the board of the respective bank in distress, (*Bank Chairman in Ass. Board*). This variable is equal to one if the chairman of the bank is also a member in the board of the association. This board decides on support measures provided by the association and it is possible that the politician tries to use her/his influence to obtain support without further restructuring. If this would be the case, we would expect that politicians are less likely to use taxpayers' money to resolve distressed banks. In a way, this variable tests whether the decision process at the association is rather transparent and follows pre-determined rules, or whether it is prone to

[30]This is our preferred setting in Section 5. First, the coefficients on the four dummies do not exhibit significant differences. Secondly, using a single instrument means our specification is just identified, avoiding any potential concerns over 2SLS bias of over-identification in the case of weak-identification.

favoritism. The dummy is insignificant, which illustrates once again the rather transparent decision process of the savings bank associations. If the association was prone to favoritism we would have expected a significantly negative coefficient for this dummy.

Next, we test whether the ideology of the association board members has any effect on who is resolving the distress event of a bank. To do so, we include the variable *Cons. Ass. Board* that takes the value of one if the majority of the association board members is associated with the conservative party and zero otherwise (columns (3) and (4)). There is no statistical relationship between the ideology of the association members and the type of the bail-out decision. Finally, we test whether the same party affiliation of the local politician and the association board members impacts the type of bail-out. In columns (5) and (6), we add a dummy *Same Party* that takes the value of one if the local politician and the majority of the association board members are from the same party and zero otherwise. Again, this variable is statistically insignificant. These results strongly suggest that political factors related to the board members of the association tends to have no impact on the bail-out decision of local saving banks.

5 Consequences of political bailouts

Previous results illustrate that decentralized bail-out decisions are highly correlated with political factors, especially the occurrence of the distress event during the electorial cycle. To differentiate whether the action taken by local politicians is associated with preventing inefficient liquidation of a bank or rather inefficient continuation of a bank, we now evaluate the consequences of these bail-out decisions. More specifically we compare the future performance as well as the allocation of credit by the banks experiencing a BLA relative to a BLP. Finally, we also focus on differences in the future macroeconomic development of the regions covered by BLP and BLA banks.

5.1 Empirical strategy

Comparing the future development of the affected banks' actions following a BLP or BLA could be prone to selection concerns. Such concerns could arise if the decision by local politicians to intervene is correlated with factors that also affect the future performance of the bank or municipality. We, therefore, use the timing of the distress event in the electoral cycle as an instrument for the intervention by local politicians (see e.g. Levitt (1997) for a similar identification strategy). We start estimating the following first stage regression:

$$BLP_{it} = \alpha_t + \beta D(0 - 12\ month\ before)_{kt} + POL'_{kt}\nu_1 + C'_{kt-1}\gamma_1 + X'_{it-1}\delta_1 + \epsilon_{1it} \qquad (2)$$

In Equation 2, the dependent variable BLP_{it} is a binary one which takes the value of one if the bank distress is resolved by the politician and zero otherwise. Subscript i stands for the unit of observation, which is at the municipality level in our main specification.[31] The corresponding county or city where i belongs to is denoted by k. The instrumental variable from utilizing the electoral cycle is $D(0-12\ month\ before)_{kt}$, which equals to one if the bank distress event takes place 0-12 months before the local election and zero otherwise. The vector of other political variables is denoted by POL_{kt}, including the political competition within the county and the ideology of the politician. Vector C_{kt-1} summarizes the regional macro control variables, which are lagged by a year. The control at the observation unit level is denoted by X_{it-1}. Time fixed effects are indicated by α_t.

To estimate the effect of a bail-out decision by local politicians on subsequent performance of banks and municipalities, we estimate the following second stage regression:

$$\Delta Y_{it}^{post} = \alpha_t + \theta \widehat{BLP_{it}} + POL'_{kt}\nu_2 + C'_{kt-1}\gamma_2 + X'_{it-1}\delta_2 + \epsilon_{2it} \tag{3}$$

where $\widehat{BLP_{it}}$ is the predicted value of a bail-out by the local politician obtained from Equation 2. The dependent variable is the change of the outcome variable in the post-bailout years (in the baseline specification, we take the average value from year $T = 1$ to $T = 5$) from pre-bailout value. In robustness checks, we also use an eight year post-event window instead of a five year one to construct our outcome variables. If indeed our instrument is a valid one, the coefficient of interest, θ, captures the causal effect of the politician's bailout decisions on the outcome variables. Two stage least squares are used to estimate the equations. Since the bailout decisions are reached at the county or city level (denoted by k), we cluster the standard error at the same level. In the Appendix, we also use an alternative estimation approach which instruments the BLP dummy with the predicted probability of BLP obtained from a *probit* model, as suggested by Wooldridge (2010).

5.1.1 Relevance

We illustrate the relevance of our instrument in Table 3 and Table B1, where we observe that the decisions on bank bailouts by local politicians are strongly affected by the electoral cycle. We also show F-stat for the excluded instruments in the following tables of regression results, further justifying the relevance of the instrument. However, for this instrument to be valid, it must also be exogenous and satisfy the exclusion restriction condition, which means the instrument should not affect the outcome variables through any channel other than the bailout decisions. In the

[31] In later sections where we examine firm-level outcome of bank bailout events, the observation unit is at firm level.

following contents, we present further empirical evidence to verify the validity of the electoral cycle instrument.

5.1.2 Exclusion Restriction

To argue that the exclusion restriction is likely to hold, we take the following steps.

A. The electoral cycle and the timing of distress events. One important assumption for our identification strategy is that the occurrence of distress events per se does not depend on the electoral cycle. Or equivalently, bank distress is triggered by events that are irrelevant to electoral cycle. Figure 3 displays the distribution of all 148 distress events over the electoral cycle. We do not observe a clear relationship between bank distress events and the electoral cycle in Germany. This is in contrast to findings for emerging economies (Brown and Dinc (2005)), which might be explained by a strong supervision of the banking sector, requiring the disclosure of monthly capital adequacy ratios. In such a supervisory environment bankers are not likely to have the opportunity to delay distress events.

We formally test whether the electoral cycle influences the timing of bank distress events by using a hazard model. Potentially, if banks know about differences in politicians' willingness to bail them out, they might have an incentive to delay distress events. We define the period from the beginning of our sample in 1995 until a distress event as the time until distress for each bank. Thus, the hazard rate, $h(t)$, is the probability that a bank distress occurs at time t, given that no distress occurred until then. Following Brown and Dinc (2005) and Liu and Ngo (2014), we test whether distress events depend on the electoral cycle, using an exponential hazard model:[32]

$$h_i(t) = exp(\alpha_t + \beta_0' \cdot X_{it-1} + \beta_1' \cdot Electoral\ Cycle_{it}) \tag{4}$$

where X_{it-1} denotes a vector of covariates for bank i at time or duration t. The vector $Electoral\ Cycle_{it}$ includes our dummies for the electoral cycle that are equal to 1 if the bank's accounting year t falls into the respective period in the electoral cycle. The regression also includes time fixed effects.

The regressions include all bank-year observations for savings banks that had a distress event throughout our sample period. Table B3 presents our findings for the relationship between distress events and the electoral cycle. In column (1) we include only the $Electoral\ Cycle_{it}$ dummies. None of the dummies are significant. Thus, there is no relationship between the timing of distress events of state-owned banks and the electoral cycle in Germany. Note that this result is robust to including time fixed effects. Furthermore, this observation is unchanged

[32] Results are very similar when we use a Cox proportional hazard model instead of the exponential hazard model.

if we add control variables in columns (3) and (4). The control variables indicate that distress is less likely when banks are large (measured by market share), profitable, and well-capitalized. Results remain unchanged when we further include two political variables in columns (5) and (6): There is no statistical relationship between the electoral cycle and distress events, suggesting that politicians are *not* able to endogenously affect the timing of distress events. Otherwise we would expect them to delay the occurrence of the distress event until after the election (see Brown and Dinc (2005), Liu and Ngo (2014)). Table 11 reconfirms this finding by simply using one dummy indicating whether the distress happens right before the election or not. In all specifications, the coefficient on this dummy turns out to be insignificant. Therefore the evidence is robust that politicians in Germany cannot delay bank distress events and the necessary bailouts.

B. Covariates balance: bank characteristics, size of the bailout. If our instrument is indeed exogenous, one should expect balance on pre-shock covariates. We examine whether there is a significant difference in the type of banks that experience distress events around the electoral cycle (all bank characteristics applied in this analysis are from year prior to the distress event values). To do so, we regress the electoral cycle on different bank characteristics in the year before the distress event. We use all 148 distress banks in our sample. Results are shown in Panel A of Table 12. Banks that experience distress events before the election seem to not differ systematically in terms of size as compared to banks that experience distress events after the election (columns (1) and (2)). The same is also true with respect to the fraction the bank's customer loans to its total assets (columns (3)-(4)), profitability (measured by ROA, see columns (5) and (6)), capital ratio (measured by equity to asset ratio, see columns (7) and (8)). Turning to non-performing loans ratio (columns (9) and (10)), we also do not detect any significant differences.

We then investigate whether the size of the bailout, or the severity of the bank distress, is correlated with the timing of the distress event in the electoral cycle. Using capital support over equity as the dependent variable, there seems to be no such correlation, as shown in columns (11) and (12) of Panel A, Table 12. The coefficient $D(0-12\ months\ before)$ is positively insignificant, suggesting that the severity of the distress, therefore the size of the bailout, is comparable for those occurred before the election and those after.

C. Macro business cycles and the electoral cycle. Another potential concern could be that local politicians can influence regional economic conditions so that the outcome favors their probability of becoming re-elected. If this would be true, regional economic conditions would be correlated with the electoral cycle and this in turn may result in different kind of banks experiencing distress events at different points in time over the electoral cycle. Moreover, if local politicians' other behavior (besides the bailout decisions) is distorted by re-election

considerations, some of the outcome variables we are interested in may be affected through channels other than bailout decisions, violating the exclusion restriction.

We argue that the above conjecture is unlikely to be true. First of all, Drazen (2000) summarizes that there is no evidence of changes in economic activity before elections in the US or in any other OECD country. To further alleviate the concern, we directly test whether the regional business cycle is correlated with the regional electoral cycle for all German counties. In Panel B of Table 12, we show that there is no relationship between the regional electoral cycle and regional GDP per capita growth (columns (1) to (3)) as well as regional public debt to GDP ratio (columns (4) to (6)). The aggregate loan amount (columns (7) to (9)), especially the amount extended by state banks (columns (10) to (12)), do not seem to be correlated with the regional electoral cycle. The evidence here also confirms the balance of covariates for macro variables.

D. Long-run effect. Julio and Yook (2012) and Julio and Yook (2016) document lower corporate investment in the election year exploiting national elections across countries. Using U.S. gubernational elections, Jens (2017) provide similar evidence. Those papers focus how firm's behavior change within an electoral cycle. We explore the long run implications on local economic performance after political bailout. Importantly, our dependent variable at the locality level is the change in the outcome variables we are investigating at. We take a multi-year window to calculate the average value of the outcome variable so that any politician-induced cyclicality is likely to be absorbed already in this measure. For example, in our baseline specification we take a five-year post bailout window to calculate the mean change in the outcome variable. As the regular length of an electoral cycle is also five years, any within cycle pattern is unlikely to drive our findings.

Having presented the instrumental approach, our next objective is to evaluate the post-bailout performance of the affected banks and the respective local areas in various dimensions. The analysis below is divided into two parts: Section 5.2 directly compares the long-run health of the distressed banks under a decentralized v.s. a centralized bailout. Section 5.3 investigates lending practices of affected banks under the two types of bailouts. We try to uncover the potential distortion in capital allocation caused by decentralized decision-making. We further presents the analysis in a wider perspective by shifting the focus to regional macroeconomic developments of the affected areas.

5.2 Future performance of affected banks

We have already documented in Table 2 that there is more restructuring of banks that are bailed out by the association as compared to local politicians. To differentiate whether the

action of the local politicians can be associated with preventing an inefficient downsizing of the bank or an inefficient continuation of the bank, we compare the long-run future performance of the respective banks. The subsequent analysis relies on bank balance sheet data. However, merged banks no longer have accounting information, which not only introduces a potential selection bias, as discussed in the following paragraph, but also severely reduces the sample size. Therefore, we show descriptive estimates in this section, without implementation of the IV strategy in Section 5.1. With detailed contract level information for loans initiated by the affected banks, the German credit register provides us a practical solution for later IV estimates on lending practices and regional development.

Following the distress event, we do not have accounting information for banks that experienced a distressed merger. The association is likely to organize distressed mergers for the "worst" distress cases. Hence, comparing the remaining association bailouts to the average political bailout might suffer from a bias. To circumvent this issue, we restrict the sample to those savings banks that do not have a potential merger partner. In particular, these are all savings banks that do not have another savings bank in close geographic proximity that has at least 1.5 times the size of the bank in distress (in terms of total assets) as well as a capital ratio and an ROA higher than the median in our sample.[33] In this way, we obtain a subsample of 79 distress cases for which we are able to obtain changes in the variables. By restricting our focus on this subsample, we ensure that the comparison between association and political bailouts is a fair one.

Descriptive statistics are shown in Table 5. For each bank, we calculate the average five-year (or eight-year) change as compared with the initial value for several key variables. We then average these changes across banks that received support from either the association or the politician and compare the values for these two groups of banks. The following fact emerges: Irrespective of the chosen horizon, banks that obtained support from the association improved their performance considerably more in the long run as compared to banks that received support from the politician. Only banks that receive support from the association are able to considerably reduce their non-performing loans ratio and ratio of loan loss provisions to customer loans (columns (1) and (2)). The difference between BLA and BLP banks is highly significant with economically large magnitude: on average banks receiving support measures from the association reduce their non-performing loans by around 2.9 percentage points more compared with banks receiving political bailout. Further the return on assets (return on equity) for the banks bailed-out by the association increases by about 0.3 percentage points (7.0 percentage points) more on average as compared to banks that obtained support from the politician (columns (3) and

[33] We define a savings bank to be in "close geographic proximity" of a bank in distress if it is located in a county neighboring the one of the distressed bank. Further, we altered the criteria for a potential merger partner and found that our results do not depend on the exact definition (in particular, we tried different size cutoffs (same size, two times the size) and omitted the capital ratio and ROA criteria in alternative specifications).

(4)). Finally, the capital ratio rises significantly more for banks whose distress case was resolved by the association, as shown in column (5) and (6). For Tier I plus Tier II capital ratio, BLA corresponds to more than 1 percentage points higher increase compared to BLP. Overall the general picture emerging from Table 5 is that the local politicians tend to hurt the long-term health of the affected banks by providing capital injections.

5.3 Lending practices of affected banks

Previous results show that a local bailout leads to relatively poorer future performance of the affected bank. Importantly, local politicians may not be primarily concerned with the performance of the financial institutions, but care in a first instance about the loan allocation of the bailed-out banks. Therefore, in order to evaluate the impact of a decentralized bailout, we examine differences in the lending practices by banks subsequent to a BLP as compared to a BLA.

To do so, we start by comparing the loan supply and changes in lending relationships by the affected banks. Second, we focus on the efficiency of credit allocation in either institute and examine patterns in connected lending for the bailed-out banks. In the end, we explore the macroeconomic development in the affected areas.

A. General patterns in credit allocation. We first study the share of aggregate lending by the affected banks. Figure 5 displays the changes in share of loans extended by distressed banks, in the years around the bailouts. Bailout decisions by *local politicians* (*association*) seems to be associated with a higher share of loans initiated by $state-owned$ (*private*) banks, but only in the post-bailout years. One rationale behind such finding is that capital injections by the politicians keep the distressed banks in operation while resolutions from the associations may result in branch mergers and closures. Figure 6 shows the trends in loans by state banks to GDP ratio for areas with political and association bailouts. There is no difference in this ratio before the bailout event, but after the bailout we observe more (fewer) loans granted by state banks under BLP (BLA).

We present statistical evidence on the structure of the local banking sector by using two stage least squares regressions in Table 6. Note that the regression analysis is carried out at the finest possible administration level, municipalities. We have one observation per municipality and have more than 1,000 observations. Results from OLS and two stage least squares are displayed in columns (1) and (2) in Panel A. Following a bailout by the local politician, the market share of state banks goes up significantly. The magnitude is considerable: BLP results in the state loan share being 4.85 percentage points higher than that in the case of BLA. Note that Figure 5 suggests that the gap in state loan share between BLP and BLA areas widens by

around 5 percentage points, which is comparable to the coefficient in column (1). In column (2) we instrument BLP with the timing of the distress event in the electoral cycle and that yields a coefficient of 6.88 on BLP, significant at 1% level. Therefore, the coefficient obtained using IV (6.88 percentage points) is greater than that from OLS (4.85 percentage points), indicating that the selection bias is most likely against finding any significant results. The F-stat for the excluded instrument is above the rule-of-thumb (see Stock, Wright, and Yogo (2002)) critical value of 10, which corroborates the relevance of political variables in explaining the type of bailouts. Accordingly, the share of loans supported by private banks falls significantly in BLP as compared to BLA, as shown in columns (3) and (4). The IV specification again gives a larger and more significant coefficient on BLP than the OLS specification. The small difference between the coefficients in columns (1) and (3) (or columns (2) and (4)) is due to the third group of banks, the cooperatives. The change in the share of those cooperative banks does not seem to depend on the particular type of bailout, as proved by the insignificant coefficient on BLP in columns (5) and (6). Interestingly, despite the divergence in ownership structure of loan supply following the two types of bailouts, the growth of total loans in affected areas does not seem to differ, as presented in columns (7) and (8). This finding suggests that in BLA areas, the private banks are likely to pick up the market that were previously serviced by the state-owned banks. In Panel B, the results barely change when we extend investigation window to eight years after the bailout.

Given that BLA banks seem to go through restructuring, we examine whether these banks tend to change their lending patterns following the bailout event. To do so, we focus on the initiation of new lending relationships by those banks and termination of existing relationships in Table 7. Without much restructuring efforts of their business, the banks bailed-out by local politicians may just stick to the status-quo, i.e., keep lending to the same set of borrowers. By exploiting the extensive contract level data from the German credit register, we are able to identify all the newly initiated and terminated lending relationships. Consistent with our conjecture, banks bailed-out by the local politicians tend to initiate fewer new lending relationships (columns (1) and (2)), and rather continue with previous relationships (columns (3) and (4)). This finding suggests that in cases where the local politicians intervene, there is less disruptions to the troublesome business that may have already led the respective banks into distress.

To summarize, we find significant differences in market share and borrower composition in the regions that experienced a centralized as compared to a decentralized bail-out. In the next step, we investigate the allocative efficiency of bank credit under these two scenarios.

B. Credit allocation and productivity. Results from Table 6 illustrates different lending patterns by banks following a BLP as compared to a BLA. BLA banks tend to lend more to new borrowers and terminate more existing relationships. Is this change in lending practices

characterized by a move towards more efficient capital allocation by banks that are bailed-out by the association? To test for this, we follow the methodology by Cong and Ponticelli (2017) who presents a theoretical model in the spirit of Hsieh and Klenow (2009) and Song, Storesletten, and Zilibotti (2011) motivating similar tests.

To be more specific, we conduct firm-level analysis since the productivity measure[34] is calculated at firm-level. We further interact this measure with the bailout type dummy to tease out the differential effects of productivity on credit allocation in BLP and BLA areas. If indeed the allocative efficiency is comparatively deteriorated following a BLP, we shall observe less credit being reallocated from firms of low capital productivity to high capital productivity, implying a negative coefficient on the interaction of BLP and $L1.logMPK$. To mitigate concerns on selection, we exploit the previous instrumental approach and again use 2SLS for estimation. The instrument for the interaction term $BLPXL1.logMPK$ is the interaction between D $(0-12\ months\ before)$ and $L1.logMPK$. The results are presented in Table 8.

In column (1) of Table 8, we show OLS results with the outcome variable being newly granted loans to the firm from affected state-owned banks, scaled by total loans from them in the previous period, i.e, growth in loans from affected banks. We find that irrespective of politician or association bailout, a lower initial productivity corresponds to fewer new loans, since the coefficient on $L1.logMPK$ is positive. This finding is consistent with the theoretical prediction that firms with higher marginal product of capital should be provided with more credit. The same pattern remains when we use the IV specification and add in control variables, see columns (2) to (4). More importantly, the coefficient of the interaction term $BLP \times L1.logMPK$ is negatively significant at 5% level in the IV estimations, see column (4), indicating the stark difference between bailouts by politicians and associations. Credit allocation is significantly more responsive to $logMPK$ in BLA areas compared to BLP areas.[35] The immediate message is that in areas with political bailout, the state banks do less reallocation of resources (credit) from low productivity firms to high productivity firms. The magnitude is economically large: firms with one standard deviation $larger$ marginal product of capital would experience a 6.8% lower growth rate in loans from affected banks under BLP than under BLA. Columns (5) to (8) examine the same issue from a different perspective with the outcome variable being share of loans from affected banks. If affected banks indeed assign more (fewer) loans to less (more) productive firms in BLP areas, we should find those less (more) productive firms accumulate more (fewer) loans from affected banks than their counter-parties in BLA areas. The negatively significant

[34]The calculation of productivity, denoted as $logMPK$ (log of marginal product of capital) in the paper, follows Cong and Ponticelli (2017). $logMPK$ is the natural log of sales divided by book value of fixed assets. Note that this is only a rough estimation of productivity. The underlying assumptions are: marginal product of capital equals to average product of capital; labor share and mark-ups are the same within a given industry-year.

[35]If we add up the coefficients on the interaction term and $L1.logMPK$, we obtain how the allocation of new loans reacts to marginal product of capital in areas with a political bailout, while the coefficient on $L1.logMPK$ by itself indicates how the new loans reacts in areas with an association bailout event.

coefficient on the interaction term in columns (5) to (8) is consistent with our prediction. In columns (9) to (12) we turn to the total new loans received by firms and confirm that the overall bank credit to more productive firms is lower in areas with support measures from politicians. One may argue that the lagged measure of logMPK may not properly account for the future investment opportunities of the firm as it is not forward-looking and credit allocation decisions can be reached based on the future marginal product of capital. To address this concern, we use forward measures of logMPK and find similar results, as summarized in Table B4. The results remain largely unchanged with comparable magnitude.

As a rich literature in development economics has summarized, reallocation of critical resources (capital and labor) from low to high productivity firms is an important source of economic growth. With intervention by local politicians in bank bailout decisions, we observe subsequently less efficient credit allocation, which may ultimately lead to the worse long-run performance of affected banks and local economic growth prospect.[36]

C. Credit allocation and elites network. In this section we provide further evidence on differences in the capital allocation by banks being bailed-out by local politicians as compared to the association. More specifically, following Haselmann, Schoenherr, and Vig (2017), we focus on credit allocation of these banks within elite social networks that the affected bank directors are members of. One may argue that local politicians do not care in first instance on an efficient capital allocation scheme as discussed in the previous section. The goals of local state-owned banks are broader and, therefore, politicians may focus on lending that is rather optimal from a social perspective. We believe that by focusing on network lending by these banks, we are able to directly address this concern since Haselmann, Schoenherr, and Vig (2017) have documented the rent-seeking motive of network lending especially for state-owned banks.

We follow their methodology and study how connected/in-group lending follows different patterns between areas receiving support from a politician and the association. A pair of lending relationship is defined as in-group (versus out-of-group) if the director of the local bank and the CEO of the borrower belong to the same local service club branch.[37] We use the share of lending from in-group affected banks in total lending to a firm as the dependent variable. An advantage of using the lending shares rather than the amount is that it automatically controls for firm-

[36]The link between reallocation of resources and aggregate productivity is discussed in Restuccia and Rogerson (2008), Hsieh and Klenow (2009), Buera and Shin (2013) and Restuccia and Rogerson (2013).

[37]This service club organization in Germany has global headquarters in the US, but individual service club branches operate locally in several countries. Typically, there is one branch in each city of about 20,000 inhabitants. In larger cities, additional club branches are often formed. There are about 1,000 club branches with a total of about 50,000 members in Germany. While the official stated objective of the service club is to raise funds for charitable work, having personal connections to other business leaders is often cited as an important membership perquisite. Members of the same club branch meet for lunch or dinner once a week to socialize, and in such a way build social capital. Haselmann, Schoenherr, and Vig (2017) covers further details about the service clubs.

specific shocks. We also exclude the distress merger cases to make sure that the results are not driven by the removal of former bankers, thereby the loss of connections, in those cases.

Results from both OLS and 2SLS estimations are displayed in Table 9. We find that the proportion of in-group loans issued by affected banks in the period following a bailout event is significantly higher in BLP as compared to BLA cases. The dependent variable from columns (1) to (4) is the share of in-group lending from affected banks in total lending to a firm. The purpose is to evaluate how the reliance on in-group credit from affected banks changes differently under the two types of bailout decisions. In OLS specifications, the coefficient is positive and insignificant. However, in IV specifications the coefficient on BLP is positively significant at 1% or 5% level and the magnitude is remarkable: the share of loans from connected banks is more than 10 percentage points higher under BLP than BLA. One may be concerned that this effect might be driven by the relatively greater presence of the affected state banks in BLP areas. But as we have pointed out in Table 6, the higher share of affected banks in BLP areas (6.88 percentage points) is considerably smaller than the magnitude of this coefficient. The affected banks seem to direct even more of credit to in-group firms with CEOs in the same service club branch as the state banker after political intervention. The positive coefficient on BLP in columns (5) to (8) suggests that out of all connected loans to a firm, a higher fraction is originated by affected banks following a political bailout.

Haselmann, Schoenherr, and Vig (2017) have documented the rent-seeking motive for connected lending of the identical network we have been analyzing here. Not only the return on loans of the connected lending is lower, but also the misallocation of credit in the economy induces inefficiencies in the deployment of capital. In the case of government intervention as a resolution for bank distress, state-owned banks are preserved and they seem to keep or even expand their lending to connected firms, potentially resulting in detrimental outcomes for the aggregate economy. Importantly, more rent-seeking behavior by banks that have been bailed-out by local politicians clearly is against the conjecture that local politicians engage in bail-outs to impose more social objectives on their local banks.

To conclude, in this section, we find strong evidence that capital injections from local politicians into a distressed bank might impede efficient credit allocation in different manners, which may ultimately hurt the banks' long-run performance.

D. Macroeconomic developments. Previous analysis has illustrated a shift in lending share from affected state-owned banks to private banks. While we have documented improvements in capital allocation of the affected state-owned banks following a centralized bailout, there might be further improvements in capital allocation resulting from the inflow of new private banks into these areas. This combined effect of centralized bailout decisions (improved capital allocation by affected banks plus the shift in financial structure towards more private funding) can be

investigated by testing for differences in the real sector for areas subject to BLA and BLP. More specifically, we aggregate firm level measures, including sales, asset, and debt at the local municipality level, and explore the gap in their growth rates between areas that experience a bailout by a local politician and the centralized association.

Table 10 summarizes both OLS and 2SLS estimations. For aggregate corporate sector asset growth, debt growth and sales growth, we observe consistent patterns. In column (2) of Panel A, the coefficient on BLP is negatively significant at 5% level, indicating lower asset growth in areas with political bailout. The magnitude of the gap is economically large, estimated at 6.61%,[38] which is also higher than that in column (1) under OLS. In columns (3) and (4), the effect on growth of aggregate debt holdings is in the same direction and at similar magnitude. Turning to the sales of the firm reassures our finding, as suggested by columns (5) and (6). As in the previous tests, the F-stats confirm the relevance of our instruments. The differential performance of the corporate sector can possibly be driven by both slower growth of existing firms and fewer disruptive entry and exit activities. Columns (7) to (10) continue to present the estimations on entry and exit activities. In column (7) of Panel A, we find that the fraction of entry firms is 4.16 percentage points lower in areas where the capital support measures are provided by the local politicians. We turn to exit of firms in columns (9) and (10). BLP areas have an exit rate 3.65 percentage points lower than BLA areas under IV estimation. Taken together, the entry and exit rates of firms that obtain bank funding is considerably higher if the area has an association bailout compared with a political bailout. This finding could potentially be interpreted by having a more dynamic macroeconomic environment fostering economic growth (in line with Schumpeter's concept of creative destruction) as a consequence of association bailouts. Again, most of the estimated coefficients on BLP from OLS regressions are in the same direction, but considerably smaller in magnitude, suggesting a selection bias against finding out any effect. Extending the sample to a longer period post-bailout does not affect any of the findings here. One may further argue that an investigation of corporate sector alone does not give us the complete picture since the politician may aim to improve the general welfare within his region. To address this concern, we additionally examine macro variables such as GDP and employment. Those variables are only available at county/city level, leaving us with a considerably smaller sample compared to the tests carried out at the municipality level. We do not find any evidence consistent with the conjecture that the politician may enhance general economic indicators through his decision to bailout the local bank. In fact, we find negative, albeit insignificant, impact of BLP on GDP, per capita income and employment. Moreover, the fiscal cost of the political bailouts are far from negligible. Figure 7 shows that while the fiscal debt in BlA areas remains constant, in BLP areas it increases dramatically by more than 30%

[38] One can be concerned that BLA leads to a higher growth rate compared with BLP, but also with a higher volatility of growth. To alleviate this concern, we further verify that there is no significant difference in the volatility of growth between BLP and BLA areas.

in the five years after the bailout. With the persistent increase in government debt over the post-bailout years, the local government's hands are tied and thereby is less able to invest in projects targeting long-run welfare.

In this section, by pointing out the negative impact on new firms' access to finance and corporate sector growth, we further alleviate the concern that the politician is improving the economic condition of his area at the cost of the affected banks. The findings, on the contrary, suggest that politicians' decision to use taxpayers' money to bail out a local bank may raise concerns about the long term growth prospect within their region.

6 Conclusion

In this paper we analyze two distinct bailout regimes within the German savings bank sector: a state-level safety net that resolves distress events conditional on certain restructuring activities, and local politicians who serve as chairmen of the banks and have the possibility to resolve distress events by using taxpayers' money. The former regime involves centralized decision-making at the association level and the later entails decentralized decision-making at the hands of local politicians. We find that interventions by local politicians are about 30 % less likely in the year before an election. Furthermore, the long-run performance of banks that were bailed out by politicians is considerably worse as compared with banks that were supported by the association. Using the timing of the distress event in the electoral cycle as an instrument, we show that a decentralized local bailout results in less efficient credit allocation of the affected banks. We also observe a significantly worse real sector performance of areas under decentralized bailouts as compared with those under centralized ones.

Local politicians have local knowledge about the banks in distress. Such knowledge could potentially improve the decision making process, leading to better decisions on bank bailouts. However, we show that decentralized bailout decisions made by local politicians who are close to the bank tend to be distorted by personal considerations. Consequently, the outcomes of such bank bailouts are actually worse than for cases that are resolved by the savings bank association under a centralized regime. Thus, our paper contributes to the debate about centralized v.s. decentralized decision-making on bank recapitalizations in the case of distress. Our findings illustrate the advantages of centralization and taking a broader perspective in bank regulation and supervision. This is particularly important in the light of the current implementation of a European banking union. Our findings suggest that such a regulatory design could have considerable advantages.

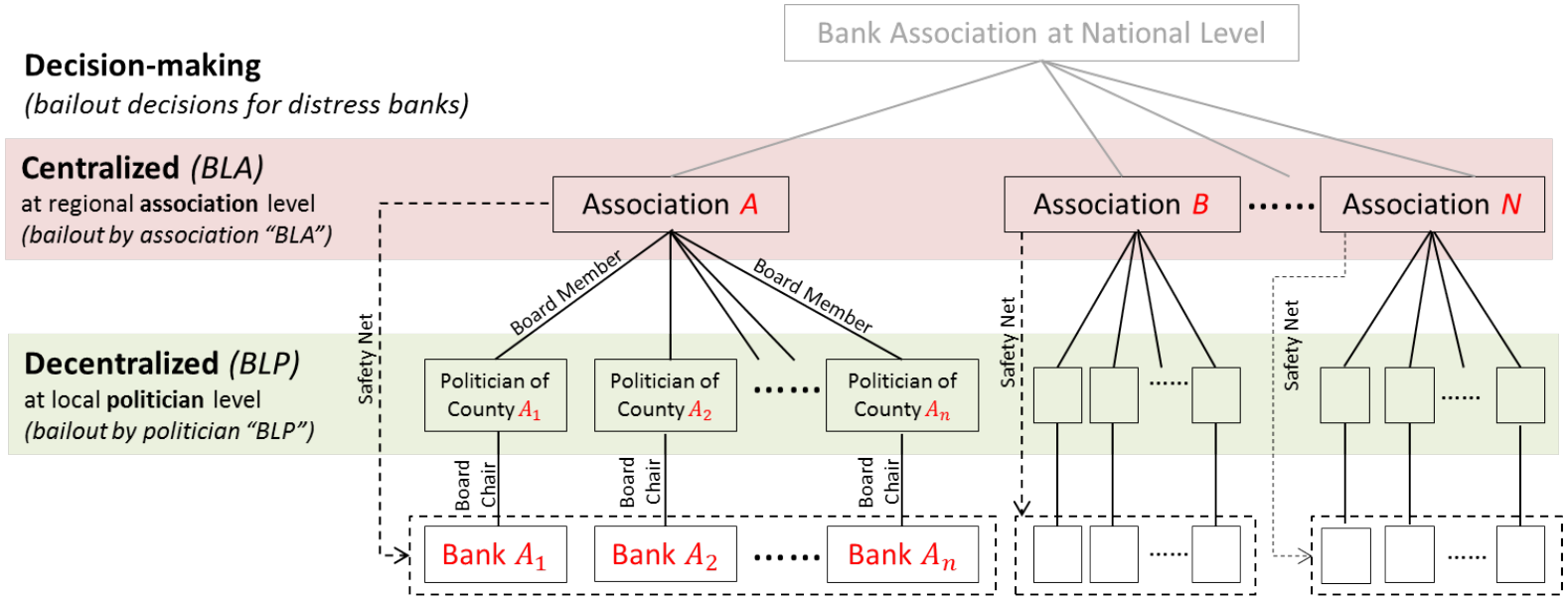
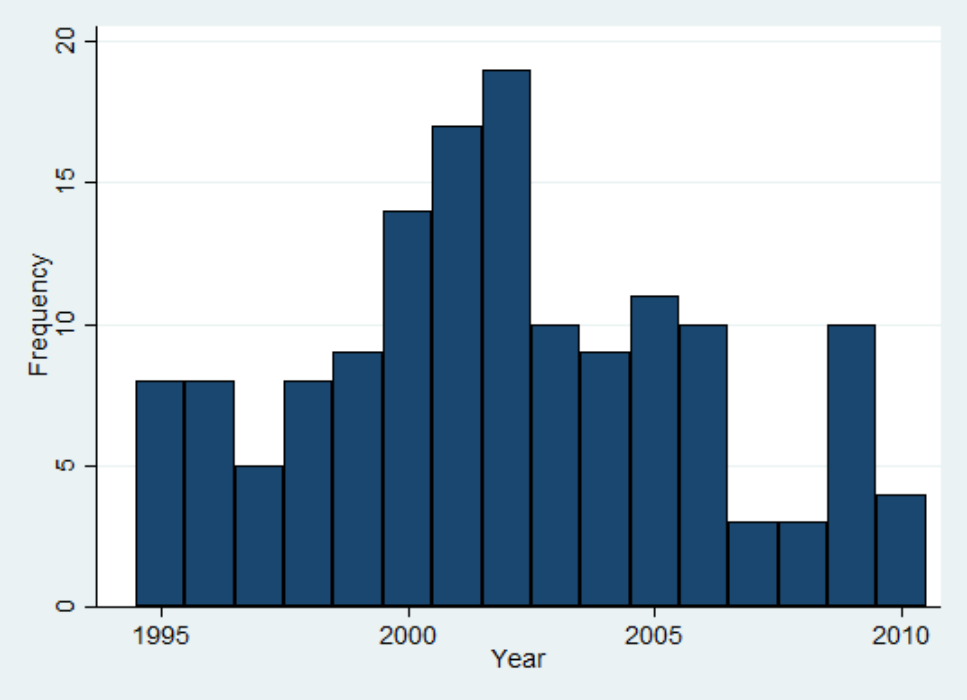


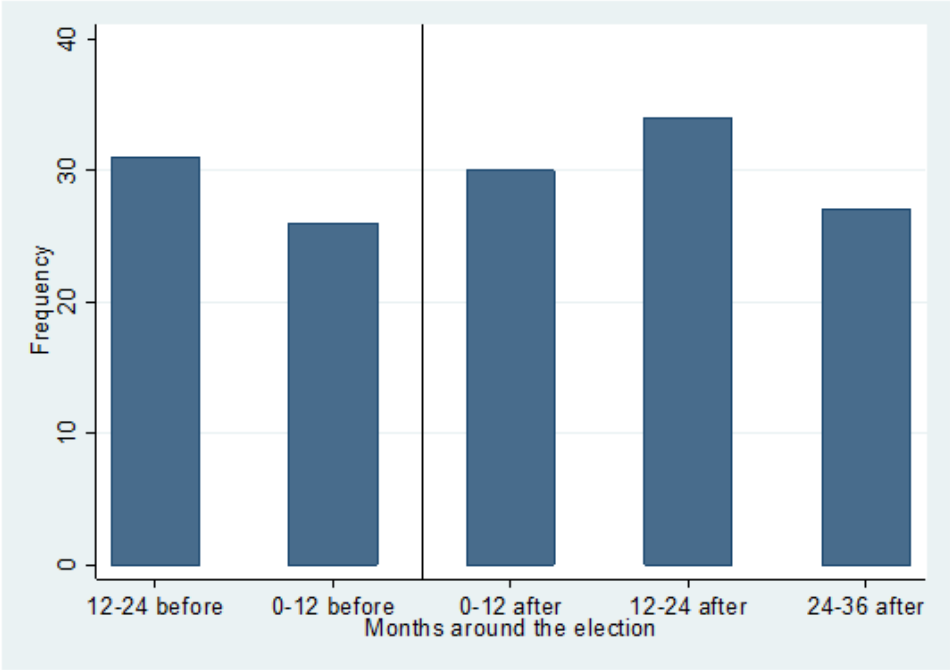
Figure 1: Institutional Setup

Figure 1 illustrates the institutional setup for our analysis. The main institutions are the savings bank associations that operate the savings bank guarantee funds, the local counties or cities that own and back the individual banks, and the savings banks themselves. The figure shows the personal and institutional connections within this system. Centralized decision-making at the association level and decentralized decision-making at the local politician level are illustrated graphically in this figure. Upon bank distress events, a bailout organized by the associated is abbreviated by BLA while a bailout organized by the local politician is abbreviated by BLP.



Total distress events

Figure 2: Distress events over 1995 and 2010.
Figure 2 illustrates the number of distress events in each year from 1995 to 2010. There are in total 148 savings banks distress events.



Total distress events

Figure 3: Distress events and the Electoral Cycle.
Figure 3 illustrates how the number of distress events varies over the electoral cycle, where the vertical black line indicates the election date.

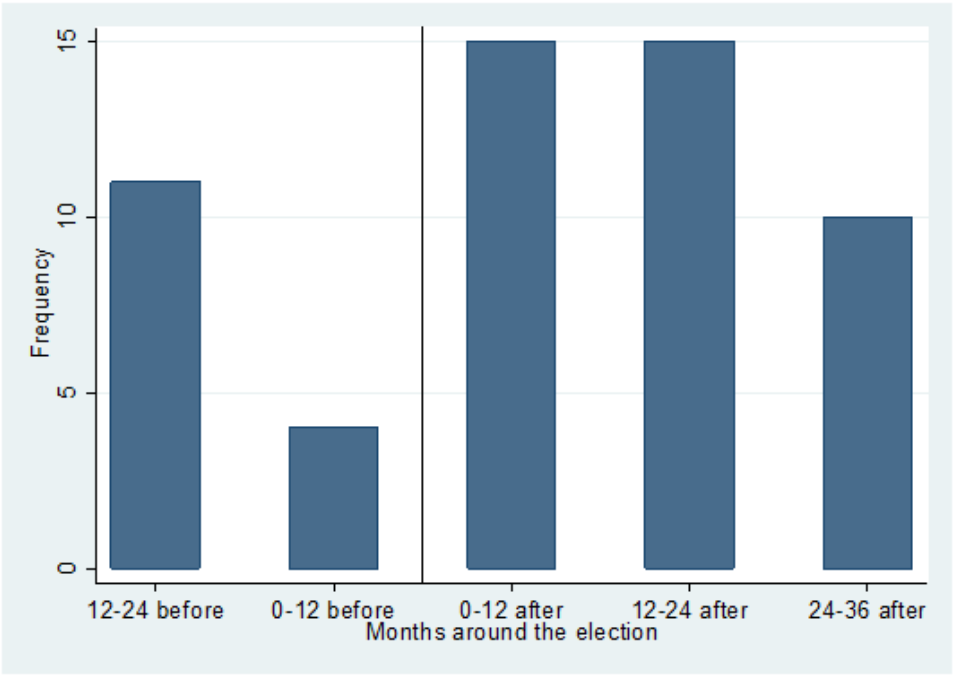


Figure 4: Capital Injections from the Politician and Electoral Cycle.

Figure 4 illustrates how the number of banks that receive capital injections from the politician varies over the electoral cycle, where the vertical black line indicates the election date.

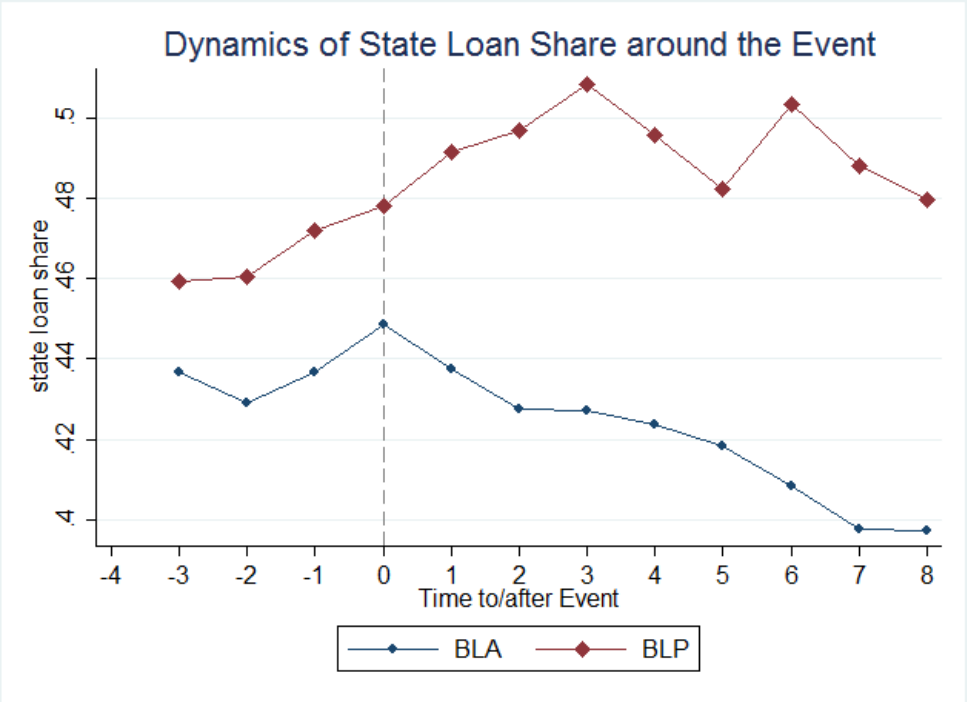


Figure 5: Dynamics of Share of State Loans Around Bailout Events by Politicians.

Figure 5 illustrates changes in share of loans extended by state-owned banks in the years around the bailout event. The x-axis shows the year to/after the bailout event. BLA stands for cases where the centralized association organizes the bailouts and BLP stands for cases where the local politicians inject capital into the distressed bank.

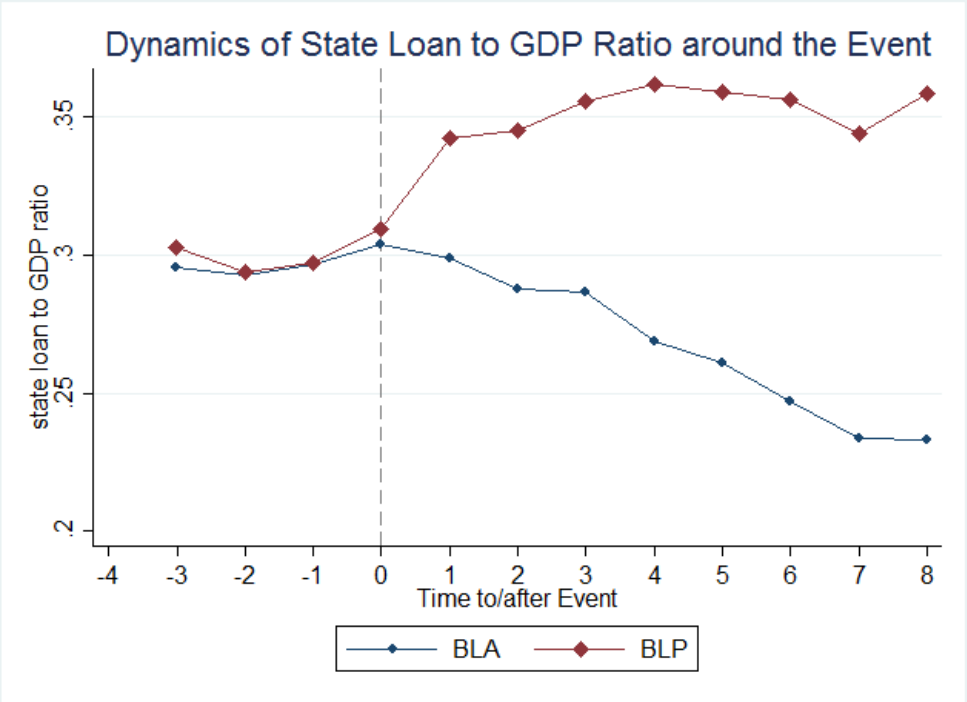


Figure 6: Dynamics of State Loans to GDP Around Bailout Events by Politicians.

Figure 6 illustrates changes in loans extended by state banks to GDP ratio in the years around the bailout event. The x-axis shows the year to/after the bailout event. BLA stands for cases where the centralized association organizes the bailouts and BLP stands for cases where the local politicians inject capital into the distressed bank.

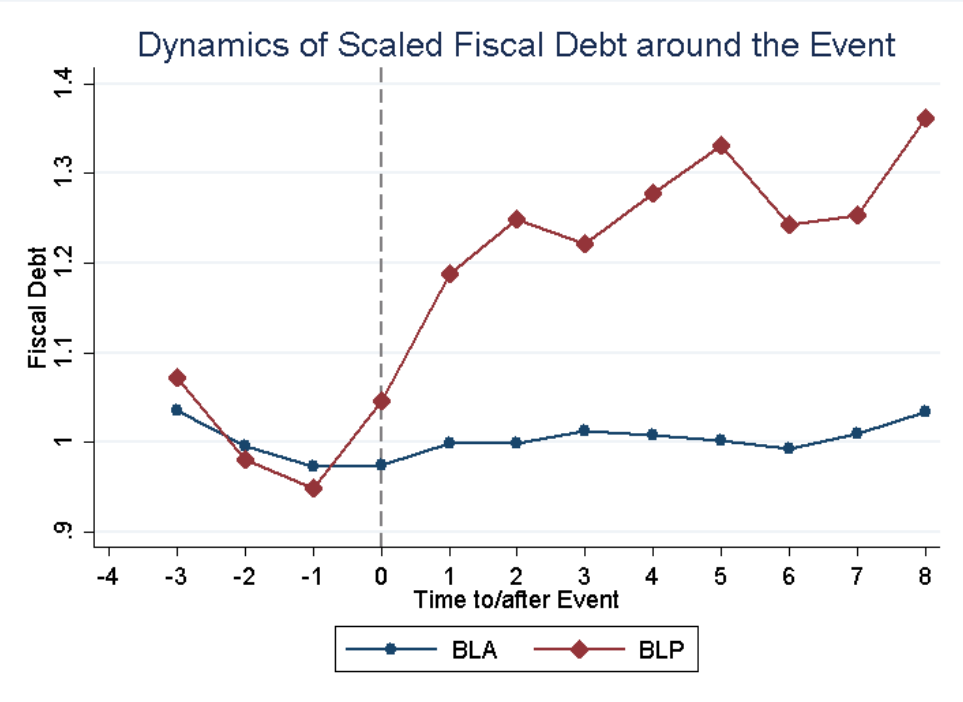


Figure 7: Dynamics of Fiscal Debt Around Bailout Events by Politicians.

Figure 7 illustrates fiscal debt, normalized to have value 1 before the bank distress, in the years around the bailout event, for counties receiving BLP versus BLA. The x-axis shows the year to/after the bailout event. BLA stands for cases where the centralized association organizes the bailouts and BLP stands for cases where the local politicians inject capital into the distressed bank.

Table 1: Descriptive Statistics

Panel A: Events	Obs.
Support from politician	55
Support from association	93
... capital support	49
... distressed merger	44
Total	148

Panel B: Bank variables	All banks			Support from politician			Support from association		
	Obs.	Mean	S.D.	Obs.	Mean	S.D.	Obs.	Mean	S.D.
Total assets (€ mn)	8,246	1,780	2,530	636	2,770	4,150	706	1,660	1,810
Log(Total assets)	8,246	20.81	0.95	636	21.15	1.02	706	20.74	1.01
Total assets / GDP (in %)	8,228	37.24	31.90	636	53.50	51.88	706	39.47	41.57
Market share (in %)	8,219	22.50	16.39	636	23.83	15.55	706	16.88	16.33
Capital ratio (in %)	8,246	4.55	1.04	636	4.30	0.88	706	3.99	0.94
ROA (in %)	8,239	0.75	0.50	635	0.57	0.52	706	0.54	0.69
NPL ratio (in %)	8,195	3.79	2.61	634	4.06	2.79	703	5.26	3.42
Deposit ratio (in %)	8,245	67.47	9.49	635	61.14	10.60	706	65.47	11.19
Loans to owner / GDP (in %)	8,229	1.03	1.41	636	1.08	1.85	706	0.90	1.16
Size of bailout conditional on distress									
Capital Injection/Total Equity (in %)	148	15.74	2.55	55	16.73	3.13	93	15.16	3.62

Table 1: continued...

Panel C: Macro & Other variables	All banks			Support from politician			Support from association		
	Obs.	Mean	S.D.	Obs.	Mean	S.D.	Obs.	Mean	S.D.
GDPPC growth (in %)	8,246	1.288	3.816	636	1.040	3.925	706	1.874	4.034
GDPPC (in €)	8,228	23,771	8,528	636	27,280	7,931	706	22,648	6,542
Log(GDPPC)	8,228	10.024	0.313	636	10.173	0.285	706	9.988	0.281
Government debt / GDP (in %)	8,246	4.623	1.983	636	3.931	2.028	706	4.862	2.241

Panel D: Political variables	Obs.	Support from politician	Support from association
All	148	0.372	0.628
12-24 months before election	31	0.355	0.645
0-12 months before election	26	0.154	0.846
0-12 months after election	30	0.500	0.500
12-24 months after election	34	0.441	0.559
24-36 months after election	27	0.370	0.630
No competitive county	73	0.438	0.562
Competitive county	75	0.307	0.693
No conservative chairman	88	0.455	0.545
Conservative chairman	60	0.250	0.750

The table shows descriptive statistics for the banks in our sample. In Panel A we report the number of distress events, where we distinguish between support measures from the politician and support measures from the association. Panel B shows descriptive statistics for key bank variables. The unit of observation is a bank-year. The first three columns show statistics for all banks in our sample, whereas the other columns include only bank-year observation of banks that experienced support measures from the politician or the association during our sample period. Panel C provides descriptive statistics for macro control variables and a dummy variable that we use in the empirical analysis. Finally, Panel D shows the distribution of capital injections from the politician and support measures by the association, and how this distribution depends on political variables. For example, of the 148 distress events in our sample, 37.2 % were capital injections from the politician, while 62.8 % were support measures from the association. Depending on the values of the political variables this distribution differs.

Table 2: Descriptives Statistics on Restructuring of Distressed Banks

Percentage Change in...		Customer Loans			Employees			Personnel Expenditures			Number of Branches		
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
		BLA	BLP	*Diff (BLA-BLP)*	BLA	BLP	*Diff (BLA-BLP)*	BLA	BLP	*Diff (BLA-BLP)*	BLA	BLP	*Diff (BLA-BLP)*
Pre Bailout	Mean	0.063	0.058	0.004	-0.007	-0.001	-0.006	0.038	0.033	0.006	-0.013	-0.027	0.014
	S.D.	0.078	0.069		0.055	0.044		0.105	0.071		0.074	0.091	
	Obs.	169	266		169	266		169	266		151	244	
Bailout Year + 1	Mean	-0.016***	0.016***	-0.032***	-0.028**	-0.004	-0.023*	0.004*	0.004**	-0,001	-0.087***	-0.039	-0.048
	S.D.	0.066	0.041		0.050	0.063		0.087	0.073		0.188	0.074	
	Obs.	41	45		40	45		40	45		31	26	
Bailout Year + 2	Mean	-0.018***	0.024***	-0.042***	-0.030**	-0.014*	-0.016*	0.008	0.019	-0.011	-0.141***	-0.128***	-0.013
	S.D.	0.052	0.039		0.033	0.040		0.085	0.066		0.281	0.204	
	Obs.	33	38		33	38		33	38		24	23	
Bailout Year + 3	Mean	-0,014***	0,025***	-0,039***	-0,038***	-0,011	-0,027*	0,013	0,006**	0,007	-0,110***	-0,029	-0,082
	S.D.	0,044	0,050		0,042	0,064		0,056	0,068		0,228	0,116	
	Obs.	31	36		30	36		31	36		18	19	

The table shows changes in key variables of savings banks around the years of capital injections. The first set of rows shows pre-event statistics of banks that experienced a distress event during our sample period. All bank-year observations prior to the event denoted on top of the column are included. The other rows show the statistics for the years following the event. * indicates statistical significance at the 10% level, ** at the 5% level, and *** at the 1% level, in a two-sided test of the mean of bank-year observations prior to the event and bank-year observations in the respective year around the event (columns (1)-(2), (4)-(5), (7)-(8), and (10)-(11). In columns (3), (6), (9), and (12) * indicates statistical significance at the 10% level, ** at the 5% level, and *** at the 1% level, in a two-sided test of the mean of bank-year observations of banks that received capital injections from the association and bank-year observations of banks that received capital injections from the politician in the respective year around the event.

Table 3: Event Type: Political Factors Influencing Local Politicians

Sample	all state bank distress events (1995-2010)					
Dep. Var.	Event Type (=1 if political bailout or BLP)					
	(1)	(2)	(3)	(4)	(5)	(6)
D (0-12 months after)	0.346***	0.327***	0.272**	0.286**	0.287**	0.301**
	(0.118)	(0.121)	(0.116)	(0.121)	(0.116)	(0.118)
D (12-24 months after)	0.287**	0.310***	0.380***	0.390***	0.374***	0.384***
	(0.113)	(0.106)	(0.100)	(0.100)	(0.103)	(0.104)
D (24-36 months after)	0.217*	0.248**	0.209*	0.230**	0.204*	0.222**
	(0.119)	(0.111)	(0.107)	(0.106)	(0.114)	(0.112)
D (12-24 months before)	0.201*	0.271**	0.244**	0.296***	0.255**	0.310***
	(0.113)	(0.110)	(0.104)	(0.110)	(0.106)	(0.107)
Cons. Bank Chairman					-0.196**	-0.200**
					(0.083)	(0.082)
Competitive County					-0.103	-0.118
					(0.075)	(0.073)
Total Assets / GDP (t-1)			-0.133	-0.177*	-0.114	-0.160*
			(0.089)	(0.095)	(0.078)	(0.086)
Capital Ratio (t-1)			-0.034	-0.042	-0.027	-0.034
			(0.040)	(0.041)	(0.039)	(0.040)
ROA (t-1)			0.065	0.071	0.041	0.046
			(0.069)	(0.070)	(0.074)	(0.076)
NPL Ratio (t-1)			-0.021**	-0.021**	-0.022**	-0.022**
			(0.009)	(0.009)	(0.009)	(0.009)
Market Share (t-1)			0.010***	0.010***	0.009***	0.009***
			(0.003)	(0.003)	(0.003)	(0.003)
Deposit Ratio (t-1)			-0.008**	-0.007	-0.006*	-0.005
			(0.004)	(0.004)	(0.004)	(0.004)
GDPPC Growth (t-1)			-0.026***	-0.025***	-0.025***	-0.023***
			(0.009)	(0.009)	(0.009)	(0.009)
Log(GDPPC) (t-1)			0.015	0.040	-0.075	-0.051
			(0.124)	(0.128)	(0.127)	(0.134)
Time FE	NO	YES	NO	YES	NO	YES
R-squared	0.055	0.104	0.287	0.305	0.321	0.341
Observations	148	148	148	148	148	148

The table shows how the electoral cycle affects the likelihood of a bailout reached by decentralized v.s. centralized decision-making. The dependent variable is a dummy that equals one if the bank receives capital injections from the politician and zero if the bank receives support measures from the association. Four dummy variables indicating four periods in the electoral cycle are included, and the omitted group is (0-12 months before). Two political variables, the political competition within the county and the ideology of the politician, are added in columns (5) and (6). The regression further includes bank-level control variables and regional control variables, and those independent variables are self-explanatory. Columns (2), (4) and (6) include time dummies for the four election cycles in our sample (begin of sample-1998, 1999-2003, 2004-2008, 2009-end of sample). All control variables are lagged by one period. Robust standard errors are denoted in parentheses. * indicates statistical significance at the 10% level, ** at the 5% level, and *** at the 1% level.

Table 4: Event Type: Political Factors Influencing The Association Board

Sample	all state bank distress events (1995-2010)					
Dep. Var.	Event Type (=1 if bailout by politician or *BLP*)					
	(1)	(2)	(3)	(4)	(5)	(6)
Bank Chairman in Ass. Board	-0.093	-0.082				
	(0.119)	(0.123)				
Cons. Ass. Board			0.078	0.072		
			(0.094)	(0.092)		
Same Party					-0.040	-0.053
					(0.088)	(0.087)
Total Assets / GDP (t-1)	-0.112	-0.144	-0.068	-0.100	-0.103	-0.142
	(0.089)	(0.095)	(0.095)	(0.103)	(0.088)	(0.095)
Capital Ratio (t-1)	-0.035	-0.034	-0.042	-0.042	-0.034	-0.035
	(0.039)	(0.041)	(0.041)	(0.043)	(0.040)	(0.042)
ROA (t-1)	0.066	0.065	0.081	0.081	0.066	0.065
	(0.070)	(0.072)	(0.071)	(0.073)	(0.070)	(0.071)
NPL Ratio (t-1)	-0.022**	-0.022**	-0.021**	-0.022**	-0.022**	-0.022**
	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)
Market Share (t-1)	0.010***	0.010***	0.008**	0.008**	0.009***	0.009***
	(0.003)	(0.003)	(0.003)	(0.004)	(0.003)	(0.003)
Deposit Ratio (t-1)	-0.007*	-0.006	-0.007	-0.005	-0.008**	-0.007*
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
GDPPC Growth (t-1)	-0.020**	-0.020**	-0.021**	-0.020**	-0.021**	-0.020**
	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)
Log(GDPPC) (t-1)	0.052	0.068	-0.046	-0.019	-0.000	0.017
	(0.140)	(0.145)	(0.128)	(0.131)	(0.123)	(0.124)
Time FE	NO	YES	NO	YES	NO	YES
Observations	148	148	145	145	148	148
R-squared	0.232	0.244	0.209	0.223	0.228	0.242

The table shows how other political variables affects the likelihood of a bailout reached by decentralized v.s. centralized decision-making. The dependent variable is a dummy that equals one if the bank receives capital injections from the politician and zero if the bank receives support measures from the association. Bank and macro control variables are the same as in Table 3. As before, all variables are lagged by one period. Additionally, we include a dummy variable *Bank Chairman in Ass. Board* that takes the value of one if the chairman of the bank in distress is a member of the board of the local savings bank association, and the variable *Conservative Ass. Board* takes the value of one if the majority of the association board members is associated with the conservative party and zero otherwise, and, the variable *Same Party*) that takes the value of one if the local politician and the majority of the association board members are from the same party and zero otherwise. Columns (2), (4) and (6) include time dummies for the four election cycles in our sample (begin of sample-1998, 1999-2003, 2004-2008, 2009-end of sample). Robust standard errors are denoted in parentheses. * indicates statistical significance at the 10% level, ** at the 5% level, and *** at the 1% level.

Table 5: Bank Bailout and Long-Run Performance of Affected Banks—Descriptives

Panel A: Five Years after Bailout Events						
Change in...	NPL ratio	LLP ratio CL	ROA	ROE	Tier I ratio	Tier I + II
	(1)	(2)	(3)	(4)	(5)	(6)
BLA	-2.079	-0.458	0.209	2.964	0.403	1.812
	(3.239)	(0.757)	(1.097)	(17.290)	(0.520)	(2.121)
BLP	0.785	0.004	-0.131	-3.693	0.215	0.659
	(2.387)	(0.512)	(0.587)	(13.401)	(0.393)	(1.471)
Diff (BLA - BLP)	-2.864***	-0.462***	0.340*	6.657*	0.188*	1.153***
	(0.642)	(0.146)	(0.198)	(3.492)	(0.103)	(0.413)

Panel B: Eight Years after Bailout Events						
Change in...	NPL ratio	LLP ratio CL	ROA	ROE	Tier I ratio	Tier I + II
	(1)	(2)	(3)	(4)	(5)	(6)
BLA	-2.662	-0.533	0.233	3.261	0.470	2.200
	(3.627)	(0.759)	(1.091)	(17.189)	(0.577)	(2.510)
BLP	0.686	-0.053	-0.121	-3.781	0.311	1.187
	(2.454)	(0.546)	(0.602)	(13.603)	(0.493)	(1.883)
Diff (BLA - BLP)	-3.348***	-0.481***	0.354*	7.042**	0.159	1.013**
	(0.698)	(0.149)	(0.198)	(3.501)	(0.121)	(0.503)

The table shows changes in key variables for banks that experienced a distress event. We calculate the average values of those variables in five years (or eight years) after the bailout event, and subtract the initial values to yield the changes in key variables. Row *BLA* presents the mean of changes in state-owned banks supported by the association while row *BLP* shows that in banks bailed-out by the politician. Row *Diff (BLA-BLP)* shows the difference in the mean between the two groups of banks, where *, **, and *** indicate statistical differences in the mean at the 10% level, 5% level, and 1% level, respectively. The variables of interest from columns (1) to (6) are non-performing loans ratio, the ratio of loan loss provisions to customer loans, ROA, ROE, Tier I capital ratio (equity/total assets), and Tier I plus Tier II capital ratio. All those variables are in percentage.

Table 6: Bank Bailout and Local Financing Structure

Panel A: Five Years After Bailout Events

Dep. Var.	$\frac{loans\ by\ state\ banks}{total\ loans}(\%)$		$\frac{loans\ by\ private\ banks}{total\ loans}(\%)$		$\frac{loans\ by\ cooperatives}{total\ loans}(\%)$		$growth\ of\ total\ loans(\%)$	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Model	OLS	IV 2SLS	OLS	IV 2SLS	OLS	IV 2SLS	OLS	IV 2SLS
BLP	4.848***	6.881***	-4.788**	-9.626***	-0.004	2.738	2.135*	2.278
	(1.554)	-2.467	(2.096)	(3.154)	(1.188)	(1.915)	(1.242)	(2.024)
Macro Controls	YES	YES	YES	YES	YES	YES	YES	YES
Time FE	YES	YES	YES	YES	YES	YES	YES	YES
F-Stat		28.63		28.63		28.63		28.63
Observations	1078	1078	1078	1078	1078	1078	1078	1078

Panel B: Eight Years After Bailout Events

Dep. Var.	$\frac{loans\ by\ state\ banks}{total\ loans}(\%)$		$\frac{loans\ by\ private\ banks}{total\ loans}(\%)$		$\frac{loans\ by\ cooperatives}{total\ loans}(\%)$		$growth\ of\ total\ loans(\%)$	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Model	OLS	IV 2SLS	OLS	IV 2SLS	OLS	IV 2SLS	OLS	IV 2SLS
BLP	4.059**	8.761***	-4.002*	-10.518***	0.002	1.768	2.691*	3.314
	(1.617)	(2.767)	(2.163)	(3.220)	(1.312)	(2.269)	(1.582)	(2.707)
Macro Controls	YES	YES	YES	YES	YES	YES	YES	YES
Time FE	YES	YES	YES	YES	YES	YES	YES	YES
F-Stat		28.63		28.63		28.63		28.63
Observations	1078	1078	1078	1078	1078	1078	1078	1078

The table examines how the share of state banks and their lending relationships (formation and termination) depend on the type of bailout following a distress event. Both results from OLS and two-stage least squares regressions using local electoral cycle as an instrument are displayed. BLP is a dummy for the type of bailout decisions and it equals to 1 if the distress is resolved by the politician. This dummy variable is instrumented by the electoral cycle, or $D(0-12\ months\ before)$ to address endogeneity concerns. In the second stage, predicted probabilities of political bailout (BLP) in the first stage are used to predict the dependent variables. Unit of observation is a municipality (the most granular administration level). The dependent variable from columns (1) to (2) is the share of loans extended by state-owned banks. In columns (3) and (4) ((5) and (6)), the dependent variable is share of loans extended by private (cooperative) banks. In columns (7) to (8), the dependent variable is growth of total loans. All the dependent variables are the change in average post-bailout value ($T = 1$ to $T = 5$ in Panel A or $T = 1$ to $T = 8$ in Panel B) from the pre-bailout value. The F-Stat reported is for the excluded instrument in the first stage. All dependent variables are in percentage terms. Standard errors are reported in parentheses and clustered at county/city level. *,**,*** indicates significance at the 10%, 5%, and 1%, respectively.

Table 7: Bank Bailout and Lending Relationships of Affected Banks

Panel A: Five Years After Bailout Events				
Dep. Var.	$\frac{\#\ new\ rel\ by\ affected\ banks}{\#\ all\ rel\ by\ affected\ banks}$(%)		$\frac{\#\ ended\ rel\ by\ affected\ banks}{\#\ all\ rel\ by\ affected\ banks}$(%)	
	(1)	(2)	(3)	(4)
Model	OLS	IV 2SLS	OLS	IV 2SLS
BLP	-4.301**	-8.542**	-4.304**	-10.308***
	-1.783	(3.709)	(1.673)	(3.401)
Macro Controls	YES	YES	YES	YES
Time FE	YES	YES	YES	YES
F-Stat		28.63		28.63
Observations	1078	1078	1078	1078

Panel A: Five Years After Bailout Events				
Dep. Var.	$\frac{\#\ new\ rel\ by\ affected\ banks}{\#\ all\ rel\ by\ affected\ banks}$(%)		$\frac{\#\ ended\ rel\ by\ affected\ banks}{\#\ all\ rel\ by\ affected\ banks}$(%)	
	(1)	(2)	(3)	(4)
Model	OLS	IV 2SLS	OLS	IV 2SLS
BLP	-5.694***	-9.281**	-2.464	-8.435***
	(2.121)	(3.957)	(1.836)	(3.153)
Macro Controls	YES	YES	YES	YES
Time FE	YES	YES	YES	YES
F-Stat		28.63		28.63
Observations	1078	1078	1078	1078

The table examines how the lending relationships (formation and termination) of affected banks depend on the type of bailout following a distress event. Both results from OLS and two-stage least squares regressions using local electoral cycle as an instrument are displayed. BLP is a dummy for the type of bailout decisions and it equals to 1 if the distress is resolved by the politician. This dummy variable is instrumented by the electoral cycle, or $D(0-12\ months\ before)$ to address endogeneity concerns. In the second stage, predicted probabilities of political bailout (BLP) in the first stage are used to predict the dependent variables. Unit of observation is a municipality (the most granular administration level). In columns (1) to (2), the dependent variable is the share of newly initiated lending relationships by affected banks out of all lending relationships by them, or $\frac{number\ of\ new\ lending\ relationships\ by\ affected\ banks}{number\ of\ all\ lending\ relationships\ by\ affected\ banks}$. In columns (3) and (4), the dependent variable is the share of ended lending relationships by affected banks out of all lending relationships by them, or $\frac{number\ of\ ended\ lending\ relationships\ by\ affected\ banks}{number\ of\ all\ lending\ relationships\ by\ affected\ banks}$. All the dependent variables are the change in average post-bailout value ($T=1$ to $T=5$ in Panel A or $T=1$ to $T=8$ in Panel B) from the pre-bailout value. The F-Stat reported is for the excluded instrument in the first stage. All dependent variables are in percentage terms. Standard errors are reported in parentheses and clustered at county/city level. *,**,*** indicates significance at the 10%, 5%, and 1%, respectively.

Table 8: Bank Bailout and Allocation of Loans from Affected Banks

Dep. Var.	$\frac{new\ loans\ from\ affected\ banks}{all\ loans\ from\ affected\ banks}$ (%)				$\frac{all\ loans\ from\ affected\ banks}{total\ loans}$ (%)				$\frac{new\ loans}{total\ loans}$ (%)			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Model	OLS	IV 2SLS	OLS	IV 2SLS	OLS	IV 2SLS	OLS	IV 2SLS	OLS	IV 2SLS	OLS	IV 2SLS
BLP	2.548	7.653**	3.457*	10.296***	10.050***	11.102**	9.773***	9.089*	2.349	5.846	2.749	7.866*
	(1.935)	(3.334)	(1.951)	(3.345)	(2.576)	(5.417)	(2.579)	(5.431)	(2.240)	(4.298)	(2.243)	(4.279)
BLP X L1.logMPK	0.036	-3.104*	-0.174	-3.427**	-1.943**	-6.622***	-1.856*	-6.315**	0.244	-4.701*	0.098	-5.101**
	(0.778)	(1.698)	(0.780)	(1.700)	(0.980)	(2.497)	(0.982)	(2.492)	(1.056)	(2.492)	(1.062)	(2.484)
L1.logMPK	1.975***	4.130***	2.714***	4.962***	0.907	4.102**	0.360	3.464*	3.671***	6.978***	4.258***	7.713***
	(0.750)	(1.341)	(0.765)	(1.353)	(0.860)	(1.812)	(0.881)	(1.823)	(1.053)	(1.849)	(1.086)	(1.859)
Firm Controls	NO	NO	YES	YES	NO	NO	YES	YES	NO	NO	YES	YES
Industry X Time FE	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
F-stat		96.11		98.75		88.38		87.38		88.38		87.38
Observations	6352	6352	6352	6352	10514	10514	10514	10514	10514	10514	10514	10514

The table examines how loan allocation by state banks depends on the type of bailout following a distress event. Both results from OLS and two-stage least squares regressions using local electoral cycle as an instrument are displayed. BLP is a dummy for the type of bailout decisions and it equals to 1 if the distress is resolved by the politician. This dummy variable is instrumented by the electoral cycle, or $D(0-12\ months\ before)$ to address endogeneity concerns. In the second stage, predicted probabilities of political bailout (BLP) in the first stage are used to predict the dependent variables. Unit of observation is a firm and only post-event years are included in the regression. The dependent variable from columns (1) to (4) is the amount of new loans from affected banks out of total loans from affected banks for the firm. In columns (5) and (8), the dependent variable is the share of loans extended by affected banks. Columns (9) to (12) exhibit the the amount of new loans out of total loans for the firm. All dependent variables are in percentage terms. logMPK is the natural log of sales divided by value of total fixed assets. The F-Stat reported is for the excluded instrument in the first stage. Standard errors are reported in parentheses and clustered at firm level. All regressions include industry-time fixed effects. *,**,*** indicates significance at the 10%, 5%, and 1%, respectively.

Table 9: Bank Bailout and Preferential Lending from Affected Banks

Dep. Var.	$\frac{in-group\ loans\ from\ affected\ banks}{total\ loans}$ (%)				$\frac{in-group\ loans\ from\ affected\ banks}{total\ in-group\ loans}$ (%)			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Models	OLS	IV 2SLS	OLS	IV 2SLS	OLS	IV 2SLS	OLS	IV 2SLS
BLP	2.557	10.526***	2.723	10.068**	7.302	21.649**	7.941	20.008**
	(3.134)	(3.948)	(3.138)	(3.956)	(6.677)	(8.696)	(6.709)	(8.418)
Firm Controls	NO	NO	YES	YES	NO	NO	YES	YES
Industry X Time FE	YES	YES	YES	YES	YES	YES	YES	YES
F-stat		27.47		26.36		27.47		26.36
Observations	1994	1994	1994	1994	1994	1994	1994	1994

The table examines how preferential lending of affected banks depends on the type of bailout following a distress event. Both results from OLS and two-stage least squares regressions using local electoral cycle as an instrument are displayed. BLP is a dummy for the type of bailout decisions and it equals to 1 if the distress is resolved by the politician. This dummy variable is instrumented by the electoral cycle, or $D(0-12\ months\ before)$ to address endogeneity concerns. In the second stage, predicted probabilities of political bailout (BLP) in the first stage are used to predict the dependent variables. Unit of observation is a firm and only post-event years are included in the regression. The dependent variable from columns (1) to (4) is the share of in-group loans from affected state-owned banks out of total loans. In columns (5) and (8), the dependent variable is share of in-group loans from affected state-owned banks out of total loans from connected banks. A loan is defined as from in-group banks if the firm and the bank are connected through membership of the same service club branch. The F-Stat reported is for the excluded instrument in the first stage. All dependent variables are in percentage terms. Standard errors are reported in parentheses and clustered at firm level. All regressions include industry-time fixed effects. *,**,*** indicates significance at the 10%, 5%, and 1%, respectively.

Table 10: Bank Bailout and Macroeconomic Developments at Municipality Level

Panel A: Five Years After Bailout Events										
Dep. Var.	asset growth (%)		debt growth (%)		sales growth (%)		$\frac{\#\ entry\ firms}{\#\ all\ firms}$(%)		$\frac{\#\ exit\ firms}{\#\ all\ firms}$(%)	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Model	OLS	IV 2SLS	OLS	IV 2SLS	OLS	IV 2SLS	OLS	IV 2SLS	OLS	IV 2SLS
BLP	-4.114***	-6.606**	-4.053**	-7.448**	-1.838*	-4.133*	-1.143	-4.161***	-1.924***	-3.654***
	(1.506)	(3.030)	(1.557)	(3.156)	(0.978)	(2.129)	(1.074)	(1.210)	(0.699)	(1.066)
Macro Controls	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Time FE	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
F-stat		28.63		28.63		28.63		28.63		28.63
Observations	1078	1078	1078	1078	1078	1078	1078	1078	1078	1078

Panel B: Eight Years After Bailout Events										
Dep. Var.	asset growth (%)		debt growth (%)		sales growth (%)		$\frac{\#\ entry\ firms}{\#\ all\ firms}$(%)		$\frac{\#\ exit\ firms}{\#\ all\ firms}$(%)	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Model	OLS	IV 2SLS	OLS	IV 2SLS	OLS	IV 2SLS	OLS	IV 2SLS	OLS	IV 2SLS
BLP	-3.921***	-5.151**	-3.435***	-5.162**	-1.835**	-3.227**	-1.489	-4.309***	-0.990	-2.910***
	(1.419)	(2.409)	(1.276)	(2.272)	(0.794)	(1.559)	(0.985)	(1.208)	(0.726)	(0.909)
Macro Controls	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Time FE	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
F-stat		28.63		28.63		28.63		28.63		28.63
Observations	1078	1078	1078	1078	1078	1078	1078	1078	1078	1078

The table examines how the macroeconomic developments in the local municipality depend on the type of bailout following a distress event. Both results from OLS and two-stage least squares regressions using local electoral cycle as an instrument are displayed. BLP is a dummy for the type of bailout decisions and it equals to 1 if the distress is resolved by the politician. This dummy variable is instrumented by the electoral cycle, or $D(0-12\ months\ before)$ to address endogeneity concerns. In the second stage, predicted probabilities of political bailout (BLP) in the first stage are used to predict the dependent variables. Unit of observation is a municipality (the most granular administration level). The dependent variables are sales growth, asset growth and debt growth in columns (1) and (2), (3) and (4), (5) and (6), respectively. The dependent variable in columns (7) and (8) ((9) and (10)) is the percentage of firms entering (exiting) external debt financing. The dependent variables are the average post-bailout growth rate ($T=1$ to $T=5$ in Panel A or $T=1$ to $T=8$ in Panel B) in columns (1) to (6). The dependent variables in columns (7) to (10) are the change in average post-bailout value ($T=1$ to $T=5$ in Panel A or $T=1$ to $T=8$ in Panel B) from the pre-bailout value. The F-Stat reported is for the excluded instrument in the first stage. All dependent variables are in percentage terms. Standard errors are reported in parentheses and clustered at county/city level. All regressions include time fixed effects. *,**,*** indicates significance at the 10%, 5%, and 1%, respectively.

Table 11: Hazard Model

Sample	all state bank distress events					
	(1)	(2)	(3)	(4)	(5)	(6)
D (0-12 months before)	0.198	-0.060	0.027	-0.079	0.012	-0.099
	(0.274)	(0.315)	(0.355)	(0.347)	(0.432)	(0.425)
Cons. Bank Chairman					2.434***	2.249***
					(0.332)	(0.355)
Competitive County					-0.059	0.227
					(0.235)	(0.288)
Total Assets / GDP (t-1)			0.165	-0.032	-0.019	-0.307
			(0.122)	(0.122)	(0.185)	(0.278)
Capital Ratio (t-1)			-0.017	-0.092	0.072	-0.027
			(0.110)	(0.105)	(0.130)	(0.147)
ROA (t-1)			-0.254*	-0.225*	-0.164	-0.102
			(0.132)	(0.137)	(0.142)	(0.174)
NPL Ratio (t-1)			-0.001*	-0.013	-0.000**	-0.000**
			(0.000)	(0.025)	(0.000)	(0.000)
Market Share (t-1)			-0.011***	-0.014***	-0.004	0.001
			(0.004)	(0.005)	(0.007)	(0.006)
Deposit Ratio (t-1)			-0.031***	-0.006	-0.043***	-0.035***
			(0.006)	(0.007)	(0.010)	(0.012)
GDPPC Growth (t-1)			0.019	0.002	0.012	0.002
			(0.026)	(0.031)	(0.033)	(0.036)
Log(GDPPC) (t-1)			0.124	-0.415	0.911**	0.465
			(0.244)	(0.264)	(0.395)	(0.391)
Time FE	NO	YES	NO	YES	NO	YES
Observations	1,174	1,174	1,169	1,169	1,169	1,169
Number of Distress	148	148	148	148	148	148

The table shows results from estimating an exponential hazard model in equation (4). The dummy variable $D(0-12 months before)$ indicates whether the distress event takes place 0-12 months before the election. Two political variables, the ideology of the politician and the political competition within the county, are added in columns (5) and (6). The regression further includes bank-level control variables and regional control variables, and those independent variables are self-explanatory. All control variables are lagged by one period. Columns (2), (4) and (6) include time dummies for the four election cycles in our sample (begin of sample-1998, 1999-2003, 2004-2008, 2009-end of sample). Robust standard errors are denoted in parentheses. * indicates statistical significance at the 10% level, ** at the 5% level, and *** at the 1% level.

Table 12: Instrument Verification: Political Cycle, Bank Characteristics, Size of Bailout, and Business Cycle

Panel A: Political Cycle, Bank Characteristics and Size of Bailout												
Dep. Var.	log (TA)		customer loans to TA (%)		ROA		Capital ratio (%)		NPL ratio (%)		Support to equity (%)	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
D (0-12 months before)	0.145	0.108	-1.996	-2.407	-0.045	-0.044	-0.194	-0.196	0.312	0.463	2.849	3.621
	(0.230)	(0.220)	(3.321)	(3.415)	(0.131)	(0.132)	(0.197)	(0.210)	(0.920)	(0.874)	(7.851)	(8.065)
Time FE	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES
Observations	148	148	148	148	148	148	148	148	148	148	148	148

Panel B: Political Cycle and Business Cycle												
Dep. Var.	GDP per capita growth (%)			government debt to GDP (%)			total loans to GDP (%)			total state loans to GDP (%)		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
D (0-12 months before)	-0.066	-0.053	-0.057	0.184	-0.346	-0.335	2.461	-0.328	0.073	3.172*	0.088	0.868
	(0.120)	(0.121)	(0.122)	(0.304)	(0.217)	(0.218)	(1.836)	(0.881)	(0.824)	(1.626)	(1.104)	(0.945)
County FE	NO	YES	YES	NO	YES	YES	NO	YES	YES	NO	YES	YES
Time FE	NO	NO	YES	NO	NO	YES	NO	NO	YES	NO	NO	YES
Observations	5501	5501	5501	5501	5501	5501	5501	5501	5501	5501	5501	5501

Panel A of this table examines whether there is a relationship between the regional electoral cycle and different bank characteristics of local saving banks' that experience a distress event. The sample includes all saving bank distress events and the dependent variable is the logarithm of bank assets in the year before the distress event ($\log(\text{assets}_{t-1})$) in columns (1) and (2), the fraction the bank's customer loans to its total assets in the year prior to default ($(\frac{customer\ loans}{total\ assets})_{t-1}$) in columns (3) and (4), the return on assets in the year before the distress event (ROA_{t-1}) in columns (5) and (6), the Tier I capital ratio in the year prior to default in columns (7) to (8), the non-performing loans ratio in columns (9) and (10). In columns (11) and (12), the dependent variable measures the size of bailout, which equals to the size of capital support scaled by total equity of the bank. Panel B of this table examines whether there is a relationship between the regional electoral cycle and regional GDP per capita growth (in columns (1) to (3)) as well as regional public debt to GDP ratio (in columns (4)- (6)). In columns (7) to (9) and columns (10) to (12), the dependent variables are total loans to GDP ratio and total state loans to GDP ratio respectively. The sample includes all German counties (irrespective whether the local saving banks experienced a distress event or not) for which we are able to obtain data for the dependent variable. Standard errors clustered by counties in Panel B and robust standard errors in Panel A are denoted in parentheses. * indicates statistical significance at the 10% level, ** at the 5% level, and *** at the 1% level.

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A Appendix: Data Sources and Construction of Variables

The Bundesbank's prudential data base (BAKIS): This database (for which the German Banking Act forms the legal basis) contains micro data on German banks which is available from the 1990s on and used for both supervisory monitoring of financial institutions and research purposes. These data contain sensitive and confidential supervisory information and, therefore, can only be used at the Bundesbank premises and the results may be published only after a thorough anonymization of the data.[39] From the BAKIS data base we obtain bank balance sheet data to construct control variables for our regression analyses. More importantly, we also get access to the "Sonderdatenkatalog 1" which is a special dataset containing confidential information which banks are legally bound to report to Bundesbank and BaFin and, amongst others, allow us to identify capital support measures savings banks received from the association.

The monthly balance sheet statistics (BISTA): This data base gives a comprehensive overview on German financial institutions' business activities. Hereby, banks are legally bound to report their balance sheet data on a monthly and highly disaggregated basis. For our project a major challenge was to access historical BISTA data which allows us to identify the size of the capital injection as well as the particular month this event occurred. Moreover, the BISTA database also provides us with information on each bank's lending to municipalities (which is used to identify further motives behind bank bailouts).

The quarterly borrowers' statistics: This database contains domestic loan portfolio exposures and write-off data on the bank-portfolio level (i.e., lending to the German real sector can be identified for 24 corporate and 3 retail portfolios per bank). Loan exposure data is available from the early 1990s on while data on write-offs can be accessed from 2002-2010. In our empirical study data from the borrowers' statistics is used to double-check the information on the timing of bailout events, in particular by the banking association, for roughly half of the time-period of our dataset. For the period before 2002 we have to rely on the evolution of the capital adequacy ratio in order to identify the timing of the distress event within a year.

The Bundesbank's distress data base: This database contains information on distress events which occurred at German financial institutions from the early 1990s on. For our analyses we rely on information on so-called "distressed mergers"; that is, we need to distinguish distressed (or restructuring) mergers from pure "economy of scale mergers". As the distress database is only available until 2006, we define a distressed merger in the years 2007-2010 as a passive merger where the bank that was taken over experienced a severe distress event (i.e., a moratorium, a capital support measure, or a very low capital ratio) in the three year before the merger.

[39] For a detailed description of the BAKIS data base see, for example, Memmel, C. and I. Stein (2008), "The Deutsche Bundesbank's Prudential Database (BAKIS)", in: Schmollers Jahrbuch 128, Duncker & Humblot, Berlin, pages 321-328.

Table A1: Variable Definitions

Panel A: Events	
Support from politician	Capital injections from the politician are identified by an increase in a bank's subscribed capital that cannot be explained by takeovers or restructuring of equity positions (so called "stille Einlage"). Note that for historical reasons, the equity capital of savings banks usually consists solely of contingency funds (so called "Sicherheitsrücklage"). These funds were originally provided by the politician of the bank in the year of foundation and then cumulated over the years out of the bank's retained earnings. However, if the savings bank—besides its equity in the contingency funds—also has subscribed capital unequal to zero, then this usually indicates an undisclosed participation of the bank owner.
Support from association	
... capital support	Capital injections or guarantees from the association, obtained from "Sonderdatenkatalog 1" of the Bundesbank BAKIS database
... distressed merger	Information on distressed mergers is taken from the Bundesbank distress data base. As this database is only available until 2006, we define a distressed merger in the years 2007-2010 as a passive merger where the bank that was taken over experienced a severe distress event in the three years before the merger (i.e., a moratorium, a capital support measure, or a very low capital ratio).
Panel B: Bank Variables	
Control Variables	
Total Bank Assets	Total assets (in Mio. EUR)
Log Bank Assets	Logarithm (ln) of total assets
Total Assets / GDP	Total assets to GDP ratio (county level, in %)
Capital Ratio	Equity capital to total assets ratio (in %)
ROA	Return (operative result) on total assets (in %)
NPL Ratio	Non-performing loans to customer loans ratio (in %)
Market Share (in %)	Share of bank branches in the respective county where very small branches (e.g., branches from the Deutsche Postbank) are excluded. Note that until 2004 banks are legally bound to report the exact location of each of their branches to the Deutsche Bundesbank; from 2005 on the share of branches can be proxied from banks' voluntary reporting and from cross-sectional information.
Deposit Ratio	Savings deposits, term deposits, and time deposits to total assets ratio (in %)
Loans to Owner / GDP	Claims against municipal governments to GDP ratio (county level, in %)
Conditional on Distress	
Bank Chairman in Ass. Board	Dummy = 1 if the chairman of the bank in distress is also a member of the board of the association.
Restructuring Variables	
Growth Rate (Employees)	Year-on-year change of number of bank employees (growth rate)
Growth Rate (Number of Branches)	Year-on-year change of number of bank branches (growth rate, available until 2004)
Growth Rate (Customer Loans)	Year-on-year change of customer loans to total assets ratio (growth rate)
Growth Rate (Pers. Expenditures)	Year-on-year change of personnel expenditures (growth rate)
Loan Loss Provisions / Customer Loans	Loan loss provisions to customer loans (in %)

Table A1: continued...

Panel C: Macro & Other Variables	
GDPPC Growth	Year-on-year change of real GDP per capita (county level, in %)
Log(GDPPC)	Logarithm (ln) of real GDP per capita (county level)
Government Debt / GDP	Municipal government debt to GDP (county level, in %)
Restructuring Variables	
State Bank Loan Share	Share of loans in the German credit register that is granted by state banks in a given year
Loans to GDP	Loans in the German credit register aggregated at the county level and divided by county-level GDP
Loans to Private Corporate Sector to GDP	Loans in the German credit register to private companies aggregated at the county level and divided by county-level GDP
Private Capital Expenditures to GDP	Capital expenditures by companies in the manufacturing sector aggregated at the county level and divided by county-level GDP
Real GDP Growth	Year-on-year change in real GDP (county level, in %)
Share of Employees in Population	Ratio of employees to total inhabitants (county level)
Panel D: Political Variables	
D(12-24 months before)	Dummy = 1 if the last county/city elections took place 12-24 months before the distress event.
D(0-12 months before)	Dummy = 1 if the last county/city elections will take place 0 to 12 months before the distress event.
D(0-12 months after)	Dummy = 1 if the last county/city elections took place 0 to 12 months after the distress event.
D(12-24 months after)	Dummy = 1 if the last county/city elections took place 12-24 months after the distress event.
D(24-36 months after)	Dummy = 1 if the last county/city elections took place 24-36 months after the distress event.
No Competitive County	Dummy = 0 for a non-competitive county.
Competitive County	Dummy = 1 for competitive counties. Hereby, the vote share margin between the first and the second party within the county from the respective state election is calculated. Then the dummy is defined as equal to one if the vote share margin is smaller than the median and zero otherwise. This taken as a proxy for political competition within the county/city: The smaller the vote share margin between the first and the second party, the more intense the political competition and the more effective the disciplining role voters can exert on politicians.
No Conservative Bank Chairman	Dummy = 0 for a non-conservative chairman.
Conservative Bank Chairman	Dummy = 1 if the chairman of the savings bank's supervisory board is a member of a conservative party (i.e., "CDU" or "CSU").

The table shows a description of the variables we use in the empirical analysis.

B Appendix: Additional Results

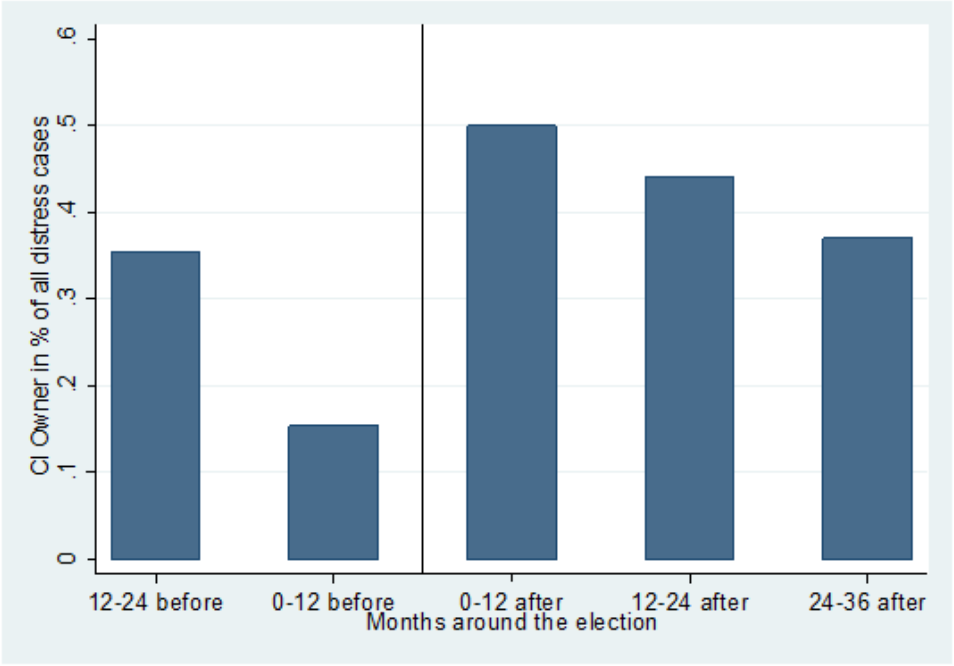

Figure B1: CI from politician and electoral cycle (in % of all distress events).

Figure B1 illustrates how the number of banks that receive capital injections from the politician varies over the electoral cycle, where the vertical black line indicates the election date.

Table B1: Event Type: Political Factors Influencing Local Politicians

Sample	all state bank distress events					
Dep. Var.	Event Type (=1 if political bailout or BLP)					
	(1)	(2)	(3)	(4)	(5)	(6)
D (0-12 months before)	-0.264***	-0.292***	-0.279***	-0.304***	-0.283***	-0.307***
	(0.084)	(0.079)	(0.080)	(0.081)	(0.085)	(0.084)
Cons. Bank Chairman					-0.197**	-0.200**
					(0.082)	(0.081)
Competitive County					-0.105	-0.117
					(0.074)	(0.072)
Total Assets / GDP (t-1)			-0.117	-0.169*	-0.095	-0.150*
			(0.088)	(0.093)	(0.077)	(0.084)
Capital Ratio (t-1)			-0.044	-0.047	-0.035	-0.037
			(0.039)	(0.040)	(0.038)	(0.038)
ROA (t-1)			0.068	0.069	0.044	0.044
			(0.067)	(0.068)	(0.071)	(0.073)
NPL Ratio (t-1)			-0.021**	-0.022**	-0.023**	-0.023**
			(0.009)	(0.009)	(0.009)	(0.009)
Market Share (t-1)			0.010***	0.010***	0.009***	0.009***
			(0.003)	(0.003)	(0.003)	(0.003)
Deposit Ratio (t-1)			-0.008**	-0.006	-0.006*	-0.004
			(0.004)	(0.004)	(0.004)	(0.004)
GDPPC Growth (t-1)			-0.023**	-0.021**	-0.022**	-0.021**
			(0.009)	(0.009)	(0.009)	(0.008)
Log(GDPPC) (t-1)			0.011	0.034	-0.080	-0.058
			(0.121)	(0.123)	(0.122)	(0.127)
Time FE	NO	YES	NO	YES	NO	YES
Observations	148	148	148	148	148	148
R-squared	0.0433	0.101	0.274	0.295	0.309	0.331

The table shows how the electoral cycle affects the likelihood of a bailout reached by decentralized v.s. centralized decision-making. The dependent variable is a dummy that equals one if the bank receives capital injections from the politician and zero if the bank receives support measures from the association. The dummy variable $D(0-12 months before)$ indicates whether the distress event takes place 0-12 months before the election. Two political variables, the political competition within the county and the ideology of the politician, are added in columns (5) and (6). The regression further includes bank-level control variables and regional control variables, and those independent variables are self-explanatory. All control variables are lagged by one period. Columns (2), (4) and (6) include time dummies for the four election cycles in our sample (begin of sample-1998, 1999-2003, 2004-2008, 2009-end of sample). Robust standard errors are denoted in parentheses. * indicates statistical significance at the 10% level, ** at the 5% level, and *** at the 1% level.

Table B2: Event Type—Logit Models

Sample	all state bank distress events					
Dep. Var.	Event Type (=1 if political bailout or BLP)					
	(1)	(2)	(3)	(4)	(5)	(6)
D (0-12 months after)	1.705***	1.763**	1.918**	2.191**	2.037**	2.381**
	(0.657)	(0.706)	(0.767)	(0.862)	(0.833)	(0.957)
D (12-24 months after)	1.468**	1.707***	2.471***	2.753***	2.488***	2.818***
	(0.646)	(0.648)	(0.721)	(0.824)	(0.789)	(0.935)
D (24-36 months after)	1.174*	1.435**	1.642**	1.976**	1.636*	2.015*
	(0.676)	(0.677)	(0.771)	(0.876)	(0.864)	(1.029)
D (12-24 months before)	1.107*	1.562**	1.824**	2.361**	1.956**	2.583**
	(0.663)	(0.687)	(0.802)	(0.948)	(0.888)	(1.079)
Cons. Bank Chairman					-1.077**	-1.140**
					(0.474)	(0.454)
Competitive County					-0.586	-0.752*
					(0.430)	(0.441)
Total Assets / GDP (t-1)			-0.802*	-1.093**	-0.704	-1.058**
			(0.429)	(0.447)	(0.430)	(0.477)
Capital Ratio (t-1)			-0.255	-0.334	-0.240	-0.326
			(0.216)	(0.232)	(0.230)	(0.254)
ROA (t-1)			0.400	0.458	0.340	0.411
			(0.367)	(0.385)	(0.400)	(0.435)
NPL Ratio (t-1)			-0.149**	-0.154**	-0.151**	-0.154**
			(0.070)	(0.071)	(0.069)	(0.069)
Market Share (t-1)			0.063***	0.062***	0.059***	0.060***
			(0.020)	(0.020)	(0.020)	(0.020)
Deposit Ratio (t-1)			-0.054**	-0.044*	-0.044*	-0.032
			(0.023)	(0.026)	(0.023)	(0.027)
GDPPC Growth (t-1)			-0.145**	-0.130**	-0.149**	-0.135**
			(0.064)	(0.061)	(0.067)	(0.065)
Log(GDPPC) (t-1)			0.026	0.186	-0.408	-0.290
			(0.718)	(0.797)	(0.722)	(0.828)
Constant	-1.705***	-2.093***	1.991	-0.017	6.369	4.729
	(0.545)	(0.618)	(7.463)	(8.216)	(7.494)	(8.513)
Time FE	NO	YES	NO	YES	NO	YES
Observations	148	148	148	148	148	148
Pesudo R-squared	0.0456	0.0848	0.253	0.283	0.297	0.318

The table re-estimates the results from Table 3, using a nonlinear logit specification instead of the OLS specification. As before, the dependent variable is a dummy that equals one if the bank receives capital injections from the politician and zero if the bank receives support measures from the association. Four dummy variables indicating four periods in the electoral cycle are included, and the omitted group is (0-12 months before). Two political variables, the political competition within the county and the ideology of the politician, are added in columns (5) and (6). The regression further includes bank-level control variables and regional control variables, and those independent variables are self-explanatory. All control variables are lagged by one period. Columns (2), (4) and (6) include time dummies for the four election cycles in our sample (begin of sample-1998, 1999-2003, 2004-2008, 2009-end of sample). Robust standard errors are denoted in parentheses. * indicates statistical significance at the 10% level, ** at the 5% level, and *** at the 1% level.

Table B3: Hazard Model—Four Dummies for Electoral Cycle

Sample	all state bank distress events					
	(1)	(2)	(3)	(4)	(5)	(6)
D (0-12 months after)	0.312	0.172	0.657	0.347	0.541	0.687
	(0.414)	(0.451)	(0.506)	(0.505)	(0.681)	(0.613)
D (12-24 months after)	-0.568*	-0.065	-0.334	-0.016	-0.036	0.131
	(0.295)	(0.365)	(0.387)	(0.436)	(0.517)	(0.497)
D (24-36 months after)	-0.297	-0.183	-0.341	-0.303	-0.353	-0.389
	(0.334)	(0.356)	(0.375)	(0.387)	(0.482)	(0.504)
D (12-24 months before)	0.484	0.355	0.560	0.433	0.887	0.882
	(0.382)	(0.415)	(0.507)	(0.489)	(0.635)	(0.606)
Cons. Bank Chairman					2.577***	2.468***
					(0.376)	(0.397)
Competitive County					0.163	0.389
					(0.280)	(0.345)
Total Assets / GDP (t-1)			0.314***	0.002	0.100	-0.225
			(0.121)	(0.132)	(0.206)	(0.324)
Capital Ratio (t-1)			-0.049	-0.110	0.075	-0.038
			(0.108)	(0.108)	(0.143)	(0.155)
ROA (t-1)			-0.233*	-0.236	-0.159	-0.113
			(0.141)	(0.154)	(0.149)	(0.174)
NPL Ratio (t-1)			-0.001	-0.013	-0.000**	-0.000**
			(0.001)	(0.027)	(0.000)	(0.000)
Market Share (t-1)			-0.019***	-0.017***	-0.011	-0.006
			(0.006)	(0.007)	(0.008)	(0.009)
Deposit Ratio (t-1)			-0.025***	-0.007	-0.044***	-0.038***
			(0.008)	(0.008)	(0.014)	(0.014)
GDPPC Growth (t-1)			0.008	0.001	0.002	-0.008
			(0.027)	(0.031)	(0.033)	(0.036)
Log(GDPPC) (t-1)			-0.093	-0.452	0.614	0.298
			(0.344)	(0.356)	(0.456)	(0.425)
Time FE	NO	YES	NO	YES	NO	YES
Observations	1,174	1,174	1,169	1,169	1,169	1,169
Number of Distress	148	148	148	148	148	148

The table shows results from estimating an exponential hazard model in equation (4). Four dummy variables indicating four periods in the electoral cycle are included, and the omitted group is (0-12 months before). Two political variables, the ideology of the politician and the political competition within the county, are added in columns (5) and (6). The regression further includes bank-level control variables and regional control variables, and those independent variables are self-explanatory. All control variables are lagged by one period. Columns (2), (4) and (6) include time dummies for the four election cycles in our sample (begin of sample-1998, 1999-2003, 2004-2008, 2009-end of sample). Robust standard errors are denoted in parentheses. * indicates statistical significance at the 10% level, ** at the 5% level, and *** at the 1% level.

Table B4: Bank Bailout and Allocation of Loans from State-owned Banks

Dep. Var.	$\frac{new\ loans\ from\ affected\ banks}{all\ loans\ from\ affected\ banks}$ (%)				$\frac{all\ loans\ from\ affected\ banks}{total\ loans}$ (%)				$\frac{new\ loans}{total\ loans}$ (%)			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Model	OLS	IV 2SLS	OLS	IV 2SLS	OLS	IV 2SLS	OLS	IV 2SLS	OLS	IV 2SLS	OLS	IV 2SLS
BLP	2.700	5.595	3.638*	8.064**	10.216***	9.365*	9.972***	7.848	1.539	4.924	1.967	6.927
	(2.047)	(3.705)	(2.051)	(3.652)	(2.705)	(5.589)	(2.711)	(5.592)	(2.398)	(4.672)	(2.406)	(4.657)
BLP X F1.logMPK	-0.268	-3.983**	-0.577	-4.255**	-2.044**	-7.325***	-1.950*	-7.103***	-0.087	-4.282*	-0.249	-4.740**
	(0.900)	(1.943)	(0.895)	(1.940)	(1.025)	(2.490)	(1.031)	(2.498)	(0.997)	(2.369)	(0.996)	(2.351)
F1.logMPK	1.718**	4.309***	2.452***	5.022***	0.870	4.589**	0.415	4.094**	2.727***	5.568***	3.313***	6.337***
	(0.852)	(1.498)	(0.849)	(1.510)	(0.909)	(1.833)	(0.935)	(1.853)	(0.948)	(1.791)	(0.959)	(1.793)
Firm Controls	NO	NO	YES	YES	NO	NO	YES	YES	NO	NO	YES	YES
Industry X Time FE	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
F-stat		96.11		98.75		88.38		87.38		88.38		87.38
Observations	6352	6352	6352	6352	10514	10514	10514	10514	10514	10514	10514	10514

The table examines how loan allocation by state banks depends on the type of bailout following a distress event. Both results from OLS and two-stage least squares regressions using local electoral cycle as an instrument are displayed. BLP is a dummy for the type of bailout decisions and it equals to 1 if the distress is resolved by the politician. This dummy variable is instrumented by the electoral cycle, or $D(0-12\ months\ before)$ to address endogeneity concerns. In the second stage, predicted probabilities of political bailout (BLP) in the first stage are used to predict the dependent variables. Unit of observation is a firm and only post-event years are included in the regression. The dependent variable from columns (1) to (4) is the amount of new loans from affected banks out of total loans from affected banks for the firm. In columns (5) and (8), the dependent variable is the share of loans extended by affected banks. Columns (9) to (12) exhibit the the amount of new loans out of total loans for the firm. All dependent variables are in percentage terms. logMPK is the natural log of sales divided by value of total fixed assets. The F-Stat reported is for the excluded instrument in the first stage. Standard errors are reported in parentheses and clustered at firm level. All regressions include industry-time fixed effects. *,**,*** indicates significance at the 10%, 5%, and 1%, respectively.

C Appendix: Alternative Estimation Approach

An alternative estimation approach instruments the BLP dummy with the predicted probability of BLP obtained from the following probit model:

$$\widehat{P_{BLP_{it}}} = \phi(\tau D(0-12\ month\ before)_{kt} + POL'_{kt}\nu_0 + C'_{kt-1}\gamma_0 + X'_{it-1}\delta_0) \tag{5}$$

When the endogenous regressor is a *binary* variable, this estimator is asymptotically efficient. Wooldridge (2010) shows that in the group of estimators where instruments are a function of $D(0-12\ month\ before)$ and other covariates, this estimation specification is more efficient. In addition the regular two stages in Equations 2 and 3, this approach at the beginning has a step of estimating the probit model described in Equations 5. We further instrument BLP with the predicted probability of politician intervention obtained from the probit regression (rather than the timing of the distress event in the electoral cycle itself). In Table C1, which mimics Table 6, we denote this method by $IV(probit)$. Both OLS and $IV(probit)$ results are shown in Table C1. In columns (1) and (2), we have the share of loans extended by state banks as the dependent variable. As expected from a more efficient specification, the F-statistic from the first stage regression increases from 28.64 to 44.09 when we replace the original instrument with the predicted probability of BLP from the probit model, see column (2) in Table 6 and Table C1. The magnitude is comparable to the IV specification in Table 6 and significantly greater than that in column (1) where we have the OLS specification.

Table C1: Bank Bailout and Local Financing Structure

Panel A: Five Years After Bailout Events

Dep. Var.	$\frac{loans\ by\ state\ banks}{total\ loans}$(%)		$\frac{loans\ by\ private\ banks}{total\ loans}$(%)		$\frac{loans\ by\ cooperatives}{total\ loans}$(%)		$growth\ of\ total\ loans$(%)	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Model	OLS	IV(Probit)	OLS	IV(Probit)	OLS	IV(Probit)	OLS	IV(Probit)
BLP	4.848***	6.973***	-4.788**	-9.838***	-0.004	2.882	2.135*	1.945
	(1.554)	(2.426)	(2.096)	(3.022)	(1.188)	(1.735)	(1.242)	(1.842)
Macro Controls	YES	YES	YES	YES	YES	YES	YES	YES
Time FE	YES	YES	YES	YES	YES	YES	YES	YES
F-Stat		44.09		44.09		44.09		44.09
Observations	1078	1078	1078	1078	1078	1078	1078	1078

Panel B: Eight Years After Bailout Events

Dep. Var.	$\frac{loans\ by\ state\ banks}{total\ loans}$(%)		$\frac{loans\ by\ private\ banks}{total\ loans}$(%)		$\frac{loans\ by\ cooperatives}{total\ loans}$(%)		$growth\ of\ total\ loans$(%)	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Model	OLS	IV(Probit)	OLS	IV(Probit)	OLS	IV(Probit)	OLS	IV(Probit)
BLP	4.059**	8.687***	-4.002*	-10.642***	0.002	1.979	2.691*	2.768
	(1.617)	(2.754)	(2.163)	(3.014)	(1.312)	(2.160)	(1.582)	(2.440)
Macro Controls	YES	YES	YES	YES	YES	YES	YES	YES
Time FE	YES	YES	YES	YES	YES	YES	YES	YES
F-Stat		44.09		44.09		44.09		44.09
Observations	1078	1078	1078	1078	1078	1078	1078	1078

The table examines how the share of state banks and their lending relationships (formation and termination) depend on the type of bailout following a distress event. IV (probit) results estimated by two-stage least squares using local electoral cycle (predicted probability of BLP obtained from the probit model) as an instrument are displayed together with OLS results. BLP is a dummy for the type of bailout decisions and it equals to 1 if the distress is resolved by the politician. This dummy variable is instrumented by the electoral cycle, or $D(0-12\ months\ before)$ to address endogeneity concerns. In the second stage, predicted probabilities of political bailout (BLP) in the first stage are used to predict the dependent variables. Unit of observation is a municipality (the most granular administration level). The dependent variable from columns (1) to (2) is the share of loans extended by state-owned banks. In columns (3) and (4) ((5) and (6)), the dependent variable is share of loans extended by private (cooperative) banks. In columns (7) to (8), the dependent variable is growth of total loans. All the dependent variables are the change in average post-bailout value ($T = 1$ to $T = 5$ in Panel A or $T = 1$ to $T = 8$ in Panel B) from the pre-bailout value. The F-Stat reported is for the excluded instrument in the first stage. All dependent variables are in percentage terms. Standard errors are reported in parentheses and clustered at county/city level. *,**,*** indicates significance at the 10%, 5%, and 1%, respectively.