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Implicit and Explicit Deposit Insurance and Depositor Behavior

Abstract

We employ proprietary data from a large bank to analyze how – during crisis – deposit insurance affects depositor behavior. Our focus is on Belgium where the government increased explicit deposit insurance coverage and implemented implicit deposit insurance arrangements. Estimating sorting below the respective insurance limits shows that depositors are aware of and understand these interventions. Difference-in-differences estimates show that both the increase in the explicit deposit insurance limit and the implicit deposit insurance had the intended calming effect on depositors. Close depositor-bank relationships mitigate these effects, while political trust seems to boost the general effectiveness of such government policies.

JEL-Codes: G210, G280, H130, N230.

Keywords: deposit insurance, coverage limit, implicit deposit guarantee, bank nationalization, depositor heterogeneity.

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1 Introduction

Deposit insurance is an important and widely-used tool to promote the resilience of financial institutions by preventing runs on banks by insured depositors (e.g., Diamond and Dybvig, 1983; Repullo, 2000; Goldstein and Pauzner, 2005; Iyer and Puri, 2012; Demirgüç-Kunt et al., 2015; Egan et al., 2017; Dávila and Goldstein, 2023) and may increase long-run macroeconomic welfare (Van der Kwaak et al., 2023). In particular, in response to the global financial crisis in 2008/2009, governments worldwide have intervened in the banking sector to prevent bank failures. Such interventions can come in two ways. First, many governments introduced or extended explicit deposit insurance schemes (Demirgüç-Kunt et al., 2015). In these schemes, the maximum coverage limit of the deposit insurance is fixed and explicitly stated in the related regulatory act. Second, many governments - often at the same time - nationalized banks or rescued them with capital injections and/or debt guarantees (Berger et al., 2020). Such interventions implicitly increase deposit insurance coverage at these banks (and, potentially, at similar banks) as depositors can expect not to be failed in the direct aftermath of a state rescue. However, by definition, an implicit protection is not formally specified.

In this paper, we provide evidence of how explicit and implicit deposit insurance helped to restore depositor confidence during the 2008/2009 financial crisis leveraging a panel of monthly deposit account-level data from Belgian customers of a European bank. Policy makers and banks need to understand the behavior of depositors in crisis times and in reaction to changes in deposit insurance to decide on the optimal design features of deposit insurance schemes in general and on potential adjustments in quiet as well as in turbulent times.[1] While deposit insurance may indeed add to the stability of banking sectors by boosting depositors' confidence and preventing bank runs, it may come at considerable costs due to decreased monitoring by depositors and increased risk-taking by banks (e.g., Cooper and Ross, 2002; Demirgüç-Kunt and Detragiache, 2002; Martin et al., 2018; Calomiris and Jaremski, 2019) and because wholesale markets may fail to efficiently reallocate deposits between banks in a crisis (Bruche and Suarez, 2010). Also implicit deposit insurance may

[1] Anginer and Demirguc-Kunt (2019) review the economic costs and benefits of deposit insurance and draw conclusions on the features that make deposit insurance work in practice.

distort financial stability and lead to negative real effects (Oliveira et al., 2015; Iyer et al., 2019). An increase in the explicit deposit insurance limit could also entail an increased volatility in deposit flows when depositors reallocate their deposits held at multiple banks to one bank making use of the higher deposit insurance limit. Besides, depositors uninsured by the explicit deposit insurance scheme may reallocate their money to banks with implicit deposit insurance such as too-big-to-fail banks in crisis times (Oliveira et al., 2015; Iyer et al., 2019). Policy makers and banks also need to understand the behavior of depositors as a bank's customer base impacts its required liquidity within the Basel III framework (Bank for International Settlements, 2013).

Our focus is on Belgium where the government intervened in the banking sector by both increasing explicit deposit insurance coverage and implementing implicit deposit insurance arrangements. The Belgian government intervened early, in November 2008 already, by increasing the explicit 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 to maintain financial stability. At the same time, the Belgian government tried to stabilize the banking sector with the help of capital injections and nationalizations of the large banks, implicitly providing deposit insurance to all depositors at these banks.

We exploit these changes in explicit and implicit deposit insurance in our identification strategy and use a difference-in-differences estimator to examine whether these interventions were successful in calming down depositors. For this purpose, we employ proprietary monthly data of more than 160,000 Belgian customers of one European bank and follow their withdrawal and depositing behavior during the financial crisis in 2008/2009. More precisely, we define the treatment group as deposits between 20K and 100K euros, and the control group as 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. We then compare deposit growth rates (the monthly change in the natural logarithm of

deposits) in the treatment and control groups during three periods. In the pre-period, the deposit insurance limit is 20K, while the financial crisis is hitting with the failure of Lehman as a major event. The first treatment period is characterized by the explicit deposit insurance limit being increased to 100K and implicit deposit insurance being extended to the bank due to its nationalization. The second treatment period starts with the re-privatization of the bank so that the increased explicit deposit insurance limit of 100K should become binding.

For depositors to react to such changes in explicit and implicit deposit insurance, they need to be aware of at least some details of the deposit guarantee schemes and understand them. Some first evidence of Belgian depositors' increased awareness of deposit insurance can be seen from the Google Trends data in Figure 1. It shows that Belgians 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. More formally, 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). Regarding the new 100K threshold, we find some increased bunching in the months before the deposit coverage increase suggesting that there were some anticipation effects. This threshold behavior almost disappears during the period of implicit deposit insurance of all deposits due to the state ownership. However, bunching below the 100K limit returns after the re-privatization of the bank. These findings indicate that depositors indeed are aware of the changing deposit insurance limit and react accordingly and that they believe the new explicit 100K limit to be binding as soon as the bank is re-privatized.

Accordingly, our difference-in-differences estimates show that both the increase in the explicit deposit insurance limit and the implicit deposit insurance 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.

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. To address this issue, we re-estimate our baseline regression using a pre-determined, and thus more exogenous, treatment status. Moreover, in our strictest estimation, we only keep those individual depositors that have a fixed treatment status throughout our observation period. Our main conclusions remain unchanged.

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 is determined by covariates which also affect the outcome variable. We include depositor fixed effects 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 observable and unobservable, time-invariant depositor characteristics that could influence depositor behavior. To further mitigate concerns about omitted variables that may drive the change in deposit growth rates and are potentially correlated with the deposit balance (i.e., treatment status), we control for an array of relationship, depositor, and branch characteristics. We also formally evaluate the robustness of our results to the omitted variables' bias using the approach by Oster (2019). The method yields an unbiased treatment effect assuming proportional selection on observables and unobservables. Based on this approach, our results seem to be robust to the selection on unobservables. Furthermore, we employ 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 forces parallel trends as much as possible based on the observable characteristics. Overall, while the magnitude of the effect of increased implicit deposit insurance coverage during state ownership varies somewhat across specifications, our main conclusions remain intact: the increase in implicit and explicit deposit insurance coverage at the height of the financial crisis had the intended calming effect and this effect was even larger after the re-privatization.

We then proceed by examining whether the average treatment effects of the increased implicit

and explicit deposit insurance coverage shown in our baseline regressions vary by the strength of the bank-depositor relationship and by depositors' political trust. We find that the effects of increased implicit and explicit deposit insurance are modulated by the strength of the bank-customer relationship. Depositors with close bank relationships (e.g., those that use more bank products, have a mortgage at the bank, or receive their income into an account at this bank) are less likely to run on the bank in the first place and subsequently respond less strongly to the increases in deposit insurance coverage. In contrast, higher political trust seems to reinforce the effectiveness of government interventions in the form of increases in implicit and explicit deposit insurance coverage.

Our paper contributes to three related strands in the banking literature. First, it contributes to the scant literature on micro-level studies of depositor behavior that results from (changes in) explicit or implicit deposit insurance schemes. Most closely related to our study, De Roux and Limodio (2023) examine the effect of an increase in the explicit deposit insurance limit in Colombia. They document bunching at the respective insurance thresholds and find that depositors who bunch below the initial insurance limit increase their deposits the most. Iyer et al. (2019) show that after a decrease in the explicit deposit insurance limit in Denmark in 2010, newly uninsured depositors reallocate their deposits to too-big-to-fail banks, i.e., banks with an implicit deposit guarantee. Also, Oliveira et al. (2015) find a reallocation of deposits to too-big-to-fail banks during the financial crisis in Brazil. We contribute to this literature by studying an increase in implicit deposit insurance due to bank nationalization and a concurrent increase in the explicit deposit insurance limit and show how both government interventions can calm down depositors during the financial crisis. As such, our study is also related to other micro-level studies on depositor behavior in bank runs (Iyer and Puri, 2012; Iyer et al., 2016; Atmaca et al., 2020; Brown et al., 2020) and in reaction to regulatory news (Martin et al., 2018) or policy uncertainty (Artavanis et al., 2022).

Second, our paper contributes to the empirical literature on the effect of deposit insurance on deposits. On the one hand, several studies show that the introduction of deposit insurance weakens depositor discipline and leads to moral hazard, i.e., increased risk-taking, at banks using bank-level data from Russia (Chernykh and Cole, 2011; Karas et al., 2013) and the U.S. (Calomiris and

Jaremski, 2019). On the other hand, Gropp and Vesala (2004), using EU bank-level data, 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 thereby decreasing the moral hazard problem. Our study, in contrast, focuses on an expansion in the existing explicit deposit insurance coverage, adds an analysis of the introduction of implicit deposit coverage, and examines whether these interventions were successful in calming down depositors during the financial crisis.

Third, and more generally, our paper contributes to the literature on government interventions (besides deposit insurance) and their effects on the banking sector. For instance, Calderon and Schaeck (2016) document at the level of the banking system that liquidity support, recapitalizations, and nationalizations considerably increase bank competition. And Diepstraten and van der Cruijsen (2019) use survey data to analyze how individual depositors react to nationalization and capital injection. To the best of our knowledge, empirical work with micro-level depositor data as we use in this study is so far absent from the literature.

The remainder of the paper is organized as follows. In Section 2, we describe the background and data. In Section 3, we analyze the relevance of the thresholds imposed by the deposit insurance limits. In Section 4 we discuss the methodology of our study and in Section 5 we present the results from our main regressions and various robustness checks. Section 6 concludes.

2 Background and Data

The great financial crisis struck the Belgian financial landscape severely. Since many books, press reports, government reports, and expert analyses were devoted to particular parts of this episode, we limit ourselves to some information on the banking and deposit insurance systems, as well as the Belgian government's rescue operations to provide a background for our empirical analyses.[2] The Belgian financial landscape was then dominated by three very different banks, in alphabetical order

[2]The description is based on Fassin and Gosselin (2011) and several government and expert reports to be found here: https://www.lachambre.be/FLWB/PDF/53/2372/53K2372001.pdf, https://www.dekamer.be/doc/flwb/pdf/52/1643/52k1643002.pdf, https://eur-lex.europa.eu/legal-content/NL/TXT/PDF/?uri=CELEX:32014D0686&from=EN, https://www.dekamer.be/kvvcr/pdf_sections/comm/dexia/53K1862002.pdf, https://www.ageas.com/sites/default/files/file/file/EN_ER_27012009_0.pdf.

Dexia, Fortis, and KBC, accounting together for more than 60% of the Belgian banking market. The magnitude of their joint balance sheets substantially exceeded their country's GDP. Therefore, Belgium did not apply a generic approach to address bank instability (like, e.g., TARP in the U.S., or the French approach), but resorted to a case-by-case approach for saving these banks.

Fortis was the result of a long series of mergers and acquisitions, the last one being a badly digested acquisition of one part of the Dutch part of ABN-AMRO, with RBS and Santander each acquiring another part. During 2008, Fortis ran into trouble financing its part of the acquisition. By the end of the summer of 2008, the bank began to suffer from collapsing investor trust, while deposits started draining off. The situation gradually deteriorated until the failure of Lehman Brothers, after which Fortis had to be jointly saved by the three governments of Belgium, Luxembourg and the Netherlands. This first operation did not suffice to pacify investors or depositors, and over the next weekend the bank was split and nationalized by the three governments involved. In the same weekend, the Belgian government sold on its part to BNP Paribas. The sale was, however, contested by shareholders in court, delaying its effectuation. Over several months, the Belgian part of Fortis therefore remained fully government-owned, while the sale was renegotiated. After final acceptance by the revolting shareholders and by the courts in 2009, BNP Paribas finally became the owner of the Belgian part of Fortis, including all Belgian bank activities. Although the Belgian government became the largest shareholder of BNP Paribas, the new parent company, and maintained some direct shares in the new affiliate, BNP Paribas Fortis, the bank explicitly regained its status as a private bank, signalling that it may no longer, or at least not in the same way, have been covered by the implicit guarantees implied by full government ownership.

Dexia, too, was the result of a long series of mergers and acquisitions of several banks and financial institutions over time, with the explicit strategy of becoming a world leader in financing local governments. One of the important shareholders was ARCO, a cooperative investment vehicle of the Chistian democratic movement in Belgium. Another important shareholder was the "Gemeentelijke Holding", which represented a long list of local governments in the shareholdings of Dexia. After the collapse of Lehman Brothers, Dexia was initially saved as a whole mainly by the French and Belgian governments by means of a complex triple-layered recapitalization and warranty system,

and by increased support from some historical shareholders. The subsequent lack of operational restructuring, and the souring of its investments in Southern European, and especially Greek, sovereign debts during the Euro crisis, brought the bank to the brink of bankruptcy by the end of 2011. The Belgian banking and insurance parts of Dexia were carved out and nationalized by the Belgian government and became Belfius, which today remains a fully government-owned financial institution. Most of the bad assets and liabilities of the former Dexia remained in Dexia, which de facto became a massive bad bank with an initial balance sheet of more than €150 billion. This bad bank has been managed ever since as a run-off with the objective to liquidate the troubled assets (€63.4 billion by the end 2022) with minimal losses.

KBC in contrast, faced slightly less deep problems. It managed to retain the core of its corporate structure and its particular business model based on a combination of banking and insurance products and services, and its double home market in Belgium and Central Europe. The bank stayed afloat with the support of special guarantees for its subordinate loans from several governments (federal and regional) that served to reinforce the capital position of the bank. The bank paid back the high yield government loans over time and has regained its position as a fully independent bank without any state ownership.

In the process of saving the financial system, the Belgian government also increased the official deposit insurance coverage from €20.000 to €100.000 in coordination with other European governments in November 2008. On top of that, Fortis and Dexia received large government guarantees on their interbank obligations (initially €150 billion each), securing the continued wholesale funding of their massive balance sheets and thereby further stabilizing these banks. These guarantees were gradually scaled back over time, but Dexia continued to enjoy government guarantees on its interbank obligations for more than €20 billion at the end 2022.

In the light of this history, we analyze the impact of increased implicit and explicit deposit insurance coverage on depositors' behavior. We use panel data from 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 explicit deposit insurance increase in November 2008 until six months after the bank was re-privatized and thus the increase in explicit deposit insurance became effective in 2009.[3]

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 explicit deposit insurance limit was increased from 20K to 100K euros in November 2008 and implicit deposit insurance was extended to the bank due to its nationalization. Shortly afterward, deposits started to flow back in and by the end of 2009, they reached the same overall level as at 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 later and withdrew much less in absolute and relative terms than depositors with larger deposit balances. The increase in explicit and implicit 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.

For the main empirical analysis, we further restrict the sample to deposits $\in$]1K,100K].[4] 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.

[3]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.

[4]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 an extension of the main analysis.

3 Threshold behavior

The previous literature shows that the introduction or change of deposit insurance makes depositors more aware of the details of the deposit insurance scheme. Essentially, such awareness and knowledge of the details of the deposit insurance scheme form the basis for any observable change in depositor behavior due to changes in the deposit insurance scheme. In Figure 4, we provide the respective evidence. The figure shows the distribution of deposits around the "old" deposit insurance 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 a 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.

In the next step, we provide a more formal analysis and 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.[5]

We expect that the coverage limit becomes more important during the crisis, leading to a higher number of individuals who keep their deposits below or around the prevailing explicit limit of 20K.

[5]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.

After the increase in explicit 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, i.e. increased implicit insurance, compared to the period after re-privatization when the explicit limit of 100K becomes effective eventually.

Figure 5 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, by 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 indicating that the depositors believe the new 100K limit to have become binding. These findings indicate that depositors indeed are aware of the changing deposit insurance limit and react accordingly.

4 Methodology

4.1 Identification and empirical specification

We employ the change in the explicit and implicit deposit insurance coverage of the bank as exogenous shocks to individual depositors in our identification strategy. In November 2008, the coverage of the explicit deposit insurance in Belgium was increased from 20K to 100K euros. In addition, during our observation period, the bank was first nationalized, which most likely increased the implicit insurance coverage of the bank, and then re-privatized, which made the new

explicit insurance limit effective. This setup allows us to study depositor behavior in reaction to changes in implicit and explicit deposit insurance coverage 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 implicit and explicit deposit insurance on depositor behavior. As the dependent variable, we use the monthly change in the natural logarithm of deposits $\Delta ln(deposits)$ and estimate the following regression:

$$\begin{aligned}\Delta \ln(\text{deposits}_{\text{i,t+1}}) = \beta_1 \text{deposits}_{\text{i,t}} \in]20\text{K}, 100\text{K}] + \beta_2 \text{implicit}_{\text{t}} + \beta_3 \text{implicit}_{\text{t}} * \text{deposits}_{\text{i,t}} \in]20\text{K}, 100\text{K}] \\ + \beta_4 \text{explicit}_{\text{t}} + \beta_5 \text{explicit}_{\text{t}} * \text{deposits}_{\text{i,t}} \in]20\text{K}, 100\text{K}] + \boldsymbol{\alpha} \text{Z}_{\text{i,t}} + \mu_{\text{i}} + \epsilon_{\text{i,t}}, \qquad (1)\end{aligned}$$

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.

We then compare deposit growth rates in the treatment and control groups during three periods. In the pre-period, 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 similarly worried by the crisis, 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 explicit deposit insurance limit being increased to 100K and the bank being in state ownership. In principle, state ownership should have introduced an informal implicit guarantee to all deposits so that the increased explicit deposit insurance limit of

100K should only become effective when the bank is re-privatized. Therefore, *implicit* is a dummy that is 1 during the period of state ownership, and 0 otherwise. β_2 then captures changes in deposit growth rates in the period of implicit deposit insurance for deposits below 20K (control group). And β_3 accounts for the additional change in deposit growth for deposits between 20K and 100K as compared to deposits below 20K during the period of implicit deposit insurance and measures the first treatment effect. We expect the implicit deposit guarantee to have a calming effect on all depositors because it sends a strong signal to all depositors that the government is willing to rescue the bank. This reasoning implies a significant and positive coefficient β_2 and a significantly positive or insignificant coefficient β_3 depending on whether or not the calming effect of implicit deposit insurance is more pronounced for the newly covered deposits between 20K and 100K.

In the second treatment period, the bank is re-privatized so that the increased explicit deposit insurance limit of 100K is now formally effective.[6] *explicit* then is a dummy that is 1 during the period of increased explicit deposit insurance limit after the re-privatization of the bank, and 0 otherwise. 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 new explicit deposit insurance limit is effective and measures the second treatment effect. Essentially, nothing changes concerning deposit insurance coverage for the treatment and the control group. However, the re-privatization of the bank should send a strong signal to depositors and other stakeholders that the acute crisis is over. We therefore still expect to find a calming effect from the increased explicit insurance limit becoming effective in the second treatment period, which implies significant and positive coefficients β_4 and β_5.

As we are interested in estimating the effect of the increase in 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. However, this means that treatment status

[6] In principle, some of the implicit insurance may still prevail because depositors now know that the government is willing to step in when necessary. Our previous results from the threshold analysis show, however, that depositors start bunching below the new explicit limit of 100K after the re-privatization of the bank. This means that at least depositors with balances around the new limit do take into account that the new explicit limit is effective.

varies not only between depositors but also within depositors over time. Therefore, in our baseline regressions, the effect of the increase in deposit insurance is identified from the switchers given that our regressions control for individual fixed effects. To qualify our results, we will estimate Equation 1 by (i) using pre-determined, and thus more exogenous, treatment variables and (ii) keeping only those individual depositors with a fixed treatment status throughout our observation period.

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 explicit and implicit deposit insurance limits (i.e. the treatment). Figure 6 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 fixed effects (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, each month, 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. 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 in 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 yearly, while all other information is available monthly. 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.

Furthermore, we will formally evaluate the robustness of our results to omitted variable bias using the approach by Oster (2019). The method yields an unbiased treatment effect assuming proportional selection on observables and unobservables.

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 forces parallel trends as much as possible based on the observable characteristics.

4.2 Bank-customer relationship strength

The previous literature has shown that strong bank-customer relationships mitigate deposit withdrawal risk during crises (e.g., Iyer and Puri, 2012; Boyle et al., 2015; 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 (Bank for International Settlements, 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 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:

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

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,∞]*[7] 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 into 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 into an account there.

We aim to assess whether the average treatment effect of increasing explicit and implicit deposit insurance is conditional on relationship characteristics. We hypothesize depositors with close bank relationships 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, β_6 and β_{10} should be significantly positive instead.

[7] *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.

4.3 Political trust

As shown in Figure 2 above, the increase in explicit and implicit 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 variation in political trust is a salient underlying mechanism in this regard.[8] We expect that individuals having more political trust are more likely to halt their withdrawals upon the increase in deposit insurance coverage. Based on the findings in Diepstraten and van der Cruijsen (2019) the effect should be stronger during the *implicit* period where the bank is nationalized because the government involvement is most obvious here.

To study the role that political trust plays in potentially reinforcing an intended calming-down effect of the increase in implicit deposit insurance (nationalization) and the increase in explicit deposit insurance coverage, we estimate the following two regressions:

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

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

[8] Political trust can be defined as "a summary judgement that the [political] system is responsive and will do what is right even in the absence of constant scrutiny" (Miller and Listhaug, 1990). "A common distinction made in the political trust literature is between the different objects of political trust: the political authorities, the political regime, and the political community" (Hooghe et al., 2011, p.249). Political trust can further be distinguished from social trust (Pitlik and Kouba, 2015) and trust in companies or banks (Stevenson and Wolfers, 2011; Jansen et al., 2015; Fungáčová et al., 2019). As we will employ a measure of trust based on voting behavior by individuals in national elections at the local level, we surmise our measure mainly captures political trust.

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

To measure political trust we make use of election outcomes before the bank 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 increases in explicit and implicit deposit insurance.[9] A measure of political trust at the national level, 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, political *trust* is the canton-level number of all votes minus invalid and blank votes divided by all votes from the federal election in 2007.[10] The variable is scaled by subtracting the minimum and dividing by the range of the original variable on the canton level. 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.[11] Given that Belgium is one of the few countries where voting is compulsory, making the effort to go voting in a national election but then vote blank or invalid (e.g., by drawing stick figures on the paper ballot), is found to be a very strong sign of political distrust in the national political institutions (Hooghe et al., 2011).[12]

With the regression in Equation 3 we first test whether political *trust* in general helps reinforce 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 political trust, is more exhaustive during the period with implicit deposit insurance when the bank is nationalized. In Equation 4, we then study whether the average treatment effect of an increase in the deposit insurance coverage is conditional on depositors' political trust. If political *trust* indeed helps reinforce government policies to contain the financial crisis, depositors with high political trust should react more to the treatment of increased coverage

[9] http://verkiezingen2007.belgium.be

[10] Voting is compulsory in Belgium and the fraction of no-shows (who risk a substantial fine) is often found to be a weak function of circumstantial factors such as age, transportation possibilities, weather, and/or incarceration rates.

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

[12] Political distrust can also result in voting for extreme or populist parties, or when those are not present, paradoxically also in "passive" voting for governing parties (Hooghe et al., 2011). Compulsory voting was initiated in 1893 "as a measure against extremism" (Malkopoulou, 2016, p.175).

and β_6 and β_{10} should be significant and positive. In addition, if the impact of political trust is more pronounced during the period with implicit deposit insurance, we expect β_5 to be larger than β_9 and expect β_6 to be larger than β_{10}.

5 Results

5.1 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. All regressions include depositor FEs. The main results are qualitatively and quantitatively very similar across all three specifications. Only the indicators *implicit* and *explicit* 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 in their bank account more than the insured depositors during the pre-period, i.e., at the height of the financial crisis. The increase in implicit deposit insurance coverage during the nationalization of the bank leads to an equal calming down of all depositors given that *implicit* is significantly positive and its interaction with the treatment variable insignificant. When the bank is re-privatized and the increased explicit deposit insurance limit becomes effective, we find an even stronger calming-down effect on all depositors given that *explicit* and its interaction with the treatment variable are significantly positive and larger. Yet, the slow-down in withdrawals is more pronounced for the treatment group, i.e. the larger deposits that are now explicitly covered by the increased deposit insurance limit. The re-privatization of the bank was indeed seen as an important step out of the crisis. And given that depositors with larger balances had withdrawn more in the pre-crisis period, they also bring back more deposits in this second treatment period.

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:

$$\Delta \ln(\text{deposits}_{i,t+1}) = \beta_1 \text{deposits}_{i,t} \in]20K, 100K] + \beta_2 \text{month}_t + \beta_3 \text{month}_t * \text{deposits}_{i,t} \in]20K, 100K] + \mu_i + \epsilon_{i,t}, \quad (5)$$

Figure 7 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 implicit coverage during nationalization, and the increased explicit coverage during re-privatization.[13] Figure 7 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 increased implicit deposit insurance during state ownership. 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 (results are available upon request). In contrast, the estimated values of β_3 become larger and significantly positive when the bank is re-privatized and the increased explicit deposit insurance limit becomes effective, albeit with a small delay.

From an economic viewpoint, we prefer to include the Lehman failure in the pre-period as we want to study whether increased implicit and explicit deposit insurance can calm down depositors during a crisis. From an econometric viewpoint, having the Lehman failure as part of the pre-period may violate the parallel trend assumption and we therefore drop the Lehman months from our regression sample to assess the robustness of our results. Figure A.2 in the Appendix replicates Figure 7 while, respectively, dropping two months (left figure) or three months (right figure) around the Lehman failure from the pre-period. Now, all treatment effects in the pre-period are close to zero. The treatment effects during the period of state ownership with increased implicit deposit insurance coverage are also close to zero and the treatment effects after the re-privatization of the bank when the increased explicit deposit insurance becomes effective are positive and significant as are

[13] 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.

those presented in Figure 7. Appendix Table A.2 shows the results from our baseline regressions when dropping the Lehman months from the pre-period. Importantly, the interaction effects of *implicit*deposits* $\in$ *]20K,100K]* and *explicit*deposits* $\in$ *]20K,100K]* are qualitatively similar to the baseline results reported in Table 2. As our pre-period now excludes the Lehman months, i.e. the height of the crisis with the largest withdrawals of deposits from the bank, *implicit* and *explicit* are significantly negative capturing this crisis effect.

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 increased implicit and explicit deposit insurance 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 implicit deposit insurance coverage during the period of state ownership leads to a small and almost uniform slowdown in deposit withdrawals. When the increased limit in the explicit insurance coverage becomes effective after the re-privatization of the bank, the calming-down effect is again larger overall and has a significantly larger effect in the treatment than in the control group. In addition, the farther depositors were away from full insurance before the reform (depositors in higher deposit buckets), the more they are calmed down by the increased coverage in explicit deposit insurance.

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 increased explicit coverage in the period after re-privatization.

Overall, our baseline results suggest that the increase in both the implicit and explicit deposit insurance coverage 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.

5.2 Exogeneity of 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 is 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 re-estimate our baseline regression with various variants of the treatment variable. Table 3 reports the respective results. We start with creating pre-determined, and thus more exogenous, treatment variables. In column (1), our treatment variable *deposits* $\in$ *]20K,100K]* equals 1 if average deposits in the pre-period are between 20K and 100K. In column (2), average deposits in the pre-period are calculated by weighting the months in the pre-period at a decreasing rate. In column (3), *deposits* $\in$ *]20K,100K]* equals 1 if the average treatment status in the pre-period exceeds 0.5. In column (4), the average treatment status is calculated by weighting the months in the pre-period at a decreasing rate. We lose 14,450 depositors due to these restrictions. We then continue the analysis by keeping only those individual depositors that have a fixed treatment status throughout our observation period. In column (5), *deposits* $\in$ *]20K,100K]* is a dummy that equals 1 for deposits between 20K and 100K, but only individuals

with fixed treatment status throughout the sampling period are kept in the sample. In column (6), individuals with fixed treatment status in the pre-period are considered and the treatment status is then extrapolated to the treatment periods. In these estimations, we lose 28,850 and 27,903 depositors, respectively, due to the applied restrictions. In addition, in Appendix Table A.5 we drop deposits [10K,30K] to create a gap between the treatment and control groups. Here, we lose around 23,000 to 33,000 depositors from our estimation sample, depending on the specification.

In all these regressions, our conclusions from the main analysis remain unchanged: the increase in implicit and explicit deposit insurance coverage 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. However, we now do find a significantly positive interaction term *implicit* deposits* $\in$ *]20K,100K]*, which means that depositors with larger balances are already more calmed down by the increase in the implicit insurance limit during the state-ownership period and not only after the re-privatization of the bank when the increase in explicit insurance coverage becomes effective. The reason is that, by construction, we now have no switches from the treatment to the control group and therefore omit these negative changes in deposit growth rates.

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 as we need to classify each depositor exclusively to the treatment or control group in each period. 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 4 provides the average treatment effect on the treated (ATT) in the *implicit* period. The effect of the effectively increased coverage in *explicit* deposit insurance after the re-privatization of the bank 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. As in our regressions with the more exogenous treatment variables in Table 3, *explicit* is positive and significant because we do not allow for switches between treat-

ment and control groups. At the same time, as in our baseline regressions, the effect of the effective increase in explicit insurance coverage when the bank is re-privatized is significantly positive and larger than the effect of the increase in implicit insurance coverage.

We then evaluate the sensitivity of our baseline findings to omitted variable bias. We use the method developed by Oster (2019) which evaluates the possible degree of omitted variable bias under the assumption that the selection on the observed controls is proportional to the selection on the unobserved controls. Table 5 summarizes the results. Columns (1) and (2) depict the coefficients on our treatment variable and its interaction terms with *implicit* and *explicit* from baseline regressions with and without controls. The corresponding robust standard errors are reported in parentheses and the respective R^2s are in brackets. All coefficients including their standard errors and R^2s are very similar in both regressions. The identified sets in columns (3) and (4) then provide bounds for the treatment effect. One bound is the controlled effect and the other is calculated under the assumption that the relative degree of selection on observables and unobservables (δ) equals 1 or -1, meaning that both types of controls are equally important.[14] For estimating the identified sets, we need to provide R_{max} which is the hypothetical R^2 of a regression on observed and unobserved controls. We set the value equal to $1.3*R^2$ as proposed by Oster (2019). The identified sets do not include zero for the treatment effect in the pre-treatment period and the *explicit* period, confirming our baseline findings. The signs are also in line with the baseline results in Table 2. As shown in column (5), the corresponding values of δ – assuming a treatment effect of zero (β=0) – are 9.2 and 1.2, suggesting that our results are robust to selection on unobservables.

Overall, while the magnitude of the effect of increased implicit deposit insurance coverage varies somewhat across specifications, our main conclusions that the increases in both implicit and explicit deposit insurance coverage at the height of the financial crisis had the intended calming effects and that this effect was even larger when the increased limit in the explicit deposit insurance became effective after re-privatization. We therefore continue our empirical analysis with the sample used in the baseline analysis where depositors are allowed to switch between treatment and control groups.

[14] δ equal to 1 (-1) implies that selection on observables and unobservables goes in the same (opposite) direction.

5.3 Robustness checks

We conduct several robustness tests to assess the sensitivity of our baseline results to changes in our regression sample. We report these results in Table 6. 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 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 *implicit* period. Overall, our results are robust to these changes. Interestingly, the results in columns (3) and (4) indicate that the increased implicit coverage during nationalization does not have a calming effect on the control group (*implicit*) 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.[15]

5.4 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* $\in$ *]20K,100K]*, *implicit*, *implicit*deposits* $\in$ *]20K,100K]*, *explicit* and *explicit*deposits* $\in$ *]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

[15] Our baseline results are also robust to clustering standard errors at the postal code or sub-street level (see Appendix Table A.6) and to winsorizing the dependent variable at the 1st and 99th percentiles.

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 in 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 implicit and explicit deposit insurance. The significantly positive coefficient on the interaction term *deposits* $\in$ *]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 coefficients on the triple interactions *implicit*deposits* $\in$ *]20K,100K]*relationship* and *explicit*deposits* $\in$ *]20K,100K]*relationship* together with the significantly positive and larger coefficients on *implicit* deposits* $\in$ *]20K,100K]* and *explicit*deposits* $\in$ *]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.[16]

As the overall interpretation of the direction and the magnitude of effects is convoluted with multiple triple interactions, we present in Figure 8 the predictive margins for the treatment and control group, conditional on the strength of the relationship, during both the *implicit* and *explicit* periods.

[16]The results in Appendix Table A.7 show that our main conclusions largely hold when dropping the Lehman months from the pre-period.

The left and right panels show the *implicit* and *explicit* periods, respectively, while the blue and black lines show the predictive margins for the treated and the control groups, respectively. The upward slope in all panels of Figure 8 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 flatter than the slope of the black line, providing empirical validation of the hypothesis that strong relationships matter less for treated than for untreated depositors during the treatment periods, i.e. mitigate the treatment effect.

5.5 Political trust

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 concerning one potential underlying mechanism that might explain our baseline results: political trust. We start with analyzing the role that political 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 *implicit*trust* and *explicit*trust* indicate that in cantons with higher levels of political trust, depositors tend to slow down their withdrawals more after the increase in implicit and explicit insurance coverage. As expected, this effect is more pronounced during the *implicit* period where government involvement is more visible through the state ownership of the bank.

To obtain a net positive effect of implicit insurance, i.e. 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 political trust is so low that the nationalization further fuelled deposit withdrawals. Depositors in these cantons 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 political trust is so high that the group of depositors perceiving nationalization as a negative stigma is very small so that the policy was successful in calming down depositors.

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' political trust. To verify the potential moderating effect of trust on treated depositors, we interact our main variables *deposits ∈]20K,100K]*, *implicit*, *implicit*deposits ∈]20K,100K]*, *explicit* and *explicit*deposits ∈]20K,100K]* with our political trust variable. We report the estimates of Equation 4 in columns (3) and (4) of Table 8. Interestingly, we find a significantly negative effect for *deposits ∈]20K,100K]*trust*. Depositors in the treatment group, i.e. those with larger deposit balances, who have a higher political trust withdraw more in the pre-period. If people with political trust believe that rules and regulations will be followed as written down, then they should withdraw more in the pre-period in which the explicit deposit insurance limit is 20K and they are therefore not covered. However, the results do not confirm our expectation that political trust reinforces the treatment effects.[17]

As the overall interpretation of the direction and the magnitude of effects is convoluted with multiple triple interactions, we visualize these results in Figure 9 by plotting predictive margins. The left and right panels show the *implicit* and *explicit* periods, respectively, while the blue and black lines show the predictive margins for the treated and the control groups, respectively. The upward slope in three out of the four lines of Figure 9 indicates that the extent of political trust, reflected from left to right on the horizontal axis, contributes positively to stronger deposit growth in the treatment periods. We also observe that the slope of the blue line is flat in the *implicit* period and only slightly steeper than the slope of the black line in the *explicit* period. Thus, political trust does not seem to have a stronger effect in the treatment group than the control group and does not dominate in the period with implicit deposit insurance. For the control group, though, we find, as expected, that the effect of political trust dominates in the period of implicit deposit insurance when government involvement is most evident.

In sum, these findings imply that political trust does play a general role in reinforcing the effects of government policies. Yet, we do not find consistent evidence that depositors with high political

[17] When repeating the analysis without the Lehman months in the pre-period we find qualitatively similar results albeit at lower significance levels (Appendix Table A.8).

trust react more to the treatment of increased coverage than depositors in the control group.

6 Conclusion

During the financial crisis in 2008, the Belgian government intervened in the banking sector by increasing the explicit deposit insurance coverage from 20,000 to 100,000 euros per depositor and per bank and by implementing implicit deposit insurance arrangements. A threshold analysis that estimates sorting below the respective explicit insurance limits provides clear evidence that depositors are well aware of the changes in deposit insurance and react rationally to them. When deposit insurance coverage is limited to 20K, depositors tend to bunch just below the 20K coverage limit. Once coverage is increased to 100K, 100K bunching largely substitutes this 20K bunching. This 100K bunching behavior fades away during the period of implicit deposit guarantees when the bank is nationalized but returns in full force once the bank is re-privatized and the new 100k coverage limit applies to the bank's depositors.

Consequently, our difference-in-differences regression results show that these interventions were effective in restoring trust in banks during the crisis. Indeed, deposit growth resumes once implicit and explicit deposit insurance limits are raised. Depositors with smaller explicit insurance coverage before the reform withdraw more deposits in the run-up to the crisis. At the same time, these depositors – who experienced a larger increase in explicit deposit insurance coverage due to the reform – increase their deposit growth most in the post-reform period. The introduction of implicit deposit insurance due to the nationalization of the bank worked across the board in calming all depositors equally.

The effects of implicit and explicit deposit insurance 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 therefore subsequently respond less strongly to the increases in implicit and explicit deposit insurance coverage. The reverse is true for customers that receive their income in a bank account with another bank because they arguably have lower switching

costs. Thus, strong depositor-bank relationships help stabilize bank liquidity in times of crisis.

Political trust, measured using the local proportion of blank and invalid votes in a recent federal election, seems to boost the general effectiveness of government policies in crisis times such as the nationalization of banks and the increase in the explicit deposit insurance limit. This finding should caution also other governments against squandering political trust too easily, lest not to dent the effectiveness of two crucial stabilization policies in times of banking crises.

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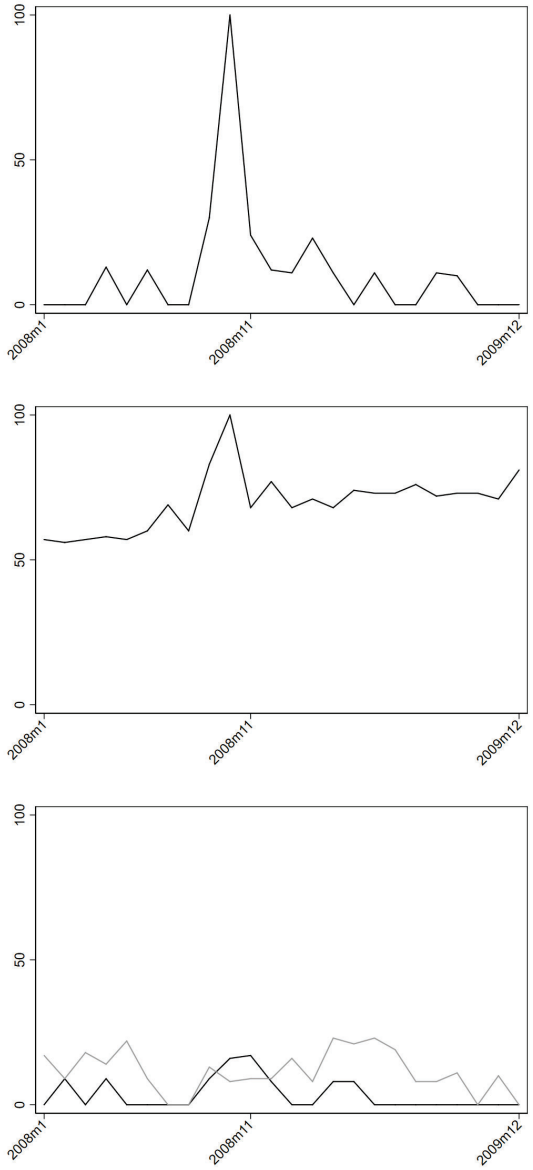
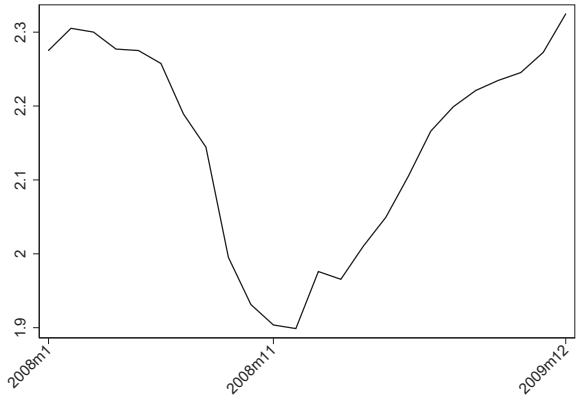
Figures

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



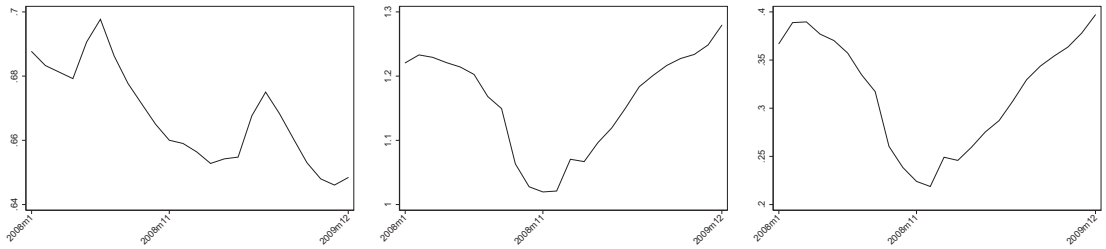
Notes: The first panel shows the search interest in the term 'depositogarantie' (which is the Dutch word for 'deposit insurance'). The second panel shows the search interest in the bank name (which we cannot reveal) as it appears in Dutch or French and the third panel shows the search interest in the 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, where 100 indicates the peak popularity for each term and 0 that there is not enough information. The sample in the first and third panel is restricted to Flanders and Brussels where Dutch is 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.

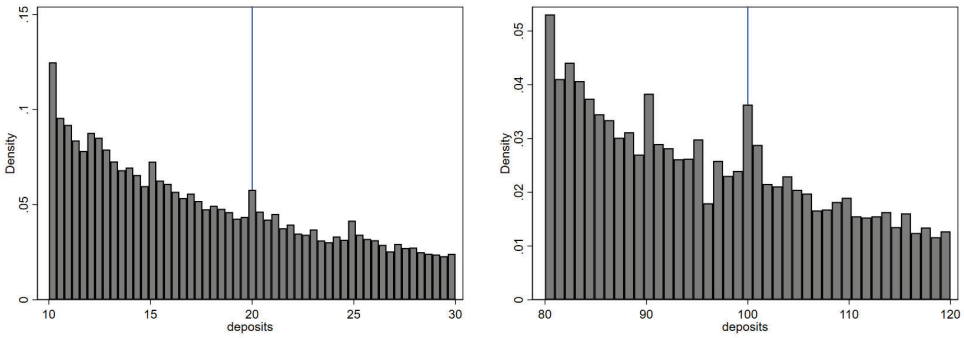
Figure 3. Total deposits over time by treatment group



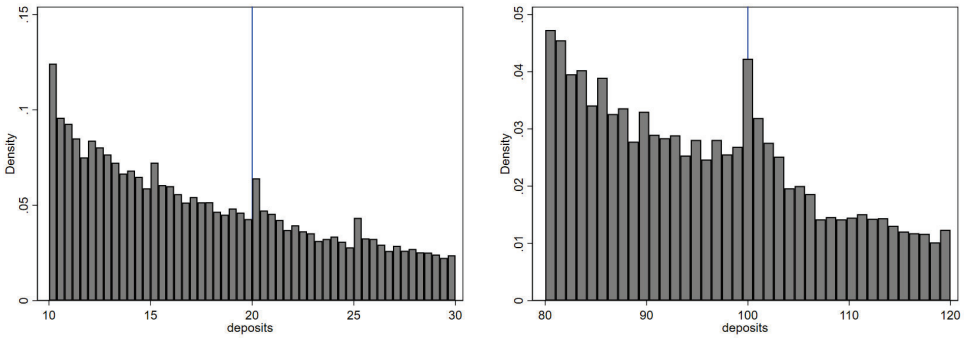
Note: From left to right, total deposits expressed in billions for depositors with deposits below 20K, deposits between 20K and 100K, deposits above 100K.

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

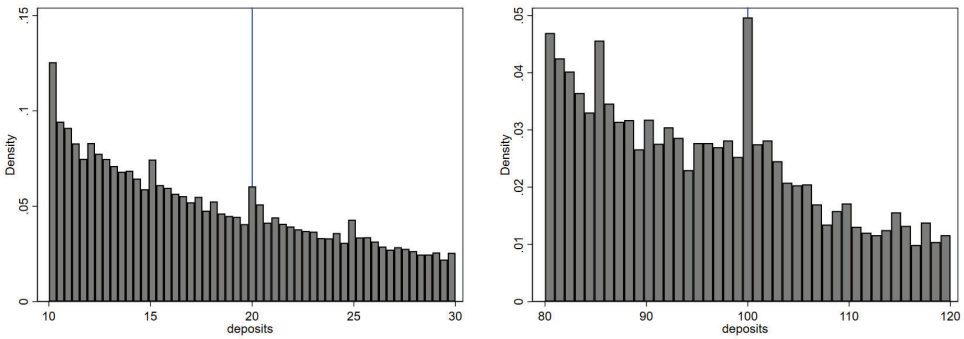
(a) Before increase of deposit insurance



(b) After increase of deposit insurance & bank nationalization

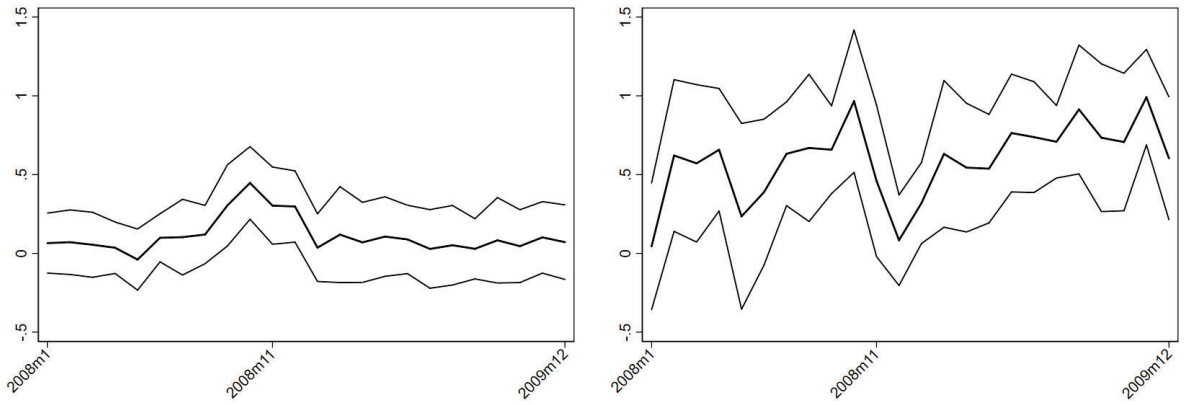


(c) After bank re-privatization



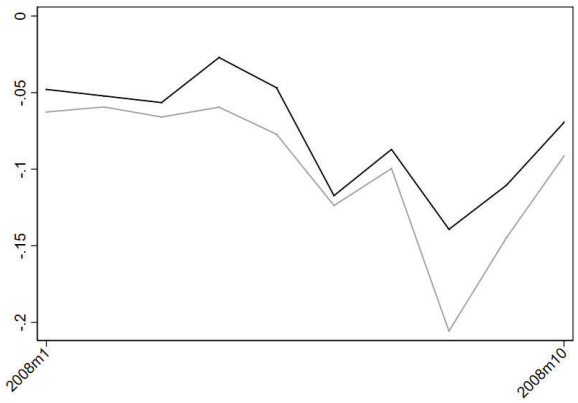
Notes: Distribution of deposits around 20K (left) and 100K (right). The first panel includes the pre-period, i.e. the period before the increase in implicit and explicit deposit insurance. The second panel includes the *implicit* period when the explicit deposit insurance limit is increased but the bank is state-owned enjoying implicit government guarantees. The third panel includes the *explicit* period when the bank is re-privatized and the increased explicit deposit insurance limit becomes effective.

Figure 5. Bunching below thresholds



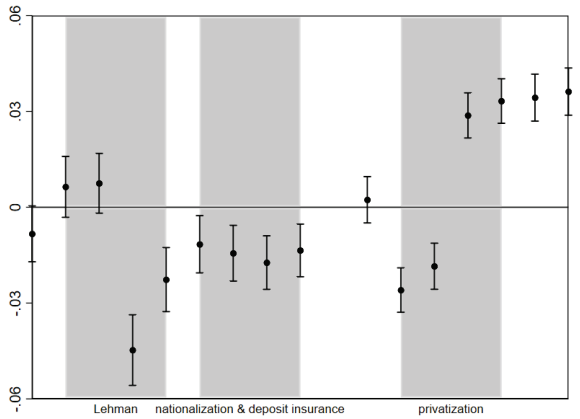
Note: Left (Right) figure shows bunching below 20K (100K).

Figure 6. Pretreatment trend



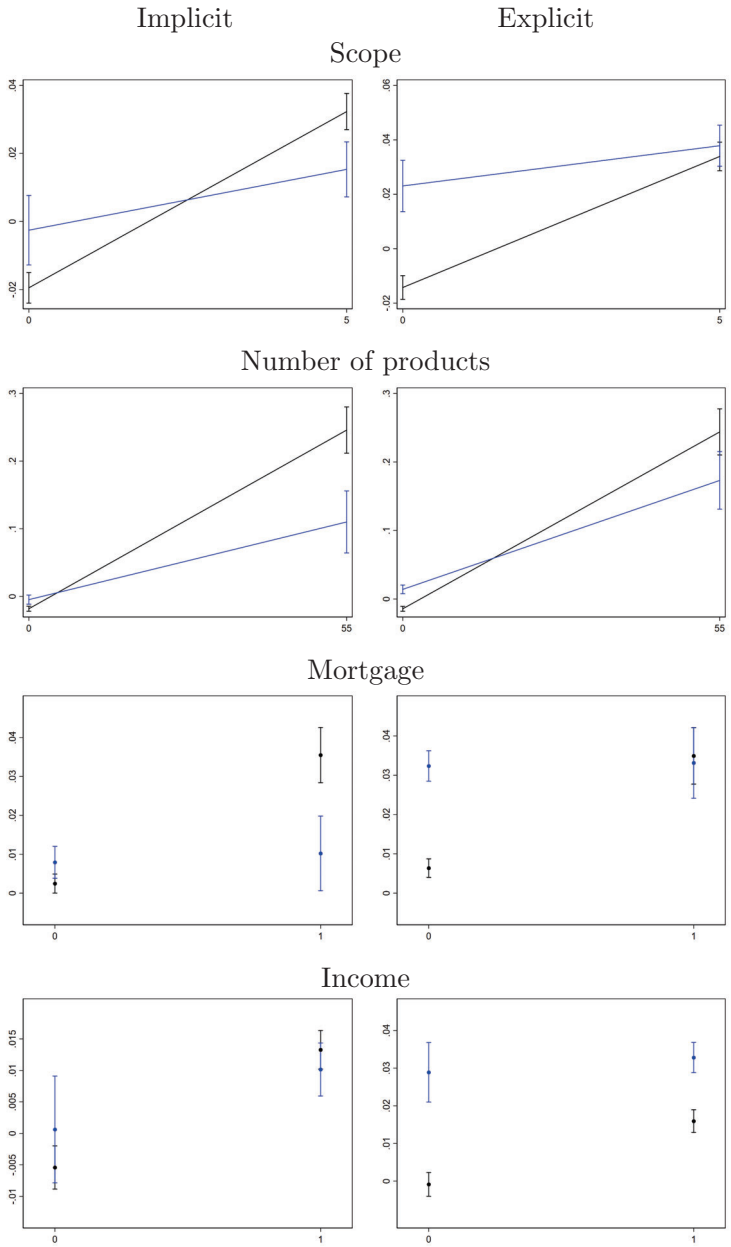
Notes: Average of the individuals' deposit growth rates for treatment (gray line) and control group (black line). The sample is restricted to deposits $\in$]10K,100K].

Figure 7. Treatment effect over time



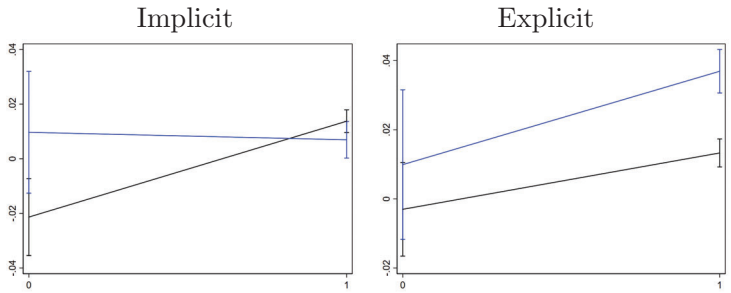
Notes: Treatment effect on deposit growth and 95% confidence interval. Gray shaded areas encompass the Lehman bankruptcy and the periods of increased implicit and explicit deposit insurance, respectively.

Figure 8. Predictive margins during implicit and explicit deposit insurance given relationship strength



Notes: The blue (black) lines depict the predictive margins for the treatment (control) groups given the respective measure of relationship strength. The panels are based on Table 7. The left (right) panels show the predictive margins during the periods of increased implicit and explicit deposit insurance, respectively.

Figure 9. Predictive margins during implicit and explicit deposit insurance given trust in government



Notes: The blue (black) lines depict the predictive margins for the treatment (control) groups 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 left (rigt) panel shows the predictive margins during the periods of increased implicit and explicit deposit insurance, respectively.

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					
implicit	2,155,164	0.288	0.453	0	1
explicit	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)	(2) Δ ln(deposits)	(3) Δ ln(deposits)
deposits ∈]20K,100K]	-0.277***	-0.276***	-0.278***
	(0.003)	(0.003)	(0.004)
implicit	0.007***	0.008***	0.001
	(0.001)	(0.001)	(0.002)
implicit*deposits ∈]20K,100K]	0.003	0.001	0.002
	(0.002)	(0.002)	(0.002)
explicit	0.009***	0.012***	-0.000
	(0.001)	(0.001)	(0.001)
explicit*deposits ∈]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 ∈]20K,100K]* is a dummy that equals 1 for deposits between 20K and 100K, *implicit* is a dummy equal to 1 for the period during which the deposit insurance was increased but the bank was nationalized and *explicit* is a dummy equal to 1 for the period following the bank re-privatization when the increased limit in the explicit depsoit insurance becomes effective. The regressions further control for individual fixed effects. The sample is restricted to deposits between 1K and 100K from six months preceding the deposit insurance limit increase until six months after the bank re-privatization. Robust standard errors in parentheses.
*** p<0.01, ** p<0.05, * p<0.1

Table 3. Exogeneity treatment status

	average deposits		average treatment		fixed treatment	
	(1)	(2)	(3)	(4)	(5)	(6)
	Δ ln(deposits)	Δ ln(deposits)	Δ ln(deposits)	Δ ln(deposits)	Δ ln(deposits)	Δ ln(deposits)
implicit	0.006***	0.004***	0.008***	0.005***	-0.004***	0.004**
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
implicit*deposits ∈]20K,100K]	0.019***	0.029***	0.013***	0.027***	0.011***	0.002
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
explicit	0.008***	0.006***	0.010***	0.007***	-0.001	0.005***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
explicit*deposits ∈]20K,100K]	0.036***	0.045***	0.030***	0.043***	0.008***	0.021***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Constant	0.104***	0.103***	0.104***	0.104***	0.091***	0.090***
	(0.015)	(0.015)	(0.015)	(0.015)	(0.015)	(0.015)
Controls	x	x	x	x	x	x
Number of observations	2,084,203	2,084,203	2,084,203	2,084,203	1,710,166	1,873,837
Number of customers	146,096	146,096	146,096	146,096	131,696	132,643

Notes: The dependent variable is the first-difference of the natural logarithm of deposits. In column 1, *deposits ∈]20K,100K]* equals 1 if the average deposits in the pre-period are between 20K and 100K. In column 2, average deposits are calculated by weighting the months in the pre-period at a decreasing rate. In column 3, *deposits ∈]20K,100K]* equals 1 if the average treatment status in the pre-period exceeds 0.5. In column 4, the average treatment status is calculated by weighting the months in the pre-period at a decreasing rate. In column 5, *deposits ∈]20K,100K]* is a dummy that equals 1 for deposits between 20K and 100K, and individuals with fixed treatment status throughout the sampling period are kept. In column 6, only individuals with fixed treatment status in the pre-period are considered. The treatment status is then extrapolated to the treatment periods. *deposits ∈]20K,100K]* is a dummy that equals 1 for deposits between 20K and 100K. *implicit* is a dummy equal to 1 for the period during which the deposit insurance was increased but the bank was nationalized and *explicit* is a dummy equal to 1 for the period following the bank re-privatization when the increased explicit deposit insurance limit becomes effective. The regressions further include control variables and individual fixed effects. The sample is restricted to deposits between 1K and 100K from six months preceding the deposit insurance limit increase until six months after the bank privatization. Robust standard errors in parentheses.
*** p<0.01, ** p<0.05, * p<0.1

Table 4. Abadie DiD

	(1) Δ ln(deposits)	(2) Δ ln(deposits)
implicit	0.027***	0.031***
	(0.006)	(0.006)
Number of observations	114,777	112,754
explicit	0.043***	0.048***
	(0.006)	(0.006)
Number of observations	114,777	112,754

Notes: The upper and lower panels provide the ATT of increased *implicit* and *explicit* deposit insurance, respectively. The baseline period in both panels is the pre-period, i.e. the period before the increase in implicit and explicit deposit insurance. Depositors with deposits between 20K and 100K form the treatment group. The dependent variable is the average deposit growth within a treatment period minus the average deposit growth in the baseline period. *implicit* is a dummy equal to 1 for the period during which the deposit insurance was increased but the bank was nationalized and *explicit* is a dummy equal to 1 for the period following the bank re-privatization when the increased explicit deposit insurance limit became effective. In column 1, all control variables are used to address non-random selection into treatment groups, and in column 2 the month fixed effects are additionally used. The sample is restricted to deposits between 1K and 100K from six months preceding the deposit insurance limit increase until six months after the bank re-privatization. Individuals who change 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 5. Robustness to omitted variable bias

treatment variable	(1) uncontrolled effect	(2) controlled effect	(3) identified set if δ=1	(4) identified set if δ=-1	(5) δ if β=0
deposits $\in$]20K,100K]	-0.277(0.003)[0.009]	-0.276(0.004)[0.01]	[-0.276;-0.27]	[-0.281;-0.276]	9.176
implicit*deposits $\in$]20K,100K]	0.003(0.002)[0.01]	0.001(0.002)[0.01]	[-0.01;0.001]	[0.001;0.011]	0.081
explicit*deposits $\in$]20K,100K]	0.024(0.002)[0.01]	0.021(0.002)[0.01]	[0.004;0.021]	[0.021;0.037]	1.216

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, *implicit* is a dummy equal to 1 for the period during which the deposit insurance was increased but the bank was nationalized and *explicit* is a dummy equal to 1 in the period following the bank re-privatization when the increased explicit deposit insurance limit became effective. The uncontrolled (controlled) effect comes from the regression without (with) control variables. The regressions further control for individual fixed effects. The sample is restricted to deposits between 1K and 100K from six months preceding the deposit insurance limit increase until six months after the bank re-privatization. Robust standard errors are in parentheses and R^2 in brackets. The identified set is obtained assuming either δ=1 or δ=-1 and R_{max}=0.013.

Table 6. Robustness tests: time window, deposit value and anticipation effects

	(1) Δ ln(deposits) 9 months	(2) Δ ln(deposits) 4 months	(3) Δ ln(deposits) deposits ∈]5K,100K]	(4) Δ ln(deposits) deposits ∈]10K,100K]	(5) Δ ln(deposits) anticipation
deposits ∈]20K,100K]	-0.219***	-0.333***	-0.197***	-0.146***	-0.276***
	(0.003)	(0.004)	(0.003)	(0.003)	(0.004)
implicit	0.001	0.011***	-0.004***	-0.009***	0.000
	(0.001)	(0.001)	(0.001)	(0.002)	(0.001)
implicit*deposits ∈]20K,100K]	0.000	-0.001	0.006***	0.008***	0.001
	(0.002)	(0.003)	(0.002)	(0.003)	(0.002)
explicit	0.006***	0.022***	0.008***	0.006***	0.008***
	(0.001)	(0.001)	(0.001)	(0.002)	(0.001)
explicit*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, *implicit* is a dummy equal to 1 for the period during which the deposit insurance was increased but the bank was nationalized and *explicit* is a dummy equal to 1 for the period following the bank re-privatization when the increased explicit deposit insurance limit became effective. The regressions further control for individual fixed effects. The sample is restricted to deposits between 1K and 100K from six months preceding the deposit insurance limit increase until six months after the bank re-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 re-privatization. The sample in column 3 (4) is restricted to deposits between 5K (10K) and 100K from six months preceding the deposit insurance limit increase until six months after the bank re-privatization. In column 5, the *implicit* period starts one month earlier to account for potential anticipation effects. Robust 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)
implicit	-0.018***	-0.017***	0.003***	-0.004**
	(0.002)	(0.002)	(0.001)	(0.002)
implicit*relationship	0.010***	0.005***	0.033***	0.018***
	(0.001)	(0.000)	(0.004)	(0.002)
implicit*deposits ∈]20K,100K]	0.017***	0.013***	0.005**	0.006
	(0.006)	(0.004)	(0.002)	(0.005)
implicit*deposits ∈]20K,100K]*relationship	-0.007***	-0.003***	-0.031***	-0.009*
	(0.002)	(0.001)	(0.006)	(0.005)
explicit	-0.012***	-0.012***	0.008***	0.001
	(0.002)	(0.002)	(0.001)	(0.002)
explicit*relationship	0.009***	0.005***	0.028***	0.016***
	(0.001)	(0.000)	(0.004)	(0.002)
explicit*deposits ∈]20K,100K]	0.037***	0.028***	0.025***	0.029***
	(0.005)	(0.004)	(0.002)	(0.004)
explicit*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, *implicit* is a dummy equal to 1 for the period during which the deposit insurance was increased but the bank was nationalized and *explicit* is a dummy equal to 1 for the period following the bank re-privatization when the increased explicit deposit insurance limit became effective, *scope* is the number of domains from which the depositor has a bank product, *mortgage now* is a dummy equal to 1 in those months in which the depositor has a mortgage, *income* is a dummy equal to 1 if the depositor receives regular income into the account, and *nbrproducts* is the number of products the depositor has. The regressions further control for individual fixed effects. The sample is restricted to deposits between 1K and 100K six months preceding the deposit insurance limit increase until six months after the bank re-privatization. Robust standard errors in parentheses.
*** p<0.01, ** p<0.05, * p<0.1

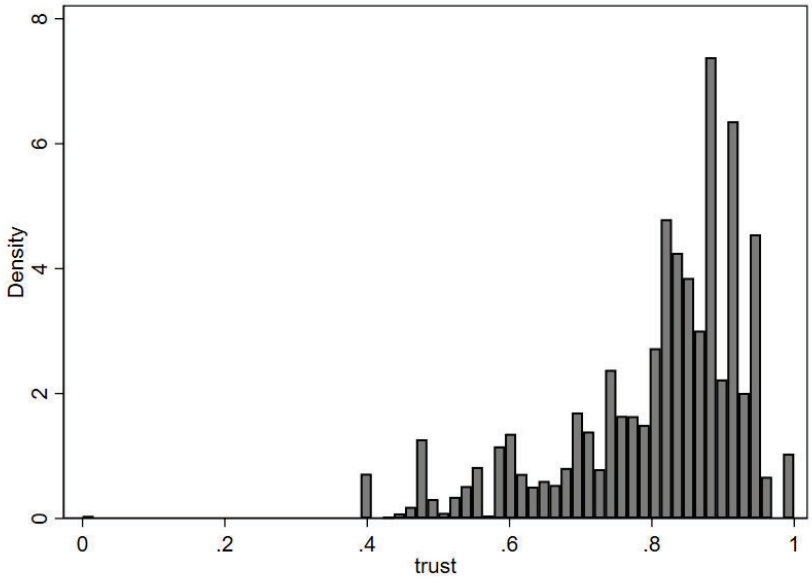
Table 8. Bank nationalization and trust in government

	(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)
implicit	-0.013**	-0.011*	-0.022***	-0.020***
	(0.006)	(0.006)	(0.007)	(0.007)
implicit*trust	0.030***	0.029***	0.036***	0.035***
	(0.008)	(0.008)	(0.009)	(0.009)
explicit	-0.003	0.001	-0.005	-0.001
	(0.006)	(0.006)	(0.007)	(0.007)
explicit*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)
implicit*deposits ∈]20K,100K]			0.031**	0.031**
			(0.013)	(0.013)
implicit*deposits ∈]20K,100K]*trust			-0.036**	-0.038**
			(0.017)	(0.017)
explicit*deposits ∈]20K,100K]			0.014	0.013
			(0.013)	(0.013)
explicit*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, *implicit* is a dummy equal to 1 for the period during which the deposit insurance was increased but the bank was nationalized, *explicit* is a dummy equal to 1 for the period following the bank re-privatization when the increased explicit deposit insurance limit became effective, *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 from six months preceding the deposit increase until six months after the bank re-privatization. Robust standard errors in parentheses.
*** p<0.01, ** p<0.05, * p<0.1

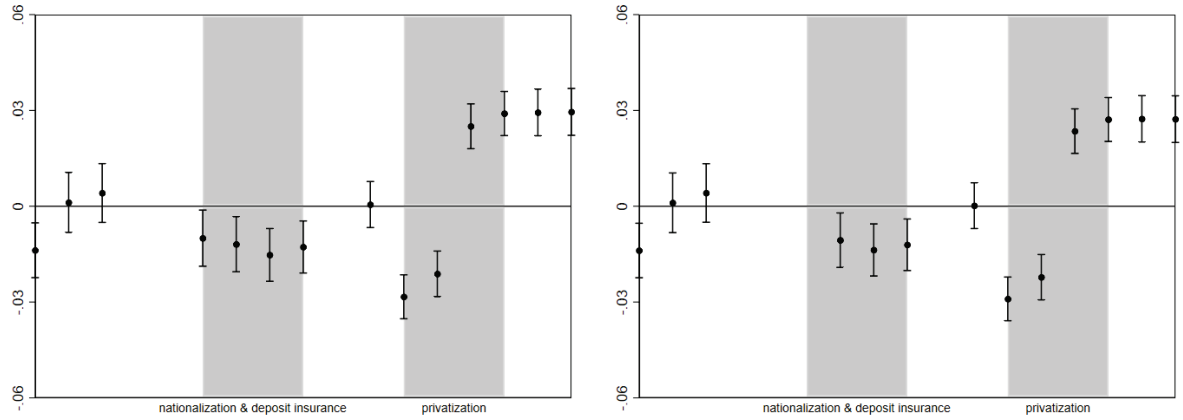
Appendix

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.

Figure A.2. Treatment effect over time, without Lehman



Notes: The sampling period starts and ends in the same month as in the baseline analysis, yet we drop the Lehman period. In the left (right) panel, we drop two (three) months around this event in September 2008, respectively.

Table A.1. Variable description

variable	description
dependent variable	
Δ ln(deposits)	deposit growth rate
main variables	
implicit	dummy that equals 1 for the period during which the deposit insurance was increased and the bank was nationalized
explicit	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. Baseline without Lehman

	(1) Δ ln(deposits) 2 months	(2) Δ ln(deposits) 3 months	(3) Δ ln(deposits) 2 months	(4) Δ ln(deposits) 3 months	(5) Δ ln(deposits) 2 months	(6) Δ ln(deposits) 3 months
deposits ∈]20K,100K]	-0.247***	-0.245***	-0.246***	-0.244***	-0.247***	-0.243***
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
implicit	-0.008***	-0.008***	-0.008***	-0.008***	-0.009***	-0.007***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)	(0.003)
implicit*deposits ∈]20K,100K]	-0.004	-0.005*	-0.006**	-0.007**	-0.005*	-0.006**
	(0.002)	(0.003)	(0.002)	(0.003)	(0.002)	(0.003)
explicit	-0.011***	-0.014***	-0.009***	-0.013***	-0.015***	-0.011***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)	(0.002)
explicit*deposits ∈]20K,100K]	0.013***	0.010***	0.010***	0.007***	0.013***	0.009***
	(0.002)	(0.003)	(0.002)	(0.003)	(0.002)	(0.003)
Constant	0.007***	0.010***	0.162***	0.167***	0.121***	0.125***
	(0.001)	(0.001)	(0.015)	(0.016)	(0.015)	(0.016)
Controls			x	x	x	x
Month FE					x	x
Number of observations	1,900,270	1,776,155	1,899,661	1,775,587	1,899,661	1,775,587
Number of customers	160,091	159,842	160,049	159,800	160,049	159,800

Note: 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, *implicit* is a dummy equal to 1 for the period during which the deposit insurance was increased but the bank was nationalized and *explicit* is a dummy equal to 1 for the period following the bank re-privatization when the increased explicit deposit insurance limit became effective. The regressions further control for individual fixed effects. The sample is restricted to deposits between 1K and 100K from six months preceding the deposit insurance limit increase until six months after the bank re-privatization. In addition, in the uneven (even) columns, we drop two (three) months around the Lehman event. 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)
implicit	0.007***	0.008***
	(0.001)	(0.001)
implicit*deposits ∈]20K,40K]	-0.003	-0.005*
	(0.003)	(0.003)
implicit*deposits ∈]40K,60K]	-0.010**	-0.012***
	(0.005)	(0.005)
implicit*deposits ∈]60K,80K]	0.006	0.004
	(0.007)	(0.007)
implicit*deposits ∈]80K,100K]	-0.008	-0.011
	(0.012)	(0.012)
explicit	0.010***	0.012***
	(0.001)	(0.001)
explicit*deposits ∈]20K,40K]	0.020***	0.017***
	(0.002)	(0.002)
explicit*deposits ∈]40K,60K]	0.025***	0.021***
	(0.004)	(0.004)
explicit*deposits ∈]60K,80K]	0.035***	0.031***
	(0.007)	(0.007)
explicit*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, *Deposits ∈]40K,60K]* is a dummy that equals 1 for deposits between 40K and 60K, *Deposits ∈]60K,80K]* is a dummy that equals 1 for deposits between 60K and 80K, *Deposits ∈]80K,100K]* is a dummy that equals 1 for deposits between 80K and 100K, *implicit* is a dummy equal to 1 for the period during which the deposit insurance was increased but the bank was nationalized and *explicit* is a dummy equal to 1 for the period following the bank re-privatization when the increased explicit deposit insurance limit became effective. The regressions further control for individual fixed effects. The sample is restricted to deposits between 1K and 100K from six months preceding the deposit insurance limit increase until six months after the bank re-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)	(2) Δ ln(deposits)
deposits ∈]20K,100K]	-0.282***	-0.281***
	(0.003)	(0.003)
deposits ∈]100K,200K]	-0.547***	-0.547***
	(0.013)	(0.013)
implicit	0.007***	0.008***
	(0.001)	(0.001)
implicit*deposits ∈]20K,100K]	0.002	0.000
	(0.002)	(0.002)
implicit*deposits ∈]100K,200K]	0.010	0.007
	(0.011)	(0.011)
explicit	0.010***	0.012***
	(0.001)	(0.001)
explicit*deposits ∈]20K,100K]	0.025***	0.022***
	(0.002)	(0.002)
explicit*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, *Deposits ∈]100K,200K]* is a dummy that equals 1 for deposits between 100K and 200K, *implicit* is a dummy equal to 1 for the period during which the deposit insurance limit was increased, but the bank was nationalized and *explicit* is a dummy equal to 1 for the period following the bank re-privatization when the increase in the explicit deposit insurance limit became effective. The regressions further control for individual fixed effects. The sample is restricted to deposits between 1K and 100K from six months preceding the deposit insurance limit increase until six months after the bank re-privatization. Robust standard errors in parentheses.
*** p<0.01, ** p<0.05, * p<0.1

Table A.5. Exogeneity treatment status and donut

	average deposits		average treatment		fixed treatment	
	(1)	(2)	(3)	(4)	(5)	(6)
	Δ ln(deposits)	Δ ln(deposits)	Δ ln(deposits)	Δ ln(deposits)	Δ ln(deposits)	Δ ln(deposits)
implicit	0.003**	0.001	0.006***	0.003**	-0.004***	0.003**
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
implicit*deposits ∈]20K,100K]	0.033***	0.043***	0.017***	0.032***	0.007***	0.001
	(0.003)	(0.003)	(0.003)	(0.003)	(0.002)	(0.003)
explicit	0.007***	0.006***	0.010***	0.008***	-0.001	0.008***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
explicit*deposits ∈]20K,100K]	0.049***	0.058***	0.033***	0.046***	0.007***	0.018***
	(0.003)	(0.003)	(0.003)	(0.003)	(0.002)	(0.003)
Constant	0.120***	0.119***	0.120***	0.120***	0.098***	0.100***
	(0.019)	(0.019)	(0.019)	(0.019)	(0.018)	(0.019)
Number of observations	1,476,167	1,476,167	1,476,167	1,476,167	1,348,926	1,386,449
Number of customers	127,345	127,345	127,345	127,345	117,980	116,515

Notes: The Table excludes deposits between 10,000 and 30,000 euros. The dependent variable is the first-difference of the natural logarithm of deposits. In column 1, *deposits ∈]20K,100K]* equals 1 if average deposits in the pre-period are between 20K and 100K. In column 2, average deposits is calculated by weighting the months in the pre-period at a decreasing rate. In column 3, *deposits ∈]20K,100K]* equals 1 if the average treatment status in the pre-period exceeds 0.5. In column 4, the average treatment status is calculated by weighting the months in the pre-period at a decreasing rate. In column 5, *deposits ∈]20K,100K]* is a dummy that equals 1 for deposits between 20K and 100K, and individuals with fixed treatment status throughout the sampling period are kept. In column 6, only individuals with fixed treatment status in the pre-period are considered. The treatment status is then extrapolated to the treatment periods. *deposits ∈]20K,100K]* is a dummy that equals 1 for deposits between 20K and 100K. *Implicit* is a dummy equal to 1 for the period during which the deposit insurance was increased but the bank was nationalized and *explicit* is a dummy equal to 1 for the period following the bank re-privatization when the increased explicit deposit insurance limit became effective. The regressions further include control variables and individual fixed effects. The sample is restricted to deposits between 1K and 100K from six months preceding the deposit insurance limit increase until six months after the bank re-privatization. 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)
implicit	0.008***	0.009***	0.008***	0.009***
	(0.001)	(0.001)	(0.001)	(0.001)
implicit*deposits ∈]20K,100K]	0.002	0.000	0.003	0.001
	(0.002)	(0.002)	(0.002)	(0.002)
explicit	0.011***	0.013***	0.011***	0.014***
	(0.001)	(0.001)	(0.001)	(0.001)
explicit*deposits ∈]20K,100K]	0.023***	0.020***	0.024***	0.020***
	(0.002)	(0.002)	(0.002)	(0.002)
Constant	-0.009***	0.129***	-0.009***	0.236***
	(0.001)	(0.020)	(0.001)	(0.043)
Controls		x		x
Number of observations	2,039,053	2,038,456	1,993,465	1,992,796
Number of customers	152,396	152,360	149,202	149,161

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, *implicit* is a dummy equal to 1 for the period during which the deposit insurance was increased but the bank was nationalized and *explicit* is a dummy equal to 1 for the period following the bank re-privatization when the increased explicit deposit insurance limitbecame effective. The regressions further control for individual fixed effects. The sample is restricted to deposits between 1K and 100K from six months preceding the deposit insurance limit increase until six months after the bank re-privatization. Standard errors in parentheses are clustered at postal code level in the first two columns and at substreet code level in the last tow columns.
*** p<0.01, ** p<0.05, * p<0.1

Table A.7. Relationship strength, without Lehman

	scope		nbrproducts		mortgage now		income	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	2 months	3 months	2 months	3 months	2 months	3 months	2 months	3 months
deposits ∈]20K,100K]	-0.322***	-0.323***	-0.235***	-0.236***	-0.254***	-0.253***	-0.289***	-0.291***
	(0.010)	(0.011)	(0.007)	(0.008)	(0.004)	(0.004)	(0.008)	(0.009)
deposits ∈]20K,100K]*relationship	0.025***	0.026***	-0.001	-0.001	0.042***	0.047***	0.054***	0.060***
	(0.003)	(0.003)	(0.001)	(0.001)	(0.009)	(0.009)	(0.009)	(0.009)
implicit	-0.022***	-0.023***	-0.024***	-0.024***	-0.011***	-0.011***	-0.012***	-0.013***
	(0.002)	(0.003)	(0.002)	(0.002)	(0.001)	(0.002)	(0.002)	(0.002)
implicit*relationship	0.006***	0.006***	0.003***	0.003***	0.021***	0.022***	0.007**	0.008***
	(0.001)	(0.001)	(0.000)	(0.000)	(0.004)	(0.005)	(0.003)	(0.003)
implicit*deposits ∈]20K,100K]	0.008	0.009	0.005	0.005	-0.002	-0.003	-0.006	-0.003
	(0.006)	(0.007)	(0.004)	(0.005)	(0.003)	(0.003)	(0.005)	(0.006)
implicit*deposits ∈]20K,100K]*relationship	-0.006***	-0.006***	-0.002***	-0.002***	-0.024***	-0.027***	-0.001	-0.006
	(0.002)	(0.002)	(0.001)	(0.001)	(0.007)	(0.008)	(0.006)	(0.007)
explicit	-0.020***	-0.023***	-0.024***	-0.028***	-0.011***	-0.015***	-0.011***	-0.014***
	(0.002)	(0.003)	(0.002)	(0.002)	(0.001)	(0.001)	(0.002)	(0.002)
explicit*relationship	0.004***	0.004***	0.003***	0.003***	0.016***	0.016***	0.003	0.003
	(0.001)	(0.001)	(0.000)	(0.000)	(0.004)	(0.005)	(0.002)	(0.003)
explicit*deposits ∈]20K,100K]	0.025***	0.024***	0.017***	0.016***	0.014***	0.011***	0.011**	0.010*
	(0.006)	(0.007)	(0.004)	(0.005)	(0.002)	(0.003)	(0.005)	(0.005)
explicit*deposits ∈]20K,100K]*relationship	-0.006***	-0.007***	-0.001**	-0.002**	-0.021***	-0.025***	-0.001	-0.004
	(0.002)	(0.002)	(0.001)	(0.001)	(0.007)	(0.008)	(0.006)	(0.006)
relationship	-0.050***	-0.052***	0.004***	0.005***	0.013	0.010	0.007	0.011
	(0.002)	(0.002)	(0.001)	(0.001)	(0.011)	(0.011)	(0.006)	(0.007)
Constant	0.177***	0.183***	0.164***	0.171***	0.162***	0.168***	0.151***	0.152***
	(0.015)	(0.016)	(0.015)	(0.016)	(0.015)	(0.016)	(0.015)	(0.015)
Controls	x	x	x	x	x	x	x	x
Number of observations	1,899,661	1,775,587	1,899,661	1,775,587	1,899,661	1,775,587	1,899,661	1,775,587
Number of customers	160,049	159,800	160,049	159,800	160,049	159,800	160,049	159,800

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, *implicit* is a dummy equal to 1 for the period during which the deposit insurance was increased but the bank was nationalized and *explicit* is a dummy equal to 1 for the period following the bank re-privatization when the increased explicit deposit insurance limit became effective, *scope* is the number of domains from which the depositor has a bank product, *mortgage now* is a dummy equal to 1 in those months in which the depositor has a mortgage, *income* is a dummy equal to 1 if the depositor receives regular income into the account, and *nbrproducts* is the number of products the depositor has. The regressions further control for individual fixed effects. The sample is restricted to deposits between 1K and 100K six months preceding the deposit insurance limit increase until six months after the bank re-privatization. In addition, in the uneven (even) columns we drop two (three) months around the Lehman event. Robust standard errors in parentheses.

*** p<0.01, ** p<0.05, * p<0.1

Table A.8. Bank nationalization and trust in government, without Lehman

	(1) 2 months	(2) 3 months	(3) 2 months	(4) 3 months	(5) 2 months	(6) 3 months	(7) 2 months	(8) 3 months
trust	0.087	0.076	0.097	0.088	0.107*	0.104	0.116*	0.116*
	(0.063)	(0.065)	(0.063)	(0.066)	(0.062)	(0.065)	(0.063)	(0.066)
implicit	-0.027***	-0.030***	-0.026***	-0.029***	-0.037***	-0.037***	-0.036***	-0.037***
	(0.007)	(0.007)	(0.007)	(0.007)	(0.008)	(0.009)	(0.008)	(0.009)
implicit*trust	0.027***	0.033***	0.027***	0.033***	0.035***	0.037***	0.035***	0.036***
	(0.008)	(0.009)	(0.008)	(0.009)	(0.010)	(0.011)	(0.010)	(0.011)
explicit	-0.023***	-0.031***	-0.020***	-0.028***	-0.026***	-0.031***	-0.023***	-0.028***
	(0.006)	(0.007)	(0.006)	(0.007)	(0.007)	(0.008)	(0.008)	(0.008)
explicit*trust	0.017**	0.025***	0.016**	0.023***	0.019**	0.022**	0.017*	0.020*
	(0.008)	(0.009)	(0.008)	(0.009)	(0.009)	(0.010)	(0.009)	(0.010)
deposits ∈]20K,100K]					-0.218***	-0.191***	-0.217***	-0.190***
					(0.024)	(0.024)	(0.024)	(0.024)
deposits ∈]20K,100K]*trust					-0.036	-0.066**	-0.036	-0.066**
					(0.029)	(0.030)	(0.029)	(0.030)
implicit*deposits ∈]20K,100K]					0.033**	0.021	0.032**	0.020
					(0.015)	(0.016)	(0.015)	(0.016)
implicit*deposits ∈]20K,100K]*trust					-0.046**	-0.032	-0.048***	-0.034*
					(0.018)	(0.020)	(0.018)	(0.020)
explicit*deposits ∈]20K,100K]					0.015	0.000	0.013	-0.001
					(0.014)	(0.015)	(0.014)	(0.015)
explicit*deposits ∈]20K,100K]*trust					-0.003	0.011	-0.004	0.010
					(0.017)	(0.019)	(0.017)	(0.019)
Constant	-0.120**	-0.110**	0.030	0.041	-0.079	-0.074	0.065	0.069
	(0.050)	(0.052)	(0.052)	(0.053)	(0.050)	(0.052)	(0.052)	(0.053)
Controls			x	x			x	x
Number of observations	1,879,202	1,756,459	1,878,673	1,755,966	1,879,202	1,756,459	1,878,673	1,755,966
Number of customers	158,394	158,145	158,358	158,109	158,394	158,145	158,358	158,109

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, *implicit* is a dummy equal to 1 for the period during which the deposit insurance was increased but the bank was nationalized, *explicit* is a dummy equal to 1 for the period following the bank re-privatization when the increased explicit deposit insurance limit becomes effective, *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 from six months preceding the deposit increase until six months after the bank re-privatization. In addition, in the uneven (even) columns we drop two (three) months around the Lehman event. Robust standard errors in parentheses.
*** p<0.01, ** p<0.05, * p<0.1