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DEPOSIT INSURANCE, BANK OWNERSHIP AND DEPOSITOR BEHAVIOR

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Deposit Insurance, Bank Ownership and Depositor Behavior

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Abstract

We employ proprietary data from a large bank to analyze how – in times of crisis – depositors react to a bank nationalization, re-privatization and an accompanying increase in deposit insurance. Nationalization slows depositors fleeing the bank, provided they have sufficient trust in the national government, while the increase in deposit insurance spurs depositors below the new 100K limit to deposit more. Prior to nationalization, depositors bunch just below the then-prevailing 20K limit. But they abandon bunching entirely during state-ownership, to return to bunching below the new 100K limit after re-privatization. Especially depositors with low switching costs are moving money around. (100 words)

Keywords: deposit insurance; coverage limit; bank nationalization; depositor heterogeneity
JEL Codes: G21, G28, H13, N23

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1 Introduction

In response to the global financial crisis EU governments increased the coverage of their national deposit guarantee schemes in a coordinated manner. The Belgian government for example intervened early, in November 2008 already, by increasing the coverage of the deposit insurance scheme from 20,000 to 100,000 euros, henceforth labeled, "20K" and "100K" (*Belgisch Staatsblad*, 17/11/2008). Each depositor was insured for an amount of 100K euros per bank. This expansion of the coverage held separately for savings certificates, such that well-informed depositors, by making the "right transfers" from deposits to savings certificates, could be covered for a total of 200K euros per bank. The stated aim was to stop withdrawals by depositors with the objective of maintaining financial stability. Previous studies have shown that the presence of deposit insurance has indeed the potential to maintain and/or restore confidence in the banking sector and to increase the volume of deposits held at banks (Diamond and Dybvig, 1983; Chernykh and Cole, 2011; Karas et al., 2013; Boyle et al., 2015; Nys et al., 2015).

But observers at the time suggested on the other hand that the increase in coverage went hand in hand with an increased awareness about the details of the deposit guarantee scheme, in effect "waking up" the depositors. It may have been the case in Belgium; locals for example started to google the word "*depositogarantie*" (the Dutch word for deposit guarantee) substantially more in the run-up to the expansion of the coverage than before. This increase in awareness can accordingly be seen from the Google Trends data in Figure 1. A reasonable reaction of depositors to the news about the expansion in coverage would be to take the newly announced threshold of 100K into account in their future decision-making. This could be viewed as a manifestation of the availability heuristic (see Tversky and Kahneman (1973)). The availability heuristic entails that people attach higher subjective probabilities to information that is more readily available in their mind. This would imply that depositors would react to the expansion in coverage by transferring money in excess of 100K (and that importantly would not have been covered before!) to savings certificates within the same bank (to avoid switching costs) or to covered products in other banks as to make the most of the newly offered protection.

The implication is that the expansion in deposit insurance coverage, although it may protect the banking system as a whole by diminishing the probability of an actual bank run, may also have heterogeneous effects on individual depositor behavior. Indeed, small depositors below or somewhat above 20K now feel safer and may decide to deposit more after the expansion in coverage. However, depositors that are close to or above the 100K can be expected to feel less comfortable depositing more in their deposit account, because they then miss out on the extra protection offered by transferring the money in excess of 100K to savings certificates or to other accounts with other banks. Next to stabilizing the system as a whole, the effect of the increased awareness about the higher coverage could therefore also entail an increase in volatility of the money deposited on

accounts above 100K, and some resulting inefficiency as deposit money spreads across many bank accounts held at multiple banks.

In addition to the changes in coverage, many EU banks saw episodes of nationalization that were well publicized at the time. These nationalizations usually entailed an explicit or implicit blanket guarantee for all depositors, since a just nationalized bank is very unlikely to fail its depositors in the immediate aftermath of the nationalization. One could therefore expect that depositors of nationalized banks will largely disregard the information about the official coverage limit during episodes of nationalization. The hypothesized effect of paying more attention to the increased deposit insurance coverage limits is therefore expected to diminish or even disappear during the spell of state ownership.

In this study we show how individual depositors react to the expansion of the deposit insurance coverage limit from 20K to 100K and to bank nationalization. For this purpose we employ proprietary monthly data of Belgian customers of one European bank. Our paper therefore uniquely contributes to three major but intimately related strands in the banking literature, i.e., on the role of bank depositors, deposit insurance and bank (state) ownership, respectively. Indeed, a large empirical literature provides estimates on the importance and specificity of depositors *funding* (e.g., Gilje (2019)), *monitoring* (e.g., Oliveira et al. (2015)), at times *withdrawing* (e.g., Brown et al. (2020); Schoors et al. (2019)) and/or *switching* (e.g., Kiser (2002); Shy (2002)), and occasionally even *running* on their banks. Recent seminal papers on bank depositor runs for example highlight the role played by depositor-bank relationships and networks (Iyer and Puri, 2012; Iyer et al., 2016b).

But deposit insurance, or the lack or limitation of it, is never far away from the depositors‘ (and the bankers‘) mind.[1] The introduction of explicit deposit insurance in Gropp and Vesala (2004) for example "wakes up" the newly explicitly *un*insured depositors. Testing their model using EU bank level data, they find evidence that explicit deposit insurance may serve as a commitment device to limit the safety net and spur monitoring by uninsured subordinated debt holders. They also find that the introduction of explicit deposit insurance tends to increase the share of insured deposits in banks' liabilities.[2] Our study in contrast focuses on an expansion in the existing (explicit) deposit insurance coverage,[3] adds a detailed analysis of depositor bunching prior to and after this expansion and covers a period with changes in bank ownership, i.e., with a nationalization and a re-privatization moment. While bank ownership has been linked to its management and lending

[1] Anginer and Demirguc-Kunt (2019) review this vast literature.

[2] Because uninsured depositors may avoid weaker banks, bank competition may lead to their further weakening and their default if bank capital requirements are set too low (Egan et al., 2017).

[3] Our paper thereby complements unpublished work by Iyer et al. (2016a) who study a run on uninsured deposits in Danish banks triggered by a reform that *limits* deposit insurance coverage. They show that the reform caused a 50 percent decrease in deposits above the insurance limit in nonsystemic banks, but a much smaller decrease in systemic banks.

(e.g., Sapienza (2004)), we are not aware of empirical work with micro data investigating how depositors change their money allocation depending on their bank's ownership.

The remainder of the paper is organized as follows. In section 2 we discuss the data and methodology and in section 3 we present the results from our main regressions and various robustness checks. We analyze the relevance of the thresholds imposed by the deposit insurance limits in section 4. Section 5 concludes.

2 Data and Methodology

2.1 Data

To analyze the impact of the increased deposit insurance coverage during the bank's nationalization and re-privatization on depositors' behavior we use panel data of a sample of more than 300,000 Belgian customers of a European bank (henceforth, "the bank"). The data is available to us on a monthly basis from December 2005 until November 2012. In the empirical analysis we focus on the period from six months before the deposit insurance increase in November 2008 until six months after the re-privatization in 2009.[4]

We have information on the end-of-month balance of all deposit accounts. Figure 2 shows the evolution of total deposits at the bank during the years 2008 and 2009. The bank loses a considerable amount of deposits during the height of the financial crisis. The withdrawals only slowed down when the deposit insurance limit was increased from 20K to 100K euros in November 2008. Shortly afterwards deposits started to flow back in and by end of 2009 they reached the same overall level as in the beginning of 2008. In Figure 3 we show the evolution of deposits of various sizes. The left figure only includes deposits of less than 20K, the middle figure includes deposits between 20K and 100K and the right figure shows deposits of more than 100K. All three depositor groups withdrew deposits before the increase in the deposit insurance coverage in November 2008 but depositors with less than 20K, i.e., those covered by deposit insurance, started withdrawing later than depositors with larger deposit balances. The increase in deposit insurance seems to have been effective as withdrawals slowed down immediately and deposits started flowing back soon afterwards. The latter effect is particularly pronounced for the newly covered deposits between 20K and 100K and also for deposits above 100K which are now covered to a much larger extent than before the coverage increase.

The previous literature shows that the introduction or change of deposit insurance makes depositors more aware of the details of the deposit insurance scheme. In Figure 4 we show that this is also the case in our setting. The figure shows the distribution of deposits around the "old" deposit insurance

[4]To ensure the anonymity of the bank that provided us with its proprietary data, we cannot be more specific about the nationalization and re-privatization dates.

threshold of 20K euros (figures on the left) and around the "new" threshold of 100K euros (figures on the right). Panel (a) of Figure 4 depicts the situation before the increase in deposit insurance, while Panel (b) and (c) refer to the periods after the increase in the deposit insurance limit when the bank is nationalized and re-privatized, respectively. In all periods, the distribution of deposits around 20K is very similar. In contrast, the distribution of deposits around the 100K threshold changes considerably over the three time periods. After the increase of the deposit insurance limit to 100K, there are more and more deposits just at the 100K threshold or closely below, while there are fewer larger deposits, in particular after the bank is re-privatized. At this moment, any implicit unlimited government guarantee came to its end and the actual deposit insurance limit of 100k became binding. These results are first evidence that depositors with relatively large deposit balances are not only aware of the deposit insurance reform, but also of the implications of the changes in bank ownership.

For the empirical analysis, we further restrict the sample to deposits $\in$]1K,100K].[5] This leaves us with 160,546 depositors and 2,155,164 depositor-month observations in our main estimation sample. Table 1 provides summary statistics and Appendix Table A.1 detailed descriptions of all variables that we employ in our regression analysis.

2.2 Methodology

2.2.1 Identification and empirical specification

We employ the change in the deposit insurance coverage together with the nationalization and re-privatization events in our identification strategy. In November 2008, the coverage of the deposit insurance in Belgium was increased from 20K to 100K euros. In addition, during our observation period the bank was first nationalized and then re-privatized. We can therefore study a period of increased deposit insurance coverage during state ownership and a period of increased coverage during private ownership. Deposit insurance should in principle only play a role for non-state-owned banks because deposits at state-owned banks are generally assumed to be insured implicitly by the state, irrespective of the amount of deposits. This set-up gives us the opportunity to study depositor behavior in reaction to a change in the deposit insurance coverage under different bank ownership types (i.e., state vs. private), but at the same bank. This means that the organizational structure, the used technologies and the staff at the branches, among others, are for all practical purposes the same during these periods and should therefore not influence depositors' decisions.

We use a difference-in-differences estimator to evaluate the impact of increased deposit insurance during the bank's state/private ownership periods on depositor behavior. As dependent variable, we use the monthly change in the natural logarithm of deposits $\Delta ln(deposits)$ and estimate the

[5] We drop deposits below 1K throughout the paper because these deposits might not represent true savings but represent inactive "shell" accounts. Deposits >100K are included in the analysis in a robustness test.

following regression:

$$\Delta \ln(\text{deposits}_{i,t+1}) = \beta_1 \text{deposits}_{i,t} \in]20\text{K}, 100\text{K}] + \beta_2 \text{state}_t + \beta_3 \text{state}_t * \text{deposits}_{i,t} \in]20\text{K}, 100\text{K}] + \beta_4 \text{private}_t + \beta_5 \text{private}_t * \text{deposits}_{i,t} \in]20\text{K}, 100\text{K}] + \boldsymbol{\alpha} Z_{i,t} + \mu_i + \epsilon_{i,t}, \quad (1)$$

where subscripts i and t stand for individual depositor and time (i.e., year:month), respectively.

As the treatment group, we define deposits between 20K and 100K euros, and as the control group, deposits below 20K. The former class of deposits was only partially insured (i.e., up to 20K) before the reform but became fully insured after the reform, while the latter class of deposits was fully insured before and after the reform. Hence, the treatment variable *deposits ∈]20K,100K]* is equal to 1 if deposits are >20K and up to 100K, and equal to 0 otherwise. Note that in our baseline regressions treatment status varies not only between depositors but can also vary within depositors over time. As we are interested in estimating the effect of the increase in the deposit insurance, we also want to capture depositors who increase their deposit balances from below the old 20K threshold to above given the extended coverage after the reform. We then compare deposit growth rates in the treatment and control groups during three periods. In the pre-period the bank is private and the deposit insurance limit is 20K, while the financial crisis is hitting with the failure of Lehman as a major event. β_1 thus accounts for differences in deposit growth rates between the treatment and control groups in the pre-period. We expect an insignificantly estimated coefficient β_1 if all depositors are worried by the crisis in a similar way, and a significantly negative estimate if the control group, which is covered by the deposit insurance, is aware of and trusts its coverage.

The first treatment period is characterized by the deposit insurance limit being increased to 100K and the bank being in state ownership. Therefore, *state* is a dummy that is 1 during the period of increased deposit insurance coverage and state ownership and 0 otherwise. β_2 captures changes in deposit growth rates in the period of increased coverage during nationalization for deposits below 20K (control group). β_3 then accounts for the additional change in deposit growth for deposits between 20K and 100K as compared to deposits below 20K during the period of state ownership and measures the first treatment effect. In principal, state ownership should have introduced an informal guarantee to all deposits so that the increased formal deposit insurance limit of 100K should only become effective when the bank is re-privatized. In any case, we expect the combination of increased coverage and nationalization to have a calming effect on depositors which implies a significant and positive coefficient β_2 (the nationalization effect) and a significantly positive or insignificant coefficient β_3 depending on whether or not the calming effect of nationalization is more pronounced for the newly covered deposits between 20K and 100K (the effect of increased coverage).

private is then a dummy that is 1 during the period of increased deposit insurance limit and re-

privatization of the bank, and 0 otherwise. In this third period, the bank is again private but the deposit insurance limit remains at the higher 100K. Thus, β_4 captures changes in deposit growth rates in the period of increased coverage after re-privatization for deposits below 20K (control group). β_5 accounts for the additional change in deposit growth for deposits between 20K and 100K as compared to deposits below 20K when the bank is re-privatized and measures the second treatment effect. Since we expect the increased deposit insurance coverage to have a calming effect on treated depositors especially after re-privatization, when the implicit guarantee of state ownership expires, we hypothesize a significant and positive coefficient β_5. Since neither re-privatisation nor increased coverage change anything much for the control group, we have no explicit expectations for β_4.

The identification of the difference-in-differences effects crucially depends on the common trend assumption which implies that the change in deposit growth rates would have been the same in the treatment and control groups in the absence of the increase in the deposit insurance limit together with the bank's change in ownership (i.e. the treatment). Figure 5 shows the change in deposit growth rates for the treatment group (dashed line) and the control group (solid line) between January and October 2008, i.e. in the months before the deposit insurance reform. While changes in deposit growth rates follow a similar path for both groups and always move in the same direction, the lines are not perfectly parallel. We will address this issue in three ways.

First, we include depositor FE (μ_i) in all our regressions to focus the analysis on within-depositor changes in deposit growth rates over time. In that way we control for all unobservable time-invariant depositor characteristics that could influence depositor behavior. Second, and to further mitigate concerns about missing variables that might drive the change in deposit growth rates and are correlated with the deposit balance (i.e., treatment status), we control for an array of relationship, depositor and branch characteristics with the vector $Z_{i,t}$. We have several indicators that capture various aspects of the intensity of the bank-depositor relationship. *mortgage now* is a dummy that equals 1 in those months in which the depositor has a mortgage at the bank, while *mortgage ever* is a dummy that equals 1 if the depositor has ever had a mortgage with the bank during the full sample period 2005-2012. *number products* indicates the number of products that the depositor has at the bank, whereas *scope* refers to the number of domains from which the depositor has a product in each month. There are five domains: daily banking, deposits and investments, loans and credits, insurance and online banking. *change branch* is a dummy that equals 1 during the 12 months after a depositor changes branches and *change account manager* equals 1 during the 12 months after a depositor experiences an account manager change. The idea is that such changes might not (only) lead to immediate changes in depositor behavior but might rather have an impact over some time. The dummy *account manager* indicates periods in which depositors have an account manager. *leave account manager* then equals 1 during the 12 months after the depositor's account manager leaves. *contact ever* and *sales ever* are dummies indicating whether the depositor has ever

had face-to-face contact with the bank or purchased bank products during the full sample period 2005-2012, whereas *contacts last year* indicates the number of face-to-face contacts between the depositor and the bank during the past year.

We also control for various depositor characteristics and life events that should affect depositor behavior. *widow*, *divorce* and *wedding* are dummies that equal 1 during the 12 months after a depositor becomes a widow(er), gets divorced or married, respectively. *married man* and *married woman* are dummies that are 1 if the depositor is a married man or woman, respectively. In addition, we have information on whether and how much income depositors receive on their accounts. Thus, *no income* is a dummy that equals 1 if no regular income is reported or if income is missing, while *income* $\in$ *]0,2K]*, *income* $\in$ *]2K,3.5K]*, *income* $\in$ *]3.5K,5K]* and *income* $\in$ *]5K,∞]* refer to the amount of the received income with *income* $\in$ *]3.5K,5K]* as the reference group omitted from the regressions. *moved* is a dummy that equals 1 during the 12 months after a depositor changes her official residence.

We further control for branch characteristics that may drive differences in depositor behavior between branches. *branch merge*, *branch relocation* and *branch status change* are dummies that equal 1 during the 12 months after a branch gets merged with another branch, a branch is relocated or a branch changes its status (statutory vs. independent), respectively. *district competitors* is the number of banks that is available to the depositor besides this bank in the district of residence and *district potential* indicates the market potential of the district as estimated by the bank. The variable ranges from 1 to 5, with 5 indicating highest market potential. The information for the variable *district competitors* is only available for 2008 during our sample period and the information for *branch status change* is available to us on a yearly basis, while all other information is available on a monthly basis. Lastly, in an extended specification, we add month FE to the model to account for seasonal factors that may drive changes in deposit growth rates in general.

Third, we use Abadie's semi-parametric difference-in-differences estimator (Abadie, 2005) as an alternative estimation technique. Based on the relationship, depositor and branch characteristics the estimator assigns a propensity score to weigh the trend of the untreated, i.e., it basically forces parallel trends as much as possible based on the observable characteristics.

2.2.2 Bank-customer relationship strength

The previous literature has shown that strong bank-customer relationships mitigate deposit withdrawal risk during crises (e.g., Brown et al. (2020). The liquidity requirements in the Basel III regulatory framework account for this regularity by requiring banks to hold less liquidity for deposits originating from close customer relationships (BIS 2013). There are several reasons why strong bank-customer relationships may mitigate deposit withdrawals during times of bank distress. Transaction costs may be high when switching to another bank, the benefits from private

information built up in a close bank-customer relationship may be lost or the range of products offered by the relationship bank is broader than at other banks. In a similar vein, we argue that depositors with strong bank relationships should react less strongly in all three periods. Since we expect them to withdraw less during the pre-period, we also hypothesize that they will react less to increased deposit insurance and thus exhibit smaller changes in deposit growth during the treatment periods, when deposits return. Alternatively, we cannot exclude that depositors with strong relationships to the bank may be willing to concentrate more deposits at the bank during the periods with increased deposit insurance coverage in order to save transaction costs, especially if they also hold deposits at other, more transactional, banks.

To test these implications we augment our baseline model to capture the potentially differential effect of close bank-customer relationships on the change in deposit growth rates in our treatment and control groups and estimate the following regression:

$$\begin{aligned}\Delta\ln(\text{deposits}_{\text{i,t+1}}) = {} & \beta_1 \text{deposits}_{\text{i,t}} \in]20\text{K}, 100\text{K}] + \beta_2 \text{state}_{\text{t}} + \beta_3 \text{state}_{\text{t}} * \text{deposits}_{\text{i,t}} \in]20\text{K}, 100\text{K}] \\ & + \beta_4 \text{deposits}_{\text{i,t}} \in]20\text{K}, 100\text{K}] * \text{relationship}_{\text{i,t}} + \beta_5 \text{state}_{\text{t}} * \text{relationship}_{\text{i,t}} \\ & + \beta_6 \text{state}_{\text{t}} * \text{deposits}_{\text{i,t}} \in]20\text{K}, 100\text{K}] * \text{relationship}_{\text{i,t}} \\ & + \beta_7 \text{private}_{\text{t}} + \beta_8 \text{private}_{\text{t}} * \text{deposits}_{\text{i,t}} \in]20\text{K}, 100\text{K}] + \beta_9 \text{private}_{\text{t}} * \text{relationship}_{\text{i,t}} \\ & + \beta_{10} \text{private}_{\text{t}} * \text{deposits}_{\text{i,t}} \in]20\text{K}, 100\text{K}] * \text{relationship}_{\text{i,t}} + \boldsymbol{\alpha} \text{Z}_{\text{i,t}} + \mu_{\text{i}} + \epsilon_{\text{i,t}}, \end{aligned} \tag{2}$$

where subscripts i and t stand for individual depositor and time (i.e., year:month), respectively, and $relationship_{i,t}$ is a subset of $Z_{i,t}$. The vector $relationship_{i,t}$ includes *scope*, *number products*, *mortgage now* and *income* $\in$ *]0,∞[*[6] as indicators of the closeness of bank relationships. The first three variables measure the intensity of the relationship in terms of cross-product synergies. The latter variable indicates whether the depositor receives income to the account at the bank. If this is not the case, the depositor most likely has a (close) relationship with another bank and receives income to an account there.

Our aim is to assess whether the average treatment effect of increasing the deposit insurance limit is conditional on relationship characteristics. We hypothesize depositors with close bank relationships to withdraw less during the pre-period, i.e., the height of the financial crisis. β_4 should therefore be significant and positive. We expect that depositors with close bank relationships will therefore also react less to the treatment of increased coverage, implying that the coefficients β_6 and β_{10} are significant and negative. In contrast, if depositors with close bank relationships do have other bank accounts and start concentrating their money at the relationship bank, we may expect β_6 and β_{10}

[6] *income* $\in$ *]0,∞]* comprises the variables *no income*, *income* $\in$ *]0,2K]*, *income* $\in$ *]2K,3.5K]*, *income* $\in$ *]3.5K,5K]* and *income* $\in$ *]5,∞]* from the baseline regression so that the income situation of a depositor is condensed into one dummy variable for ease of comparison. The variable equals 1 if the depositor receives her monthly income at the bank

to be significantly positive instead.

2.2.3 Trust in the government

As shown in Figure 2 above, the increase in deposit insurance coverage seems to have had a calming effect on depositors during crisis times, i.e., depositors slowed down withdrawing money from the bank and even started bringing money back after some time. In the next step, we will formally evaluate whether trust in the government is the underlying mechanism. We expect that individuals having faith in the government are more likely to halt their withdrawals upon the increase in deposit insurance coverage. The effect should be stronger during the nationalization period because the government involvement is most explicit here.

To study the role that trust in the government plays in potentially reinforcing an intended calming-down effect of nationalization and increased deposit insurance coverage, we estimate the following two regressions:

$$\begin{aligned}\Delta\ln(\text{deposits}_{i,t+1}) = {} & \beta_1 \text{trust}_{i,t} + \beta_2 \text{state}_t + \beta_3 \text{state}_t * \text{trust}_{i,t} + \beta_4 \text{private}_t \\ & + \beta_5 \text{private}_t * \text{trust}_{i,t} + \boldsymbol{\alpha} \text{Z}_{i,t} + \mu_i + \epsilon_{i,t}, \end{aligned} \tag{3}$$

$$\begin{aligned}\Delta\ln(\text{deposits}_{i,t+1}) = {} & \beta_1 \text{deposits}_{i,t} \in]20\text{K}, 100\text{K}] + \beta_2 \text{state}_t + \beta_3 \text{state}_t * \text{deposits}_{i,t} \in]20\text{K}, 100\text{K}] \\ & + \beta_4 \text{deposits}_{i,t} \in]20\text{K}, 100\text{K}] * \text{trust}_{i,t} + \beta_5 \text{state}_t * \text{trust}_{i,t} \\ & + \beta_6 \text{state}_t * \text{deposits}_{i,t} \in]20\text{K}, 100\text{K}] * \text{trust}_{i,t} \\ & + \beta_7 \text{private}_t + \beta_8 \text{private}_t * \text{deposits}_{i,t} \in]20\text{K}, 100\text{K}] + \beta_9 \text{private}_t * \text{trust}_{i,t} \\ & + \beta_{10} \text{private}_t * \text{deposits}_{i,t} \in]20\text{K}, 100\text{K}] * \text{trust}_{i,t} + \beta_{11} \text{trust}_{i,t} + \boldsymbol{\alpha} \text{Z}_{i,t} + \mu_i + \epsilon_{i,t}, \end{aligned} \tag{4}$$

where subscripts i and t stand for individual depositor and time (i.e., year:month), respectively.

To measure trust in the government, we make use of election outcomes before the nationalization. In particular, we take the federal election of 2007 which took place in the year before our sampling period and is the most recent election before the increase in deposit insurance and the bank nationalization. A measure of general trust in the government, as compared to a measure derived from regional elections, seems to be most appropriate because the crisis was a national phenomenon and the federal government is the actor expected to set policies to mitigate the crisis effects. Moreover, the electorate is expected to vote for different motives in regional elections. Thus, *trust* is the canton-level number of all votes minus invalid and blank votes divided by all votes from the federal election in 2007. The variable is scaled by subtracting the minimum and dividing by the range of the original variable. Assuming that the fraction of invalid votes is random on the canton level,

the proxy measures the share of non-blank votes. The mean of this scaled variable is 0.80 (the mean of the unscaled variable is 0.95), meaning that only a small fraction of the voters do not have or express political preferences.[7] Given that Belgium is one of the few countries where voting is obligatory, coming to the election and voting blank can be seen as a strong sign of revealed distrust in the national government and its policies.

With the regression in Equation 3 we first test whether *trust* in general helps reinforcing government policies to contain the financial crisis. If this is the case, we expect to find significantly positive coefficients β_3 and β_5. We expect β_3 to be larger than β_5 because the government involvement, and hence the impact of trust in the government, is more exhaustive during the nationalization period. In Equation 4 we then study whether the average treatment effect of an increase in the deposit insurance coverage is conditional on depositors' trust in the government. We expect that within the control group the effect of trust will be larger during the period of state ownership than after re-privatization. Indeed, as the increased deposit insurance coverage is immaterial for the control group, trust in the nationalization is what matters. We therefore expect β_5 to be larger than β_9. For the treatment group in contrast, we expect the effect of trust to be more pronounced in the period after re-privatization than during nationalization and therefore β_{10} to be larger than β_6. This is because the treatment group's trust in the increased deposit insurance coverage only starts to matter when it becomes binding in the period after re-privatization. We expect, in short, the effect of trust in the government on deposit growth to dominate in the period after re-privatization for the treatment group and during nationalization for the control group.

Since the trust effects for the treatment and control groups are expected to work in opposite directions over the treatment periods, the question inasmuch the average treatment effect is conditional on depositors' trust depends on the relative size of the respective effects. Intuitively, one would expect β_{10} to be larger than β_9 and β_6 to be smaller than β_5. However, given that the overall interpretation of regressions with triple interactions requires a complex summation of coefficients, we verify these hypotheses by (graphically) analyzing the predictive margins at specified values of trust in the relevant dimensions, i.e. the treatment versus control groups and the periods of state versus private ownership.

3 Results

3.1 Baseline

We start with discussing the findings from the baseline model which are reported in Table 2. Column (1) of Table 2 shows the results without control variables, while column (2) includes all our relationship, depositor and branch characteristics and column (3) further adds month FEs.

[7] Appendix Figure A.1 shows a histogram of the scaled trust variable as we use it in our regression analysis.

All regressions include depositor FEs. The main results are qualitatively and quantitatively very similar across all three specifications. Only the indicators *state* and *private* are insignificant in column (3) due to the collinearity introduced by the month FEs.

The results are in line with our reasoning above. The significantly negative coefficient on our treatment variable *deposits* $\in$ *]20K,100K]* means that those depositors with only partial deposit insurance coverage decrease their savings on their bank account more than the insured depositors during the pre-period, i.e., at the height of the financial crisis. Once the increase in the deposit insurance limit to 100K is effective, depositors slow down their withdrawals. The increased coverage during the nationalization period leads to a calming down of all depositors given that *state* is significantly positive and its interaction with the treatment variable insignificant. In contrast, the increased coverage during the re-privatization period leads to a stronger slow-down in withdrawals for the now covered larger deposits, i.e., the treatment group.

For an easier assessment of the economic magnitude of these effects, Table 3 shows the changes in deposit growth rates for the control and treatment groups for the three periods we analyze by summing up the respective significant coefficients from Table 2, column (1). The bottom line of Table 3 reports results from a test on the significance of the difference in the changes in deposit growth rates between the treatment and control groups. The results show that the increased coverage during nationalization has a small effect on all depositors, while during re-privatization the now covered larger depositors, i.e., the treatment group, slow down withdrawing money from the bank. These findings include depositor fixed effects and therefore only reflect changes of deposit behavior from (i.e., "within") the same depositor, not across depositors. They imply that the nationalization period, which starts only two months after the Lehman failure, may still have been considered as a time of crisis by most depositors. The calming effect of the increase in the deposit insurance limit, that is, did only materialize once the bank was re-privatized.

To visualize the temporal pattern of the treatment effects discussed above we allow the change in deposit growth rates to differ between the treatment and control groups in each month of our observation period and run the following regression:

$$\begin{aligned}\Delta\ln(\text{deposits}_{i,t+1}) = \beta_1 \text{deposits}_{i,t} \in]20\text{K}, 100\text{K}] + \beta_2 \text{month}_t + \beta_3 \text{month}_t * \text{deposits}_{i,t} \in]20\text{K}, 100\text{K}] \\ + \boldsymbol{\alpha} Z_{i,t} + \mu_i + \epsilon_{i,t}, \end{aligned} \tag{5}$$

The regression results are reported in Appendix Table A.2. Figure 6 depicts the estimated values of β_3 of Equation 5 and the respective 95% confidence intervals. The figure also shows three grey shaded areas encompassing the Lehman bankruptcy (which happened in our pre-period), the increased coverage during nationalization and the increased coverage during re-privatization.[8]

[8]To ensure the anonymity of the bank that provided us with the data, the grey shaded areas are not exact illustrations of the timing of these periods.

Figure 6 shows that the treatment effect, i.e., the estimated values of β_3 of Equation 5, are close to zero during the pre-period and during the period of state ownership combined with increased deposit insurance coverage. The only exception is the large and negative effect of the Lehman failure. A Wald test of the joint significance of the estimated coefficients of the treatment effect during the pre-period confirms that they are jointly insignificant as soon as the Lehman effect is excluded (see F-statistics reported at the bottom of Appendix Table A.2). In contrast, the estimated values of β_3 become larger and positive during the period of increased coverage and re-privatization of the bank, albeit with a small delay.

In the next step, we study the behavior of depositors in the treatment group in more detail and divide the treatment group into four subgroups with increasing deposit balances. We thus assess the impact of the deposit insurance reform on the change in deposit growth for deposits $\in$]20K,40K],]40K,60K],]60K,80K] and]80K,100K]. Appendix Table A.3 reports the results for regressions without and with our control variables. The results suggest that, in the pre-period at the height of the financial crisis, depositors with relatively less insurance (a higher deposit bucket) tend to withdraw relatively more. Again, increased deposit insurance coverage during the period of state ownership leads to a small and almost uniform slowdown in deposit withdrawals. The increased deposit insurance coverage during the re-privatization period again has a significantly larger effect in the treatment than the control group. In addition, the further depositors were away from full insurance before the reform (depositors in higher deposit buckets), the more they are calmed down by the increased coverage during the re-privatization period.

We then extend our sample to deposits $\leq$200K and report the results in Appendix Table A.4. By including deposits $\in$]100K,200K] into our analysis we can study the impact of the increased deposit insurance coverage on individuals that were only very partially insured before the reform (from at most 20 % for those with 100K to 10% for those with 200K) and received five times more insurance because of the reform (from 100% insured for those with 100k to 50% insured for those with 200K). In line with our previous findings, we find that depositors with smaller insurance coverage in the pre-period react by withdrawing more deposits during the crisis and are more effectively placated by the the increased coverage in the period after re-privatization.

Overall, our baseline results suggest that the increase in the deposit insurance limit had the intended calming effect on depositors at the height of the financial crisis in the Fall of 2008 and, even more so, during the months following.

3.2 Robustness

We conduct several robustness tests to assess the sensitivity of our results to changes in our regression sample. We report these results in Table 4. For brevity, we only report the specifications with control variables as results without the control variables are qualitatively and quantitatively very

similar. First, we change the time window that we analyze and compare the four months before with the four months after the deposit insurance reform (column (1)) and the nine months before the reform with the nine months after the re-privatization (column (2)). Second, we increase the lower bound of deposits that we include in our analysis sample to 5K in column (3) and to 10K in column (4). Third, we assess potential anticipation effects as the increase of the insurance limit officially happened in November 2008 but the minister of Finance announced the reform already one month before. To study whether depositors reacted to this information we redefine the pre-period to until October instead of November 2008. November 2008 will consequently be part of the *state*-period. Overall, our results are robust to these changes. Interestingly, the results in columns (3) and (4) indicate that the increased coverage during nationalization does not have a calming effect on the control group (*state*) when dropping the smaller deposits of up to 5K and 10K, respectively, while there still is a small calming effect on the larger deposits in the treatment group, as found in our baseline results.[9]

Our next set of robustness tests is concerned with the exogeneity of the treatment status. In our baseline regressions, depositors are allowed to switch between treatment and control groups at any point during our observation period because we are interested in estimating the effect of an increase in the deposit insurance limit. This means, for instance, that depositors with balances below 20K (the old limit) could start concentrating their deposits at one bank due to the increased insurance limit and would thus move from the control to the treatment group over time. In addition, the difference-in-differences estimator relies on the assumption that in the absence of the treatment the outcome variable of the treated and untreated follow the same trend. The parallel trend assumption is however violated if selection into treatment is not random and determined by covariates which also affect the outcome variable. While we control for depositor fixed effects and an array of control variables in our baseline regression to address this concern, we cannot fully rule out that there are unobserved factors that are correlated with the treatment status and also drive the change in deposit growth rates.

To address these issues, we first drop depositors who change between treatment and control groups within the three periods that we analyze (the pre-period, the period with increased coverage while the bank is state-owned and the period with increased coverage during private ownership), i.e., depositors can only switch between treatment and control groups from one period to another and not at any point in time during our observation period. We lose roughly 1,400 depositors due to this restriction. We report the respective results in columns (1) and (2) of Table 5. Overall, our conclusions from the main analysis that the increase in the deposit insurance limit had a calming effect on depositors at the height of the crisis and even more so a couple of months later when the bank was re-privatized remain unchanged. However, we now do find a significantly positive

[9]Our baseline results are also robust to winsorizing the dependent variable at the 1st and 99th percentiles to account for potential outliers.

interaction term *state*deposits* ∈ *]20K,100K]*, which means that depositors with larger balances are already more calmed down by the increase in the insurance limit during the state-ownership period and not only during the private ownership period.[10] In columns (3) and (4), we then drop deposits ∈ [10K,30K] to create a gap between the treatment and control groups. Here, we loose around 20,000 depositors from our estimation sample. Again, our results are robust except for the interaction effect of *state*deposits* ∈ *]20K,100K]*, which turns significantly negative. One explanation could be that we dropped the smallest deposits from the treatment group, i.e., those deposits that are furthest away from the newly increased insurance limit of 100K. These depositors are obviously the ones who are calmed down the most by the increased coverage during nationalization, while the larger depositors might still be worried about the safety of their deposits during this period shortly after the Lehman failure.

In the next step, we repeat our analysis using Abadie's semi-parametric difference-in-differences estimator (Abadie, 2005). Based on the individual characteristics the estimator assigns a propensity score to weigh the trend of the untreated. To apply the semi-parametric approach, we drop depositors who switch between treatment and control groups within each of our three periods (pre-period, increased coverage during state ownership and increased coverage during private ownership) as we need to classify each depositor exclusively to the treatment or control group. We then calculate the average deposit growth for each of the two treatment periods and compute the change compared with the pre-period average deposit growth to derive the dependent variable. The upper panel of Table 6 provides the average treatment effect on the treated (ATT) in the period when the insurance coverage was increased to 100K euros and the bank was state-owned. The effect of the increased coverage during private ownership is shown in the lower panel. Column 1 uses all control variables to estimate the propensity score to weigh the trend of the untreated and column 2 additionally includes the month fixed effects. Similar to the baseline results, the effect on the treated of the increased insurance limit during nationalization is positive, yet significant because we cannot allow for switches between treatment and control groups (see above). At the same time, the effect of the increased insurance is significantly positive and larger during the re-privatization period as in our baseline regressions. The economic magnitude of these effects is also larger than in the baseline specification.

Finally, we aggregate the monthly data into one observation for each depositor in each of the three periods to ensure that standard errors are calculated correctly given the possible serial correlation in the monthly deposits data (Bertrand, Duflo and Mullainathan 2004). Specifically, we calculate the deposit growth within each period by considering the difference in deposits in the first and last month of the period. The dependent variable is then the average change in deposit growth, $1/s\Delta ln(deposits_{i,t+s})$ calculated as $1/s[ln(deposits_{t+s}) - ln(deposits_t)]$. The results are reported

[10] The reason is that, by construction, we now have fewer switches from the treatment to the control group and therefore omit these negative changes in deposit growth rates.

in Appendix Table A.5. In columns (1) and (2) we restrict the sample to the first month in each of the three periods to define treatment status of the depositor, while in columns (3) and (4) we further restrict the sample to depositors who do not switch between treatment and control groups within each of the treatment periods. The results are in line with the results from Abadie's semi-parametric estimator with both treatment effects being significantly positive, but the effect of the increased insurance limit during re-privatization being larger than the effect of the increased limit during nationalization.

Overall, while the magnitude of the effect of increased coverage during stae ownership varies somewhat across specifications, our main conclusions that the increase in deposit insurance coverage at the height of the financial crisis had the intended calming effect and that this effect was even larger after re-privatization remain intact.

3.3 Relationship strength

In this section, we examine whether the average treatment effect of the increased deposit insurance coverage shown in our baseline regressions varies by relationship characteristics. In Table 7 we therefore interact our main variables *deposits ∈]20K,100K]*, *state*, *state*deposits ∈]20K,100K]*, *private* and *private*deposits ∈]20K,100K]* with variables that capture relationship strength. In column (1) we employ *scope*, in column (2) *number products* and in column (3) *mortgage now* as measures of the closeness of the bank-depositor relationship in terms of cross-product synergies. The underlying hypothesis is that depositors who currently have a broader range of bank products (*scope* $\in [0, 5]$), a larger number of bank products (*number products* $\in [1, 55]$) or a mortgage (*mortgage now* $\in [0, 1]$), which usually constitutes a long-term contract between the bank and the customer, face higher costs when they want to switch to another bank. Similarly, depositors who receive a monthly income into their account at the bank can be expected to face higher switching costs because, for instance, it is likely that they also run all their daily expenses through this account. In column (4) we take this aspect into account by using *income* as the relationship variable (*income* $\in [0, 1]$). The depositors with close relationships should therefore react less strongly during the financial crisis and when the insurance limit is increased. However, during the periods with increased deposit insurance coverage they might also be more willing to concentrate their deposits at this bank to save, for instance, transaction costs.

Results across all four indicators of the closeness of bank-depositor relationship are very similar and in line with our above reasoning that close relationships induce depositors to react less to the treatment of increased deposit insurance during both the state- and private-ownership periods. The significantly positive coefficient on the interaction term *deposits ∈]20K,100K]*relationship* confirms that depositors in the treatment group who have close relationships with the bank withdraw less during the pre-period, i.e., at the height of the financial crisis. The significantly negative co-

efficients on the triple interactions *state*deposits ∈]20K,100K]*relationship* and *private*deposits ∈]20K,100K]*relationship* together with the significantly positive and larger coefficients on *state* deposits ∈]20K,100K]* and *private*deposits ∈]20K,100K]* further suggest that depositors in the treatment group who have close bank relationships increase their deposit growth less strongly after the increase in the deposit insurance coverage compared to depositors with weak bank relationships. In contrast, we do not find evidence that depositors with close bank relationships start concentrating their deposits at the bank after the increase in the deposit insurance limit. In sum, the effect of the increased deposit insurance limit on the bank is mitigated by strong bank-depositor relations.

As the overall interpretation of the direction and the magnitude of effects is convoluted with multiple triple interactions, we present in Figure 7 the predictive margins for the treatment and control group, conditional on the strength of the relationship, during both the state- and private-ownership periods. The left and right panel show the state- and private-ownership periods respectively, while the blue and black lines show the predictive margins for the treated and the control group respectively. The upward slope in all panels of Figure 7 indicates that the strength of the relationship, reflected from left to right on the horizontal axis, always contributes positively to stronger deposit growth. We also observe that the slope of the blue line is always considerably less pronounced than the slope of the grey line, providing empirical validation of the hypothesis that strong relationships matter less for treated than for untreated depositors, i.e. mitigate the treatment effect.

3.4 Trust in the government

Our results so far have shown that the increase in the deposit insurance limit at the height of the financial crisis was successful in placating depositors. We now proceed by scrutinizing the results with respect to one potential underlying mechanism that might explain our baseline results: trust in the government. We start with analyzing the role that trust may play in reinforcing the intended placating effect of the increase in deposit insurance coverage during the financial crisis. We report the estimates of Equation 3 in columns (1) and (2) of Table 8. The significantly positive interaction terms *state*trust* and *private*trust* indicate that in cantons with higher levels of trust, depositors tend to slow down their withdrawals more after the increase in the insurance limit. As expected, this effect is more pronounced during the period of state ownership.

In order to obtain a net positive effect of state ownership on depositors' inclination to stay with the bank the canton level fraction of non-blank votes needs to be at least 0.9, which is the case in 97.5% of the cantons. There are about 2.5% of the cantons, therefore, where trust in the government is so low that the nationalization in fact further fuelled deposit withdrawals. Depositors in these cantons apparently perceive the nationalization on average as a signal of serious trouble rather than as a positive bail-out by the government. The good news is that average trust is so high that the group of depositors perceiving nationalization as a negative stigma is very small.

We proceed by analyzing whether the average treatment effect of an increase in the deposit insurance coverage that we estimated in our baseline regression is conditional on depositors' trust in the government. To verify the potential moderating effect of trust on treated depositors, we interact our main variables *deposits ∈]20K,100K]*, *state*, *state*deposits ∈]20K,100K]*, *private* and *private*deposits ∈]20K,100K]* with our trust variable. We report the estimates of Equation 4 in columns (3) and (4) of Table 8. As expected, we find that the effect of trust dominates in the period of state ownership for the control group with the estimated coefficient of *state*trust* being larger than the estimated coefficient of *private*trust*. In contrast, for the treated group the effect of trust dominates in the period of private ownership after the re-privatization given that the estimated coefficient of *private*deposits ∈]20K,100K]*trust* is larger than the respective coefficient on *state*deposits ∈]20K,100K]*trust*.

As the overall interpretation of the direction and the magnitude of effects is convoluted with multiple triple interactions, we visualize these results in Figure 8 by plotting predictive margins. The left and right panel show the state- and private-ownership periods, respectively, while the blue and black lines show the predictive margins for the treated and the control group respectively. In line with our expectations we observe that during state-ownership (left panel of Figure 8) trust does not seem to matter for the deposit behavior of treated depositors (blue line), since the effect of increased deposit insurance coverage is dominated by the effect of being state-owned in this period. After re-privatization (right panel of Figure 8), however, we observe that treated depositors' deposit growth (blue line) becomes more sensitive to trust relative to untreated depositors (grey line), as in this period the deposit insurance coverage becomes binding and trust in the government therefore becomes essential to understand the effect of deposit insurance on depositor behavior.

4 Threshold behavior

So far we have discussed the effectiveness of increasing the insurance coverage to calm down depositors during the financial crisis. In this section, we analyze to what extent individuals actually take the insurance limits into account and how this changes over time. We quantify how much individuals care about the maximum level of coverage by estimating sorting below the respective limits (20K and 100K) using the method first proposed by Saez (2010) and Chetty et al. (2011). The degree of bunching at the 20K and 100K thresholds is retrieved by considering the excess mass which is calculated by comparing the actual distribution of deposits with a counterfactual without a kink at those points.[11]

We expect that the coverage limit becomes more important during the crisis, leading to a higher

[11]The counterfactual is obtained by fitting a polynomial without observations in the proximity of the threshold i.e., where bunching occurs. The fitted polynomial is then extrapolated to the threshold which was initially dropped due to bunching. The used command is *bunch_count* in Stata.

number of individuals who keep their deposits below or around the then prevailing limit of 20K. After the increase in the insurance coverage in November 2008, the 20K threshold should lose its importance and depositors should shift their attention to the new 100K limit. However, since the deposit guarantee scheme is most relevant for private-owned banks, we expect to see less sorting during the period of state ownership compared to the period after re-privatization.

Figure 9 shows the degree to which individuals sort below the insurance limits to ensure that their deposits are fully covered. The left figure shows the bunching below the 20K limit, whereas the right figure shows the respective bunching below the 100K limit. Starting with bunching below the 20K limit, the graph shows that, in the run up to the crisis, more and more depositors limit their deposits to 20K for full coverage. After the increase of the insurance to 100K in November 2008, the number of accounts with deposits just below or equal to 20K drops quickly and becomes insignificantly different from zero. Regarding the 100K threshold in the right figure, we observe some increased bunching in the months before the deposit coverage increase suggesting that there were some anticipation effects. This threshold behavior, in accordance with our expectations, almost disappears during the period of state-ownership when all deposits can be expected to be fully covered by the state. However, bunching below the 100K limit returns in full swing after the re-privatization of the bank when the new 100K limit becomes binding for the bank's depositors. These findings indicate that depositors indeed are aware the changing deposit insurance limit and react accordingly.

5 Conclusion

In November 2008 the Belgian government revised the deposit insurance scheme by increasing the coverage from 20,000 to 100,000 euros per depositor and per bank. Our results suggest that this reform was effective in restoring trust in banks during the crisis. Indeed, deposit growth resumes once the deposit insurance limit is raised. Depositors with smaller insurance coverage before the reform withdraw more deposits in the run-up to the crisis. Depositors with a larger increase in deposit insurance coverage due to the reform increase their deposit growth most in the post-reform period. The nationalization of the bank worked across the board in calming depositors.

The effects of deposit insurance and nationalization are modulated by the strength of the bank-customer relationship. Captive depositors (who purchase different types of products, a mortgage, or a large number of products from the bank, or receive their income at the bank) are less likely to run on the bank in the first place and subsequently respond less strongly to nationalization and to the increase in coverage to 100K after re-privatization. The reverse is true for customers that receive their income on a bank account with another bank, because they arguably have lower switching costs.

The effects are reinforced by the revealed trust in the federal government. The nationalization has a larger positive effect on deposit growth in high-trust cantons. After re-privatization the positive effect of the increase in deposit insurance on treated depositors is more pronounced in high-trust cantons. Trust in the government, that is, boosts the effectiveness of federal initiatives like nationalization or the increase in the coverage limit of the deposit insurance. This finding should caution also other governments against squandering this trust too easily, lest not to dent the effectiveness of two crucial stabilization policies in times of banking crises.

When deposit insurance coverage was limited to 20K depositors tended to bunch just below the 20K coverage limit. Once coverage is increased to 100K, however, 100K bunching largely substitutes this 20K bunching. In fact, depositors even start bunching at 100K just before the coverage was effectively raised to 100K, suggesting there were some anticipation effects. This 100K bunching behavior fades away during the period of nationalization with its implicit blanket guarantees, but returns in full force once the bank is re-privatized and the new 100k coverage limit applies to the bank's depositors, providing clear evidence that depositors are well aware of changes in bank ownership and deposit insurance and react rationally to these changes.

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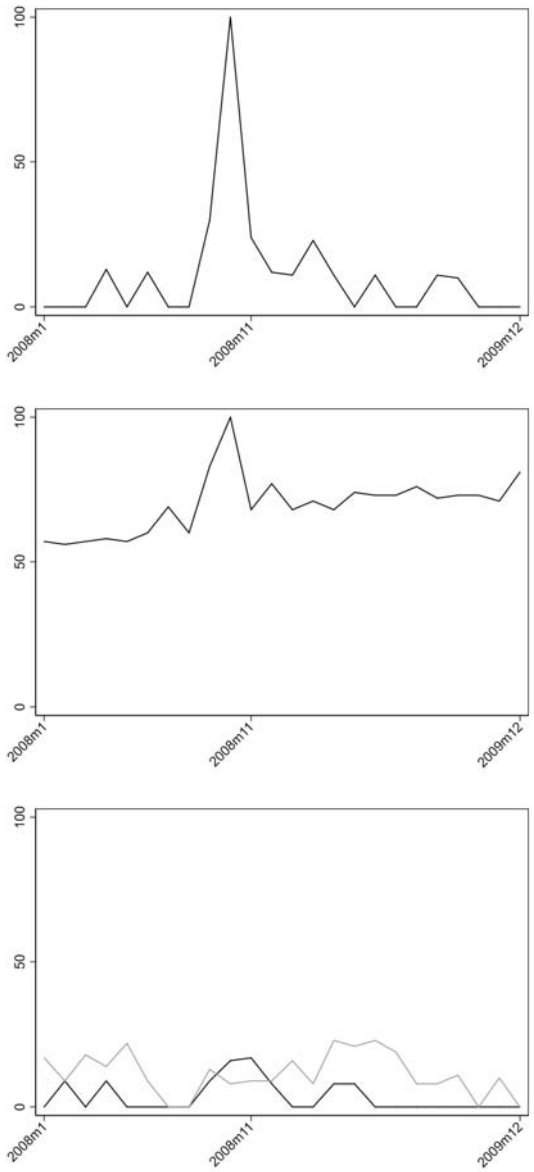
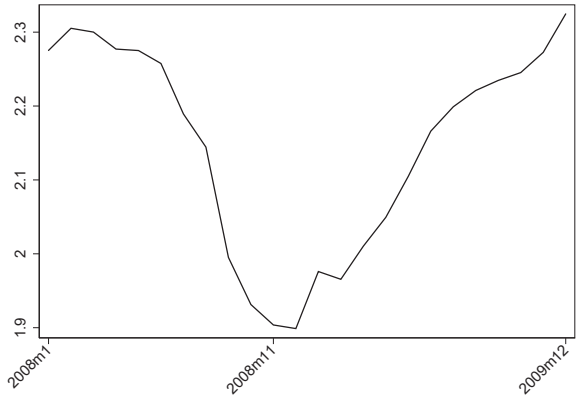
Figures

Figure 1. Google Trends – deposit insurance, bank name, nationalization and privatization



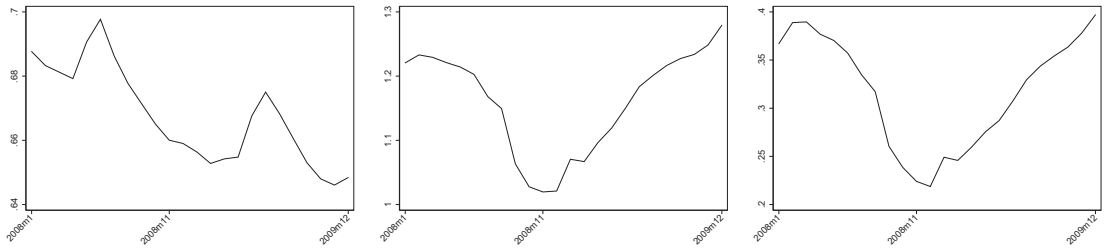
Notes: The first panel shows the search interest in the term 'depositogarantie' (which is the Dutch word for 'deposit insurance'). The second panel shows the search interest in the bank name (which we cannot reveal) as it appears in Dutch or French and the third panel search interest in the terms 'nationalisatie' (which is the Dutch word for 'nationalization') represented by the black line and 'privatisering' (which is the Dutch word for 'privatization') represented by the gray line. The vertical axis indicates the search interest in each month compared to the highest point in the figure. A value of 100 is the peak popularity for that term and 0 if there is not enough information. The sample in the first and third panel is restricted to Flanders and Brussels where Dutch in an official language, while the sample in the second panel also includes Wallonia where French is the official language.

Figure 2. Total deposits over time



Note: Total deposits expressed in billions.

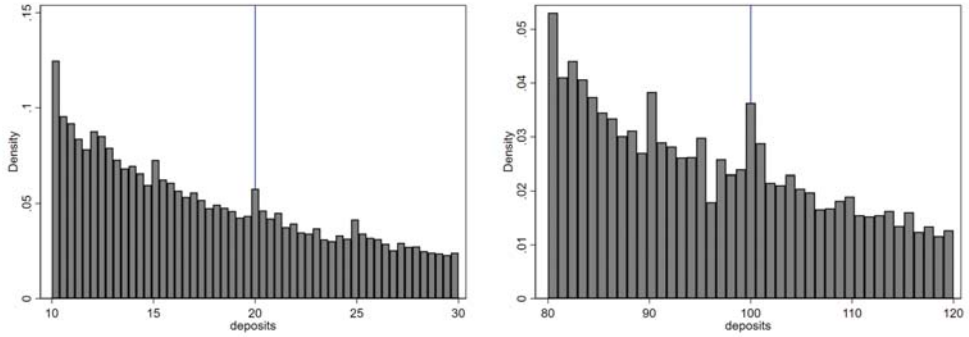
Figure 3. Total deposits over time by treatment group



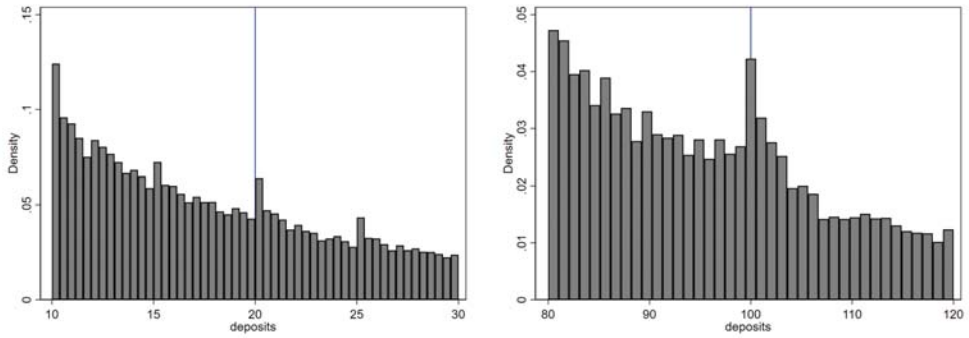
Note: From left to right, total deposits expressed in billions for depositors with deposits below 20K, deposits between 20K and 100K, deposits above 100K.

Figure 4. Distribution deposits around 20K and 100K by period

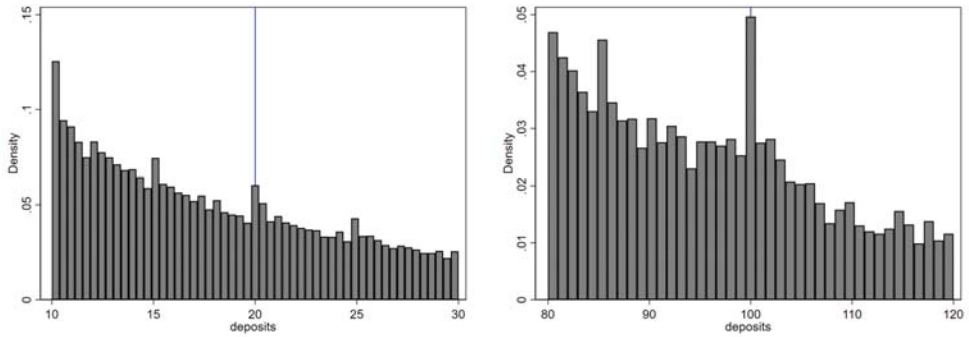
(a) Before increase deposit insurance



(b) After increase deposit insurance & bank nationalization



(c) After bank privatization

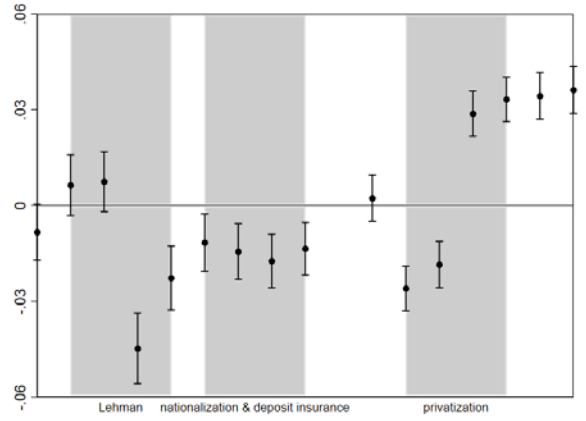


Notes: Distribution of deposits around 20K (left) and 100K (right). First panel before the increase in deposit insurance. Second panel after the increase in deposit insurance and during the period of state-ownership. Third panel after the increase in deposit insurance and re-privatization.

Figure 5. Pretreatment trend

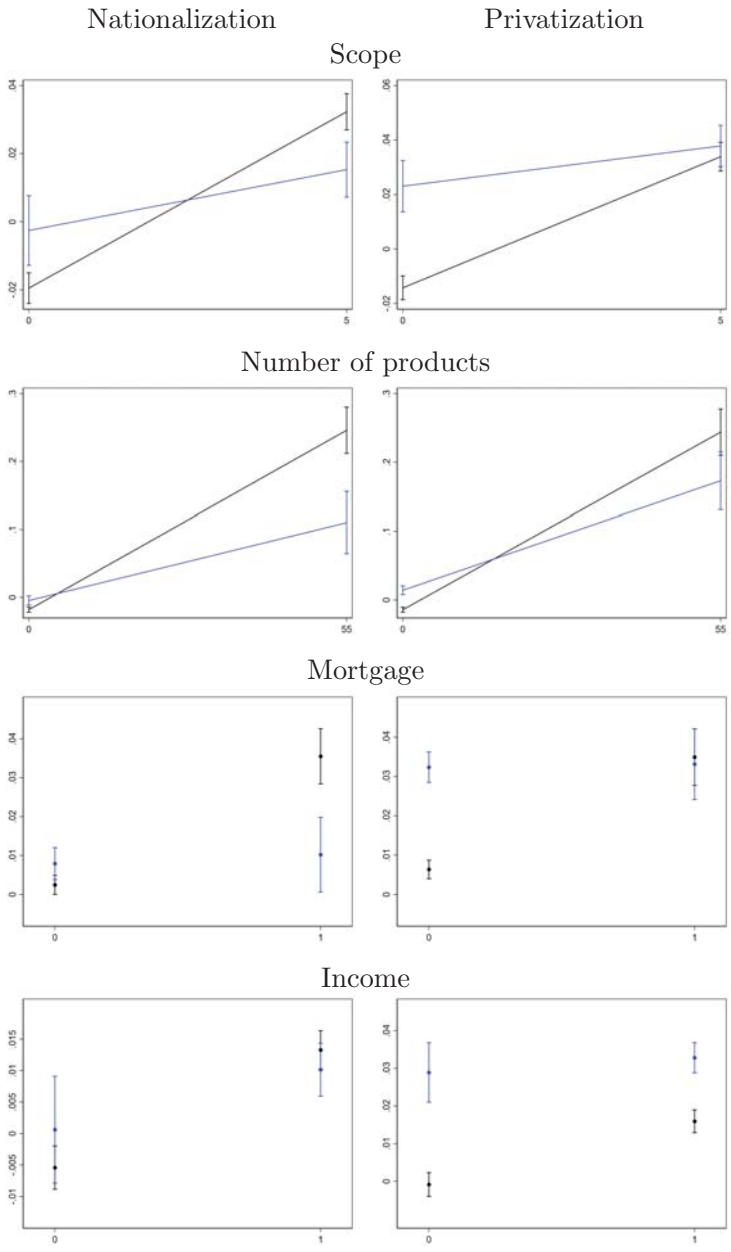
Notes: Average of the individuals' deposit growth rates for treatment (gray line) and control group (black line). The sample is restricted to deposits $\in$]10K,100K].

Figure 6. Treatment effect over time



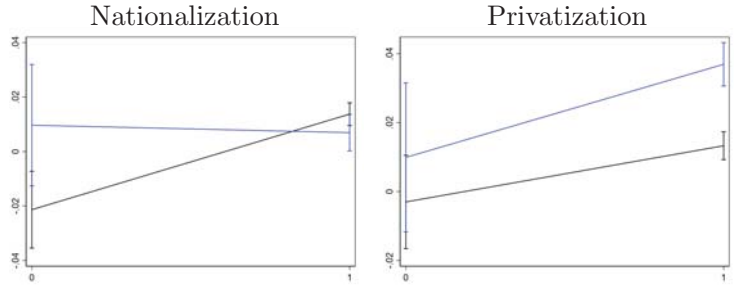
Notes: Treatment effect on deposit growth and 95% confidence interval based on column 1 of table A.2. Gray shaded areas encompass the impact of the Lehman bankruptcy, the increase in coverage during the period of state ownership and the increase in coverage after re-privatization.

Figure 7. Predictive margins during state and private ownership given relationship strength



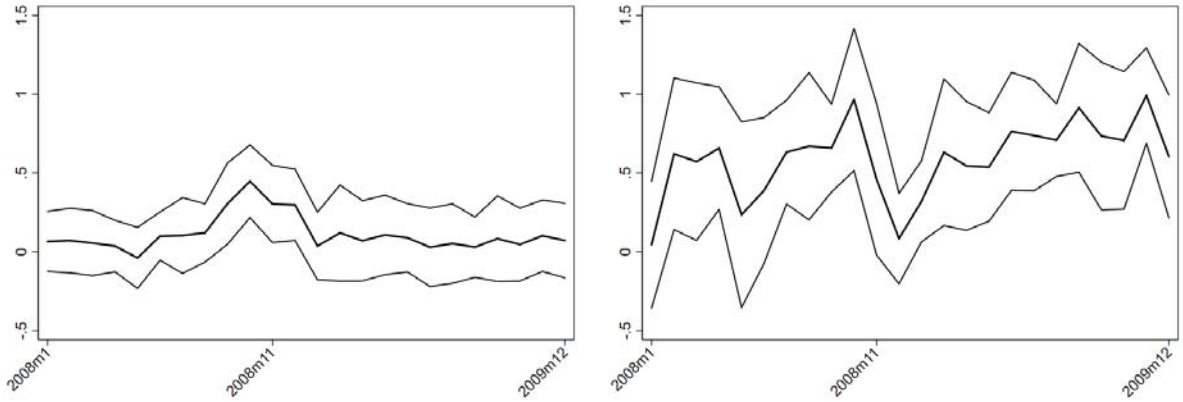
Notes: The blue (black) line depicts the predictive margins for the treatment (control) group given the relationship strength. The panels are based on table 7. The first (second) panel shows the predictive margins during the periods of state and private ownership, respectively.

Figure 8. Predictive margins during state and private ownership given trust in government



Notes: The blue (black) line depicts the predictive margins for the treatment (control) group given the trust level measured as the number of valid votes divided by total votes. The trust variable is scaled by subtracting the minimum and dividing by the range. The panels are based on column 3 of table 8. The first (second) panel shows the predictive margins during the periods of state and private ownership, respectively.

Figure 9. Bunching below thresholds



Note: Left (Right) figure shows bunching below 20K (100K).

Tables

Table 1. Summary statistics

variable	N	mean	sd	min	max
dependent variable					
Δ ln(deposits)	2,155,164	-0.065	0.611	-16.056	6.398
main variables					
state	2,155,164	0.288	0.453	0	1
private	2,155,164	0.353	0.478	0	1
deposits $\in$]20K,100K]	2,155,164	0.227	0.419	0	1
deposits $\in$]20K,40K]	2,155,164	0.145	0.352	0	1
deposits $\in$]40K,60K]	2,155,164	0.049	0.217	0	1
deposits $\in$]60K,80K]	2,155,164	0.022	0.145	0	1
deposits $\in$]80K,100K]	2,155,164	0.011	0.104	0	1
deposits $\in$]100K,200K]	2,183,278	0.013	0.113	0	1
depositor characteristics					
mortgage now	2,155,164	0.147	0.354	0	1
mortgage ever	2,155,164	0.248	0.432	0	1
number products	2,155,164	5.708	3.845	0	55
scope	2,155,164	2.680	1.294	0	5
change branch	2,155,164	0.061	0.240	0	1
change account manager	2,155,164	0.101	0.301	0	1
account manager	2,155,164	0.490	0.500	0	1
leave account manager	2,155,164	0.039	0.194	0	1
contact ever	2,155,164	0.868	0.338	0	1
sales ever	2,155,164	0.538	0.499	0	1
contacts last year	2,155,164	1.711	2.071	0	67
depositor characteristics					
widow	2,154,473	0.003	0.053	0	1
divorce	2,154,473	0.006	0.080	0	1
wedding	2,154,473	0.008	0.091	0	1
married man	2,155,164	0.289	0.453	0	1
married woman	2,155,164	0.184	0.387	0	1
income	2,155,164	0.697	0.460	0	1
no income	2,155,164	0.303	0.460	0	1
income $\in$]0,2K]	2,155,164	0.464	0.499	0	1
income $\in$]2K,3.5K]	2,155,164	0.173	0.378	0	1
income $\in$]5K,∞[	2,155,164	0.017	0.129	0	1
moved	2,155,164	0.055	0.228	0	1
branch characteristics					
branch merge	2,155,164	0.033	0.178	0	1
branch relocation	2,155,164	0.006	0.077	0	1
branch status change	2,155,164	0.010	0.098	0	1
district competitors	2,155,164	0.919	1.764	0	12
district potential	2,155,164	2.641	1.043	0	5
regional characteristics					
trust	2,131,265	0.806	0.128	0	1

Table 2. Baseline

	(1) Δ ln(deposits$_{i,t+1}$)	(2) Δ ln(deposits$_{i,t+1}$)	(3) Δ ln(deposits$_{i,t+1}$)
deposits $\in$]20K,100K]	-0.277***	-0.276***	-0.278***
	(0.003)	(0.003)	(0.004)
state	0.007***	0.008***	0.001
	(0.001)	(0.001)	(0.002)
state*deposits $\in$]20K,100K]	0.003	0.001	0.002
	(0.002)	(0.002)	(0.002)
private	0.009***	0.012***	-0.000
	(0.001)	(0.001)	(0.001)
private*deposits $\in$]20K,100K]	0.024***	0.021***	0.024***
	(0.002)	(0.002)	(0.002)
Constant	-0.010***	0.160***	0.119***
	(0.001)	(0.015)	(0.015)
Controls		x	x
Month FE			x
Number of observations	2,155,164	2,154,473	2,154,473
Number of customers	160,546	160,504	160,504

Notes: The dependent variable is the first-difference of the natural logarithm of deposits. *Deposits $\in$]20K,100K]* is a dummy that equals 1 for deposits between 20K and 100K, *state* is a dummy equal to 1 for the period during which the deposit insurance was increased and the bank was nationalized and *private* is a dummy equal to 1 for the period following the bank privatization. The regressions further control for individual fixed effects. The sample is restricted to deposits between 1K and 100K six months preceding the deposit increase until six months after the bank privatization. Robust standard errors in parentheses.
*** p<0.01, ** p<0.05, * p<0.1

Table 3. Percentage growth rates

	private bank 20K insured	state bank 100K insured	private bank 100K insured
deposits $\in$]10K,20K]	-0.01	-0.003	-0.001
deposits $\in$]20K,100K]	-0.287	-0.277	-0.254
Δ	-0.277***	-0.274***	-0.253***

Notes: Based on significant coefficient in column 1 of table 2. The significance of the difference in growth rates between control and treatment group is tested at the bottom of the table.
*** p<0.01, ** p<0.05, * p<0.1

Table 4. Robustness window, deposit value and anticipation effects

	9 months	4 months	deposits ∈]5K,100K]	deposits ∈]10K,100K]	anticipation
	(1)	(2)	(3)	(4)	(5)
	Δ ln(deposits)	Δ ln(deposits)	Δ ln(deposits)	Δ ln(deposits)	Δ ln(deposits)
deposits ∈]20K,100K]	-0.219***	-0.333***	-0.197***	-0.146***	-0.276***
	(0.003)	(0.004)	(0.003)	(0.003)	(0.004)
state	0.001	0.011***	-0.004***	-0.009***	0.000
	(0.001)	(0.001)	(0.001)	(0.002)	(0.001)
state*deposits ∈]20K,100K]	0.000	-0.001	0.006***	0.008***	0.001
	(0.002)	(0.003)	(0.002)	(0.003)	(0.002)
private	0.006***	0.022***	0.008***	0.006***	0.008***
	(0.001)	(0.001)	(0.001)	(0.002)	(0.001)
private*deposits ∈]20K,100K]	0.021***	0.014***	0.014***	0.010***	0.021***
	(0.002)	(0.003)	(0.002)	(0.003)	(0.002)
Constant	0.149***	0.212***	0.091***	0.075***	0.163***
	(0.011)	(0.019)	(0.018)	(0.020)	(0.015)
Controls	x	x	x	x	x
Number of observations	2,795,458	1,637,712	1,318,094	898,714	2,154,473
Number of customers	165,502	154,750	108,920	79,658	160,504

Notes: The dependent variable is the first-difference of the natural logarithm of deposits. *Deposits ∈]20K,100K]* is a dummy that equals 1 for deposits between 20K and 100K, *state* is a dummy equal to 1 for the period during which the deposit insurance was increased and the bank was nationalized and *private* is a dummy equal to 1 for the period following the bank privatization. The regressions further control for individual fixed effects. The sample is restricted to deposits between 1K and 100K six months preceding the deposit increase until six months after the bank privatization. In the first (second) column the sample is restricted to deposits between 1K and 100K nine (four) months preceding the deposit increase until nine (four) months after the bank privatization. The sample in column 3 (4) is restricted to deposits between 5K (10K) and 100K six months preceding the deposit increase until six months after the bank privatization. Column 5 redefines *state*. The dummy in the last column is equal to 1 for the period during which the deposit insurance was increased and the bank was nationalized including the month before. Robust standard errors in parentheses.
*** p<0.01, ** p<0.05, * p<0.1

Table 5. Exogeneity treatment status

	fixed treatment status		without deposits ∈ [10K,30K]	
	(1)	(2)	(3)	(4)
	Δ ln(deposits)	Δ ln(deposits)	Δ ln(deposits)	Δ ln(deposits)
deposits ∈]20K,100K]	-0.112***	-0.111***	-0.591***	-0.591***
	(0.007)	(0.007)	(0.009)	(0.009)
state	0.002*	0.003**	0.006***	0.007***
	(0.001)	(0.001)	(0.001)	(0.001)
state*deposits ∈]20K,100K]	0.011***	0.009***	-0.008**	-0.011***
	(0.002)	(0.002)	(0.003)	(0.003)
private	0.000	0.003**	0.008***	0.011***
	(0.001)	(0.001)	(0.001)	(0.001)
private*deposits ∈]20K,100K]	0.022***	0.020***	0.020***	0.015***
	(0.002)	(0.002)	(0.003)	(0.003)
Constant	-0.046***	0.111***	0.034***	0.211***
	(0.001)	(0.015)	(0.002)	(0.019)
Controls		x		x
Number of observations	1,974,994	1,974,303	1,536,257	1,535,650
Number of customers	159,115	159,073	140,594	140,557

Notes: The dependent variable is the first-difference of the natural logarithm of deposits. *Deposits ∈]20K,100K]* is a dummy that equals 1 for deposits between 20K and 100K, *state* is a dummy equal to 1 for the period during which the deposit insurance was increased and the bank was nationalized and *private* is a dummy equal to 1 for the period following the bank privatization. The regressions further control for individual fixed effects. The sample is restricted to deposits between 1K and 100K six months preceding the deposit increase until six months after the bank privatization. The first two columns are further without individuals changing from treatment status within treatment period and the last two columns without deposits between 10,000 and 30,000 euros. Robust standard errors in parentheses.
*** p<0.01, ** p<0.05, * p<0.1

Table 6. Abadie DiD

	(1) Δ ln(deposits$_{i,t+1}$)	(2) Δ ln(deposits$_{i,t+1}$)
state	0.027***	0.031***
	(0.006)	(0.006)
Observations	114,777	112,754
private	0.043***	0.048***
	(0.006)	(0.006)
Number of observations	114,777	112,754

Notes: The first and second panel provide the ATT of increased deposit insurance during respectively nationalization and privatization. The baseline in both panels is the period before the increase of deposit insurance and the depositors with deposits between 20K and 100K are part of the treatment group. The dependent variable is average deposit growth within a treatment period minus the average deposit growth in the baseline period. *State* is a dummy equal to 1 for the period during which the deposit insurance was increased and the bank was nationalized and *private* is a dummy equal to 1 for the period following the bank privatization. In column 1, all controls used to address nonrandom selection into treatment groups and column 2 also includes the month fixed effects. The sample is restricted to deposits between 1K and 100K six months preceding the deposit increase until six months after the bank privatization. Individuals who change from treatment status within a treatment period are dropped from the sample. Standard errors in parentheses.
*** p<0.01, ** p<0.05, * p<0.1

Table 7. Relationship strength

	(1) Δ ln(deposits) scope	(2) Δ ln(deposits) nbrproducts	(3) Δ ln(deposits) mortgage now	(4) Δ ln(deposits) income
deposits ∈]20K,100K]	-0.354***	-0.266***	-0.284***	-0.330***
	(0.010)	(0.007)	(0.004)	(0.008)
deposits ∈]20K,100K]*relationship	0.026***	-0.001	0.047***	0.069***
	(0.003)	(0.001)	(0.008)	(0.009)
state	-0.018***	-0.017***	0.003***	-0.004**
	(0.002)	(0.002)	(0.001)	(0.002)
state*relationship	0.010***	0.005***	0.033***	0.018***
	(0.001)	(0.000)	(0.004)	(0.002)
state*deposits ∈]20K,100K]	0.017***	0.013***	0.005**	0.006
	(0.006)	(0.004)	(0.002)	(0.005)
state*deposits ∈]20K,100K]*relationship	-0.007***	-0.003***	-0.031***	-0.009*
	(0.002)	(0.001)	(0.006)	(0.005)
private	-0.012***	-0.012***	0.008***	0.001
	(0.002)	(0.002)	(0.001)	(0.002)
private*relationship	0.009***	0.005***	0.028***	0.016***
	(0.001)	(0.000)	(0.004)	(0.002)
private*deposits ∈]20K,100K]	0.037***	0.028***	0.025***	0.029***
	(0.005)	(0.004)	(0.002)	(0.004)
private*deposits ∈]20K,100K]*relationship	-0.007***	-0.002***	-0.027***	-0.013**
	(0.002)	(0.001)	(0.006)	(0.005)
relationship	-0.052***	0.000	0.003	-0.002
	(0.002)	(0.001)	(0.011)	(0.006)
Constant	0.179***	0.163***	0.159***	0.153***
	(0.015)	(0.015)	(0.015)	(0.014)
Controls	x	x	x	x
Number of observations	2,154,473	2,154,473	2,154,473	2,154,473
Number of customers	160,504	160,504	160,504	160,504

Notes: The dependent variable is the first-difference of the natural logarithm of deposits. *Deposits ∈]20K,100K]* is a dummy that equals 1 for deposits between 20K and 100K, *state* is a dummy equal to 1 for the period during which the deposit insurance was increased and the bank was nationalized and *private* is a dummy equal to 1 for the period following the bank privatization, *scope* is the number of product domains of the subject, *mortgage now* dummy equal to 1 in those time periods where the subject has a mortgage, *income* dummy equal to 1 if regular income is not missing or zero and *nbrproducts* is the number of products the subject has. The regressions further control for individual fixed effects. The sample is restricted to deposits between 1K and 100K six months preceding the deposit increase until six months after the bank privatization. Robust standard errors in parentheses.
*** p<0.01, ** p<0.05, * p<0.1

Table 8. Bank nationalization and trust in government

	(1) Δ ln(deposits)	(2) Δ ln(deposits)	(3) Δ ln(deposits)	(4) Δ ln(deposits)
trust	0.029	0.041	0.056	0.068
	(0.060)	(0.061)	(0.060)	(0.061)
state	-0.013**	-0.011*	-0.022***	-0.020***
	(0.006)	(0.006)	(0.007)	(0.007)
state*trust	0.030***	0.029***	0.036***	0.035***
	(0.008)	(0.008)	(0.009)	(0.009)
private	-0.003	0.001	-0.005	-0.001
	(0.006)	(0.006)	(0.007)	(0.007)
private*trust	0.020***	0.018**	0.018**	0.016*
	(0.007)	(0.007)	(0.009)	(0.009)
deposits ∈]20K,100K]			-0.231***	-0.230***
			(0.023)	(0.023)
deposits ∈]20K,100K]*trust			-0.055**	-0.055**
			(0.027)	(0.027)
state*deposits ∈]20K,100K]			0.031**	0.031**
			(0.013)	(0.013)
state*deposits ∈]20K,100K]*trust			-0.036**	-0.038**
			(0.017)	(0.017)
private*deposits ∈]20K,100K]			0.014	0.013
			(0.013)	(0.013)
private*deposits ∈]20K,100K]*trust			0.012	0.010
			(0.016)	(0.016)
Constant	-0.097**	0.067	-0.055	0.102**
	(0.048)	(0.050)	(0.048)	(0.050)
Controls		x		x
Number of observations	2,131,265	2,130,666	2,131,265	2,130,666
Number of customers	158,846	158,810	158,846	158,810

Notes: The dependent variable is the first-difference of the natural logarithm of deposits. *Deposits ∈]20K,100K]* is a dummy that equals 1 for deposits between 20K and 100K, *state* is a dummy equal to 1 for the period during which the deposit insurance was increased and the bank was nationalized and deposit insurance was increased, *private* is a dummy equal to 1 for the period following the bank privatization and deposit insurance was increased, *trust* is the number of valid votes divided by the total number of votes. The trust variable is scaled by subtracting the minimum and dividing by the range. The regressions further control for individual fixed effects. The sample is restricted to deposits between 1K and 100K six months preceding the deposit increase until six months after the bank privatization. Robust standard errors in parentheses.
*** p<0.01, ** p<0.05, * p<0.1

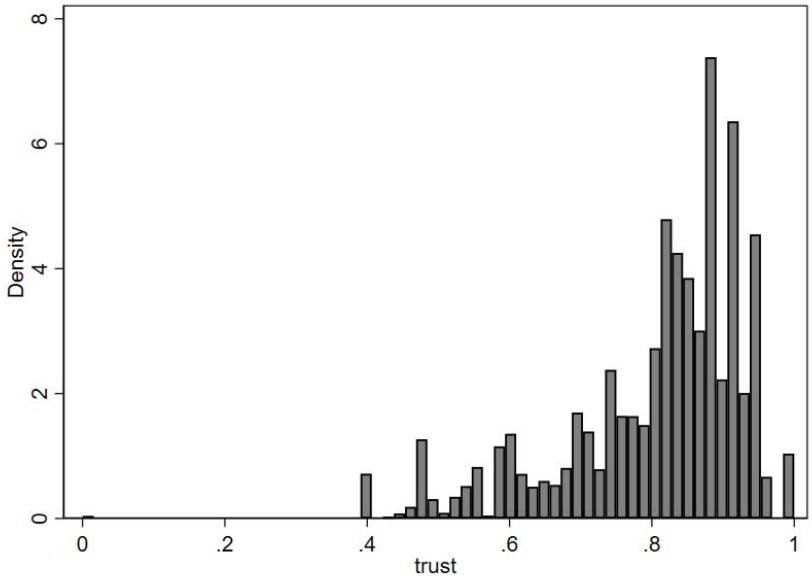
Table 9. Percentage growth rates, trust regressions

	private bank 20K insured			state bank 100K insured			private bank 100K insured		
	All	C	T	All	C	T	All	C	T
trust_{min}	-0.097	-0.055	-0.286	-0.11	-0.077	-0.277	-0.097	-0.06	-0.277
trust_{max}	-0.068	0.001	-0.286	-0.051	0.015	-0.276	-0.051	0.014	-0.246
Δ	0.029	0.056	0.001	0.059	0.092	0.001	0.049	0.074	0.031

Notes: Deposit growth rates based on columns 1 and 3 of table 8. *Trust* is the number of valid votes divided by the total number of votes. The trust variables are scaled by subtracting the minimum and dividing by the range. The minimum is 0 and the maximum is 1. C and T refer respectively to control and treatment group.

Appendix

Figure A.1. Histogram of the trust variable



Notes: *Trust* is the number of valid votes divided by the total number of votes. The variable is scaled by subtracting the minimum and dividing by the range.

Table A.1. Variable description

variable	description
dependent variable	
Δ ln(deposits)	deposit growth rate
main variables	
state	dummy that equals 1 for the period during which the deposit insurance was increased and the bank was nationalized
private	dummy that equals 1 for the period during which the deposit insurance was increased and the bank was privatized
deposits $\in$]20K,100K]	dummy that equals 1 if deposits between 20K and 100K
deposits $\in$]20K,40K]	dummy that equals 1 if deposits between 20K and 40K
deposits $\in$]40K,60K]	dummy that equals 1 if deposits between 40K and 60K
deposits $\in$]60K,80K]	dummy that equals 1 if deposits between 60K and 80K
deposits $\in$]80K,100K]	dummy that equals 1 if deposits between 80K and 100K
deposits $\in$]100K,200K]	dummy that equals 1 if deposits between 100K and 200K
relationship banking	
mortgage now	dummy that equals 1 in those time periods where the subject has a mortgage
mortgage ever	dummy that equals 1 if the subject has ever had a mortgage with the bank
number products	number of products the subject has had at this point in time
scope	number of product domains of the subject
change branch	dummy equals 1 if the subject changes branch at this point in time (*)
change account manager	dummy equals 1 if the subject gets a new account manager at this point in time (*)
account manager	dummy equals 1 if the subject has an account manager at this point in time
leave account manager	dummy equals 1 if the account manager of the subject leaves at this point in time (*)
contact ever	dummy equals 1 if the subject has ever had face-to-face contact with branch
sales ever	dummy equals 1 if the subject has ever had sales
contacts last year	number of face-to-face contacts during last 12 months
depositor characteristics	
widow	dummy equals 1 if the subject becomes widow(er) at this point in time (*)
divorce	dummy equals 1 if the subject is divorced at this point in time (*)
wedding	dummy equals 1 if the subject marries at this point in time (*)
married man	dummy equals 1 for married men
married woman	dummy equals 1 for married women
no income	dummy equals 1 if regular income is missing or zero
income	dummy equals 1 if regular income is higher than 0
income $\in$]0,2K]	dummy equals 1 if regular income is higher than 0 and smaller or equal to 2000
income $\in$]2K,3.5K]	dummy equals 1 if regular income is higher than 2000 and smaller or equal to 3500
income $\in$]5K,∞[	dummy equals 1 if regular income higher than 5000
moved	dummy equals 1 if the subject moves at this point in time (*)
branch characteristics	
branch merge	dummy equals 1 if branch merges at this point in time (monthly data) (*)
branch relocation	dummy equals 1 if branch relocates at this point in time (monthly data) (*)
branch status change	dummy equals 1 if branch changes statute (statutory or independent) at this point in time (yearly data) (*)
district competitors	number of competing banks available to subject in this district (data for 2008) for 2005 until 2009, we use the level of 2008
district potential	market potential of the district as estimated by the bank (data for 2005, 2006, 2008, 2010 and 2011), 5 levels: 1–5
regional characteristics	
trust	number of valid votes divided by the total number of votes the variable is scaled by subtracting the minimum and dividing by the range

Note: (*) dummy kept at 1 during 12 months.

Table A.2. Treament effect by period

	(1) Δ ln(deposits$_{i,t+1}$)	(2) Δ ln(deposits$_{i,t+1}$)
deposits $\in$]20K,100K]	-0.269***	-0.271***
	(0.004)	(0.004)
deposits $\in$]20K,100K]*D$_{s-6}$	-0.008*	-0.005
	(0.004)	(0.004)
deposits $\in$]20K,100K]*D$_{s-5}$	0.006	0.009*
	(0.005)	(0.005)
deposits $\in$]20K,100K]*D$_{s-4}$	0.007	0.010**
	(0.005)	(0.005)
deposits $\in$]20K,100K]*D$_{s-3}$	-0.045***	-0.043***
	(0.006)	(0.006)
deposits $\in$]20K,100K]*D$_{s-2}$	-0.023***	-0.021***
	(0.005)	(0.005)
deposits $\in$]20K,100K]*D$_{s-1}$	-0.012**	-0.010**
	(0.005)	(0.005)
deposits $\in$]20K,100K]*D$_{s}$	-0.014***	-0.013***
	(0.004)	(0.004)
deposits $\in$]20K,100K]*D$_{s+1}$	-0.017***	-0.017***
	(0.004)	(0.004)
deposits $\in$]20K,100K]*D$_{s+2}$	-0.014***	-0.014***
	(0.004)	(0.004)
deposits $\in$]20K,100K]*D$_{s+4}$	0.002	0.002
	(0.004)	(0.004)
deposits $\in$]20K,100K]*D$_{s+5}$	-0.026***	-0.026***
	(0.004)	(0.004)
deposits $\in$]20K,100K]*D$_{s+6}$	-0.018***	-0.019***
	(0.004)	(0.004)
deposits $\in$]20K,100K]*D$_{s+7}$	0.029***	0.028***
	(0.004)	(0.004)
deposits $\in$]20K,100K]*D$_{s+8}$	0.033***	0.032***
	(0.004)	(0.004)
deposits $\in$]20K,100K]*D$_{s+9}$	0.034***	0.033***
	(0.004)	(0.004)
deposits $\in$]20K,100K]*D$_{s+10}$	0.036***	0.036***
	(0.004)	(0.004)
Constant	0.007***	0.150***
	(0.002)	(0.015)
D$_{s-6,\ldots,t+2,t+4,\ldots,t+10}$	x	x
Controls		x
Number of observations	2,155,164	2,154,473
Number of customers	160,546	160,504
$\beta_{5/2008} + \beta_{6/2008} + \beta_{7/2008} + \beta_{8/2008} + \beta_{9/2008} + \beta_{10/2008} = 0$	15.59***	10.3***
$\beta_{5/2008} + \beta_{6/2008} + \beta_{7/2008} + \beta_{8/2008} + \beta_{9/2008} = 0$	14.84***	9.67***
$\beta_{5/2008} + \beta_{6/2008} + \beta_{7/2008} + \beta_{8/2008} + \beta_{10/2008} = 0$	10.09***	5.91**
$\beta_{5/2008} + \beta_{6/2008} + \beta_{7/2008} + \beta_{9/2008} + \beta_{10/2008} = 0$	3.28*	1.19
$\beta_{5/2008} + \beta_{6/2008} + \beta_{7/2008} + \beta_{8/2008} = 0$	8.47***	4.67**
$\beta_{5/2008} + \beta_{6/2008} + \beta_{7/2008} + \beta_{9/2008} = 0$	1.66	0.32
$\beta_{5/2008} + \beta_{6/2008} + \beta_{7/2008} + \beta_{10/2008} = 0$	0.21	0.07
$\beta_{5/2008} + \beta_{6/2008} + \beta_{7/2008} = 0$	0.27	1.56

Notes: The dependent variable is the first-difference of the natural logarithm of deposits. *Deposits $\in$]20K,100K]* is a dummy that equals 1 for deposits between 20K and 100K. *D* captures each period within the sample and s=0 in the month of the deposit increase. The regressions further control for individual fixed effects. The sample is restricted to deposits between 1K and 100K six months preceding the deposit increase until six months after the bank privatization. Robust standard errors in parentheses.
*** p<0.01, ** p<0.05, * p<0.1

Table A.3. Subgroups deposits ∈]20K,100K]

	(1) Δ ln(deposits)	(2) Δ ln(deposits)
deposits ∈]20K,40K]	-0.233***	-0.232***
	(0.003)	(0.003)
deposits ∈]40K,60K]	-0.376***	-0.375***
	(0.006)	(0.006)
deposits ∈]60K,80K]	-0.479***	-0.480***
	(0.009)	(0.009)
deposits ∈]80K,100K]	-0.552***	-0.552***
	(0.013)	(0.013)
state	0.007***	0.008***
	(0.001)	(0.001)
state*deposits ∈]20K,40K]	-0.003	-0.005*
	(0.003)	(0.003)
state*deposits ∈]40K,60K]	-0.010**	-0.012***
	(0.005)	(0.005)
state*deposits ∈]60K,80K]	0.006	0.004
	(0.007)	(0.007)
state*deposits ∈]80K,100K]	-0.008	-0.011
	(0.012)	(0.012)
private	0.010***	0.012***
	(0.001)	(0.001)
private*deposits ∈]20K,40K]	0.020***	0.017***
	(0.002)	(0.002)
private*deposits ∈]40K,60K]	0.025***	0.021***
	(0.004)	(0.004)
private*deposits ∈]60K,80K]	0.035***	0.031***
	(0.007)	(0.007)
private*deposits ∈]80K,100K]	0.043***	0.040***
	(0.011)	(0.011)
Constant	-0.004***	0.166***
	(0.001)	(0.015)
Controls		x
Number of observations	2,155,164	2,154,473
Number of customers	160,546	160,504

Notes: The dependent variable is the first-difference of the natural logarithm of deposits. *Deposits ∈]20K,40K]* is a dummy that equals 1 for deposits between 20K and 40K, *state* is a dummy equal to 1 for the period during which the deposit insurance was increased and the bank was nationalized and *private* is a dummy equal to 1 for the period following the bank privatization. The regressions further control for individual fixed effects. The sample is restricted to deposits between 1K and 100K six months preceding the deposit increase until six months after the bank privatization. Robust standard errors in parentheses.
*** p<0.01, ** p<0.05, * p<0.1

Table A.4. Including deposits ∈]100K,200K]

	(1) Δ ln(deposits$_{i,t+1}$)	(2) Δ ln(deposits$_{i,t+1}$)
deposits ∈]20K,100K]	-0.282***	-0.281***
	(0.003)	(0.003)
deposits ∈]100K,200K]	-0.547***	-0.547***
	(0.013)	(0.013)
state$_t$	0.007***	0.008***
	(0.001)	(0.001)
state$_t$*deposits ∈]20K,100K]	0.002	0.000
	(0.002)	(0.002)
state$_t$*deposits ∈]100K,200K]	0.010	0.007
	(0.011)	(0.011)
private$_t$	0.010***	0.012***
	(0.001)	(0.001)
private$_t$*deposits ∈]20K,100K]	0.025***	0.022***
	(0.002)	(0.002)
private$_t$*deposits ∈]100K,200K]	0.056***	0.051***
	(0.011)	(0.011)
Constant	-0.004***	0.167***
	(0.001)	(0.014)
Controls		x
Number of observations	2,183,278	2,182,587
Number of customers	161,383	161,341

Notes: The dependent variable is the first-difference of the natural logarithm of deposits. *Deposits ∈]20K,100K]* is a dummy that equals 1 for deposits between 20K and 100K, *state* is a dummy equal to 1 for the period during which the deposit insurance was increased and the bank was nationalized and *private* is a dummy equal to 1 for the period following the bank privatization. The regressions further control for individual fixed effects. The sample is restricted to deposits between 1K and 100K six months preceding the deposit increase until six months after the bank privatization. Robust standard errors in parentheses.
*** p<0.01, ** p<0.05, * p<0.1

Table A.5. Averaged data

	treatment status at time t		no changes in treatment status within treatment period	
	(1)	(2)	(3)	(4)
	$\frac{1}{s}\Delta$ ln(deposits)	$\frac{1}{s}\Delta$ ln(deposits)	$\frac{1}{s}\Delta$ ln(deposits)	$\frac{1}{s}\Delta$ ln(deposits)
deposits ∈]20K,100K]	-0.153***	-0.152***	-0.097***	-0.097***
	(0.002)	(0.002)	(0.003)	(0.003)
state	1.797***	1.797***	1.798***	1.797***
	(0.001)	(0.001)	(0.001)	(0.001)
state*deposits ∈]20K,100K]	0.028***	0.028***	0.007***	0.007***
	(0.002)	(0.002)	(0.002)	(0.002)
private	1.492***	1.492***	1.494***	1.494***
	(0.001)	(0.001)	(0.001)	(0.001)
private*deposits ∈]20K,100K]	0.051***	0.050***	0.024***	0.022***
	(0.002)	(0.002)	(0.002)	(0.002)
Constant	0.022***	0.103***	0.011***	0.084***
	(0.001)	(0.008)	(0.001)	(0.009)
Controls		x		x
Number of observations	381,518	381,396	350,024	349,902
Number of customers	149,772	149,731	147,802	147,761

Notes: Notes: The dependent variable is the first-difference of the natural logarithm of deposits at time t (start of treatment period) and t+s (end of treatment period). For the calculation of the dependent variable, data six months preceding the deposit increase until six months after the bank privatization is employed. *Deposits ∈]20K,100K]* is a dummy that equals 1 for deposits between 20K and 100K, *state* is a dummy equal to 1 for the period during which the deposit insurance was increased and the bank was nationalized and *private* is a dummy equal to 1 for the period following the bank privatization. The regressions further control for individual fixed effects. The sample is restricted to deposits between 1K and 100K and the first month of each treatment period. The last two columns further restricts the sample to customers who did not change from treatment status within a treatment period. Robust standard errors in parentheses.
*** p<0.01, ** p<0.05, * p<0.1

Table A.6. Clustered se

	postal code		substreet	
	(1)	(2)	(3)	(4)
	Δ ln(deposits)	Δ ln(deposits)	Δ ln(deposits)	Δ ln(deposits)
deposits ∈]20K,100K]	-0.276***	-0.275***	-0.276***	-0.275***
	(0.004)	(0.004)	(0.004)	(0.004)
state	0.008***	0.009***	0.008***	0.009***
	(0.001)	(0.001)	(0.001)	(0.001)
state*deposits ∈]20K,100K]	0.002	0.000	0.003	0.001
	(0.002)	(0.002)	(0.002)	(0.002)
private	0.011***	0.013***	0.011***	0.014***
	(0.001)	(0.001)	(0.001)	(0.001)
private*deposits ∈]20K,100K]	0.023***	0.020***	0.024***	0.020***
	(0.002)	(0.002)	(0.002)	(0.002)
Constant	-0.009***	0.154***	-0.009***	0.236***
	(0.001)	(0.021)	(0.001)	(0.043)
Controls		x		x
Number of observations	2,038,496	2,037,899	1,992,619	1,991,950
Number of customers	152,314	152,278	149,078	149,037

Notes: The dependent variable is the first-difference of the natural logarithm of deposits. *Deposits ∈]20K,100K]* is a dummy that equals 1 for deposits between 20K and 100K, *state* is a dummy equal to 1 for the period during which the deposit insurance was increased and the bank was nationalized and *private* is a dummy equal to 1 for the period following the bank privatization. The regressions further control for individual fixed effects. The sample is restricted to deposits between 1K and 100K six months preceding the deposit increase until six months after the bank privatization. Standard errors in parentheses are clustered at postal code level in the first two columns and in the last two columns at substreet code.
*** p<0.01, ** p<0.05, * p<0.1

Table A.7. Placebo test

	24 months before		12 months before	
	(1)	(2)	(3)	(4)
	Δ ln(deposits)	Δ ln(deposits)	Δ ln(deposits)	Δ ln(deposits)
deposits ∈]20K,100K]	-0.223***	-0.226***	-0.243***	-0.245***
	(0.003)	(0.003)	(0.003)	(0.003)
state	-0.017***	-0.012***	-0.007***	-0.002
	(0.001)	(0.001)	(0.001)	(0.001)
state*deposits ∈]20K,100K]	-0.062***	-0.060***	-0.023***	-0.022***
	(0.002)	(0.002)	(0.002)	(0.002)
private	-0.029***	-0.016***	-0.054***	-0.045***
	(0.001)	(0.001)	(0.001)	(0.001)
private*deposits ∈]20K,100K]	-0.043***	-0.039***	-0.048***	-0.047***
	(0.002)	(0.002)	(0.002)	(0.002)
Constant	0.017***	0.154***	0.010***	0.135***
	(0.001)	(0.013)	(0.001)	(0.014)
Controls		x		x
Number of observations	2,149,246	2,148,542	2,241,247	2,240,511
Number of customers	164,202	164,158	164,037	163,994

Notes: The dependent variable is the first-difference of the natural logarithm of deposits. *Deposits ∈]20K,100K]* is a dummy that equals 1 for deposits between 20K and 100K. In columns 1 and 2 (3 and 4), *state* is a dummy equal to 1 24 (12) months preceding the period during which the deposit insurance was increased and the bank was nationalized and *private* is a dummy equal to 1 24 (12) months preceding the period during which the bank was privatized. The regressions further control for individual fixed effects. The sample in columns 1 and 2 (3 and 4) is 24 (12) months before the baseline sampling period. Robust standard errors in parentheses.
*** p<0.01, ** p<0.05, * p<0.1