The Political Economy of Decentralization: Evidence from Bank Bailouts*

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Abstract

We examine the political determinants and consequences of decentralized decision-making in the banking sector. In Germany, resolution of savings bank distress can be handled either by a county-level politician (decentralized) or by a state-level association (centralized). While the occurrence of distress is not related to the electoral cycle, the probability of a decentralized-level bailout is 30% lower in the year directly preceding an election. Using the electoral cycle as an instrument for who rescues the distressed bank, we find that banks under decentralized-layer bailouts perform more poorly, provision credit less efficiently, and grant more preferential loans when compared with those under centralized-layer bailouts. We also observe lower growth in income and employment in areas exposed to decentralized-layer bailouts. Overall, our results highlight the political economy of decentralization, with local politicians deriving private benefits from controlling the bank.

Keywords: political economy, bank bailouts, elections, decentralization
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1 Introduction

Whether governmental decision-making should be conducted at a local or a more centralized level is one of the most debated issues for the past few decades. Many countries have implemented reforms decentralizing decision-making to local governments in recent years.[1] In sharp contrast, decision-making in the European Union (EU) has been shifting towards more centralized structures. For instance, in the banking sector, supranational institutions have emerged, including the Single Supervisor Mechanism (SSM), the Single Resolution Mechanism (SRM), and the European Deposit Insurance Scheme (EDIS) among others.[2] In the context of bank bailouts in Germany, this paper revisits the debate between decentralization and centralization in governmental decision-making.

The economic theory of federalism provides a useful starting point for this debate. The famous decentralization theorem (Oates (1972)) states that in the absence of spillovers, decentralization is more efficient than centralization. The European community also refers to this as the principle of subsidiarity. According to this theorem, decentralization allows for better decision-making since local institutions have an informational advantage (Hayek (1945)) compared with national institutions about local conditions and preferences of citizens, and can therefore better tailor policies to local needs.[3] In contrast, centralization of decision-making allows entities to internalize externalities, improve coordination, and capitalize on the economies of scale.

While this theory informs any discussion on how to best design a federal state, it relies on the role of local preference heterogeneity and externalities between different jurisdictions. It, thus, abstracts away from any incentive conflicts that are key to analyzing different organizational designs. In many regards, it can be compared to the neo-classical theory

[1] Such reforms were initiated in a diverse set of countries since late 1990s, such as Argentina, Bolivia, Cambodia, France, Japan and Turkey among others.

[2] The Brexit vote, though, can be viewed as a move to more decentralization of decision-making.

[3] Furthermore, competition between jurisdictions improves the provision of goods and services in the economy (Tiebout (1956)).

of the firm, which treats firms as black boxes, devoid of any incentive conflicts—manager acting benevolently to maximize shareholder value. In reality, government officials do not necessarily make decisions to maximize the welfare of citizens. The second-generation theory of federalism (Lockwood (2002), Besley and Coate (2003), Harstad (2007), and Tommasi and Weinschelbaum (2007)) focuses on accountability and incentives of government officials and discusses optimal level of decision making through the new theory of the firm (Grossman and Hart (1986), and Hart and Moore (1990)).[4]

Guided by this second-generation theory of federalism, we attempt to provide empirical evidence on the political determinants and consequences of organizational design through the lens of an extensive organizational economics literature.[5] The literature, largely theoretical, emphasizes the role of the authority and delegation in decision-making and is helpful in understanding the relevant trade-offs. According to these theories, decentralization is a double-edged sword. On the one hand, decentralization provides better incentives and information that can improve decision-making. On the other hand, decentralization may increase the scope for corruption and capture (Shleifer and Vishny (1993)).

Several challenges have hindered empirical research on testing these theories, and in particular, on evaluating different organizational designs. The first impediment comes from the paucity of good micro-level data. A researcher needs not only detailed data on the organizational design of institutions, but also comprehensive information on outcome variables, to identify the effect of changes in organizational design. The second challenge relates to the classic endogeneity problem. Even if one is fortunate enough to access organizational-level micro data, one still has to grapple with the fact that the choice of organizational design is not random. While cross-sectional studies are informative about the plausible relationship,

[4]See also Bardhan and Mookherjee (2000), Seabright (1996), Blanchard and Shleifer (2001) among others. This is referred to as the second generation theories of fiscal federalism in Bardhan and Mookherjee (2006a) and Mookherjee (2015).

[5]The literature can be broadly categorized into incentives based theories (Aghion and Tirole (1997)) or communication based theories (see Sah and Stiglitz (1986), Radner (1993), Bolton and Dewatripont (1994) and Garicano (2000) among others.

they are plagued by omitted variable bias. To make any causal claims, the researcher has to seek exogenous variations in the organizational design, which tends to be sticky over time.

The German savings bank sector offers a rare opportunity for us to overcome the above challenges. First, German savings banks operate in locally pre-defined areas that usually cover one county and its mayor, referred to as the *local politician* throughout the paper, serves as the chairman of the bank's supervisory board. Once a bank gets in distress, a safety net whose decision board consists of rotating local politicians organizes a bailout for the respective saving bank.[6] This safety net at the state level constitutes the central layer in our set-up. However, given that a bailout by the safety net may involve intensive restructuring, local politicians may step in and use tax payers money to organize the bailout. In this case, local politicians resolve the distress event without the involvement of the central layer. This set-up provides us with a sample of bank bailouts which are managed by two different layers of decision-makers.

Second, comparing outcomes associated with these two different types of bailouts would nevertheless be biased if local politicians inject tax payers money only in selected cases. The following observation helps us to address this selection issue: local politicians avoid getting involved in bailouts before a local election, while they are considerably more likely to do so if the distress event occurs after an election. We use this fact to construct an instrument, which relies on the timing of distress events in the electoral cycle to generate plausibly exogenous variation in the probability of a decentralized-level versus a centralized-level bailout. This instrument identifies out of switchers—distressed banks that would have been treated by the local politician after the election, but are treated by the central decision-maker instead (Imbens and Angrist (1994)).

Employing a micro-level dataset from Deutsche Bundesbank of 429 individual savings banks in Germany, we identify 148 distress events of these banks between 1995 and 2010.

[6]It should be noted that the savings bank association is also governed by county level politicians. The county level politicians are voted to head the state-level association on a rotational basis.

More specifically, a distress event is considered as a situation in which a savings bank requires an external capital injection to fulfill regulatory capital requirements. As a first step, we test for the presence of an electoral cycle regarding the capital injection by local politicians. Conditional on distress, politicians are about 30% less likely to inject capital into a bank in the preceding twelve months of an election when compared with the twelve months following an election. The findings are robust to the inclusion of an extensive set of macroeconomic as well as bank-specific control variables.

The presence of an electoral cycle in bailouts suggests certain incongruence in the objective functions of the electorate and the politician. If both were perfectly aligned, one would not see a cycle. On the other hand, if the bailout were very popular with the electorate, one would perhaps observe more bailouts by politicians in the pre-election year. The fact that the local politician is reluctant to carry on bailouts prior to the election perhaps is driven by the concern that it may not go well with the electorate, who may prefer deploying taxpayers' money on other important projects that generate a higher benefit to the county (schools, hospitals, etc.). The politician's behavior thus can be seen as a sign of distorted decision-making driven by her personal incentives. To formally study this, we use the aforementioned instrument to compare outcomes of bailouts organized at different layers.

We discuss our identifying assumptions before presenting the results. The timing of banks' distress event provides us with exogenous variation of the treatment as long as (1) politicians are not able to influence this timing, and, (2) the electoral cycle does not affect outcome variables through any channel other than the bailout decision. A major concern is that politicians are able to exert their influence on banks to evergreen loans in order to delay write-offs that may cause bank distress.[7] If this would be possible, politicians could decide to delay selected distress events until after the election. Empirically, we find no correlation between the timing of distress events and the electoral cycle and no evidence

[7]Haselmann, Schoenherr and Vig (2018) document excess continuation as a major problem of the lending decisions of savings banks for a sample of connected loans.

of even-greening around distress events.[8] We further test whether banks that experience a distress event before elections systematically differ from those banks that go into distress after these elections. For an extensive set of bank characteristics as well as macroeconomic variables, there is no significant relationship between these measures and the electoral cycle (see Section 5.1 for a detailed discussion on validity of the instrument).

Using the instrumental variables approach, we ask two questions. First, do decision-makers at a centralized layer carry out the bailout differently from local decision-makers? Second, which bailout technology is superior? We find that the state-level association takes a more drastic approach when it comes to restructuring banks. It either downsizes the bank, or in some cases merges it with a bank in the neighboring county. Thus, in the event of an association bailout, the local politician either controls a smaller bank or loses the control of the bank. What happens to the financial performance of failing banks after the bailouts? Our results suggest that banks under centralized-level bailouts perform better and are also better capitalized in the five years following the distress event. These banks have higher improvements in non-performing loans (capital ratio) by 2.9 (1.2) percentage points.

The second question requires further investigation into the aftermath of different bailouts from a broader perspective. The relatively poor future performance of local bailed-out banks is in line with its inefficient continuation upon political intervention. However, a local politician may not be primarily concerned with profit maximization within financial institutions. She may have a broader objective function and care more about local economic efficiency and long-term macro development. Therefore, to fairly evaluate the impact of a politician-involved bailout, we examine lending practices, including the efficiency of credit allocation and preferential lending, and regional economic development around bailouts.

[8]Note that this finding does not rule out the possibility that savings banks tend to evergreen loans in general. Our findings suggest that evergreening is not practiced for cases that are likely to result in a distress event since these cases will be carefully audited in the future. Such evergreening potentially entails high personal risk (e.g. loss of job and pension) for the mangers of savings banks.

We find significant differences in the market structure and borrower composition. Savings banks experience a 6.88 percentage points decrease in market share and more disruptions to their lending relationships following a centralized-layer bailout when compared with a decentralized-layer one. More importantly, bailouts directed by decentralized decision-making lead to distortions in the affected banks' lending practices. First, these banks are more likely to allocate a significant amount of credit to less efficient firms. In these cases, firms with one standard deviation higher average product of capital observe a 6.8% lower loan growth when compared with association led bailouts. Second, when bank bailout decisions are reached at the decentralized level, state-owned banks are preserved and they tend to keep and even expand the preferential lending to connected firms.

Regarding macroeconomic performance, we find that counties exposed to post-election distress events, which are more likely to be resolved by local politicians, experience significantly lower growth in income per capita and employment. They also underperform in employment rate and new firm creation. In addition, government debt keeps increasing in the post-bailout years for these counties. The local government's hands are therefore tied and they are less able to invest in projects targeting long-run welfare. In summary, our results suggest that decentralization imposes both fiscal and real costs on the county. The result on preferential lending further suggests that local politicians derive private benefits from controlling the savings bank. To this end, our findings highlight the benefits of centralized decision-making and uncover the political economy of decentralization via the lens of bank bailouts.

Our paper contributes to the ongoing debate over political decentralization. In line with the ambiguous prediction from theories of federalism (see Oates (1972), Besley and Coate (1997), Lockwood (2002), Alesina and Spolaore (2003), Harstad (2007) and Boffa, Piolatto, and Ponzetto (2016)), many surveys of the literature agree that empirical evidence is inconclusive. While studies relying on cross-country variation in decentralization can be extremely informative (Fisman and Gatti (2002)), omitted variables are a valid concern. Designing a

credible identification strategy still poses one major challenge (Bardhan and Mookherjee (2006a)). Our paper joins the nascent literature that leverages disaggregated data to establish causality (see Bardhan and Mookherjee (2006b), Alatas, Banerjee, Hanna, Olken, and Tobias (2012), Acemoglu, Reed, and Robinson (2014) and Anderson, Francois, and Kotwal (2015) among others).[9] While most previous studies rely on evidence in developing countries, we provide evidence in the financial sector of a *developed* economy. Our findings suggest that even in a country with a low level of corruption like Germany, the cost of political distortions appears to dominate the potential benefits of decentralization. Furthermore, the prominent role of banks in the economy, as well as the comprehensive micro-level data, allows us to examine not only the performance of affected banks but also the allocation of credit in the corporate sector and local macroeconomic development. By facilitating such a comprehensive evaluation, banking therefore provides us a suitable setting to uncover the wider social costs of decentralization.

Our setting further allows us to learn about the mechanism. The decision of local politicians to bail out banks is driven by considerations over upcoming elections. This finding in itself already sheds light on the personal incentives of local government officials, corroborating our second stage finding on the distortions in lending decisions. To this end, by studying the incentives and behavior of local government officials, this paper fits squarely with the second generation theories of fiscal federalism, which focuses on political economy considerations and corruption problems.

We also add to the empirical research on the determinants of decentralization. Prior organizational economics literature documents that among other things, human capital (Caroli and Van Reenen (2001)), communication technologies (Colombo and Delmastro (2004)), ownership status (Colombo and Delmastro (2004)), distance to technological frontier (Acemoglu, Aghion, Lelarge, Van Reenen, and Zilibotti (2007)) and social trust (Bloom, Sadun,

[9]See Mookherjee (2015) and Mansuri (2012) for a review. Channa and Faguet (2016) also discuss a comprehensive list of papers exploiting health care and education reforms in Africa, Asia and Latin America for identification.

and Van Reenen (2012)) all matter for the optimal organization structure. We identify the political economy determinants of organizational design and take one step further to show that decentralization may entail a substantial cost in the context of financial sector interventions. In our setting, the large private benefits of controlling a state-owned bank at the decentralized level shift the trade-off in favor of centralization.

In the end, the paper relates to the growing literature on banking supervision. Our results are broadly in line with the findings in the US banking sector. Agarwal, Lucca, Seru, and Trebbi (2014) compare federal and state regulator supervisory ratings for a sample of US banks and find that federal regulators are systematically tougher than local supervisors. Granja and Leuz (2019) study how regulatory strictness shapes the local economy through banks' lending activities. We focus on another important aspect of banking supervision—bailout regimes. By choosing a decentralized and more generous bailout regime, a local supervisor may generate inferior economic outcomes. This findings further connects our paper with studies that examine the various economic trade-offs regarding bank bailout decisions (Merton (1977), Keeley (1990), Demirgu¸c-Kunt and Detragiache (2002), Dam and Koetter (2012), Gropp, Hakenes, and Schnabel (2011)).[10] Central to this debate is the design of bailout institutions. Our evidence supports a regime based on centralized decision-making to decide on and manage bank bailouts.

2 Institutional Background

2.1 Distress and Bailouts in the Savings Bank Sector

We focus on savings banks, which constitute about a quarter of all corporate and consumer loans in Germany (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 with

[10] A detailed discussion of state-supported schemes for financial institutions is provided by Beck, Coyle, Dewatripont, Freixas, and Seabright (2010).

each other as their operations are constrained to the city or county that formally own them. The head of the respective local government acts as the chairman of the local savings bank's supervisory board.[11] This local politician has a strong influence on the operations of the bank, including 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.[12] Individual savings banks pay the association every month to ensure a proper financial resources of the safety fund.[13] Figure 1 illustrates the setup of a savings bank association. The decision-making board of the association consists of representatives from the individual banks, including local politicians and bank executives, who are elected at general meetings of the association and serve for four- or five-year terms.

Savings bank associations collect data on the solvency and liquidity of their member institutions and transmit this information to the central supervisor—Federal Financial Supervisory Authority (BaFin) and the Deutsche Bundesbank. The associations also operate guarantee funds such that 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. Support is provided under the condition that the bank follows a restructuring plan which is proposed by the association. Importantly, such support is expected to be paid back in future years with a pre-arranged interest when the bank recovers. The extensive safety net in Germany has ensured that no savings bank ever failed. The claim is that distressed savings banks will always be bailed out by the association.

[11]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 account for about two thirds of the board members).

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

[13]In case the funds of the safety net are not sufficient to organize a bailout, member banks are supposed to further contribute to the fund. In this amount is not sufficient to handle a bailout, safety funds and member banks from other states are supposed to contribute. As a final layer of the safety net also central institutions such as Landesbanks are supposed to step in and provide funds.

An interesting feature of this institutional setup is that the local politician can avoid formal distress cases by using taxpayers' money to support distressed banks. In this paper, we investigate how local politician's decisions on support measures depend on political variables such as the time to the next election. To clearly illustrate the role of the local politician in our setup, we outline the sequence of decisions in case of bank distress below:

- The most common reason for the distress events of savings 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. Following that, the board of the association decides on the kind and the size of support measures for the bank. Moreover, it decides on a restructuring plan to be imposed on the bank. This takes place immediately after the distress event, usually within a month.
- As the association wants to avoid stepping 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 generally includes an organizational restructuring, a dismissal of the management, and merger of the bank with another bank in the association. As it imposes severe restrictions on the bank's operations, the plan naturally limits the local politician's influence on the bank.[14] To ensure that a restructuring plan is implemented in practice, the association assigns a monitoring team to the specific bank.[15]
- Alternatively, the local politician can step in and prevent the implementation of the restructuring plan. If the local parliament agrees, they can use taxpayers' money

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

[15]The head of the monitoring team has the right to audit meetings of the management and the board. If the monitoring team is not satisfied with the restructuring efforts, the support funds from the association might be withdrawn in coordination with the official supervisor. Once the restructuring process is finalized, the bank is supposed to repay the rescue funds with a prearranged interest to the association.

to save the bank in distress.[16] In this case, the distress event is resolved without involvement of the association, and the implementation of a restructuring plan is not required.

In sum, while savings banks in distress will always be bailed out, the bailout can either be organized by a decision-maker at the centralized association level or the decentralized county level. At the centralized level, the decision on support measures and restructuring plan is made by the board of the association, which consists of local politicians and bank executives from other counties. At the decentralized level, the local politician who chair the supervisory board can step in by injecting taxpayers' money. Such interventions allow her to prevent the implementation of restructuring activities by the association. This could be efficient, since the local politician, compared with the board of the association, is 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 the mayor or the county administrator.

However, decisions by the local politician could be distorted by personal considerations. Restructuring activities imposed by the association may reduce the pecuniary and the non-pecuniary benefits that the local politician 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 politician 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

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

[16] In 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.

counties that are headed by local administrators, and 107 urban cities that are headed by mayors. Separate elections on each layer take place at 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. The electoral cycle for local parliaments and mayors 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.

3 Data and Descriptives

Our analysis covers a sample period from 1993 to 2015 while distress events take place between 1995 and 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 introduce the political variables. We merge them with savings bank distress events and explain the construction of these events in the second part. The third part describes bank-level and macroeconomic variables, and the construction of outcome variables using contract-level lending information.

3.1 Political variables

We hand-collect information on the identity and the position of any distressed savings bank's chairman from bank annual reports as published in the Bundesanzeiger.[17] We use various Internet sources in order to determine the party membership of the chairman. Results and dates of local elections are obtained from the 16 German State Statistical Offices. We match counties and cities with owners of our sample banks.[18] In this way, we obtain information on the elections in all cities or counties that own one of our sample banks.

[17]This information is available online from 2006 onwards (www.bundesanzeiger.de). For earlier observations, we consult microfiche versions of the Bundesanzeiger provided by the university and public libraries in Germany.

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

To analyze whether political considerations matter we identify situations in which they should be more important. Several papers have documented that voters tend to forget events that occurred early on in the electoral cycle (e.g., Rogoff and Sibert (1988)). Thus, if an election is imminent, an intervention by the politician is more likely to affect her probability of re-election. In this way the timing of the occurrence of a bank distress event in the electoral cycle could affect the decision of a politician in case she cares about re-election.[19] Accordingly, we define electoral cycle indicators according to the timing of distress in the electoral cycle.

A second proxy for political constraints is the degree of political competition in the respective county. If competition between different parties within the county 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 a dummy variable *Competitive County* based on the vote share margin between the winner and runner-up in the previous election. This variable equals to one if the margin is below median and zero otherwise. A politician's bailout decision might also depend on her ideology, which we proxy by the dummy variable *Cons. Bank Chairman*. This variable equals 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 the politician acts according to this principle, we would expect less capital injections from the politician if the chairman of the bank is a CDU/CSU member.

3.2 Distress events

We define distress events as cases when a savings bank receives external support in the form of capital injections and/or guarantees in response to a capital shortfall below the regulatory minimum, or when it is taken over by another savings bank in a distressed merger. A

[19] Forgetful voters is not a necessary condition for electoral cycles to influence the decision of a politician. An imminent election means that an unpopular decision by the politician would be penalized immediately and for a longer period by negatively affecting all future elections. Therefore, even without forgetful voters, electoral cycle can affect the decision of a politician.

major challenge is to identify and disambiguate distress events in the savings bank sector, since some types of support measures cannot be determined from banks' balance sheets. For example, 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 combine four sources from Deutsche Bundesbank's supervisory data to cleanly identify distress events, including the Bundesbank's prudential database for banking supervision (BAKIS), the monthly balance sheet statistics (BISTA), the borrowers' statistics, and the Bundesbank's database on distress events. Additionally, we consult local media coverage on distress events obtained from the GENIOS database in order to verify our event dates. Appendix A provides a detailed description of the four underlying datasets and the procedure to disambiguate the distress cases.

We identify 148 distress events of German savings banks from 1995 to 2010. Typically multiple events occur in a year, as illustrated in Figure B1. Among these 148 distress event, more than one third, or 55 cases, was resolved by capital injections from the local politician. For simplicity, we denote these 55 bailouts by politicians as BLP cases. The remaining 93 events were dealt with by the association, which we denote as BLA cases. Out of these 93 cases, 44 banks experienced a distressed merger in the year following the distress event (Table 1, Panel A). On average, the capital support amounted to around 15% of the distressed bank's total equity, and 3.2% of the local government's revenue. Furthermore, the bailouts take up over 30% of the local government's annual budget on real investment, suggesting the economic significance of bank bailouts (Table 1, Panel B). The size of the support is roughly the same for the banks bailed out by the politician and those by the association.[20]

3.3 Outcome variables

To evaluate different bailout institutions, we study bank-level and locality-level outcome variables. We also use bank and macroeconomic control variables to account for potential

[20]Table A1 provides the definition of variables.

differences between banks that were bailed out by the local politician and banks that were bailed out by association.

A. Bank balance sheet variables and descriptive results. 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.Panel B of Table 1 provides sample statistics for balance sheet item using a sample of all available bank-year observations. We compare banks that had a bailout from the politician or the association during our sample period with an average savings bank. A few interesting observations emerge: The association tends to deal with less healthier banks characterized by a lower capital ratio, a slightly lower ROA, and a higher non-performing loans ratio. These banks are also relatively less important, as indicated by their lower local market share.

Does the association carry out the bailout differently from the local politician? We expect banks bailed out by the association to undergo considerably more restructuring following the distress event. To verify this, we examine changes in the growth rates of total assets, total loans, and number of employees and branches of the bank five years following the bailout from the pre-bailout value.[21] Note that merged banks no longer have accounting information, which introduces a potential selection bias—merged banks tend to be "worst" distress cases. To fix this, we restrict the sample to the savings banks that do not have a potential merger partner. In particular, a potential merger partner should satisfy the following conditions. First, it situates in the neighboring counties and therefore is in close geographic proximity to the bank in distress. Second, it has a strong balance sheet and is large enough to take over the distressed bank.[22]

Panel A of Table 2 shows the results. Compared with politician bailed-out banks, association bailed-out ones experience significantly greater declines in both total assets and

[21]We choose a three-year pre-event window since the first distress event takes place in 1995 and the data on most outcome variables become available only after 1992.

[22]We require that the potential merger partner is at least 1.5 times the size of the bank in distress in terms of total asset and has a capital ratio and an ROA higher than an average bank.

total loans in the five years after the bailout. In line with the implementation of a tight restructuring plan, the number of employees, and, to a lesser extent, the number of branches decline more for banks bailed out by the association. We extend the examination window to eight years after the bailout and find similar trends in Panel A of Table B1.

Does a lower level of restructuring suggest an inefficient continuation of a bank or an effort to prevent inefficient bank liquidation? To provide an early look, we use bank-specific balance sheet data to summarize the future financial performance of the affected banks. According to Panel B of Table 2, banks that obtained support from the association improved their performance considerably more in the long run when compared with banks that received support from the politician. Specifically, only banks bailed out by the association can 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 under centralized-level bailouts see their non-performing loans reduce by around 2.9 percentage points more compared with banks having undergone decentralized-level bailouts.

Furthermore, the return on assets (return on equity) of BLA banks increases by about 0.34 percentage points (6.7 percentage points) more on average when compared with BLP banks (columns (3) and (4)). Finally, the capital ratio also increases significantly more for BLA banks, as shown in column (5) and (6). In terms of Tier I plus Tier II capital ratio, BLA banks experience more than 1 percentage point higher increase. The same patterns hold when we extend our investigation window to eight years after the bailout (Panel B of Table B1). Taken together, these results provide preliminary evidence of the inefficient continuation of distressed savings banks upon political intervention. However, a local politician's objective function is usually broader than profit maximization within financial institutions. By examining a wider range of outcome variables, we formerly evaluate if the politician's actions can still be consistent with serving the "common good" in Section 6.

B. Macroeconomic variables. 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 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 county with lower GDP growth in comparison to the counties of banks that are bailed out by the association. Furthermore, counties where politicians conduct bailouts have a higher GDP per capita and are less indebted than the average county.

C. Loan-related variables based on German credit register. We rely on the German credit register to study credit allocation at the micro level. The German credit register at Deutsche Bundesbank provides detailed contract-level information between all German firms and the banks extending credit to them.[23] We collect the location information for all the firms and map it to the municipalities they belong to.[24] For each loan contract, we identify the originating municipality, which allows us to generate municipality-level measures for the local banking activities. Importantly, although the savings banks are organized at the county level, their exact coverage can be further pinned down to the municipality level. Therefore, to improve accuracy we hand-collect detailed information on the coverage of distressed banks to identify the municipalities that are exposed to the distress and the following bailout events. We further merge it with the municipality and firm level outcome variables so that we put together a dataset to analyze the consequences of bailouts at a more granular level. These outcome variables are described in detail in Section 6.

[23] 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.

[24] 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 while the last three-digit denotes the municipalities within a county. There are more than 8,000 municipalities in Germany, identified by different eight-digit AGS keys. Our analysis essentially is carried out at a geographical level as granular as US zip code.

4 Electoral Cycles in Bank Bailouts

In this section we seek to understand the politician's decision-making when dealing with a distressed bank. If the local politician's decision is driven by the better information set she has, we would not expect a correlation between political factors and her action. The electoral cycle is a candidate for the political factors. On the one hand, politicians could manipulate the timing of distress events around election dates. To test this, we first gauge whether the timing of bank distress events is correlated with the electoral cycle in our German setting. On the other hand, if such manipulation is not possible, politicians may selectively bail out certain banks out of re-election considerations. To assess this conjecture, we model the politician's decision to organize a decentralized-level bailout conditional on a distress event.

4.1 Electoral Cycles in Bank Distress Events

Figure 2a displays the distribution of all 148 distress events over the electoral cycle. From this figure, we do not observe a clear relationship between bank distress events and the electoral cycle, suggesting that the local politician in Germany might not be able to manage *the timing* of bank distress events out of her political interests. We formally test this 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 up to 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 Dinç (2005), we test whether distress events depend on the electoral cycle, using an exponential hazard model:[25]

$$h_k(t) = exp(\alpha_t + +\beta ElectoralCycle_{kt} + \nu POL_{kt} + \delta X_{kt-1}) \quad (1)$$

where k denotes the individual bank and the county of the bank, and t denotes year. The dependent variable BLP equals to one (zero) if the bank distress is resolved by the politician

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

(association). The primary variables of interest are four dummies for the years within a five-year electoral cycle, denoted by $ElectoralCycle_{kt}$. The omitted group is the year directly preceding the election. The other political variables, summarized in the vector POL_{kt}, include the political competition within the county and the ideology of the politician. X_{kt-1} include lagged bank level and macro control variables. We include the bank's size, the capital ratio, the return on assets, the non-performing loans ratio, the market share, the deposit ratio, and the level and growth rate of county-level GDP per capita. The specification further includes time fixed effects.[26]

The regressions include all bank-year observations for savings banks that had a distress event throughout our sample period.[27] Table 3 presents our findings. In column (1) we include only the $ElectoralCycle_{k,t}$ dummies. None of the dummies have a significant coefficient, suggesting little relationship between the timing of distress events of state-owned banks and the electoral cycle in Germany. This result is robust to including time fixed effects in column (2) and adding 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. When we further include two political variables in columns (5) and (6), the coefficients on electoral cycle dummies are close to zero and remain insignificant. The evidence is robust that politicians are *not* able to endogenously affect the timing of distress events.[28] Otherwise we would expect them to delay the occurrence of the distress event until after the election.

Our finding is in contrast to that in emerging economies (Brown and Dinç (2005)) and the US (Liu and Ngo (2014)). To explain this, we zoom in on the underlying causes of banks' distress events in Germany and discuss institutional differences in Section 5.

[26]Since the cycles of the local elections are to a large extent synchronized, year fixed effects would absorb the $ElectoralCycle_{kt}$. Therefore, we define time fixed effects which take the value of 1 during one of the entire cycles (begin of sample-1998, 1999-2003, 2004-2008 and 2009-end of sample) and 0 otherwise.

[27]Results hold if the sample further include banks without distress events. See Table B2.

[28]Table B3 reconfirms this finding by simply using one dummy indicating whether the distress happens right before the election. In all specifications, the coefficient on this dummy turns out to be insignificant.

4.2 Electoral Cycles in the Bailout Decision by the Politician

While local politicians in Germany cannot manage *the timing* of bank distress events out of their political interests, they might have certain discretion over the *resolution strategy*. On the one hand, voters may perceive an intervention by local politicians as a sub-optimal usage of taxpayers' money. Since the savings bank association has an extensive safety net in place, convincing voters of the economic necessity of using local funds to save a falling bank appears rather difficult. If so, interventions at the decentralized level 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. Hence, any influence of political considerations on the likelihood of interventions by decentralized-level politicians can be seen as a sign of distorted decision-making.

Figure 2b displays the distribution of bailouts by politicians over the electoral cycle. Very interestingly, in the 12 months before the election, the share of bailouts by politicians is considerably *lower* than in the 12 months following the election (15.4% vs. 50.0% according to Panel D of Table 1). Only one out of 55 cases of capital support by the politician occurs in the six months directly preceding an election (Figure B2). This suggests that politicians are reluctant to use taxpayers' money to support a distressed savings bank right before an election. To formally test this pattern, we use all 148 bank distress cases in our sample and estimate the following linear equation:

$$BLP_{kt} = \alpha_t + \beta ElectoralCycle_{kt} + \nu POL_{kt} + \delta X_{kt-1} + \epsilon_{kt} \quad (2)$$

where k denotes the individual bank and the county of the bank, and t the year in which the distress event occurred.[29] The dependent variable BLP equals to one (zero) if the bank distress is resolved by the politician (association). Other variables are defined similarly to those in Equation 1.

Table 4 presents the results. We start with a benchmark specification without any controls in columns (1) and (2). The coefficients on the four dummies, which indicate all the non pre-election years, are positive and highly significant. This is robust to adding in time fixed effects in column (2) and including bank and macro control variables in columns (3) and (4). These findings confirm the descriptive analysis: The electoral cycle seems to have a strong influence on the bailout type for a distressed savings bank. In the twelve months before an election, the probability that a politician resolves the distress is 21% to 34% lower compared with the other years in the electoral cycle (column (4)). This finding is remarkable as it suggests that decisions on bank bailouts at the decentralized county level are distorted by politicians' personal considerations over re-election prospects.

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. Banks that suffer from more severe distress and have high non-performing loans ratio tend to receive bailouts at the centralized level. 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 greater interest in keeping control of the bank and wants to avoid a painful restructuring plan. Finally, the regression shows that counties 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

[29] Using a nonlinear logit model gives results that are similar to the results from our linear specification (see Table B5).

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. Further, columns (5) and (6) show that politicians are less likely to support a distressed bank if political competition within the county 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 the 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 therefore be punished in the next election. The more intense the political competition, the more severe the threat of punishment.

Since the decision-making board of the association include local politicians, one might worry that the association's decision is similarly influenced by the political factors. To address this, we examine the role of political factors in the decision-making of the association board. We define three additional variables to capture the political landscape at the association level, including the ideology of the association board members and whether the local politician chairing the distressed bank is a current member of the association board or at least shares a similar ideology with the association board. The variables are further described in Table B6 and the results suggest that centralized decision-making by the savings bank associations tends to be rather transparent and independent of political factors.

Our results show that the political incentives behind regulatory intervention in banking could manifest themselves in different ways. While the previous literature documents the delaying of bank failures right before elections, we show that when delaying is difficult, politicians choose between different types of bailout institutions to serve their political interests. A natural next step is to study the aftermath of the politically-driven bailout decisions.

5 Empirical Strategy to Evaluate Bailout Institutions

Comparing the future development following different bailout regimes is prone to selection concerns. Such concerns could arise if the decision by local politicians is correlated with factors that also affect the future performance of the bank or the local area. To address this, we exploit the findings in Section 4.2 and use the local electoral cycle to construct an instrument for the bailout regime. Specifically, we use the timing of the distress event in the electoral cycle as an instrument for intervention by local politicians (see Levitt (1997) for a similar identification strategy).

Equation 2 illustrates the first-stage regression.[30] Instead of including separate dummies for all the years around an election, we use a single variable indicating whether or not the distress event occurs 0-12 months before the election as a single instrument. This is done for two reasons. First, the coefficients on the four separate dummies do not exhibit significant differences (see Table 4). Second, using a single instrument means our specification is just identified, avoiding any potential concerns on 2SLS bias of over-identification in the case of weak-identification. According to Table B4, the probability of capital injection from the politician is around 25-30% less likely if the distress event takes place 0 to 12 months before the election. This result highlights the relevance of the instrument and we also report F-stat for the excluded instrument in the 1st stage. We then estimate the following second stage regression:

$$\Delta Y_{it} = \alpha_t + \theta \widehat{BLP_{it}} + \nu_2 POL_{kt} + \delta_2 X_{it-1} + \epsilon_{it} \tag{3}$$

where i denotes a municipality or a firm, depending on the level of analysis. $\widehat{BLP_{it}}$ is the predicted probability of a bailout by the local politician obtained from the first stage in the respective county. The dependent variable is the change of the outcome variable in the post-bailout years from the pre-bailout value. In the baseline specification, we examine a

[30]The unit of observation changes depending on the level of analysis. We study both municipality level and firm level outcome variables.

five-year post-event window and a three-year pre-event window, which is chosen to exploit the data beyond the distress event window (1995 to 2010).[31] If our instrument is valid, the coefficient of interest, θ, captures the causal effect of the politician's bailout decisions on the outcome variables. We use two stage least squares for estimation. Since the bailout decisions are reached at the county 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 Exclusion Restriction

For the above instrument to be valid, it must be exogenous and satisfy the exclusion restriction condition, which means that the instrument should not affect the outcome variables through any channel other than the bailout decision. One important assumption 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 the electoral cycle. Although there is no statistical evidence that politicians in Germany have the capacity to delay bank distress events, one may still worry that a small number of distress events are delayed through evergreening of loans, especially when the distress is not severe. Such a selective delaying of distress events would threaten the exogeneity of the instrument since the pre-election and post-election distress events would be different. To address this concern, we carry out two additional sets of tests.

First, we investigate the underlying causes of all savings bank distress cases. In almost all cases we were able to identify bankruptcy events of one to two large borrowers of those savings banks.[32] Using Bundesbank's credit register, we further check whether these borrowers that are responsible for the post-election distress events have obtained a new loan or credit line

[31] In robustness checks, we also use an eight-year post-event window. But for more recent distress events, we do not have a full set of eight years of data after the bailout.

[32] One concern is that the probability of borrowers' bankruptcy depends on the electoral cycle. By studying the correlation of bankruptcy timing and the electoral cycle, we do not find support for this concern.

from the same savings bank in the year before the election. In none of these cases we find this to be true. Importantly, all distress events of savings banks, irrespective of whether the bailout is organized by the association or local politicians, are subject to a careful audit by the association. Evergreening around distress events is therefore especially risky for the managers of savings banks.[33] For the remaining cases, we identify losses from US subprime investments as well as a write-off due to fraud by an entrepreneur that had obtained a loan from the bank as the causes for the distress events. Overall, we find that bank distress is not triggered by events that are related to the electoral cycle.

Second, we empirically test whether there is a significant difference in the type of banks that experience pre-election and post-election distress events. We first regress different bank characteristics in the year before the distress event on the electoral cycle indicator. We use all 148 distress banks in our sample. Results are shown in Panel A of Table 5. Banks that experience distress events before the election seem to not differ systematically in terms of absolute and relative size when compared with banks that experience distress events after the election. The same is also true for customer loans to total assets ratio, deposit ratio, capital ratio, and profitability. Turning to non-performing loans ratio and the ratio of loan loss provisions to customer loans, we also do not detect any significant differences.

We then investigate whether the size of the bailout, hence the severity of the bank distress, is correlated with the timing of the distress event in the electoral cycle. For example, politicians may find it easier to hide and delay the failure of a relatively healthier bank. As a result, the required size of bailout for post-election distress cases may be smaller than pre-election ones. Using capital support over equity as the dependent variable, there seems to be no such correlation. The coefficient on $D(0-12\ months\ before)$ is insignificant, suggesting

[33] In case the manager of a distressed savings bank is convicted to have not timely written off non-performing loans or to have extended loans to non-performing corporations, the manager is personally liable for losses resulting from these actions. Furthermore, managers of state banks would lose her/his pension in case she/he commits misconduct to delay the distress event. Given that the compensation of these managers is characterized by generous pension scheme, this would constitute a substantial personal risk for them.

that the severity of the distress, therefore the size of the bailout, is comparable for distress cases occurring before and after the elections.

Moreover, local macroeconomic conditions may also affect the cost and benefit trade-offs of delaying bank distress. For example, politicians in more indebted counties may find it less attractive to delay bank distress. In Panel B of Table 5, we find no significant differences between counties exposed to pre- and post-election distress across a list of macro variables, such as GDP per capita, GDP per capita growth, employment rate, employment growth, local government indebtedness, credit market growth, and share of loans extended by state banks in the year before the distress event. The balance of these macro variables also suggests that the local politician in Germany can barely influence regional economic conditions so that the outcome favors her probability of becoming re-elected.

One may still be concerned about political business cycles that are not captured by observable macro variables. We take one more step to alleviate this concern. Studies supporting political business cycles usually examine how firms' behavior changes *within* an electoral cycle. In contrast, our empirical specification typically examines the average effects over a five-year post-bailout window—exactly the length of an electoral cycle in Germany—so that any within-cycle pattern or politician-induced cyclicality is unlikely to drive our results.

Taken together, we find no significant differences in a wide range of observables between banks or counties that experience pre-election and post-election distress events. This further supports our argument that the German local politicians are unlikely to manipulate the timing of bank distress.

6 Consequences of Decentralized-level Bailouts

We aim to differentiate whether the action taken by local politicians is associated with preventing inefficient bank liquidation or rather an inefficient continuation of a bank. Descriptive results in Section 3.3 show that a decentralized-level bailout is associated with

relatively poorer future performance of the affected bank. However, local politicians may not be primarily concerned with the accounting performance of financial institutions, but care in a first instance about credit allocation within the bailed-out banks. Therefore, to fairly evaluate the impact of a decentralized-level bailout, we examine differences in the lending practices by banks subsequent to the two types of bailouts. To do so, we start by comparing changes in the loan supply and in lending relationships by affected banks. We then study the efficiency of credit allocation and examine patterns in preferential lending for the two types of bailed-out banks.

6.1 General Patterns in Credit Allocation

Figure 3a displays changes in the market share of distressed banks around bailouts. Bailouts by the local politician are associated with a higher share of loans from savings banks in the post-bailout years. This is because the local politician tends to keep the distressed banks in operation while resolutions from the association often result in branch mergers and closures. Figure 3b shows a similar pattern by examining loans by savings banks to GDP ratio.

We present statistical evidence on the structure of the local banking sector in Panel A of Table 6. Note that the regression analysis is carried out at the smallest possible administration level—municipality level. We have one observation per municipality and results from OLS and 2SLS are displayed in columns (1) and (2). In the five years after the bailout, BLP results in a 4.85 percentage points higher savings bank loan share than that in BLA cases. Note that Figure 3a suggests that the gap in savings bank loan share between BLP and BLA areas widens by around 5 percentage points, which is similar to the coefficient in column (1). In column (2) we instrument BLP with the timing of the distress event in the electoral cycle, which yields a positively significant coefficient on BLP. Importantly, the coefficient from IV (6.88) is greater than that from OLS (4.85), suggesting that OLS may underestimate the true effect. 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 our instrument in predicting the type of bailouts.

Accordingly, the share of loans provided by private banks falls significantly in BLP compared with BLA areas, as shown in columns (3) and (4). The small difference between the coefficients in columns (2) and (4) is due to a third group of banks, the cooperatives. Their share does not seem to depend on the particular type of bailout (columns (5) and (6)). Interestingly, despite the divergence in the local market structure following the two types of bailouts, the growth of total loans is only affected by a small amount (columns (7) and (8)). This finding suggests that in BLA areas, private banks are likely to pick up the market that was previously serviced by the distressed savings banks.

We further examine whether distressed banks alter their lending relationships after the bailout. By exploiting the extensive contract level data from the German credit register, we identify all newly initiated and terminated lending relationships. According to Panel B of Table 6, banks under decentralized-level bailouts tend to initiate fewer new lending relationships (columns (1) and (2)), and instead they continue with previous relationships (columns (3) and (4)). This finding suggests that in cases where the local politician intervenes, there are fewer disruptions to the bank's lending practices that may have slowly contributed to its distress in the first place. Results are largely similar when we extend our investigation window to eight years after the bailout (Table B7).

6.2 Credit Allocation and Productivity

Results from Table 6 suggest that BLA banks tend to have more dynamic lending relationships after the bailout. Is this change in lending practices characterized by a move towards more efficient capital allocation? To test this, we follow the methodology in Cong, Gao, Ponticelli, and Yang (2019) which presents a theoretical model in the spirit of Hsieh and Klenow (2009) and Song, Storesletten, and Zilibotti (2011) to motivate tests on credit allocation.

More specifically, we compare the sensitivity of credit allocation to productivity for two types of bailouts. We first calculate firm-level productivity by taking the natural log of sales divided by book value of fixed assets and denote it as $logAPK$.[34] We then interact lagged $logAPK$, or $L1.logAPK$, with the bailout type dummy to pin down the differential responses of credit allocation to productivity in BLP and BLA areas. If indeed the efficiency of credit allocation deteriorates following a BLP, we should observe that credit allocation becomes less responsive to productivity, implying a negative coefficient on the interaction term between BLP and $L1.logAPK$. To mitigate concerns on selection, we exploit the previous IV approach. The instrument for the interaction term $BLPXL1.logAPK$ is the interaction between D $(0-12\ months\ before)$ and $L1.logAPK$.

Table 7 presents the results. In column (1), the outcome variable is newly granted loans 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 the bailout type, lower initial productivity corresponds to fewer new loans, as the coefficient on $L1.logAPK$ is positive. This finding is consistent with the theoretical prediction that firms with higher average product of capital should get more credit. More importantly, the coefficient on the interaction term $BLP \times L1.logAPK$ is negatively significant, either with or without firm-level control variables. This suggests that credit allocation is significantly more responsive to productivity in BLA areas compared with BLP areas.[35] Equivalently, in areas subject to decentralized-level bailouts, savings banks reallocate less credit from low productivity firms towards high productivity firms. The magnitude is economically large: Firms with one standard deviation larger average product of capital would experience a 6.8% lower growth rate in loans from affected banks under BLP than under BLA.

[34]The calculation follows Cong, Gao, Ponticelli, and Yang (2019). Note that this is only a rough measure of productivity. The underlying assumption is that 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 $L1.logAPK$, we understand how the allocation of new loans reacts to average product of capital in areas with political bailouts, while the coefficient on $L1.logAPK$ by itself indicates how the new loans react in areas subject to bailouts by the association.

Columns (3) to (4) use the share of loans from affected banks as the outcome variable. If affected banks indeed allocate less credit to more productive firms in BLP areas, we expect these firms to accumulate fewer loans from affected banks relative to other banks when compared with similarly productive firms in BLA areas. Consistent with this prediction, the coefficient on the interaction term is negatively significant.

In columns (5) to (6), we study the growth of total loans received by firms. The purpose is to understand whether the overall efficiency in credit allocation is significantly affected by the type of bailout. The negative coefficient on the interaction term implies that the overall bank credit allocated to productive firms is lower in BLP areas compared with BLA areas. In addition to the improved efficiency in credit allocation within affected banks, as documented in column (2), the shift in local financing structure towards private banking may also contribute to the higher overall allocative efficiency in BLA areas. Indeed we observe slightly larger effects in column (6) compared with column (2).

As a large 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.[36] With political interventions 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 prospects for local economic growth.

6.3 Preferential Lending

One may argue that local politicians do not primarily care about an efficient capital allocation scheme. The goals of local state-owned banks can be broader and, therefore, politicians focus on lending that is rather optimal from a social perspective. To directly address this concern, we study preferential lending by these banks. This helps us identify distortions due to personal incentives and rent-seeking behavior.

[36]See Restuccia and Rogerson (2008), Hsieh and Klenow (2009), Buera and Shin (2013) and Restuccia and Rogerson (2013) among others.

We focus on credit allocation of distressed banks within social networks of bank directors. We follow Haselmann, Schoenherr, and Vig (2018) and study how in-group lending evolves under the two bailout regimes. A pair of lending relationship is defined as in-group (as opposed to out-of-group) if the director of the local bank and the CEO of the borrower belong to the same local service club branch. Members of the same club branch meet regularly to socialize, and in such a way build social capital.[37] We use the share of loans from in-group affected banks in total loans as the dependent variable. An advantage of using the share of loans rather than the amount is that it automatically controls for firm-specific demand shocks. We 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.

Table 8 presents the results. We find that the proportion of in-group loans issued by affected banks is significantly higher in BLP compared with BLA cases. The dependent variable from columns (1) to (2) is the share of in-group loans from affected banks in total loans of a firm. The purpose is to evaluate how the reliance on in-group credit from affected banks changes differently under the two bailout regimes. Following the same IV approach, we find that the coefficient on BLP is positively significant and the magnitude is economically large. The share of loans from connected banks is around 10 percentage points higher under BLP than BLA. One may argue that this effect is potentially driven by the stronger presence of the affected savings banks in BLP areas. However, the market share of affected banks in BLP areas is 6.88 percentage points (Panel A of Table 6), which is smaller than the magnitude here. The affected banks therefore seem to direct even more credit to connected firms after a bailout by the local politician. The positive coefficient on BLP in columns (3)

[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 county of about 20,000 inhabitants. In larger counties, 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 that the 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 requisite. Haselmann, Schoenherr, and Vig (2018) discusses further details about the service clubs.

to (4) suggests that out of all in-group loans to a firm, a higher fraction is originated from affected BLP banks after the resolution of distress.

Haselmann, Schoenherr, and Vig (2018) document the rent-seeking motive for in-group lending within the identical network. They find that the return on in-group lending is lower. And more broadly, the misallocation of credit in the economy induces inefficiencies in firms' deployment of capital. In our context, when bank bailout decisions are reached at the decentralized level, state-owned banks are preserved and they seem to keep and even expand their lending to connected firms. These preferential loans tend to negatively impact the economy. At the same time, more rent-seeking behavior by BLP banks is directly against the conjecture that local politicians engage in bailouts to impose more social objectives on their local banks.

6.4 Further Results and Discussions

6.4.1 Macroeconomic Developments and Fiscal Costs of Bailouts

So far we have documented a shift in loan market share from affected state-owned banks to private banks. While we emphasize relative improvements in banks' capital allocation decisions following a centralized-level bailout, there might be further improvements due to the shift in financing structure towards more private funding. To gauge the combined effect, we examine macro variables such as income and employment. Another purpose is to further mitigate the concern that politicians may aim to improve general welfare within her region at the cost of the local banking sector. The macro variables are only available at the county level, leaving us with a considerably smaller sample compared with the tests carried out at the municipality or firm level. We thus report descriptive statistics on macroeconomic development at the county level in Table 9. This can be considered as a simple illustration of reduced form results.

In particular, we compare the change in macroeconomic variables around the bailout for counties with pre-election distress events relative to those with post-election events. In Panel A, we find a strong correlation between the timing of distress in the electoral cycle and five-year macro performance dynamics, potentially through the impact of the electoral cycle on the choice of bailout institutions. Areas exposed to post-election distress events, which are more likely to be handled by a local politician, experience significantly lower growth in income per capita and employment. They also underperform in employment rate and new firm creation compared with the pre-election group. Panel B examines an eight-year window and the results are quantitatively similar but statistically slightly weaker. Moreover, the fiscal cost of political bailouts is far from negligible. Figure B3 shows that while the government debt to GDP ratio in BLA areas remains constant, in BLP areas it increases by more than 30% in the five years after the bailout. The last column of Panel A, Table 9 provides consistent evidence: for areas with post-election distress, government debt increases by 17.6% per year 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 are less able to invest in projects targeting long-run welfare.

Even worse, post-election distress banks, which tend to be rescued at the decentralized layer, are more likely to re-default in the future. Figure B4 shows that the probability of future defaults is around 23% when distress happens in the twelve month preceding an election. For distress in post-election periods, this number is substantially higher, reaching 35% to 40%. On the one hand, the gloomy survival prospect of politician bailed-out banks further highlights the undesirability of intervention at the decentralized layer. On the other hand, decentralized-layer bailouts severely limit the local government's ability to direct future earnings of the savings bank towards local, welfare-improving projects.

6.4.2 Further Discussions on the Instrument

Our IV strategy identifies out of "switchers", or "compliers", i.e. cases in which the politicians would change their decisions on bank bailouts if the timing of the distress in the electoral cycle were to change. The empirical evidence so far suggests that decentralized decision-making on bank bailouts has negative implications for "switchers". However, to fairly compare the two bailout institutions and inform policy, we need to infer the average effect of decentralized-level bailouts for the entire sample, including "non-compliers". There are two groups of "non-compliers": "never-takers" and "always-takers". The "never-takers" choose to implement bailouts at the centralized association layer regardless of the timing of distress. By revealed preference, decentralization should be more harmful in these cases since BLP is not chosen even when the distress event occurs after the election.

The "always-takers" always opt for bailouts at the decentralized level. One could argue that BLP is actually optimal in these cases and a centralized-level BLA is instead inferior. If this is true, a centralized bailout regime might not be as desirable as our estimation suggests. To address this concern, we carefully examine all BLP cases in the pre-election period. First, these "always-takers" constitute a small group—only 4 out of 148 distress cases. Second, in all 4 cases we find that the upcoming local elections are irrelevant. The politicians announced well in advance that they would not run in the next election. In the absence of re-election considerations, a politician may choose to bail out the bank so that she can at least keep the private benefits of controlling it during the remaining days in office.[38] Three out of these four banks re-defaulted in less than three years. The evidence is therefore consistent with private benefits driving these pre-election BLP cases rather than BLP being optimal. In other words, had the politician planned to run again, the "always-takers" are likely to turn into "switchers".

[38]There might be other benefits. For example, if there is a revolving door between the government and private sector, the politician may have additional incentives to bail out the bank and extend favor to connected parties.

Another possible but unlikely circumstance is that the four pre-election BLP cases are in fact "reverse switchers", or "defiers". This would require that a bailout using local taxpayers' money is popular with the voters but costly for the politicians, which is unlikely for three reasons. First, this would suggest very different preferences of voters in these four cases. Second, the fact that these banks are likely to re-default soon, as well as the existence of private benefits from granting preferential loans, are inconsistent with the popularity of BLP among voters. Third, the two requirements are contradictive in nature. If indeed bailing out the bank entails a high personal cost (cost of effort, for example) for the politician, it is likely that the focal bank is heavily in distress, highly complex, and thus a burden for the community. Recognizing this, the voters would not want to reward the politician for keeping such a bank within the community.

Based on the above discussion, our IV estimation does not seem to overestimate the true negative effect of a decentralized decision-making procedure in bank bailouts.

7 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 the local politician who serve as the chairmen of the bank and would possibly resolve distress events using taxpayers' money. The former regime involves centralized decision-making at the association level and the latter entails decentralized decision-making at the hands of the local politician. We find that interventions by the local politician 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 compared with banks that were supported by the association. Using the timing of distress event in the electoral cycle as an instrument, we show that a decentralized local bailout results in less efficient credit allocation for the affected banks. We also observe a significantly worse macroeco-

nomic performance in areas under decentralized-level bailouts compared with those under centralized-level bailouts.

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 the decision-making process of local politicians who are close to the bank tends to be distorted by personal considerations. Consequently, the outcomes of such bank bailouts are worse than bailouts organized by the savings bank association under a centralized regime. Our paper contributes to the debate on centralized vs. decentralized decision-making in the context of bank recapitalizations upon distress. Overall, our results highlight the political economy of decentralization—local politicians derive private benefits from controlling the bank at the expense of citizens at large. Our findings thus illustrate the advantages of centralization and taking a broader perspective in bank regulation and supervision. This is particularly important in light of the current implementation of a European banking union. Our findings suggest that such a regulatory design could have considerable advantages.

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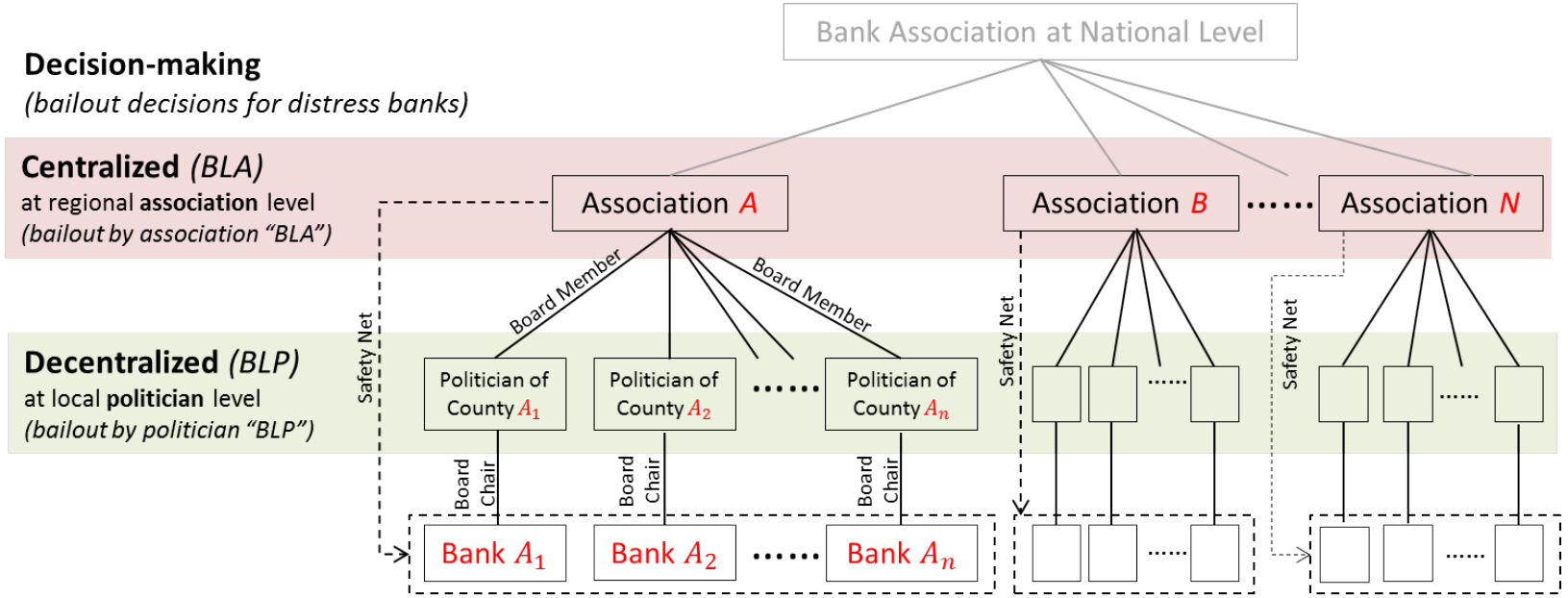
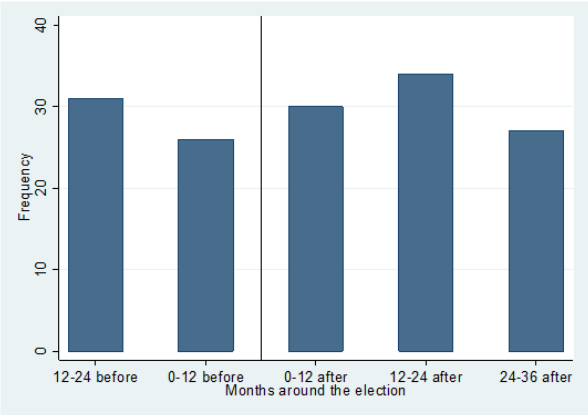
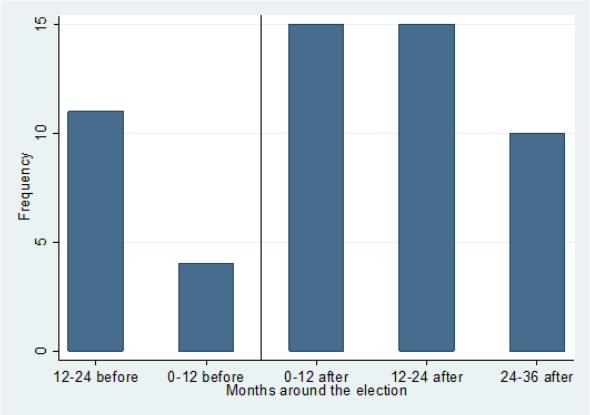


Figure 1: Institutional Setup

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 association is abbreviated by BLA, while a bailout organized by the local politician is abbreviated by BLP.

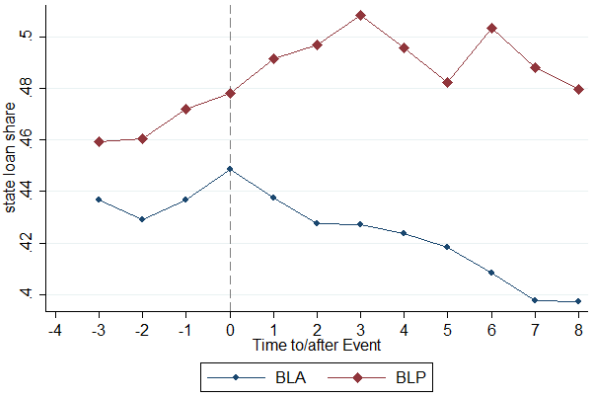


(a) Distress events

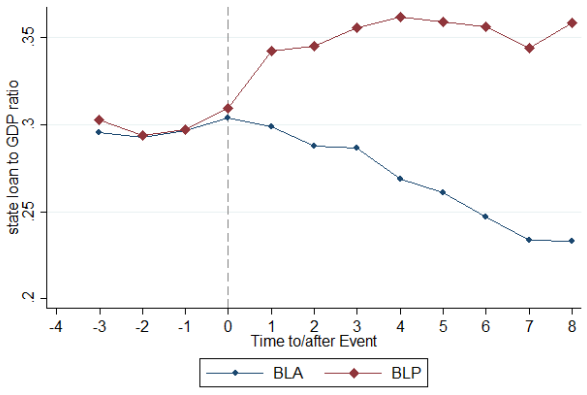


(b) Capital Injections at Decentralized Level

Figure 2: Frequency of Distress and Decentralized Level Bailout Events around Elections
Figure 2a illustrates how the number of distress events varies over the electoral cycle, where the vertical line indicates the election date. Figure 2b illustrates how the number of banks that receive capital injections from local politician varies over the electoral cycle, where the vertical black line indicates the election date.



(a) Share of State Loans



(b) State Loans to GDP

Figure 3: Dynamics around Bailout Events
Figure 3a illustrates changes in the share of loans extended by savings banks in the years around the bailout event. Figure 3b illustrates changes in loans extended by savings 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 areas where the association at the centralized layer organizes the bailouts, and BLP stands for areas where the local politician injects 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
Size of bailout conditional on distress									
Capital Injection/Total Equity (in %)	148	15.74	30.97	55	16.73	23.17	93	15.16	34.88
Capital Injection/Total Assets (%)	148	0.59	1.18	55	0.67	0.95	93	0.55	1.30
Capital Injection/Govt Revenue (in %)	136	3.26	6.17	49	3.36	5.80	87	3.20	5.67
Capital Injection/Govt Investment (in %)	136	36.86	108.6	49	30.79	59.01	87	40.27	103.1

Table 1: continued...

Panel C: Macro 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
Govt 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 observations of banks that experienced support measures from the politician or the association during our sample period. Panel C provides descriptive statistics for macro variables. 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: Restructuring and Long-Run Financial Performance of Affected Banks
Five Years after the Bailout Event

Panel A: Restructuring

Change in the growth rate	(1) Total assets	(2) Total loans	(3) Number of employees	(4) Number of branches
BLA	-0.748	-0.117	-1.672	-4.128
	(2.571)	(3.507)	(2.469)	(6.342)
BLP	0.748	2.311	0.056	-2.966
	(2.407)	(3.775)	(3.493)	(5.766)
Diff (BLP - BLA)	1.496***	2.429***	1.728***	1.162
	(0.493)	(0.727)	(0.608)	(1.199)

Panel B: Long-Run Financial Performance

Change in ratios	(1) NPL Ratio	(2) LLP Ratio CL	(3) ROA	(4) ROE	(5) Capital Ratio	(6) Tier I + II
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 (BLP - BLA)	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 A examines changes in the growth rate of variables related to bank restructuring while Panel B examines changes in key accounting ratios for banks that experienced a distress event. We calculate the average values of growth/accounting ratios in the five years after the bailout, and subtract the initial values averaged over three years to yield the changes around the bailout event (standard deviations in parentheses). Row *BLA* includes banks bailed-out by the association while row *BLP* includes banks bailed-out by the politician. Row *Diff (BLP-BLA)* shows the difference in the mean value between the two groups of banks (standard errors in parentheses), where *, **, and *** indicate statistical differences in the mean at the 10% level, 5% level, and 1% level, respectively. In Panel A, the variables of interest from columns (1) to (4) are changes in the growth of total assets, total loans, number of employees and number of branches. In Panel B, 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, Capital Ratio (equity/total assets), and Tier I plus Tier II capital ratio. All variables are in percentage terms.

Table 3: Occurrence of Bank Distress Events—Hazard Model

Sample	state banks with distress events between 1995 and 2010					
	(1)	(2)	(3)	(4)	(5)	(6)
D (0-12 months after)	0.228	0.098	0.294	0.189	0.078	0.046
	(0.238)	(0.245)	(0.245)	(0.258)	(0.217)	(0.223)
D (12-24 months after)	0.178	0.130	0.315	0.265	0.072	0.062
	(0.240)	(0.251)	(0.242)	(0.256)	(0.208)	(0.210)
D (24-36 months after)	0.008	-0.017	0.078	0.036	-0.056	-0.120
	(0.232)	(0.228)	(0.246)	(0.240)	(0.210)	(0.215)
D (12-24 months before)	0.180	0.155	0.264	0.218	0.079	-0.002
	(0.218)	(0.214)	(0.227)	(0.222)	(0.198)	(0.212)
Cons. Bank Chairman					2.442***	2.403***
					(0.138)	(0.149)
Competitive County					0.254	0.281
					(0.176)	(0.182)
Log (Total assets) (t-1)			0.122	0.128	0.114	0.123
			(0.093)	(0.101)	(0.105)	(0.113)
Capital Ratio (t-1)			-0.116	-0.127	-0.060	-0.061
			(0.092)	(0.094)	(0.104)	(0.108)
ROA (t-1)			-0.465***	-0.471***	-0.311***	-0.313***
			(0.086)	(0.082)	(0.078)	(0.078)
NPL Ratio (t-1)			-0.000*	-0.000**	-0.000	-0.000
			(0.000)	(0.000)	(0.000)	(0.000)
Market Share (t-1)			-0.017***	-0.018***	-0.011	-0.011
			(0.006)	(0.006)	(0.007)	(0.007)
Deposit Ratio (t-1)			-0.006	-0.001	-0.004	-0.003
			(0.007)	(0.008)	(0.009)	(0.009)
GDPPC Growth (t-1)			0.014	0.014	0.008	0.009
			(0.021)	(0.022)	(0.022)	(0.023)
Log(GDPPC) (t-1)			0.266	0.232	0.763**	0.738**
			(0.311)	(0.308)	(0.334)	(0.330)
Number of distress events	148	148	148	148	148	148
Time FE	NO	YES	NO	YES	NO	YES
Observations	1,174	1,174	1,169	1,169	1,169	1,169

The table shows results from estimating an exponential hazard model in equation (1) to test whether the occurrence of distress events depends on the electoral cycle. 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 macro control variables, and those 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). Standard errors are denoted in parentheses and clustered at bank level. * indicates statistical significance at the 10% level, ** at the 5% level, and *** at the 1% level.

Table 4: Type of Bailout and Political Factors Influencing the Local Politician

Sample	state banks with distress events between 1995 and 2010					
Dep. Var.	Type of Bailout (=1 if decentralized-level bailout by a politician or BLP)					
	(1)	(2)	(3)	(4)	(5)	(6)
D (0-12 months after)	0.346***	0.327***	0.249**	0.253**	0.266**	0.269**
	(0.118)	(0.121)	(0.118)	(0.122)	(0.118)	(0.121)
D (12-24 months after)	0.287**	0.310***	0.338***	0.341***	0.333***	0.335***
	(0.113)	(0.106)	(0.099)	(0.099)	(0.102)	(0.103)
D (24-36 months after)	0.217*	0.248**	0.192*	0.209**	0.185	0.199*
	(0.119)	(0.111)	(0.105)	(0.105)	(0.112)	(0.111)
D (12-24 months before)	0.201*	0.271**	0.213**	0.255**	0.224**	0.270**
	(0.113)	(0.110)	(0.101)	(0.108)	(0.104)	(0.106)
Cons. Bank Chairman					-0.193**	-0.198**
					(0.082)	(0.082)
Competitive County					-0.114	-0.130*
					(0.075)	(0.073)
Log (Total assets) (t-1)			-0.115**	-0.121**	-0.108**	-0.116**
			(0.055)	(0.053)	(0.054)	(0.053)
Capital Ratio (t-1)			-0.060	-0.068	-0.049	-0.057
			(0.039)	(0.041)	(0.038)	(0.040)
ROA (t-1)			0.085	0.096	0.057	0.068
			(0.065)	(0.067)	(0.070)	(0.071)
NPL Ratio (t-1)			-0.018**	-0.018**	-0.020**	-0.019**
			(0.009)	(0.009)	(0.008)	(0.009)
Market Share (t-1)			0.011***	0.010***	0.010***	0.010***
			(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***	-0.024***
			(0.009)	(0.009)	(0.009)	(0.009)
Log(GDPPC) (t-1)			0.183	0.211	0.086	0.115
			(0.154)	(0.155)	(0.156)	(0.158)
Time FE	NO	YES	NO	YES	NO	YES
R-squared	0.055	0.104	0.299	0.312	0.333	0.349
Observations	148	148	148	148	148	148

The table shows how the electoral cycle affects the likelihood of a bailout reached by decentralized vs. centralized decision-making. The dependent variable is a dummy that equals one if the bank receives capital injections from the politician (BLP) and zero if the bank receives support measures from the association (BLA). 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 macro 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 5: Are Pre-election and Post-election Cases Different?

	D (0-12 months before)	Observations	R-squared
Panel A: Bank Charactersistics and Size of Bailout			
Log (Total assets)	0.136	148	0.003
	(0.229)		
Log (Number of employees)	0.091	148	0.002
	(0.193)		
Number of branches	-1.424	148	0.000
	(8.749)		
Market share (in %)	-0.843	148	0.000
	(3.529)		
Customer loans to Total assets (in %)	-1.996	148	0.003
	(3.321)		
Deposit ratio (in %)	-0.043	148	0.000
	(2.544)		
Capital ratio (in %)	-0.194	148	0.007
	(0.197)		
ROA (in %)	-0.045	148	0.000
	(0.131)		
NPL ratio (in %)	0.312	148	0.000
	(0.920)		
LLP ratio CL (in %)	0.060	148	0.000
	(0.164)		
Local banking sector HHI (0-10000)	13.848	148	0.000
	(164.310)		
ln (Capital injection)	-0.909	148	0.003
	(1.488)		
Capital injection to total equity (in %)	2.326	148	0.001
	(7.847)		
Panel B: Local Macro and Other Variables			
Log (GDPPC)	-0.020	148	0.000
	(0.689)		
GDPPC growth (in %)	-0.573	148	0.002
	(0.785)		
Employment rate (in %)	-3.082	145	0.009
	(2.642)		
Employment growth (in %)	0.000	145	0.000
	(0.289)		
Government debt to GDP (in %)	0.310	131	0.003
	(0.487)		
Government debt to revenue (in %)	3.801	132	0.004
	(5.689)		
Total loan growth (in %)	0.032	140	0.000
	(2.321)		
State loan share (in %)	0.846	140	0.000
	(2.885)		

This table tests whether there is a significant difference in the type of banks that experience pre-election and post-election distress events. Each row of this table represents a univariate regression of the variable in the first column on a dummy that indicates the timing of distress in the electoral cycle. $D(0-12\ months\ before)$ equals to one if the distress event occurs 0 to 12 months before the election and zero otherwise. Panel A examines bank characteristics and bailout size. Panel B examines local macroeconomic and loan-related variables. The variables are measured in the year before the distress event. Robust standard errors are denoted in parentheses. * indicates statistical significance at the 10% level, ** at the 5% level, and *** at the 1% level.

Table 6: General Patterns in Credit Allocation
Five Years after the Bailout Event

Panel A: Changes in Local Financing Structure

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)
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)
Model	OLS	IV 2SLS	OLS	IV 2SLS	OLS	IV 2SLS	OLS	IV 2SLS
1st Stage F-stat		28.63		28.63		28.63		28.63
Time FE	YES	YES	YES	YES	YES	YES	YES	YES
Observations	1,078	1,078	1,078	1,078	1,078	1,078	1,078	1,078

Panel B: Aggregate Changes in Lending Relationships of Affected Banks

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)
BLP	-4.301**	-8.542**	-4.304**	-10.308***
	-1.783	(3.709)	(1.673)	(3.401)
Model	OLS	IV 2SLS	OLS	IV 2SLS
1st Stage F-stat		28.63		28.63
Time FE	YES	YES	YES	YES
Observations	1,078	1,078	1,078	1,078

Panel A shows how the presence of state-owned savings banks depends on the type of bailout following a distress event. Panel B shows 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 are displayed. BLP is a dummy that equals to 1 if the distress is resolved by the politician and zero otherwise. This dummy variable is instrumented by the timing of the distress event in the electoral cycle, or $D(0-12\ months\ before)$, to address endogeneity concerns. $D(0-12\ months\ before)$ equals to one if the distress event occurs 0 to 12 months before the election and zero otherwise. Unit of observation is a municipality (the most granular administration level). In Panel A, columns (1) and (2) examine the share of loans extended by state-owned banks in total loans. Columns (3) and (4) ((5) and (6)) examine the share of loans extended by private banks (cooperatives) in total loans. Columns (7) to (8) examine total loans. In Panel B, columns (1) to (2) examine the share of newly initiated lending relationships by affected banks out of all lending relationships by them, or $\frac{number\ of\ new\ lending\ relationships\ by\ affected\ banks}{number\ of\ all\ lending\ relationships\ by\ affected\ banks}$. Columns (3) and (4) examine the share of newly terminated 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 measure the change or growth in average post-bailout value (five years after the bailout) from the pre-bailout value (three years before the bailout). The F-stat 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 level. *,**,*** indicates significance at the 10%, 5%, and 1%, respectively.

Table 7: Credit Allocation of Affected Banks

Dep. Var.	growth of loans from affected banks		share of loans from affected banks		growth of loans from all banks	
	(1)	(2)	(3)	(4)	(5)	(6)
BLP X L1.logAPK	-3.104*	-3.427**	-6.622***	-6.315**	-4.701*	-5.101**
	(1.698)	(1.700)	(2.497)	(2.492)	(2.492)	(2.484)
BLP	7.653**	10.296***	11.102**	9.089*	5.846	7.866*
	(3.334)	(3.345)	(5.417)	(5.431)	(4.298)	(4.279)
L1.logAPK	4.130***	4.962***	4.102**	3.464*	6.978***	7.713***
	(1.341)	(1.353)	(1.812)	(1.823)	(1.849)	(1.859)
Model	IV 2SLS	IV 2SLS	IV 2SLS	IV 2SLS	IV 2SLS	IV 2SLS
1st Stage F-stat	96.11	98.75	88.38	87.38	88.38	87.38
Firm Controls	NO	YES	NO	YES	NO	YES
Industry X Time FE	YES	YES	YES	YES	YES	YES
Observations	6,352	6,352	10,514	10,514	10,514	10,514

The table shows how the credit allocation—sensitivity of credit allocation to firm level productivity—of affected banks depends on the type of bailout following a distress event. BResults from two-stage least squares regressions are displayed. BLP is a dummy that equals to 1 if the distress is resolved by the politician and zero otherwise. This dummy variable is instrumented by the timing of the distress event in the electoral cycle, or $D(0-12\ months\ before)$, to address endogeneity concerns. $D(0-12\ months\ before)$ equals to one if the distress event occurs 0 to 12 months before the election and zero otherwise. Unit of observation is a firm-year and only post-event years are included in the regression. The dependent variable from columns (1) to (2) is the growth of loans from affected banks. In columns (3) and (4), the dependent variable is the share of loans from affected banks out of all loans received by the firm. Columns (5) to (6) shows the growth of total loans from all banks. All dependent variables are in percentage terms. $L1.logAPK$ is the natural log of sales divided by value of total fixed assets, lagged by one year. The F-stat is for the excluded instruments in the first stage. All regressions include industry-time fixed effects. Firm controls include lagged size and profitability. *,**,*** indicates significance at the 10%, 5%, and 1%, respectively.

Table 8: Preferential Lending of 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)
BLP	9.775***	9.092**	19.691**	17.290**
	(3.657)	(3.499)	(8.122)	(7.210)
Model	IV 2SLS	IV 2SLS	IV 2SLS	IV 2SLS
1st Stage F-stat	33.550	33.170	33.550	33.170
Firm Controls	NO	YES	NO	YES
Industry X Time FE	YES	YES	YES	YES
Observations	1,926	1,926	1,926	1,926

The table shows how preferential lending of affected banks depends on the type of bailout following a distress event. Results from two-stage least squares regressions are displayed. BLP is a dummy that equals to 1 if the distress is resolved by the politician and zero otherwise. This dummy variable is instrumented by the timing of the distress event in the electoral cycle, or $D(0-12\ months\ before)$, to address endogeneity concerns. $D(0-12\ months\ before)$ equals to one if the distress event occurs 0 to 12 months before the election and zero otherwise. Unit of observation is a firm and only post-event years are included in the regression. The dependent variable from columns (1) to (2) is the share of in-group loans from affected banks out of total loans received by the firm. In columns (3) and (4), the dependent variable is share of in-group loans from affected banks out of total in-group loans from all the connected banks. A loan is defined as from in-group or connected banks if the firm and the bank are connected through membership of the same service club branch (Haselmann, Schoenherr, and Vig (2018)). The F-stat is for the excluded instrument in the first stage. All dependent variables are in percentage terms. All regressions include industry-time fixed effects. Firm controls include lagged size and profitability. *,**,*** indicates significance at the 10%, 5%, and 1%, respectively.

Table 9: Macroeconomic Developments at County Level

Panel A: Five Years after the Bailout Event

	D (0-12 months before)=1 *(Pre-eleciton: more BLA)*			D (0-12 months before)=0 *(Post-election: more BLP)*			Post - Pre
Change	Mean	Median	S.D.	Mean	Median	S.D.	Difference
Income per capita growth	4.871	5.326	(6.529)	2.918	3.144	(4.752)	-1.954*
Employment growth	3.548	4.434	(4.127)	1.938	2.441	(3.332)	-1.611**
Employment rate	1.416	1.489	(1.724)	0.789	0.906	(1.511)	-0.627*
New estab growth	1.616	0.963	(4.667)	-0.380	-0.431	(3.282)	-1.996**
New estab employment growth	12.587	4.874	(24.506)	2.949	2.823	(21.317)	-9.638*
Government debt growth	-1.490	-0.628	(17.469)	17.593	0.418	(80.168)	19.083**

Panel B: Eight Years after the Bailout Event

	D (0-12 months before)=1 *(Pre-eleciton: more BLA)*			D (0-12 months before)=0 *(Post-election: more BLP)*			Post - Pre
Change	Mean	Median	S.D.	Mean	Median	S.D.	Difference
Income per capita growth	5.948	7.717	(6.445)	4.095	4.610	(5.247)	-1.854
Employment growth	4.186	4.890	(4.271)	2.618	3.278	(3.845)	-1.568*
Employment rate	1.657	2.040	(1.624)	1.138	1.251	(1.638)	-0.519
New estab growth	1.219	1.017	(3.596)	-0.144	-0.517	(2.944)	-1.364*
New estab employment growth	10.166	6.337	(20.427)	1.733	1.540	(19.587)	-8.433*
Government debt growth	2.127	1.892	(19.763)	19.421	0.413	(82.291)	17.294*

This table reports the change in the growth rate of county-level macroeconomic variables in the five-year or eight-year period after the bank bailout, for both pre-election and post-election distress events. $D(0-12\ months\ before)$ equals to one if the distress event occurs 0 to 12 months before the election and zero otherwise. Unit of observation is a county. The variables of interest include income per capita growth, employment growth, employment rate, new establishment growth, establishments' employment growth and local government debt growth. *, **, and *** indicate that the difference in means is statistically significant at the 10%, 5%, and 1% level, respectively.

For Online Publication:

Internet Appendix to "The Political Economy of Decentralization: Evidence from Bank Bailouts"

This appendix has three sections. Section A contains detailed information on data sources and sample construction. Section B provides additional results, including figures and tables. Section C presents results from an alternative estimation approach.

A Appendix: Data Sources and Sample Construction

A.1 Data Sources

The Bundesbank's prudential database (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 database 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 database 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

[39]For a detailed description of the BAKIS database 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.

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 the local governments (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 savings bank 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 database: This database contains information on distress events which occurred at German financial institutions from the early 1990s on. For our analyses we rely on the 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.

A.2 Disambiguation of Distress Events

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.[40] By using historical 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.[41] 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;[42] and second, we identify large write-offs from the borrowers' loan statistics that are available on a quarterly basis. 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 database 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

[40] 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 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.

[41] 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.

[42] 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.

and the local politician within the same year (four cases); we assign these events to the source that provided the larger amount of funds. Results also hold if we exclude these cases.

Third, we obtain information on distressed mergers from the Bundesbank database on distress events. 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 database where it is available. For the remaining cases we consult the responsible local supervisors responsible for the respective savings bank to learn about the date of the distress event.

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 database. 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

Bank Balance Sheet Variables	
Total Bank Assets	Total assets (in Million EUR)
Log Bank Assets	Logarithm (ln) of total assets
Total Assets / GDP	Total assets to GDP ratio (county level, 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.
Capital Ratio	Equity capital to total assets ratio (in %)
Tier I + II	Equity capital plus tier 2 capital to total assets ratio (in %)
ROA	Return (operative result) on total assets (in %)
NPL Ratio	Non-performing loans to customer loans ratio (in %)
Deposit Ratio	Savings deposits, term deposits, and time deposits to total assets ratio (in %)
Loan Loss Provisions/Customer Loans	Loan loss provisions to customer loans (in %)
Restructuring Variables	
Growth Rate (Total assets)	Year-on-year change of total assets (growth rate) (in %)
Growth Rate (Total loans)	Year-on-year change of total loans (growth rate) (in %)
Growth Rate (Employees)	Year-on-year change of number of bank employees (growth rate) (in %)
Growth Rate (Number of Branches)	Year-on-year change of number of bank branches (growth rate) (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)
Govt Debt/GDP	Government debt to GDP (county level, in %)
Govt Debt/Revenue	Government debt to revenue (county level, in %)
Employment growth	Year-on-year change of total employment (county level, in %)
Employment rate	Share of Employees in Population (county level, in %)
New estab growth	Year-on-year change of new establishments (county level, in %)
New estab employment growth	Year-on-year change of new establishments' employment (county level, in %)
Loans to GDP	Loans in credit register aggregated at the county level and divided by GDP (county level, in %)
Total loan growth	Year-on-year change of total loans in credit register (county/municipality level, in %)
State Loan Share	Share of loans in credit register that is granted by state banks (county/municipality level, in %)

Panel D: Political Variables

D(12-24 months before)	Dummy = 1 if the last county elections took place 12-24 months before the distress event.
D(0-12 months before)	Dummy = 1 if the last county elections will take place 0 to 12 months before the distress event.
D(0-12 months after)	Dummy = 1 if the last county elections took place 0 to 12 months after the distress event.
D(12-24 months after)	Dummy = 1 if the last county elections took place 12-24 months after the distress event.
D(24-36 months after)	Dummy = 1 if the last county elections took place 24-36 months after the distress event.
Competitive County	Dummy = 1 for competitive counties. Hereby, the vote share margin between the first and the second party within the county from the previous 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: 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 Competitive County	Dummy = 0 for a non-competitive county.
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").
No Conservative Bank Chairman	Dummy = 0 for a non-conservative chairman.

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

B Appendix: Additional Results: Figures and Tables

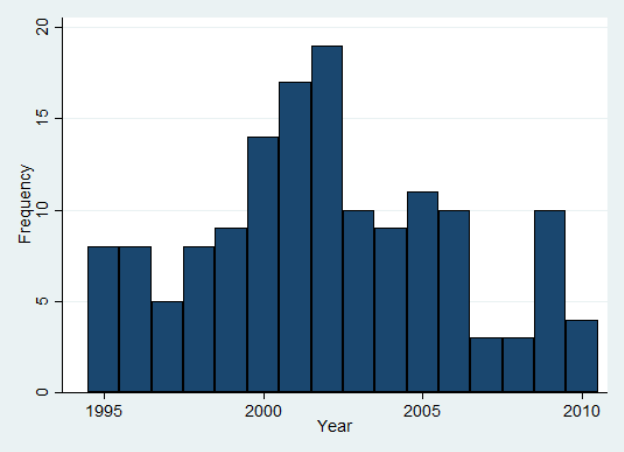


Figure B1: Number of Distress events from 1995 to 2010
Figure B1 illustrates the number of distress events in each year from 1995 to 2010. There are in total 148 savings banks distress events.

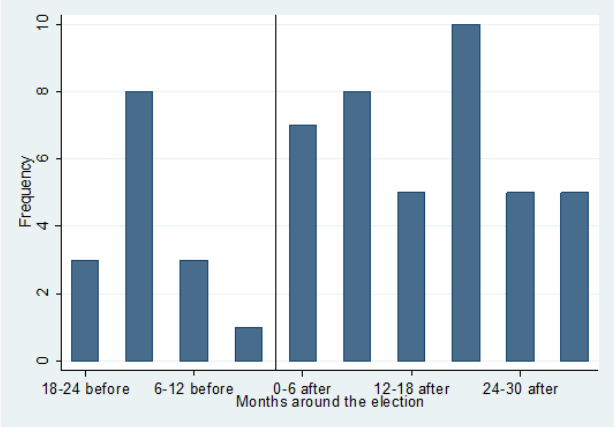


Figure B2: Capital Injections at the Decentralized Level and Electoral Cycle
Figure B2 illustrates how the number of banks that receive capital injections from local politicians varies over the electoral cycle (6 months intervals), where the vertical black line indicates the election date.

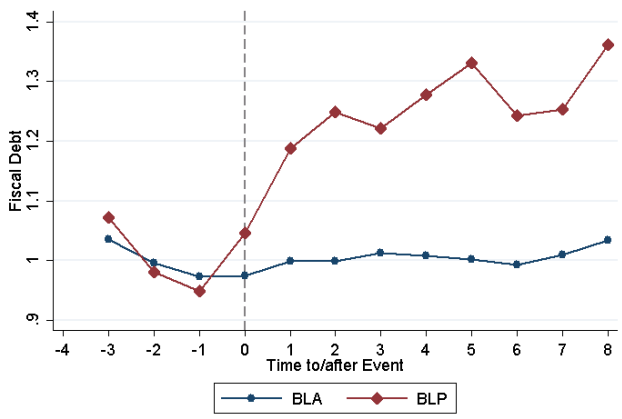


Figure B3: Dynamics of Scaled Government Debt around Bailout Events

Figure B3 plots the value of local government debt, normalized to have value 1 before the bank distress, in the years around the bailout event, for counties subject to BLP versus BLA. The x-axis shows the year to/after the bailout event. BLA stands for cases where the association at the centralized layer organizes the bailouts, and BLP stands for cases where the local politician injects capital into the distressed bank.

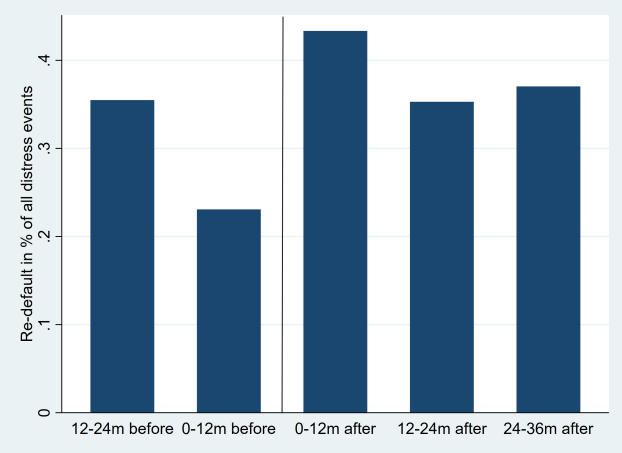


Figure B4: Future Defaults after Bailouts (% of all distress events)

Figure B4 illustrates how the probability of future defaults varies over the electoral cycle, where the vertical black line indicates the election date.

Table B1: Restructuring and Long-Run Financial Performance of Affected Banks
Eight Years after the Bailout Event

Panel A: Restructuring

Change in the growth rate	(1) Total assets	(2) Total loans	(3) Number of employees	(4) Number of branches
BLA	-0.690	0.199	-1.641	-4.147
	(2.290)	(3.120)	(2.509)	(6.297)
BLP	0.419	1.961	0.327	-2.968
	(1.969)	(2.747)	(3.199)	(5.847)
Diff (BLP - BLA)	1.109***	1.762***	1.969***	1.179
	(0.422)	(0.584)	(0.576)	(1.202)

Panel B: Long-Run Financial Performance

Change in ratios	(1) NPL Ratio	(2) LLP Ratio CL	(3) ROA	(4) ROE	(5) Capital Ratio	(6) Tier I + II
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 (BLP - BLA)	3.348***	0.481***	-0.354*	-7.042**	-0.159	-1.013**
	(0.698)	(0.149)	(0.198)	(3.501)	(0.121)	(0.503)

Panel A examines changes in the growth rate of variables related to bank restructuring while Panel B examines changes in key accounting ratios for banks that experienced a distress event. We calculate the average values of growth/accounting ratios in the eight years after the bailout, and subtract the initial values averaged over three years to yield the changes around the bailout event (standard deviations in parentheses). Row *BLA* includes banks bailed-out by the association while row *BLP* includes banks bailed-out by the politician. Row *Diff (BLP-BLA)* shows the difference in the mean value between the two groups of banks (standard errors in parentheses), where *, **, and *** indicate statistical differences in the mean at the 10% level, 5% level, and 1% level, respectively. In Panel A, the variables of interest from columns (1) to (4) are changes in the growth of total assets, total loans, number of employees and number of branches. In Panel B, 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, Capital Ratio (equity/total assets), and Tier I plus Tier II capital ratio. All variables are in percentage terms.

Table B2: Occurrence of Bank Distress Events—Hazard Model

All banks (including banks without distress events)

Sample	all state banks					
	(1)	(2)	(3)	(4)	(5)	(6)
D (0-12 months after)	0.222	0.157	0.292	0.239	0.052	0.040
	(0.258)	(0.257)	(0.260)	(0.278)	(0.244)	(0.254)
D (12-24 months after)	0.073	0.078	0.309	0.307	-0.021	-0.011
	(0.253)	(0.265)	(0.257)	(0.269)	(0.248)	(0.245)
D (24-36 months after)	0.101	0.067	0.154	0.114	-0.050	-0.118
	(0.240)	(0.238)	(0.266)	(0.259)	(0.239)	(0.244)
D (12-24 months before)	0.246	0.206	0.371	0.330	0.203	0.125
	(0.233)	(0.232)	(0.247)	(0.247)	(0.210)	(0.223)
Cons. Bank Chairman					3.896***	3.870***
					(0.220)	(0.230)
Competitive County					0.537***	0.550***
					(0.200)	(0.209)
Log (Total assets) (t-1)			0.224*	0.217*	0.155	0.164
			(0.118)	(0.118)	(0.112)	(0.114)
Capital Ratio (t-1)			-0.559***	-0.573***	-0.351***	-0.350**
			(0.124)	(0.131)	(0.124)	(0.138)
ROA (t-1)			-0.843***	-0.859***	-0.552***	-0.561***
			(0.083)	(0.080)	(0.102)	(0.104)
NPL Ratio (t-1)			-0.000***	-0.000***	-0.000	-0.000
			(0.000)	(0.000)	(0.000)	(0.000)
Market Share (t-1)			-0.025***	-0.025***	-0.011	-0.012
			(0.008)	(0.008)	(0.009)	(0.009)
Deposit Ratio (t-1)			-0.036***	-0.033***	-0.026**	-0.025**
			(0.010)	(0.010)	(0.011)	(0.011)
GDPPC Growth (t-1)			0.022	0.021	0.013	0.014
			(0.025)	(0.025)	(0.025)	(0.026)
Log(GDPPC) (t-1)			0.347	0.351	0.783**	0.766**
			(0.389)	(0.390)	(0.378)	(0.373)
Time FE	NO	YES	NO	YES	NO	YES
Observations	8,232	8,232	8,135	8,135	8,135	8,135

The table shows results from estimating an exponential hazard model in equation (1). $D(0-12\ months\ before)$ equals to one if the distress event occurs 0 to 12 months before the election and zero otherwise. 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 macro 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). Standard errors are denoted in parentheses and clustered at bank level. * indicates statistical significance at the 10% level, ** at the 5% level, and *** at the 1% level.

Table B3: Occurrence of Bank Distress Events—Hazard Model

One dummy indicating pre-election year

Sample	state banks with distress events between 1995 and 2010					
	(1)	(2)	(3)	(4)	(5)	(6)
D (0-12 months before)	-0.150	-0.093	-0.241	-0.177	-0.044	0.002
	(0.187)	(0.188)	(0.196)	(0.199)	(0.175)	(0.181)
Cons. Bank Chairman					2.448***	2.409***
					(0.137)	(0.149)
Competitive County					0.252	0.277
					(0.176)	(0.183)
Log (Total assets) (t-1)			0.126	0.130	0.114	0.124
			(0.093)	(0.101)	(0.104)	(0.113)
Capital Ratio (t-1)			-0.113	-0.126	-0.056	-0.062
			(0.093)	(0.094)	(0.104)	(0.108)
ROA (t-1)			-0.462***	-0.466***	-0.309***	-0.306***
			(0.084)	(0.081)	(0.077)	(0.076)
NPL Ratio (t-1)			-0.001	-0.000*	-0.000	-0.000
			(0.000)	(0.000)	(0.000)	(0.000)
Market Share (t-1)			-0.017***	-0.018***	-0.011	-0.011
			(0.006)	(0.006)	(0.007)	(0.007)
Deposit Ratio (t-1)			-0.005	-0.001	-0.004	-0.003
			(0.007)	(0.008)	(0.008)	(0.009)
GDPPC Growth (t-1)			0.013	0.014	0.008	0.010
			(0.021)	(0.022)	(0.023)	(0.023)
Log(GDPPC) (t-1)			0.268	0.236	0.772**	0.748**
			(0.312)	(0.308)	(0.333)	(0.330)
Number of distress events	148	148	148	148	148	148
Time FE	NO	YES	NO	YES	NO	YES
Observations	1,174	1,174	1,169	1,169	1,169	1,169

The table shows results from estimating an exponential hazard model in equation (1). 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 macro 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). Standard errors are denoted in parentheses and clustered at bank level. * indicates statistical significance at the 10% level, ** at the 5% level, and *** at the 1% level.

Table B4: Type of Bailout and Political Factors Influencing the Local Politician
One dummy indicating the pre-election year

Sample	state banks with distress events between 1995 and 2010					
Dep. Var.	Type of Bailout (=1 if decentralized-level bailout by a politician or BLP)					
	(1)	(2)	(3)	(4)	(5)	(6)
D (0-12 months before)	-0.264***	-0.292***	-0.251***	-0.268***	-0.256***	-0.272***
	(0.084)	(0.079)	(0.080)	(0.081)	(0.086)	(0.086)
Cons. Bank Chairman					-0.193**	-0.197**
					(0.081)	(0.081)
Competitive County					-0.114	-0.128*
					(0.073)	(0.072)
Log (Total assets) (t-1)			-0.114**	-0.125**	-0.106*	-0.118**
			(0.055)	(0.053)	(0.054)	(0.052)
Capital Ratio (t-1)			-0.069*	-0.074*	-0.057	-0.061
			(0.038)	(0.040)	(0.037)	(0.038)
ROA (t-1)			0.087	0.095	0.058	0.065
			(0.064)	(0.065)	(0.068)	(0.069)
NPL Ratio (t-1)			-0.019**	-0.019**	-0.021**	-0.020**
			(0.009)	(0.009)	(0.008)	(0.009)
Market Share (t-1)			0.011***	0.010***	0.010***	0.010***
			(0.003)	(0.003)	(0.003)	(0.003)
Deposit Ratio (t-1)			-0.008**	-0.007*	-0.006*	-0.005
			(0.004)	(0.004)	(0.003)	(0.004)
GDPPC Growth (t-1)			-0.023***	-0.023***	-0.023**	-0.022***
			(0.009)	(0.008)	(0.009)	(0.008)
Log(GDPPC) (t-1)			0.183	0.213	0.085	0.115
			(0.151)	(0.151)	(0.152)	(0.152)
Time FE	NO	YES	NO	YES	NO	YES
R-squared	0.043	0.101	0.289	0.305	0.323	0.342
Observations	148	148	148	148	148	148

The table shows how the electoral cycle affects the likelihood of a bailout reached by decentralized vs. centralized decision-making. The dependent variable is a dummy that equals one if the bank receives capital injections from the politician (BLP) and zero if the bank receives support measures from the association (BLA). $D(0-12\ months\ before)$ equals to one if the distress event occurs 0 to 12 months before the election and zero otherwise. 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 macro 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 B5: Type of Bailout and Political Factors Influencing the Local Politician
Logit models

Sample	state banks with distress events between 1995 and 2010					
Dep. Var.	Type of Bailout (=1 if decentralized-level bailout by a politician or BLP)					
	(1)	(2)	(3)	(4)	(5)	(6)
D (0-12 months after)	1.705***	1.763**	1.564**	1.687**	1.764**	1.987**
	(0.657)	(0.706)	(0.734)	(0.781)	(0.817)	(0.885)
D (12-24 months after)	1.468**	1.707***	1.997***	2.145***	2.061***	2.257***
	(0.646)	(0.648)	(0.679)	(0.729)	(0.755)	(0.840)
D (24-36 months after)	1.174*	1.435**	1.340*	1.544**	1.375	1.633*
	(0.676)	(0.677)	(0.737)	(0.780)	(0.844)	(0.931)
D (12-24 months before)	1.107*	1.562**	1.472*	1.860**	1.638*	2.171**
	(0.663)	(0.687)	(0.769)	(0.866)	(0.872)	(0.999)
Cons. Bank Chairman					-1.109**	-1.215***
					(0.477)	(0.466)
Competitive County					-0.641	-0.858*
					(0.433)	(0.445)
Log (Total assets) (t-1)			-0.708**	-0.782**	-0.684**	-0.811**
			(0.339)	(0.332)	(0.336)	(0.334)
Capital Ratio (t-1)			-0.444**	-0.526**	-0.407*	-0.520*
			(0.226)	(0.250)	(0.246)	(0.275)
ROA (t-1)			0.514	0.612	0.426	0.551
			(0.364)	(0.393)	(0.388)	(0.435)
NPL Ratio (t-1)			-0.145**	-0.144**	-0.154**	-0.155**
			(0.070)	(0.070)	(0.071)	(0.071)
Market Share (t-1)			0.066***	0.063***	0.065***	0.063***
			(0.019)	(0.020)	(0.018)	(0.019)
Deposit Ratio (t-1)			-0.053**	-0.043*	-0.043*	-0.029
			(0.023)	(0.026)	(0.023)	(0.027)
GDPPC Growth (t-1)			-0.155**	-0.144**	-0.158**	-0.146**
			(0.066)	(0.061)	(0.069)	(0.065)
Log(GDPPC) (t-1)			1.056	1.289	0.559	0.790
			(0.924)	(0.988)	(0.917)	(0.976)
Time FE	NO	YES	NO	YES	NO	YES
Pesudo R-squared	0.045	0.085	0.273	0.286	0.307	0.328
Observations	148	148	148	148	148	148

The table re-estimates the results from Table 4, using a nonlinear logit specification instead of an OLS specification. The dependent variable is a dummy that equals one if the bank receives capital injections from the politician (BLP) and zero if the bank receives support measures from the association (BLA). 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 macro 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 B6: Type of Bailout and Political Factors Influencing The Association Board

Sample	state banks with distress events between 1995 and 2010					
Dep. Var.	Type of Bailout (=1 if decentralized-level bailout by a politician or BLP)					
	(1)	(2)	(3)	(4)	(5)	(6)
Bank Chairman in Ass. Board	-0.043	-0.022				
	(0.116)	(0.121)				
Cons. Ass. Board			0.071	0.068		
			(0.090)	(0.089)		
Same Party					-0.048	-0.059
					(0.087)	(0.086)
Log (Total assets) (t-1)	-0.124**	-0.135**	-0.130**	-0.140**	-0.130**	-0.140**
	(0.055)	(0.053)	(0.057)	(0.055)	(0.055)	(0.054)
Capital Ratio (t-1)	-0.063	-0.066	-0.071*	-0.075*	-0.064	-0.068
	(0.039)	(0.041)	(0.040)	(0.042)	(0.039)	(0.041)
ROA (t-1)	0.084	0.090	0.092	0.100	0.082	0.088
	(0.067)	(0.069)	(0.068)	(0.069)	(0.067)	(0.069)
NPL Ratio (t-1)	-0.020**	-0.020**	-0.020**	-0.020**	-0.020**	-0.019**
	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)
Market Share (t-1)	0.011***	0.011***	0.011***	0.010***	0.011***	0.011***
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
Deposit Ratio (t-1)	-0.008**	-0.007*	-0.007*	-0.006	-0.008**	-0.007*
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
GDPPC Growth (t-1)	-0.021**	-0.021**	-0.022**	-0.021**	-0.022**	-0.021**
	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)
Log(GDPPC) (t-1)	0.220	0.240	0.159	0.189	0.198	0.223
	(0.163)	(0.164)	(0.166)	(0.166)	(0.155)	(0.154)
Time FE	NO	YES	NO	YES	NO	YES
R-squared	0.252	0.262	0.239	0.253	0.252	0.264
Observations	148	148	148	148	148	148

The table shows how other political variables related to the association affect the likelihood of a bailout reached by decentralized vs. centralized decision-making. The dependent variable is a dummy that equals one if the bank receives capital injections from the politician (BLP) and zero if the bank receives support measures from the association (BLA). Bank and macro control variables are the same as in Table 4. 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 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 B7: General Patterns in Credit Allocation
Eight Years after the Bailout Event

Panel A: Changes in Local Financing Structure

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)
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)
Model	OLS	IV 2SLS	OLS	IV 2SLS	OLS	IV 2SLS	OLS	IV 2SLS
1st Stage F-stat		28.63		28.63		28.63		28.63
Time FE	YES	YES	YES	YES	YES	YES	YES	YES
Observations	1,078	1,078	1,078	1,078	1,078	1,078	1,078	1,078

Panel B: Aggregate Changes in Lending Relationships of Affected Banks

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)
BLP	-5.694***	-9.281**	-2.464	-8.435***
	(2.121)	(3.957)	(1.836)	(3.153)
Model	OLS	IV 2SLS	OLS	IV 2SLS
1st Stage F-stat		28.63		28.63
Time FE	YES	YES	YES	YES
Observations	1,078	1,078	1,078	1,078

Panel A shows how the presence of state-owned savings banks depends on the type of bailout following a distress event. Panel B shows 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 are displayed. BLP is a dummy that equals to 1 if the distress is resolved by the politician and zero otherwise. This dummy variable is instrumented by the timing of the distress event in the electoral cycle, or $D(0-12\ months\ before)$, to address endogeneity concerns. $D(0-12\ months\ before)$ equals to one if the distress event occurs 0 to 12 months before the election and zero otherwise. Unit of observation is a municipality (the most granular administration level). In Panel A, columns (1) and (2) examine the share of loans extended by state-owned banks in total loans. Columns (3) and (4) ((5) and (6)) examine the share of loans extended by private banks (cooperatives) in total loans. Columns (7) to (8) examine total loans. In Panel B, columns (1) to (2) examine the share of newly initiated lending relationships by affected banks out of all lending relationships by them, or $\frac{number\ of\ new\ lending\ relationships\ by\ affected\ banks}{number\ of\ all\ lending\ relationships\ by\ affected\ banks}$. Columns (3) and (4) examine the share of newly terminated 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 measure the change or growth in average post-bailout value (eight years after the bailout) from the pre-bailout value (three years before the bailout). The F-stat 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 level. *,**,*** 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:

$$\widehat{P_{BLP_{it}}} = \phi(\tau D(0-12\ month\ before)_{kt} + \nu_0 POL_{kt} + \delta_0 X_{it-1}) \tag{4}$$

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 4. 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 Panel A of Table 6 and Table B7, 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, with a more efficient specification, the F-statistic from the first stage regression increases from 28.63 to 44.09 when we replace the original instrument with the predicted probability of BLP from the probit model, see column (2) in Panel A of Table 6 and Table C1. The coefficient on BLP is comparable to the IV specification in Panel A of Table 6 and greater than that in column (1).

Table C1: Changes in Local Financing Structure

Alternative Estimation Approach: Probit Model in the First Stage

Panel A: Five Years After the Bailout Event

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)
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)
Model	OLS	IV Probit	OLS	IV Probit	OLS	IV Probit	OLS	IV Probit
1st Stage F-stat		44.09		44.09		44.09		44.09
Time FE	YES	YES	YES	YES	YES	YES	YES	YES
Observations	1,078	1,078	1,078	1,078	1,078	1,078	1,078	1,078

Panel B: Eight Years After the Bailout Event

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)
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)
Model	OLS	IV Probit	OLS	IV Probit	OLS	IV Probit	OLS	IV Probit
1st Stage F-stat		44.09		44.09		44.09		44.09
Time FE	YES	YES	YES	YES	YES	YES	YES	YES
Observations	1,078	1,078	1,078	1,078	1,078	1,078	1,078	1,078

The table shows how the presence of state-owned savings banks depends on the type of bailout following a distress event. Both results from OLS and IV (probit) are displayed. BLP is a dummy that equals to 1 if the distress is resolved by the politician and zero otherwise. This dummy variable is instrumented by the timing of the distress event in the electoral cycle, or $D(0-12\ months\ before)$, to address endogeneity concerns. $D(0-12\ months\ before)$ equals to one if the distress event occurs 0 to 12 months before the election and zero otherwise. Unit of observation is a municipality (the most granular administration level). Columns (1) and (2) examine the share of loans extended by state-owned banks in total loans. Columns (3) and (4) ((5) and (6)) examine the share of loans extended by private banks (cooperatives) in total loans. Columns (7) to (8) examine total loans. All the dependent variables measure the change or growth 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 (three yeas before the bailout). The F-stat 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 level. *,**,*** indicates significance at the 10%, 5%, and 1%, respectively.