Deposit Insurance and Depositor Behavior: Evidence from Colombia*

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Abstract

We exploit a large and unexpected increase in the Colombian insurance threshold to investigate how depositors respond to higher deposit insurance. Monthly depositor-level records from a major bank show that the level and growth rate of deposits rise with higher coverage. Individuals who were fully and nearly-fully insured before the policy drive this increment. A survey of bank customers indicates that higher deposits were replenished by lowering cash and other assets. We estimate an elasticity of deposit growth to deposit insurance of 0.4%, and find a similar figure in the United States by leveraging the 2008 increase in deposit insurance.

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1 Introduction

Financial regulation is central in promoting the resilience of financial institutions, avoiding bank failures and setting the appropriate incentives for risk-taking. Among the various tools to regulate financial institutions, deposit insurance is one of the most prominent (Diamond and Dybvig, 1983; Diamond and Rajan, 2000; Repullo, 2000; Goldstein and Pauzner, 2005; Bruche and Suarez, 2010; Davila and Goldstein, 2020) and has been extensively used in history, around the world and during the 2008 financial crisis (Calomiris and Kahn, 1991; Demirgüç-Kunt, Kane, and Laeven, 2015; Martin, Puri, and Ufier, 2018; Calomiris and Jaremski, 2019; Iyer, Lærkholm Jensen, Johannesen, and Sheridan, 2019).

Despite notable theoretical work in this area, there is a limited number of empirical studies exploring the behavioral consequences of deposit insurance on depositors for two main reasons. First, accessing depositor-level information is difficult, as financial institutions are not obliged to disclose such data by regulators. Second, most changes in deposit insurance take place during periods of financial turbulence, and as a result, separating the effect of deposit insurance from concurrent economic shocks is challenging. For this reason, there is a lack of stylized facts on whether deposit insurance matters for depositors and, in particular, on how changing the availability of deposit insurance affects the behavior of insured individuals.

In this paper, we study the effect of deposit insurance on depositors exploiting a large and unexpected policy change. On the 18th of April 2017, the Colombian deposit guarantee fund (FOGAFIN - Fondo de Garantías de Instituciones Financieras) increased the insurance for individual deposits from 20 million Colombian Pesos (COP) (approximately 6,780 USD) to 50 million COP (around 16,950 USD). The change was unexpected and the announcement to the public took place only one day after its implementation. Contrary to most changes in deposit insurance that are deliberated during financial crises, this increase aimed to update the real value of the insurance threshold, which had not changed since the year 2000.[1] We investigate the effect of this policy change using monthly deposits data from a large Colombian bank, covering more than 50 thousand individuals between 2016 and 2018. Additionally, we present

[1]Refer to the approval document of the board of FOGAFIN, https://normativa.colpensiones.gov.co/colpens/docs/ pdf/resolucion _fogafin_0002 _2017.pdf, and the newspaper La Republica, April 20th, 2017, https://www.larepublica.co/finanzas/ampliacion-del-seguro-de-depositos-de-fogafin-fue-solo-una-actualizacion-castano-2498566

results from a survey of the bank's customers to uncover which assets were liquidated in the aftermath of the policy change.

Three unique features characterize this policy. First, it entails a large change in the insurance threshold, which more than doubles for each depositor and financial institution. This offers an opportunity to study the effect of a large increment in insurance. Second, it involves an unexpected change since the implementation preceded the announcement. This allows us to overcome some of the common challenges in studying such events, like anticipation and adaptation. Third, this policy change is unrelated to the health of the Colombian banking system. This allows us to separate the effect of deposit insurance from other factors that usually take place in periods of financial distress when changes in deposit insurance are common.

Our identification strategy exploits the increase in the deposit insurance threshold from 20 to 50 million COP that took place in April 2017. This time-series variation is combined with a measure of cross-sectional exposure at the depositor level. We assign individuals to one of four bins according to their average monthly deposits before the policy change. Bin 1 includes depositors with average deposits between 5 and 20 million COP, and who are therefore fully insured. Bin 2 includes individuals with 20 to 50 million COP and who are partially insured before the change and completely insured after. Individuals in Bin 3 have pre-policy deposits between 50 and 75 million COP and those in Bin 4 have deposits above 75 million, and are therefore never fully insured. Using a Difference-in-Difference (DiD) design we study the differential response of individuals in each bin to the increase in deposit insurance.

Our results indicate that deposit insurance has a causal effect on deposits. The following are our main findings. First, a descriptive analysis shows that depositors were bunching below the 20 million COP insurance threshold before the policy change. In particular, we observe that an extensive mass of individuals held deposits between 15 and 20 Million COP. Second, an event-study specification indicates that the trends of deposits across Bins 1, 2, 3, and 4 are parallel before April 2017. However, in the following 12 months deposits expand significantly more for individuals who were completely insured before the policy change (Bin 1) and for those who were nearly fully-insured and become fully insured after April 2017 (Bin 2). Relative to individuals in Bin 3, the response of individuals in Bin 1 corresponds to an increase of 7% in the level of deposits and to 1.5% in the rate of deposit growth. Individuals in Bin 2 increase their level of deposits by 5.3% and deposit growth by 0.4%. Those in Bin 4 do not show any change in the level or growth rate of deposits. These results indicate that individuals below the old policy threshold respond with a higher increase in deposits.

We present three additional sets of results that help us illustrate how deposit insurance shapes households' financial decisions. First, in the aftermath of the policy change, we observe a 1.8% expansion in the share of deposits placed in savings and fixed-term deposits for depositors in Bin 1 and no changes in the volatility of deposits.[2] Second, we estimate the elasticity of deposit growth to deposit insurance by defining a depositor-specific measure of increased insurance coverage, which is equal to the ratio between the change in insured amounts (30 million COP) and average monthly deposits before May 2017. Our estimated elasticity corresponds to 0.4%, implying that a 1% increase in the share of insured deposits translates into a 0.4% higher deposit growth. Third, the results of the survey indicate that an important fraction of clients know about FOGAFIN and the policy change, and that individual asset holding changed in response to the increase in deposits with a notable decline in cash.

It is important to highlight that deposit insurance matters for depositors in Colombia. As described by the International Monetary Fund (2016), FOGAFIN functions according to the best-practices of deposit guarantee funds, repaying insured depositors within two days from intervention.[3] While our results pertain to a specific country and deposit insurance policy, we believe that they are novel since they quantify the magnitude of a theoretical mechanism that remained hard to measure: how much insured deposits respond to changes in deposit insurance. To benchmark our results, we use more aggregated data from the United States. In particular, we estimate the elasticity of deposit growth to insurance using bank-level data around 2008, when the insurance threshold increased from 100,000 to 250,000 USD. Despite the limitations of this comparative exercise, we verify that deposit growth was more intense among banks with a higher share of insured deposits over total deposits. Our estimated elasticity in the US is very similar to the Colombian parameter.

We offer a series of alternative specifications to study the mechanisms behind our results and to verify their robustness. We investigate whether the effect of insurance on deposit behavior is

[2]We define deposit volatility in month t as the standard deviation of deposit growth during the previous 6 months.

[3]Refer to https://www.imf.org/external/pubs/ft/scr/2016/cr1699.pdf. Furthermore, this fund is actively engaged in payments. For example, FOGAFIN disbursed more than 36 billion COP (approximately 12 million USD) in 2015 following the liquidation of an insured financial institution.

driven by more sophisticated individuals.[4] We find that sophisticated individuals in Bin 1 are indeed more responsive, but this does not change the baseline findings on the average response. In addition to this, we show that our results of the effect of deposit insurance are robust to using a shorter time period around April 2017 (of one year instead of two), to the inclusion of branch-month-year fixed effects (that account for branch time-varying shocks), and to using a continuous measure of exposure to the policy change. We also show that the result on depositor bunching below 20 million COP prior to the policy change is robust across unsophisticated and sophisticated depositors. Furthermore, we show that the stock prices of Colombian banks evolve on parallel trends compared to other companies (insurances, utilities, etc.) before the policy change, but that they increase differentially after the deposit insurance reform.

Three pieces of evidence shade light on the mechanisms through which deposit insurance provides depositors with "enhanced safety", which stimulates deposit holding. First, three empirical exercises discard the possibility that our results are only driven by a "reshuffling" of resources across bank accounts. Second, we observe that individuals living in departments with higher trust in the banking system present a higher increase in deposits. Both of these findings are in line with the results of Bachas et al. (2016) and the role of financial institutions in promoting savings. Finally, we show that the interest rates of deposits were declining prior to the policy change, which suggests that our results are not driven by an interest rate mechanism.

This paper contributes to the literature on deposit insurance, which received a key stimulus from the seminal work of Diamond and Dybvig (1983) showing how deposit insurance can enhance the stability of financial intermediaries. In recent years, the theoretical literature has explored the role of deposits in creating liquidity and their relation to insurance (Diamond and Rajan, 2000), the relation between central bank, deposit insurance, and liquidity shortfalls (Repullo, 2000), the fragility of banks to bank-runs given by the nature of demand deposits (Goldstein and Pauzner 2005), the relation between deposit insurance and money market freezes (Bruche and Suarez, 2010) and the conditions of an optimal deposit insurance coverage (Davila and Goldstein, 2020). On the negative side, deposit insurance may induce moral hazard, as it can relax depositor monitoring, leading to greater risk-taking by banks and subsequent default risk (Calomiris and Kahn, 1991; Calomiris and Jaremski, 2019).

[4]Following Iyer and Puri (2012) we define sophisticated depositors as those holding another financial product beyond deposits with the bank, in particular a loan.

Regarding the empirical literature, several authors have shown that deposit insurance can cause distortions, trigger banking crises and increase risk seeking-behaviors (Bryant, 1980; Demirgüç-Kunt and Detragiache, 2002; Cooper and Ross, 2002; Allen, Carletti, Goldstein, and Leonello, 2018). Four recent papers study how different aspects of deposits respond to insurance and outside shocks, with findings closely related to ours. Iyer et al. (2019) exploit deposit account data in Denmark to estimate the effects of a 50% drop in the deposit insurance threshold in October 2010. They show that this generated a large decline in uninsured deposits compared to insured deposits and verify that the intensity of this run correlates with banks' systemic importance. Gatti and Oliviero (2019) show that deposit insurance lowered deposit rates in the European Union following the increase of the insurance threshold to 100,000 Euros in 2009. Albertazzi et al. (2020) find evidence that insured depositors take into account bank riskiness when making financial decisions and Slutzky and Chavaz (2020) show that depositors react to adverse shocks even if they lie below the insurance coverage limit. Our results are in line with these findings, contributing with granular data and a unique empirical strategy.

Another strand of the literature has investigated the response of depositors to bank runs. For example, Iyer and Puri (2012) find that bank-depositor relations and social networks affect the extent of the run. Iyer et al. (2016) find that uninsured depositors run in the presence of a large shock if they have loan linkages, a high volume of transactions, and present some specific characteristics (are well educated, engaged in business, financially literate, or hold important assets). Egan et al. (2017) study whether a bank's financial distress affects deposit demand through a structural model in the United States and find that the demand of uninsured deposits declines with financial distress. Martin et al. (2018) show that when uninsured depositors leave the bank under stress, they typically withdraw a large share even of insured funds, creating additional distortions. Recently, Artavanis et al. (2019) introduce a new approach to identify whether deposit withdrawals are due to fundamental uncertainty or to expectations on depositor behavior. Our paper offers an innovative contribution to this literature by showing how insured depositors respond to an increase in deposit insurance in the absence of bank runs or financial distress.

The rest of the paper is organized as follows. In Section 2, we describe our institutional setting, the policy change and our data. Section 3 presents the empirical strategy, our main results and the robustness exercises. In Section 4, we present additional evidence on the mechanisms, while our concluding remarks are presented in Section 5.

2 Setting and Data

2.1 FOGAFIN and Deposit Insurance

Our study takes place in Colombia, a middle-income country with a track record of prudent macroeconomic and fiscal management. Like other countries in Latin America, Colombia is subject to commodities and export fluctuations, which in turn can lead to downturns (Reinhart and Wickham, 1994). However, this country has maintained its investment-grade rating since 2013 and a record of robust economic growth.

Colombia has a large and diversified financial system compared with peer countries, with significant cross-border institutions and large conglomerates. The four largest banking groups are considered systemic and account for over 70 percent of banking assets. Of these four groups, the top three are domestic and privately owned. The assets under management by financial companies are close to 150 percent of GDP, with banks accounting for about 45 percent of the total.[5] As discussed by International Monetary Fund (2016), banks are strongly funded with local deposits.

In this setting, the Colombian deposit guarantee fund (FOGAFIN - Fondo de Garantías de Instituciones Financieras) is the financial authority responsible for protecting the accounts of the public in commercial banks, all of which are required to register with FOGAFIN. This financial authority administers the deposit insurance scheme, namely, it guarantees that depositors will recover all or part of their money (up to 50 million COP per individual and per institution), and pays out to account-holders if an institution is liquidated. FOGAFIN was created in 1985 to deal with a crisis when it intervened in the process of capitalization of the financial system (Perez-Reyna and Osorio, 2018). Over the last 30 years, FOGAFIN gained a central role in handling the difficulties faced by the financial system and has taken part in the winding up of financial institutions, paying out deposit insurance, and following up liquidation of financial entities. In 2015, FOGAFIN intervened and spent 36 billion COP (approximately 12 million

[5] Out of 57 credit institutions, 25 are banks (the others are financial corporations of various types as well as financial cooperatives).

USD) to repay back insured deposits of *Internacional*, a Colombian financing company. Overall, FOGAFIN role is analogous to the Federal Deposit Insurance Corporation (FDIC) in the United States and it functions according to the best-practices of deposit guarantee funds, being able to pay insured depositors within two days from the intervention of a financial institution.

The reimbursement process is easy and accessible. It involves four steps, two of which need to be done by depositors: to complete an online form - or a physical form for individuals without internet access - after the previous contact from FOGAFIN if eligibility requirements are met; and to present the form to the institution. Lastly, the institution arranges the payment of the insured amount through an electronic funds transfer (EFT), a cheque, or cash, in two to four days.[6]

Finally, deposit insurance in Colombia only covers savings products. This means that it excludes any fiduciary contracts, bonds, stocks, and insurance products. It is mandatory for every commercial bank in Colombia to be registered with FOGAFIN, so every savings account in every commercial bank and financial corporation, public or private is protected. Finally, it is important to clarify that the deposit insurance scheme covers all deposits up to the threshold per person and per financial institution; if an individual owns two deposit accounts, each in a different financial institution, each account is covered up to 50 million pesos.[7]

2.2 The Policy Change

Central to our study is the unexpected policy change, which took place in 2017 and involves the maximum amount insured by FOGAFIN. On the 18th of April 2017, the Colombian deposit guarantee fund increased the insurance for individual deposits from 20 million COP (approximately 6,780 USD at the average exchange rate of 2017 of around 2,950 COP/USD) per person, per institution, to 50 million COP (approximately 16,950 USD). Importantly, this policy change was unexpected and the announcement to the public took place only one day after the implementation. This increase aimed to update the real value of the insurance threshold

[6]FOGAFIN charges all associated financial institutions a premium of 0,3% per year of the liabilities covered. The accounts that are covered by deposit insurance, and thus affected by the policy change, are all the saving products of financial institutions registered with FOGAFIN, whether owned by individuals or firms. For more information, refer to `https://www.fogafin.gov.co/que-es-el-seguro-de-depositos/definicion`.

[7]For additional details on FOGAFIN and the deposit insurance scheme, such as the reimbursement process or the list of insured products, refer to https://www.fogafin.gov.co/en/deposit-insurance/definitions-and-characteristics.

that had not changed since the year 2000, contrary to most policy changes which usually happen during periods of financial turmoil. According to the Financial Superintendent of FOGAFIN, Jorge Castaño: "*The 20 million COP of year 2000 corresponds to the 50 million COP of today*".[8] In sum, the policy change induced a large level of variation in the deposit insurance threshold (it more than doubled overnight) that was exogenous to the health of Colombia's banking system. Moreover, individual depositors were automatically granted the increment without any action required on their part. These specific features of the policy change offer a unique opportunity to investigate the effect of deposit insurance on depositors and banks.

2.3 Data

We use individual-level data on monthly deposits from a large Colombian bank. We observe all accounts of individuals in the bank. We focus our analysis on depositors with two characteristics. First, they had an active account in the 24-month window around April 2017, hence from April 2016 to March 2018. Second, they had a monthly balance of at least 5 million COP (around 1,700 USD) in the period of analysis. We impose this second restriction to screen out of the exercise accounts dedicated to microfinance and microsavings. Third, we trim individuals with an average level of deposits in the pre-policy period (April 2016 to April 2017) in the top 1% to reduce the possibility of spurious outliers, as is standard in the literature.

Our final sample is a panel of 59,052 individuals, over 24 months, with 1,417,248 observations. Figure 1 shows the evolution of the natural logarithm of total deposits in our sample, in a one year window around the policy change. This graph shows that the aggregate level of deposits increased during the period of interest. Moreover, we note that the aggregate level of deposits seems to grow at a higher pace after the change in deposit insurance relative to the growth rate in the previous two months. This piece of preliminary evidence suggests that the policy change may have had an effect on depositors' behavior in Colombia.

Given the insurance thresholds before and after the policy change, we group individuals in the following four bins:

[8] Refer to https://www.larepublica.co/economia/fogafin-aumento-la-cobertura-de-los-seguros-de-20-millones-a-50-millones-2753168, https://www.dinero.com/economia/articulo/fogafin-amplia-su-cobertura-de-seguros/244269 and http://es.presidencia.gov.co/noticia/170419-Gobierno-aumenta-de-20-millones-a-50-millones-cobertura-del-seguro-de-depositos.

Bin 1: individuals with average monthly deposits in April 2016 to April 2017 between 5 and 20 million COP. These depositors were fully-insured before April 2017.

Bin 2: individuals with average monthly deposits before the policy change between 20 and 50 million COP.

Bin 3: individuals holding between 50 and 75 million COP.

Bin 4: individuals holding 75 million COP or more.

Table 1 reports summary statistics of our main variables of interest over the 24-month window between April 2016 and March 2018. It presents summary statistics of the natural logarithm of the deposited amount (*Log deposits*), the monthly growth rate of deposits (*Deposit growth*, defined as the difference in log deposits between month t and month $t-1$), the share of deposits in savings and fixed-term accounts (*Savings share*) and the 6-month deposit volatility (*Volatility 6-months*). We define this volatility measure as the standard deviation of deposit growth during the previous 6 months.

Figure 2 shows the distribution of monthly average deposits in the period before the policy change (April 2016 to April 2017). The figure shows evidence of bunching of deposits below the 20 million threshold, specifically in the 15 and 20 million bin. While this is only a descriptive result, it is consistent with depositors being aware of the discontinuity in deposit insurance and allocating their portfolio optimally. It is important to note that the presence of bunching does not depend on individual sophistication, as we show in Section 3.4.

3 Empirical Analysis

This section presents our empirical analysis which exploits the change in the insurance threshold of April 2017 to study the effect of deposit insurance on depositor behavior. We start with an event study design analyzing 12 months around the policy change followed by a DiD specification to estimate the average effect of the policy change. We then show how our results depend on the level of borrower sophistication and present a battery of robustness exercises. Next, we estimate the elasticity of deposits to deposit insurance. Finally, we present the analysis of the survey of bank clients.

3.1 Event Study

The first specification is an event study design around April 2017, the month of the change in the deposit insurance threshold. This allows us to investigate whether depositors of the different bins were on parallel trends prior to the policy and study it's dynamics effects. We estimate by OLS the following specification:

$$
\begin{aligned}
log\_deposits_{ibt} = \sum_{\tau=-6,\tau\neq-1}^{\tau=6} \alpha_{1\tau}(X_\tau \cdot Bin_{1i}) + \sum_{\tau=-6,\tau\neq-1}^{\tau=6} \alpha_{2\tau}(X_\tau \cdot Bin_{2i}) \\
+ \sum_{\tau=-6,\tau\neq-1}^{\tau=6} \alpha_{4\tau}(X_\tau \cdot Bin_{4i}) + \iota_i + \mu_t + e_{ibt}
\end{aligned}
\tag{1}
$$

$log\_deposits_{ibt}$ is the log of the amount of deposits of individual i, in Bin b at the end of the month-year period t. The term Bin_b indicates the Bin b of individual i, based on its average amount of pre-policy deposits. X_τ is a leads and lags indicator.[9] Note that we omit Bin_3 from the equation and X_{-1} from each summation. ι_i and μ_t denote fixed effects respectively for each individual and month of each year, henceforth month-year. e_{ibt} denotes the error term, which we cluster at the individual level. $\alpha_{b\tau}$ is the coefficient of interest and it expresses the change of deposits in a specific bin during a given month-year t, relative to deposits in the same month-year in Bin 3. Therefore, identification of the $\alpha_{b\tau}$ coefficient comes from the differential change in deposits relative to the omitted Bin 3.

Figure 3 shows the evolution of the $\alpha_{b\tau}$ coefficients across Bins 1, 2, and 4 before and after the implementation of the policy change. The figure reveals two important elements. First, prior to the policy change the evolution of deposits across bins is on parallel trends. For all bins in the pre-period we cannot reject the null hypothesis that deposits of a specific bin are on the same trend as depositors in Bin 3. Second, individuals belonging to Bin 1 substantially increase their deposits in the aftermath of the policy relative to depositors in Bin 3. This positive increment is followed by a steady and persistent increase, which ends with a 12% higher level of deposits 6 months after the policy change. Depositors in Bin 2 react less starkly but still increase their deposits. Relative to depositors in Bin 3, depositors in Bin 4 do not

[9] X_0 equals 1 for the first month after the start of the policy change, that is for May 2017. X_1 to X_5 equal 1 for June 2017 to October 2017 respectively. X_6 equals 1 for November 2017 or future months. Similarly, X_{-1} equals 1 for April 2017, and X_{-2} to X_{-5} equal 1 for March 2017 to December 2016 respectively. X_{-6} equals one for November 2016 or previous months.

behave differently. These results show that the response to deposit insurance is higher for depositors who are more affected by the policy change (those in Bin 1).

In the following section, we study the magnitude of the effect if we consider the period after the policy as a whole. We do so in a DiD framework.

3.2 Difference-in-Difference

In this section, we present results from a Difference-in-Difference (DiD) specification. Compared to the event-study, it assumes a constant treatment effect over time and provides a measure of the average causal effect of the increase in deposit insurance. This exercise postulates that in the absence of the treatment, depositors in the different bins would have followed parallel trends. This is in line with the findings from our event-study design.

We estimate by OLS the following model:

$$Y_{ibt} = \sum_{b=1, b\neq 3}^{4} \gamma_b \, Bin_b \times Policy_t + \iota_i + \mu_t + \epsilon_{ibt} \tag{2}$$

where i denotes individuals, b deposit bins and t month-year periods. Y_{ibt} denotes the outcome of interest. We consider four outcomes: log deposits, monthly deposit growth (defined as the difference in log deposits between t and $t-1$), the share of deposits in savings or fixed-term deposits relative to total deposits, and the volatility of deposits (equal to the standard deviation of the deposit growth rate in the previous six months). $Policy_t$ is a dummy equal to zero before May 2017 and equal to one afterwards.[10] ι_i and μ_t denote individual and time fixed effects respectively. ϵ_{ibt} denotes the error term, which we cluster at the individual level. The effect of the policy is identified from the differential change of the outcome across deposit bins.

Table 2 presents the results of estimating equation 2. Column 1 shows that deposits in Bins 1 and 2 increase after the policy (relative to deposits of Bin 3) by 6.9% and 5.3% respectively. This increase is large and significant at the 1% confidence level. Depositors in Bin 4 do not exhibit a differential change in deposits relative to depositors in Bin 3. Column 2 shows that the growth rates of Bins 1 and 2 also increase after the policy change by 1.5% and 0.4% respectively. We find no effect in deposit growth for Bin 4.

[10] Although the policy was implemented the 18th of April of 2017, we code $Policy_t = 1$ for t in May 2017 and onward because this is the first month during which the policy was in place every day. Our results are robust to coding $Policy_t = 1$ also for April 2017.

The last two columns of Table 2 show how other aspects of the bank's liquidity are affected by higher deposit insurance. Column 3 shows that depositors in Bin 1 increase their holding of deposits in savings and fix-term accounts by 1.8%. However, the saving shares of depositors in the other bins are unaffected. Column 4 shows that there are no effects, for any of the bins, on the volatility of deposits, which could neutralize the benefits of the decline in liquidity risk. Overall, these results indicate that the increase in the deposit insurance threshold in Colombia led to significant changes in depositors' behavior.

3.3 Heterogeneity and Sophistication

In this section, we extend the empirical model described by equation 2 and study whether our results vary with the level of sophistication of depositors. Following Iyer and Puri (2012), we define the dummy S_i equal to 1 if the depositor also had a loan or a credit card from the bank in the sample period. To study if the effects of deposit insurance depend on the level of sophistication, we estimate by OLS the following equation:

$$Y_{ibt} = \sum_{b=1, b \neq 3}^{4} \gamma_b \, Bin_b \times Policy_t + \sum_{b=1, b \neq 3}^{4} \gamma_b \, Bin_b \times Policy_t \times S_i + \iota_i + \iota_t + \epsilon_{idt} \qquad (3)$$

in which we add to the terms in equation 2 the term S_i to construct a triple interaction with Bin_b and $Policy_t$. This exercise differentiates the effect depending on the level of sophistication of the depositor.

Table 3 reports the results. Two main findings stand out. First, the results on the differential effect of the policy on depositors in Bins 1 and 2 are preserved. These individuals increase their level and growth of deposits, while those in Bin 1 also tilt the composition of their deposits toward longer-term products. At the same time, there are no effects on deposit volatility. Second, while sophistication per se does not seem to affect depositor behavior, it seems to matter for depositors in Bin 1: the sophisticated depositors of this bin increase their level and growth of deposits twice as much as non-sophisticated ones. There are no heterogeneous effects on the savings share or on deposit volatility.

Overall, our results suggest that deposit insurance increases deposits for individuals in Bin 1 and Bin 2 and that the effect is larger for sophisticated individuals in Bin 1. In the next section, we present results that confirm the robustness of our findings.

3.4 Robustness

In this section, we present results from different robustness exercises. First, we replicate our DiD exercise but changing the sample period. In particular, we use a shorter time window around the policy change (November 2016 to November 2017) contrary to the 24 months used in the baseline exercises (April 2016 - March 2018). Table 4 reports the results. Although the sample size is reduced by half the main results reported above hold. In particular, depositors in Bins 1 and 2 increase their deposits after the policy change (relative to those in Bin 3) in 5.9% and 3.4% respectively. Furthermore, the deposit growth of Bin 1 increases by 0.8% and the savings share expands by 0.9%. We see no changes in deposit growth or the savings share of depositors in Bin 2. In line with our previous results, depositors of Bin 4 do not change their deposit behavior. Deposit volatility is unaffected across all bins.

In the second exercise, we account for shocks at the branch level that can potentially bias our estimates of the effect of deposit insurance. We do so by including a set of branch-month-year fixed effects.[11] This set of fixed effects accommodates time trends and shocks that are specific to the branch. Table 5 reports the results which are very similar to the ones reported in the baseline exercises (Table 2). In this case, the effect of the policy on depositors in Bin 1 is larger for the log deposits variable, but in line with the previous estimates for deposit growth and the savings share.

In the third exercise, we study the effect of deposit insurance using a continuous measure of exposure to the policy change. For each individual, we define the $\Delta Coverage_i$ variable as the ratio between the change in available insurance, 30 million COP, over the average level of deposits in the pre-policy period. Individuals with lower average deposits before the policy see a larger increase in the fraction of insured deposits, for the same change of 30 million COP, and therefore have a higher $\Delta Coverage_i$. Table 6 reports the results of estimating equation 2 but replacing the $\gamma_b \, Bin_b \times Policy_t$ terms by a the single term $\gamma \Delta Coverage_i \times Policy_t$. The table shows that individuals more exposed to the policy increase by a larger proportion their deposits (Column 1) have a higher rate of deposit growth (Column 2), higher savings share (Column 3), and interestingly, higher volatility of deposits (Column 4). These findings show

[11] Our panel contains 744 branches distributed across Colombia. To individuals with deposit accounts in different branches, we assign the branch with the higher level of deposits in April 2016, the first month of our sample.

that our baseline estimates of the effect of deposit insurance are robust to using a continuous measure of exposure to the policy change.

Finally, we investigate if the bunching behavior reported in Figure 2 depends on the level of borrower sophistication. We construct the distribution of average deposits during the 12 months prior to the policy change for the two groups and report the results in Figure 4. Panel A presents the results for sophisticated depositors and panel B presents the distribution of unsophisticated ones. Both panels show sizable bunching of deposits between 15 and 20 million COP. The share of depositors in this bin is similar across unsophisticated (43%) and sophisticated borrowers (38%). Other moments of the two distributions also look similar. Therefore, it does not appear that the result of deposit bunching is specific to depositor sophistication.

3.5 Estimating the Elasticity of Deposit Supply to Insurance

An additional step of our analysis is to estimate the elasticity of deposit growth to deposit insurance. To our knowledge, this parameter has not yet been estimated with the level of precision that our data allows, but is key to understanding depositor behavior and to calibrate the optimal coverage of deposit insurance like in Davila and Goldstein (2020). We address the following question: how much do deposits increase in response to an increase in insurance coverage? Our estimate relies on the fact that different individuals face a different shock to the share of insured deposits depending on the level of deposits preceding the policy change.

To perform the analysis, we collapse the data at the individual level i and define the following outcomes. First, $log\left(\overline{deposits}_{i,pre}\right)$ is the logarithm of average monthly deposits for individual i before the policy change (April 2016 - April 2017). $log\left(\overline{deposits}_{i,post}\right)$ is defined analogously but for the period after the policy change (May 2017 to March 2018). $\overline{depo\_growth}_{i,pre}$ is the average monthly deposit growth before the policy change and $\overline{depo\_growth}_{i,post}$ is defined analogously for the post-period.[12] Finally, we define $\Delta Deposits_i = log\left(\overline{deposits}_{i,post}\right) - log\left(\overline{deposits}_{i,pre}\right)$ and $\Delta Growth_i = \overline{depo\_growth}_{i,post} - \overline{depo\_growth}_{i,pre}$. Therefore, for a given depositor i, $\Delta Deposits_i$ measures how the average level of log deposits changed between the pre and post periods. $\Delta Growth_i$ measures how the average growth rate of deposits changed.

[12] Recall from above that deposit growth in t is defined as the change in log deposits, that is, $log\_deposits_{it} - log\_deposits_{it-1}$.

We are interested in the relation between $\Delta Deposits_i$ or $\Delta Growth_i$ and the change in deposit insurance between the two periods. Note that before the policy change, the proportion of deposits that was insured was (on average) equal to $\left(T_{pre}/\ \overline{deposits}_{i,pre}\right)$ where T_{pre} is equal to 20 million COP. This proportion can be smaller or larger than one depending on the value of $\overline{deposits}_{i,pre}$. Similarly, after the policy change the proportion of deposits that is insured is $\left(T_{post}/\ \overline{deposits}_{i,pre}\right)$, where T_{post} is equal to 50 million pesos. We define the change in insurance coverage as the difference between these two terms, that is:

$$\Delta Coverage_i = \left(T_{post} - T_{pre}\right) \Big/ \ \overline{deposits}_{i,pre} \tag{4}$$

Consider the following simple example to illustrate the logic of $\Delta Coverage_i$. Suppose that two individuals a and b had average monthly deposits in the pre-period equal to $\overline{deposits}_{a,pre} =$ 20 million and $\overline{deposits}_{b,pre} = 100$ million COP. Before the policy change, individual a had a fraction of 1 of her deposits covered whereas b only had 0.2. After the policy change, a has a fraction of insured deposits of 2.5 and b has a fraction of 0.5. Therefore, $\Delta Coverage_a$ is equal to 1.5 which indicates that the fraction covered for individual a increased by 1.5 points. For individual b this fraction increased by 0.3 points, so that $\Delta Coverage_b = 0.3$.

We are interested in studying the change of the log of deposits for each point that $\Delta Coverage_i$ increases, in other words in the elasticity of deposits to deposit insurance. To obtain this elasticity we estimate by OLS the simple cross-sectional regression:

$$x_i = \beta \Delta Coverage_i + \epsilon_i \tag{5}$$

where x_i is either $\Delta Deposits_i$ or $\Delta Growth_i$. In the first case, β captures the change in log deposits from the pre-period to the post-period in response to an increase of one point in the fraction of insurance coverage and it can therefore be interpreted as the elasticity of deposits to deposit insurance. The interpretation when x_i is $\Delta Growth_i$ is similar since in this case β captures the change in average deposits growth from the pre to the post-period for each point of change in deposit coverage.

We report the results of estimating equation 5 in Table 7. Column 1 shows that an increase in insurance coverage of 1 point leads to a 0.3 percentage point increase in the level of deposits.

The same increase in insurance leads to an increase of 0.4 percentage points in average deposit growth (Column 2).

The results of this section provide estimates of the elasticity of deposits to deposit insurance. In the next section, we turn to the study of the survey that confirms that the policy was known by an important fraction of the bank's clients.

3.6 Deposit Insurance and Household Portfolio

In this section, we investigate the level of knowledge of the policy change and which assets were liquidated in response to the changes in deposits. To explore these questions, we partnered with the bank and conducted a telephone survey of 990 clients that were randomly selected from our sample. The survey was carried in November and December of 2019. Despite the fact that all customers were asked the questions, we observe that the share of customers who answered the survey was less than 40%, with some variation taking place across questions. This fact is due to the nature of some questions, which could be perceived as touching sensible issues. Therefore, while our survey offers an important contribution to understanding how deposit insurance affects depositors behaviour, its results are suggestive and need to be interpreted with caution.

We asked the clients if they knew about the existence of FOGAFIN, or the deposit insurance scheme, and if they knew about the policy change. 388 clients answered the first question and 128 answered the second one. Figure 5 shows the percentage of the different responses. Panel A shows that among those who answered the first question, 32% know about FOGAFIN. Among those who answered the question about the policy change, 25% knew about it. These numbers are relatively high and imply that a large fraction of depositors knows about deposit insurance and, in particular, about the policy change.

To investigate the source of deposit growth, we asked the clients about their deposit growth from 2017 to 2019 and 323 customers responded. Among those with higher deposits, we specifically asked to indicate the assets that were liquidated and transformed in bank deposits. Our survey offered five possible answers: 1) cash (stored at home or in the office), 2) loan liquidations (someone paid a loan owed to the client), 3) liquidation of financial investments (for example stock, bonds, investment funds), 4) sale of fixed assets (for example a house, a car or a television) and 5) others. This last option corresponds to cases where the source is different from the liquidation of alternative assets, like receiving an unforeseen income shock. 23% of the clients who answered the question on deposit growth, said that they increased deposits and 40% of these respondents reported that they liquidated some assets as a result. Figure 6 shows the distribution of liquidated assets, with cash being by far the most important and exceeding a response rate of 50%. Overall, these results suggest that some clients are changing the composition of their savings and lowering their cash holding to increase deposits because of the policy change.

4 Additional Evidence

In this section, we present additional evidence on the mechanisms studied above. First, in Section 4.1 we use data from the US to benchmark the magnitude of our deposit elasticity estimate. We exploit the change in the deposit insurance threshold that took place in 2008. Although the data is more aggregated and the policy change happened in a period of financial turmoil, the results are similar to what we obtain with the Colombian data, which suggests that the results reported above have some degree of external validity. Second, in Section 4.2 we use a DiD design to study how the prices and returns of stocks of Colombian financial companies behaved relative to other companies around April 2017. The results constitute additional evidence that the change in the deposit insurance threshold was unexpected. Third, Section 4.3 presents evidence that suggests that a reshuffling of resources across bank accounts is not the main driver of our results. Fourth, in Section 4.4, we analyze the relation between deposit insurance and trust. This is done by combining our dataset with a survey of trust in the banking system which offers an opportunity to study if deposit insurance and trust are substitutes or complements. Our evidence suggests that the latter is the case. Finally, Section 4.5 explores data on deposit interest rates in Colombia. In line with the rest of the world, deposit rates were declining in our sample period and prior to the policy change. This suggest that our results are not driven by changes in deposit rates.

4.1 Deposit Insurance and Deposit Growth in the US

In the US, the Federal Deposit Insurance Corporation (FDIC) is the agency that looks after the stability of the financial system through deposit insurance, like FOGAGIN. Since its creation in 1933, the FDIC has been an essential part of the American financial system and regulatory framework.

In this section, we estimate the magnitude of the elasticity of deposits to insurance in the US. We use quarterly data from depository institutions and exploit the change in the insurance threshold of 2008, triggered by the financial crisis, that extended the coverage of insured deposits from 100,000 USD to 250,000 USD.[13] Although this change was motivated by financial distress we believe these results are useful to benchmark our findings in Colombia, reported in Section 3.5.

We use data covering a 2-year window around the 2008 policy change (2007-q3 to 2009-q2), to follow our exercise for Colombia. We focus on the Statistics on Depository Institutions (SDI) which contains financial information of every FDIC-insured institution at a quarterly frequency. The data include the level of deposits and the fraction that is insured, as well as other characteristics of the institution. The primary source of this information is the Federal Financial Institution Examination Council (FFIEC) Call Reports. Therefore, the SDI includes both data traditionally associated with the FDIC, such as deposits information, as well as Call Reports data.

The SDI data is available at the level of the institution-quarter-year and we collapse it at the level of the Bank Holding Company (BHC) and quarter-year level.[14] We are interested in the total deposits and the total domestic deposits of the BHC, which vary across quarters. We investigate if banks that had a higher share of insured deposits prior to 2008 recorded a stronger deposit growth in the aftermath of the policy change. Several changes in deposit insurance took

[13]This policy change was announced in late September 2008 and implemented by December 2008. Its conclusion, and the return from the 250,000 USD to 100,000 USD threshold, was originally planned to take place in December 2010, but was instead extended indefinitely. Refer to the following links for details on the policy and its implementation https://www.fdic.gov/ news/ press-releases/ 2010/ pr10161.html, https://www.fdic.gov/ news/ board/ 08BODtlgp.pdf and https://www.fdic.gov/ news/press-releases/ 2008/ pr08110.html.

[14]This is done using the BHC or Regulatory Top Holder id (called *RSSDHCR)* which identifies the BHC. A regulatory top holder is any company that directly or indirectly owns, controls or has power over 25 percent of the vote or more of a bank, has a direct holding of the majority of a company shares, controls the election of a majority of the directors or trustees of a bank, holds direct control over the company or exercises a controlling influence over the management or the policies of a bank.

place in the US prior to 2008 but we cannot consider them since the last one was implemented in 1980, before the starting year of the SDI data in 1992.

To estimate the elasticity of deposit growth to deposit insurance, we rely on the fact that banks had different levels of exposure to the increase in the deposit insurance threshold depending on the level of insured deposits prior to the policy change. We first calculate the share of insured deposits of each bank's balance sheet prior to the change. We define the share of insured deposits as:

$$Insured_b = \frac{ID_{b,pre}}{TD_{b,pre}} \tag{6}$$

where b denotes the Bank Holding Company and pre refers to the period before the change. ID_{pre} denotes average insured deposits in the four quarters prior to the policy change and TD_{pre} denotes average total deposits in the same period. We estimate the following equation:

$$Growth_{bt} = \beta Post_t \times Insured_b + \alpha_b + \gamma_t + \epsilon_{bt} \tag{7}$$

where b denotes the Bank Holding Company and t a quarter-year period. The dependent variable $Growth_{bt}$ is either total deposits growth or domestic deposits growth.[15] $Post_t$ is a dummy equal to one after the policy change (from 2008-q3 onward). α_b and γ_t denote banking holding company and quarter-year fixed effects respectively. ϵ_{bt} denotes the error term which we cluster at the level of the bank. β, our coefficient of interest, captures the difference in deposits growth from the pre-period to the post-period for each additional point of the share of insured deposits, and can therefore be interpreted as an elasticity of deposits to deposit insurance.[16]

Table 8 present the estimates of equation 7 for a two-year window around the time of the policy change. In line with the results in Colombia, both deposit growth and domestic deposit growth are larger after the increase in deposit insurance for those banks that have a larger fraction of insured deposits. The estimate of β in Column 1 implies that banks with 1 point higher fraction of insured deposits $Insured_b$ have a deposit growth rate that is 0.6 percentage points higher in the aftermath of the policy change. We obtain the same coefficient if we consider domestic deposits only (Column 2)

[15] We define deposit growth as the difference between log deposits in quarter t and quarter $t-1$. Deposits are measured at the end of the quarter.

[16] When considering the outcome of domestic deposits growth, we use a measure of insured deposits, $Insured_b$, computed using only information on domestic deposits.

The elasticity in Column 1 is in the same order of magnitude as the estimated 0.4 with the Colombian data (Column 2 of Table 7). The lower elasticity in Colombia can reflect the fact that our estimate for the US is biased by confounding factors related to the 2008 financial crisis. For example, this upward bias can be due to the existence of fragile banks, with an aggressive attitude to attract deposits, in line with the work of Martin et al. (2018). If prior to 2008 these banks were both raising more deposits (including insured ones), and responded more aggressively to the increase in the insurance threshold, the estimated elasticity would be biased upwards.

4.2 Anticipation and Bank Stock Prices

In this section, we present additional evidence from two exercises on the lack of anticipation of the policy change of FOGAFIN. Both exercises are based on the idea that if the change was indeed unexpected, the prices and the returns of financial companies should not differ from those of other types of companies prior to the policy change. However, after the FOGAFIN announcement, we expect the stock prices (and the associated returns) of banks to increase since this policy can induce a subsidy to financial institutions or can create value by unlocking additional funding. To test this, we compile a dataset of daily stock prices of 19 Colombian companies operating in different sectors (financial, energy, communications, industrial, among others) from Bloomberg.[17] Among these, 7 are financial companies. We use this data in two different exercises in the DiD spirit, with results that are consistent with a lack of anticipation.

In the first exercise, we perform a Cumulative Abnormal Returns (CAR) analysis. This method, used extensively in the asset pricing literature, aims to capture the effect of important and unexpected events on stock prices. An abnormal return (AR) describes the unusually large profits or losses generated by a given investment or portfolio over a specified period, and CAR is simply the cumulative sum of abnormal returns over this period. In other words, abnormal returns are positive (negative) if a company's stock outperforms (underperform) the market.

We use a simplified version of the Fama and French model (Fama and French, 1992) and define the abnormal returns as:

$$AR_{it} = ER_{it} - ER_{mt} \tag{8}$$

[17]This number is due to the overall number of companies with available daily stock prices in Bloomberg.

were i is a stock and t is a day. $ER_{it} = R_{it} - R_t^f$ is the excess return of stock i over the risk-free rate and $ER_{mt} = R_{mt} - R_t^f$ is the market excess return over the risk-free rate.[18] We define $R_{it} = logP_{it} - logP_{it-1}$ where P_{it} is the price of company i's stock in day t. Regarding the market excess returns we define $R_m = logCOLCAP_{mt} - logCOLCAP_{mt-1}$ where $COLCAP_{mt}$ is a market-capitalization weighted index that includes the most liquid stocks listed in the Colombian Stock Exchange. Finally we approximate R_t^f, the risk-free-rate, with the returns on a 10-year Colombian government bond.[19]

Using a DiD approach we assess if there is any difference in the cumulative abnormal returns of banks after the policy change, which took place on April 18th and was announced to the public on April 19th, focusing on a window of five days before the event and six days after the event. In particular, we compute the CAR for each company in our sample for two periods, before and after the policy change. The CAR for company i in the pre-period is given by $CAR_{i,pre} = \sum_{-5}^{-1} AR_{i,t}$. That is, we add the abnormal returns 5 days before the event with $t = -1$ corresponding to April 18th. The CAR for the post-period is given by $CAR_{i,post} = \sum_{0}^{5} AR_{i,t}$ with $t = 0$ corresponding to April 19th.

We estimate the following simple two-period regression:

$$CAR_{ip} = \alpha_i + Post_p + Post_p \times Bank_i + \epsilon_{ip} \tag{9}$$

α_i is a financial company fixed effect, p is either *pre* or *post*, $Post_p$ is a dummy equal to 1 for $p = post$, and $Bank_i$ is a dummy equal to 1 for financial companies.

Table 9 reports the estimates. Note that the coefficient of the $Post_p$ dummy captures the CRA of non-financial companies after the policy change. The estimated coefficient is a precise zero, which implies that there are no differences in the CAR of this type of company before and after the policy change. The coefficient of the interaction shows that the financial companies saw their CRA increase from the pre to the post period. The effect is large (close to 3%) and statistically significant at the 10% level. These results are consistent with a lack of anticipation

[18]In this simple version of the Fama and French model we are omitting the Small Minus Big (SMB) and the High Minus Low (HML) excess returns.

[19]Prices of stocks are from Bloomerang, the 10 years Government bond data comes from investing.com (https://www.investing.com/rates-bonds/colombia-10-year-bond-yield-historical-data) and the COLCAP index data comes from the Banco de la Republica (https://www.banrep.gov.co/en/stock-market).

and with an increase in the returns of holding stocks of financial companies after the policy change.

Now we turn to an event-study exercise where we focus only on the prices of the stocks. We estimate by OLS the following equation:

$$p_{idt} = \sum_{t=-3, t\neq 0}^{3} \gamma_t (X_t \times Financial_i) + \iota_i + \mu_t + \epsilon_{it} \tag{10}$$

where p_{idt} is the stock price of company i in day d of month t. X_t is a leads and lags month indicator. We consider $t = -3, -2, -1, 0, 1, 2, 3$. We code $X_0 = 1$ for the 19th of April 2017, the first day the policy was in place, X_{-1} for the days between the 19th of March and the 18th of April, and $X_1 = 1$ for the days between the 20th of April and the 19th of May. We code X_2, X_{-2}, X_3, X_{-3} analogously. We omit $t = 0$ which corresponds to the 18th April 2017, the day of the policy announcement. $Financial_i$ is an indicator variable for financial companies. Company and month fixed effects are denoted by ι_i and μ_t respectively. Standard errors, which we denote by ϵ_{it}, are clustered at the company level.

Figure 7 plots the estimates of γ_t. The figure shows that the stock prices of both financial and non-financial companies were on parallel trends before the policy. After April 2017 there is a relative increase in the price of financial companies that reaches 10% three months after the policy change. While the extent of this increase may be interpreted in various manners, the results reported in the figure constitute evidence of the lack of anticipation of the policy change.

4.3 Deposit Reshuffling

Our results are consistent with a theory in which the bank's customers perceive that is safer to increase deposits above 20 million COP after the policy change and, therefore, increase their deposit holdings at the expense of other types of asset. However, an alternative interpretation of our findings could be that customers who had multiple deposit accounts before the policy change close most of them and consolidate their deposits in a single one. We refer to this possibility as the "reshuffling hypothesis". In this section, we provide three pieces of evidence that suggest that this hypothesis is not the main driver of our results.[20]

Our first exercise investigates the distribution of deposit growth rates in our sample in the period after the policy change. We plot the distribution of deposit growth rates in Figure 8. If reshuffling of resources was important in our sample, we should observe bunching at certain points of the distribution. For example, if there is a large fraction of clients who move the resources from this bank to another, we would expect a large fraction of observations close to a -1 rate. Also, if resources were reshuffled from other banks to this bank, then we should observe a large fraction of observation with high deposit growth rates. In the figure, we observe that most observations fall in the zero bin and that the distribution is smooth. At the same time, a sizable mass of depositors presents a small increase in deposits.[21] Overall, this descriptive evidence does not support a reshuffling hypothesis, in which an individual consolidates its accounts on a single account and records very large and sudden increases in deposits.

Our second exercise explores the number of accounts that opened or closed during our period of analysis. Under the reshuffling explanation, we expect a discontinuous change of this number in the aftermath of the policy change. Figure 9 depicts the percentage of new and closed accounts as a percentage of the total.[22] There are two interesting results. First, the bank is expanding, as the share of new accounts exceeds the share of closing accounts (around 0.3% versus 0.1%) in all months. Second, account openings and closing remain relatively stable around the time of the policy change. This result is not consistent with the reshuffling hypothesis.

Finally, we study the behavior of individuals who presented stable deposits before the policy change. The reshuffling explanation is consistent with individuals having a non-primary account with a deposit amount that remains stable before the policy change but increases sharply afterward. If this behavior is the sole driver of our results, then the differential increase in deposits of customers in Bins 1 and Bin 2 documented above should be driven almost exclusively

[20]These results are suggestive because to discard completely the reshuffling possibility we would need data on deposits of all the other Colombian banks for the customers in our sample.

[21]Note also that this picture rejects evidence of bunching around round numbers (like 50% or 100%).

[22]Recall that our main sample is a monthly panel collapsed at the individual level. For this exercise, we use data at the account level (the same individual can have multiple accounts) and say that an account opened at t if the account was not observed before t and in t deposits were at least 5 million COP. We say that an account closing occurs in month t if the account is observed in the data at t but not at $t+1$ and it had at least 5 million COP at t.

by depositors who had stable deposits before the policy change. We investigate this possibility by defining a dummy equal to one for individuals with stable deposits before April 2017 which we interact with the terms of equation 2, our main DiD specification.[23] Table 10 presents the results. The increase in deposits in the post-period is lower for individuals with stable deposits in Bins 1 and 2. Although these individuals increase the level and growth of deposits, the effect is around 50% smaller compared to that of other individuals in Bin 1 and 2.

Overall the results present in this section offer evidence against the reshuffling explanation. Together with the results from the other sections of the paper, this suggests that depositors are substituting other assets in favor of deposits in safer bank accounts.

4.4 Deposit Insurance and Bank Trust

In this section, we study the relation between trust in the banking system and the effect of deposit insurance. In particular we ask whether deposit insurance and trust are complements or substitutes. It is possible that trust and regulation are complementary if areas with high trust respond more to the policy change. On the other hand, the two might be substitutes as places with low trust may benefit more from higher deposit insurance.

We merge our dataset with a measure of trust in banks from the World Value Survey. This survey asks participants to reveal the confidence they have in various organizations, including banks, on a scale from 1 to 4. We use the survey wave taking place before the policy change, that of 2012. For each of the 32 departments of Colombia sampled in the survey, we compute the average value of trust in banks and then define a dummy equal to one for those departments with trust above the median.[24]. We interact this dummy with the terms of equation 2 to study if the effects documented for Bins 1 and 2 above depend on the level of trust. Table 11 presents the results. The baseline results remain unchanged. However, in the case of log deposits, the coefficient of the triple interaction for Bin 1 shows that individuals in a department with high trust increase deposits by 12% overall (7% more than individuals of low trust departments). This results suggests that trust and deposit insurance are complements in our setting.

[23]For each depositor we compute the standard deviation of monthly deposit growth rates in the months before the increase in the insurance threshold. The dummy of stable deposits is equal to one if the individual is in the first quartile of the distribution of this average.

[24]The department is the highest administrative division of Colombia

4.5 Deposit Insurance and Deposit Rates

This section asks whether our results are driven by changes in the interest rates of deposits. In particular, the depositor response we identified above could be driven by an endogenous response of deposit rates to the policy change.

Figure 10 shows the evolution during our sample period of the annual effective interest rate of 90-day certificate of deposits (Panel A) and of savings accounts (Panel B). The data comes from the Banco de la República (the Colombian central bank) and each point in the plots corresponds to the monthly average of the interest rate across institutions. In line with other countries in the world, the deposit rates in Colombia declined steadily in 2017 and there is no sharp change around the policy change. Therefore, it appears difficult to justify that this is a mechanism through which depositor increase their deposit rates. In fact, since the rates are falling, depositors should be discouraged to increase their deposits, as their return is declining in the aftermath of the policy change. Furthermore interest rate would need to have a differential effect across bins to explain our results.

5 Conclusions

In this paper, we present an empirical assessment of the effects of deposit insurance on depositor behavior, and provide a novel causal estimate of the magnitude of this effect. Our empirical analysis focuses on Colombia which allows us to combine an exogenous and large change in the insurance threshold with unique data sources. Our identification relies on the unexpected change in the coverage of deposit insurance which took place on the 18th of April 2017. On this date, the Colombian agency in charge of deposit insurance (FOGAFIN) increased the insurance threshold from 20 million COP (around 6,780 USD) per person to 50 million COP (around 16,950 USD). This change took place for reasons exogenous to the health of the Colombian economy: to update the real value of the threshold, which had not been changed since the year 2000.

We combine this time-series variation with a monthly depositor-level database from a major Colombian bank containing information of more than 50 thousand individual depositors and divide depositors according to their pre-policy level of deposits. We distinguish between depositors who were fully-insured prior to the policy and had deposits below 20 million COP (Bin 1), those who were nearly fully-insured before April 2017 and became fully-insured (deposits between 20 and 50 million COP, Bin 2), and depositors with a higher level of deposits (Bin 3 - between 50 and 75 million COP; Bin 4 - above 75 million COP).

We find that while depositors across different bins were on parallel trends before the policy change, those who were fully-insured and nearly-fully insured respond to higher insurance by increasing their level and growth rate of deposits. In the 12 months after April 2017 and relative to individuals in Bin 3, depositors in Bin 1 increased their level of deposits by 7% and their deposit growth by 1.5%, those in Bin 2 by 5.3% and 0.4%, while those in Bin 4 did not react. We also find that depositors in Bin 1 increase the maturity of their deposits, with a 1.8% higher share of deposits in savings and fixed-term accounts. These results are robust to a battery of robustness tests. We leverage the cross-sectional heterogeneity in the exposure to the treatment to estimate an elasticity of deposit growth to deposit insurance of 0.4 points. This point estimate is close to the elasticity of 0.6 that we obtain in an exercise exploiting the 2008 threshold increase in the United States, which may be higher due to confounders related to the financial crisis. Finally, the results from a survey on 990 clients in our sample indicate that an important fraction of bank clients knows about deposit insurance and changed their assets holdings (cash in particular) to increase deposits. This result is suggestive of a change in asset composition in response to the policy change.

All in all, we believe that this paper offers important insights into the effects of deposit insurance for three reasons. First, the policy change we consider provides the opportunity to isolate the effect of deposit insurance, unconfounded from the factors that are common in periods of crisis or financial distress. Second, the paper quantifies the elasticity of deposit growth to deposit insurance, which can be useful for theoretical and empirical researchers, policy makers and bankers. Third, our work contributes to a growing literature at the intersection between banking and development economics, showing that financial regulation can promote the size and depth of financial systems and credit markets.

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Tables and Figures

Table 1: Descriptive Statistics

	Mean	St. Dev	Pct. 25	Median	Pct. 75
	(1)	(2)	(3)	(4)	(5)
Log deposits	16.6	0.61	16.25	16.56	16.75
Savings share	0.87	0.31	1.000	1.000	1.000
Deposit growth	0.002	0.12	-0.0001	0.00	0.003
Volat. 6-months	0.05	0.12	0.002	0.01	0.04

Notes: This table reports descriptive statistics of the main variables in our analysis. The sample is a monthly panel at the depositor level and consists of individuals who had an active account with at least 5 million COP in every month from April 2016 to March 2018. We remove from the panel individuals in the top 1% according to their average level of deposits in the pre-policy period (April 2016 to April 2017). The final sample consists of 59,052 individuals and 1,417,248 observations. *Log deposits* is the natural logarithm of individual total monthly deposits; *Deposit growth* is the logarithmic difference of total monthly deposits between t and $t-1$; *Savings share* is the share of savings and fixed term deposits over total deposits; *Volatility 6-months* is the standard deviation of the monthly deposit growth recorded in the previous six months. Individuals are assigned to bins according to average monthly deposits in April-2016 to April-2017: below 20 million COP (Bin 1), between 20 and 50 million COP (Bin 2), between 50 and 75 million COP (Bin 3) and above 75 million COP (Bin 4). There are 45,239 individuals in Bin 1, 10,250 in Bin 2, 2,155 in Bin 3 and 1,408 in Bin 4.

Table 2: Difference-in-Difference

	Log Deposits	Deposit Growth	Savings Share	Volatility 6-months
	(1)	(2)	(3)	(4)
$Bin_1 \times Policy_t$	0.069***	0.015***	0.018***	-0.002
	(0.009)	(0.002)	(0.005)	(0.003)
$Bin_2 \times Policy_t$	0.053***	0.004***	0.002	-0.004
	(0.009)	(0.002)	(0.005)	(0.003)
$Bin_4 \times Policy_t$	-0.019	-0.003	0.009	0.007
	(0.014)	(0.003)	(0.008)	(0.005)
Depositor FE	Yes	Yes	Yes	Yes
Month FE	Yes	Yes	Yes	Yes
Obs.	1,417,248	1,358,196	1,417,248	1,240,092
Adj. R^2	0.893	0.019	0.781	0.536

Notes: This table reports estimates from the difference-in-difference specification presented in equation 2. Each column corresponds to a different regression using the outcome listed in the column header. All regressions include depositor and month-year fixed effects. The reported coefficient corresponds to the interaction between a bin dummy and the policy dummy, $Policy_t$, equal to 1 from May 2017 onward. See the notes of Table 1 for the description of the sample, the dependent variables, and the bins. Standard errors clustered at depositor level are reported in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 3: Difference-in-Difference, Sophistication Heterogeneity

	Log Deposits (1)	Deposit Growth (2)	Savings Share (3)	Volatility 6-months (4)
$Bin_1 \times Policy_t$	0.057***	0.013***	0.019***	-0.005
	(0.009)	(0.002)	(0.006)	(0.003)
$Bin_2 \times Policy_t$	0.050***	0.004**	0.002	-0.006
	(0.010)	(0.002)	(0.006)	(0.004)
$Bin_4 \times Policy_t$	-0.017	-0.001	0.010	0.004
	(0.015)	(0.003)	(0.009)	(0.006)
$Bin_1 \times Policy_t \times S_i$	0.064***	0.009**	-0.006	0.012
	(0.024)	(0.004)	(0.013)	(0.009)
$Bin_2 \times Policy_t \times S_i$	0.015	0.003	-0.001	0.011
	(0.026)	(0.005)	(0.014)	(0.010)
$Bin_4 \times Policy_t \times S_i$	-0.019	-0.010	-0.007	0.015
	(0.040)	(0.007)	(0.020)	(0.016)
$S_i \times Policy_t$	-0.004	-0.002	-0.003	-0.005
	(0.024)	(0.004)	(0.013)	(0.009)
Depositor FE	Yes	Yes	Yes	Yes
Month FE	Yes	Yes	Yes	Yes
Obs.	1,431,576	1,371,927	1,431,576	1,431,576
Adj. R^2	0.893	0.019	0.781	0.536

Notes: This table reports estimates from the difference-in-difference specification presented in equation 3, were we allow the effect of the policy change to depend on the depositor's level of sophistication, S_i. We say that a depositor is sophisticated and code $S_i = 1$ if the depositor has another bank product (a loan in particular). Each column corresponds to a different regression using the outcome listed in the column header. All regressions include depositor and month-year fixed effects. The reported coefficient corresponds to the interaction between a bin dummy, the policy dummy, $Policy_t$, equal to 1 from May 2017 onward, and S_i. See the notes of Table 1 for the description of the sample, the dependent variables, and the bins. Standard errors clustered at depositor level are reported in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 4: Difference-in-Difference, Short Panel

	Log Deposits (1)	Deposit Growth (2)	Savings Share (3)	Volatility 6-months (4)
$Bin_1 \times Policy_t$	0.059***	0.008***	0.009**	0.003
	(0.007)	(0.002)	(0.005)	(0.003)
$Bin_2 \times Policy_t$	0.034***	0.002	0.0005	-0.001
	(0.008)	(0.002)	(0.005)	(0.003)
$Bin_4 \times Policy_t$	-0.016	-0.002	0.006	0.003
	(0.011)	(0.004)	(0.007)	(0.005)
Depositor FE	Yes	Yes	Yes	Yes
Month FE	Yes	Yes	Yes	Yes
Obs.	767,676	767,676	767,676	767,676
Adj. R^2	0.893	0.019	0.781	0.536

Notes: This table reports estimates from the difference-in-difference specification presented in equation 2, but restricting the panel to November 2016 to November 2017. Each column corresponds to a different regression using the outcome listed in the column header. All regressions include depositor and month-year fixed effects. The reported coefficient corresponds to the interaction between a bin dummy and the policy dummy, $Policy_t$, equal to 1 from May 2017 onward. See the notes of Table 1 for the description of the sample, the dependent variables, and the bins. Standard errors clustered at depositor level are reported in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 5: Difference-in-Difference Results, Branch-Month Fixed Effects

	Log Deposits (1)	Deposit Growth (2)	Savings Share (3)	Volatility 6-months (4)
$Bin_1 \times Policy_t$	0.115***	0.015***	0.011**	-0.0004
	(0.009)	(0.002)	(0.005)	(0.003)
$Bin_2 \times Policy_t$	0.054***	0.004***	0.004	-0.004
	(0.009)	(0.002)	(0.005)	(0.003)
$Bin_4 \times Policy_t$	-0.015	-0.003	0.010	0.006
	(0.014)	(0.003)	(0.008)	(0.005)
Depositor FE	Yes	Yes	Yes	Yes
Branch-Month FE	Yes	Yes	Yes	Yes
Obs.	1,417,224	1,358,173	1,417,224	1,240,071
Adj. R^2	0.896	0.003	0.785	0.542

Notes: This table reports estimates from the difference-in-difference specification presented in equation 2 including branch times month-year fixed effects. To individuals with deposit accounts in different branches, we assign the branch with the higher level of deposits in April 2016. Each column corresponds to a different regression using the outcome listed in the column header. All regressions include depositor and branch times month-year fixed effects. The reported coefficient corresponds to the interaction between a bin dummy and the policy dummy, $Policy_t$, equal to 1 from May 2017 onward. See the notes of Table 1 for the description of the sample, the dependent variables, and the bins. Standard errors clustered at depositor level are reported in parentheses.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 6: Difference-in-Difference, Continuous Exposure

	Log Deposits (1)	Deposit Growth (2)	Savings Share (3)	Volatility 6-months (4)
$\Delta Coverage_i \times Policy_t$	0.021***	0.004***	0.004***	0.002***
	(0.001)	(0.0002)	(0.001)	(0.0004)
Depositor FE	Yes	Yes	Yes	Yes
Month-Year FE	Yes	Yes	Yes	Yes
Obs.	1,417,248	1,358,196	1,417,248	1,240,092
Adj. R^2	0.893	0.019	0.781	0.536

Notes: This table reports estimates from the difference-in-difference specification presented in equation 2 but where the measure of exposure is $\Delta Coverage_i$, defined as the ratio between the increment in deposit insurance (30 million COP) divided by the average level of deposits in the pre-period, as explained in more detail in Section 3.5. Each column corresponds to a different regression using the outcome listed in the column header. All regressions include depositor and month-year fixed effects. The reported coefficient corresponds to the interaction between $\Delta Coverage_i$ and the policy dummy, $Policy_t$, equal to 1 from May 2017 onward. See the notes of Table 1 for the description of the sample, the dependent variables, and the bins. Standard errors clustered at depositor level are reported in parentheses. * p < 0.10, ** p < 0.05, *** p < 0.01.

Table 7: Elasticity of Deposits to Deposit Insurance, Colombia

	$\Delta Deposits_i$ (1)	$\Delta Growth_i$ (2)
$\Delta Coverage_i$	0.003***	0.004***
	(0.0001)	(0.0002)
Obs.	59,649	59,649
Adj. R^2	0.015	0.012

Notes: This table reports estimates of the elasticity of deposits to deposit insurance, following the specification described by equation 5. The dependent variables are at the depositor i level. $\Delta Deposits_i$ is the difference between the log of average deposits in the pre-period (April 2016 - April 2017) and the post-period (May 2017 - March 2018); $\Delta Growth_i$ is the difference between the average growth rate in the pre-period and the post-period. These outcomes are regressed over $\Delta Coverage_i$ defined as the ratio between the increment in deposit insurance, 30 million COP, divided by the average level of deposits in the pre-period, as described in detail in Section 3.5. Standard errors are reported in parentheses. * p < 0.10, ** p < 0.05, *** p < 0.01.

Table 8: Elasticity of Deposits to Deposit Insurance, USA

	Deposit Growth (1)	Dom. Deposit Growth (2)
$Insured_b \times Policy_t$	0.006***	0.006***
	(0.0015)	(0.0016)
Bank Holding Com. FE	Yes	Yes
Quarter FE	Yes	Yes
Obs.	39,449	39,449
Adjusted R^2	0.170	0.164

Notes: This table presents estimates of equation 7 in a quarterly panel of Banking Holding Companies (BHC) in the US. The source of all variables are the Call Reports (FDIC SDI) and the time period is 2008-2010. The dependent variable of column (1) is deposit growth, defined as the log change in deposits from quarter $t-1$ to quarter t. Deposits are given by the level of deposits of the BHC at the end of the quarter. The outcome for column (2) is the growth of domestic deposits. The variable of interest is the interaction between a dummy equal to 1 from 2008-q3 onward and 0 otherwise, and the share of insured deposits, $Insured_b$. This share is calculated at the level of the BHC, and is equal to the ratio of average insured deposits in the four quarters prior to 2008-q3 and average total deposits in the same period. Standard errors clustered at BHC level are reported in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 9: Unexpected Policy Change and CAR - DiD - Company level

Post	-0.000
	(0.000)
Post $\times$ Bank_i	0.003*
	(0.0015)
Obs.	38
Adj. R sq.	0.0991

Notes: This table presents the estimates of 8 the dependent variable is the cumulative abnormal returns (two for each company, one before one after the policy change), the main predictors are a dummy taking value of 1 after the policy change (after April 18th) and an interaction between this dummy (post) and and indicator for financial institutions. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 10: Difference-in-Difference, Stability of Deposits Heterogeneity

	Log Deposits (1)	Deposit Growth (2)	Savings Share (3)	Volatility 6-months (4)
$Bin_1 \times Policy_t$	0.077***	0.016***	0.023***	-0.001
	(0.010)	(0.002)	(0.006)	(0.004)
$Bin_2 \times Policy_t$	0.057***	0.004**	0.004	-0.005
	(0.011)	(0.002)	(0.006)	(0.004)
$Bin_3 \times Policy_t$	-0.021	-0.003	0.015*	0.009
	(0.016)	(0.003)	(0.008)	(0.006)
$Bin_1 \times Policy_t \times Stable_i$	-0.047***	-0.009***	-0.021	-0.013***
	(0.016)	(0.003)	(0.016)	(0.005)
$Bin_2 \times Policy_t \times Stable_i$	-0.036**	-0.001	-0.004	0.004
	(0.017)	(0.003)	(0.018)	(0.005)
$Bin_3 \times Policy_t \times Stable_i$	0.021	0.001	-0.011	-0.008
	(0.025)	(0.005)	(0.029)	(0.008)
$Stable_i \times Policy_t$	0.017	0.011***	0.023	0.021***
	(0.016)	(0.003)	(0.016)	(0.005)
Depositor FE	Yes	Yes	Yes	Yes
Month FE	Yes	Yes	Yes	Yes
Obs.	1,393,584	1,335,518	1,393,584	1,219,386
Adj.	0.894	-0.019	0.781	0.534

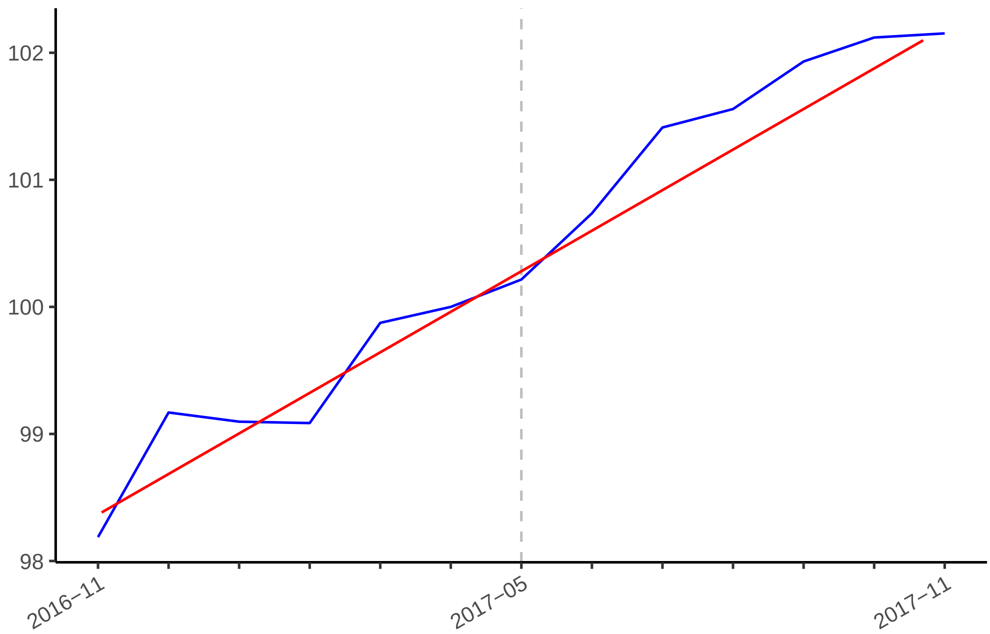
Notes: This table reports estimates from the difference-in-difference specification presented in equation 2, where we allow the effect of the policy to depend on the stability of deposits prior to the policy change. $Stable_i$ is a dummy equal to one if depositor i is in the lowest quartile of the distribution of this average. Each column corresponds to a different regression using the outcome listed in the column header. All regressions include depositor and month-year fixed effects. The reported coefficient corresponds to the interaction between a bin dummy, the policy dummy, $Policy_t$, equal to 1 from May 2017 onward, and $Trust_i$. See the notes of Table 1 for the description of the sample, the dependent variables, and the bins. Standard errors clustered at depositor level are reported in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 11: Difference-in-Difference, Bank Trust Heterogeneity

	Log Deposits (1)	Deposit Growth (2)	Savings Share (3)	Volatility 6-months (4)
$Bin_1 \times Policy_t$	0.051***	0.017***	0.022***	0.003
	(0.011)	(0.002)	(0.007)	(0.004)
$Bin_2 \times Policy_t$	0.043***	0.006***	0.005	0.001
	(0.012)	(0.002)	(0.007)	(0.005)
$Bin_4 \times Policy_t$	-0.022	-0.001	0.020**	0.010
	(0.018)	(0.003)	(0.010)	(0.007)
$Bin_1 \times Policy_t \times Trust_i$	0.074***	-0.005	-0.010	-0.010
	(0.020)	(0.004)	(0.012)	(0.007)
$Bin_2 \times Policy_t \times Trust_i$	0.017	-0.002	0.002	-0.012
	(0.021)	(0.004)	(0.013)	(0.008)
$Bin_3 \times Policy_t \times Trust_i$	0.004	-0.005	-0.017	-0.004
	(0.033)	(0.006)	(0.018)	(0.012)
$Trust_i \times Policy_t$	-0.012	0.004	0.004	0.014**
	(0.020)	(0.003)	(0.012)	(0.007)
Depositor FE	Yes	Yes	Yes	Yes
Month FE	Yes	Yes	Yes	Yes
Obs.	1,322,064	1,266,978	1,322,064	1,156,806
Adj. R^2	0.896	-0.019	0.782	0.537

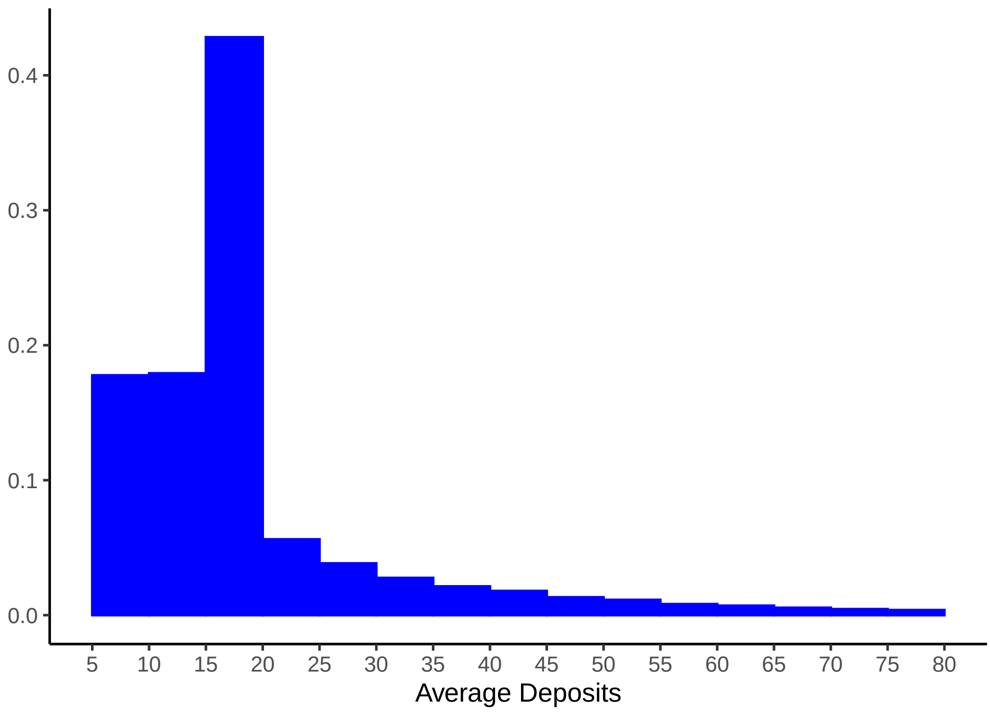
Notes: This table reports estimates from the difference-in-difference specification presented in equation 2, where we allow the effect of the policy change to depend on the level of trust in banks. We measure trust at the department level (the highest level of administrative division of Colombia). We say that depositor i is in a department with high trust in banks (and code $Trust_i = 1$) if average trust in banks in that department is above the median of the average trust distribution according to the World Value Survey of 2012. Each column corresponds to a different regression using the outcome listed in the column header. All regressions include depositor and month-year fixed effects. The reported coefficient corresponds to the interaction between a bin dummy, the policy dummy, $Policy_t$, equal to 1 from May 2017 onward, and $Trust_i$. See the notes of Table 1 for the description of the sample, the dependent variables, and the bins. Standard errors clustered at depositor level are reported in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Figure 1: Log of Total Monthly Deposits



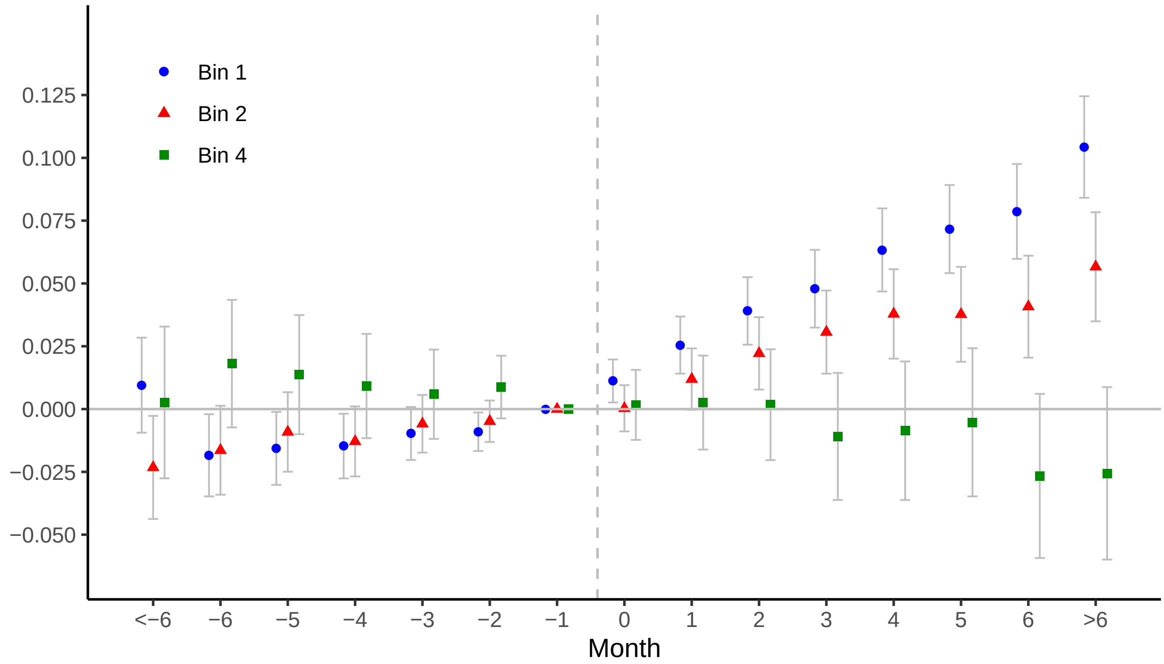
Notes: This figure presents the natural logarithm of the total deposits at the bank between November 2016 to November 2017. Total deposits are normalized to 100 in May 2017, the first month after the policy announcement on April 18th 2017. The sample is a monthly panel at the depositor level and consists of individuals who had an active account with at least 5 million COP in every month over the sample period.

Figure 2: Average Deposits - Pre-policy



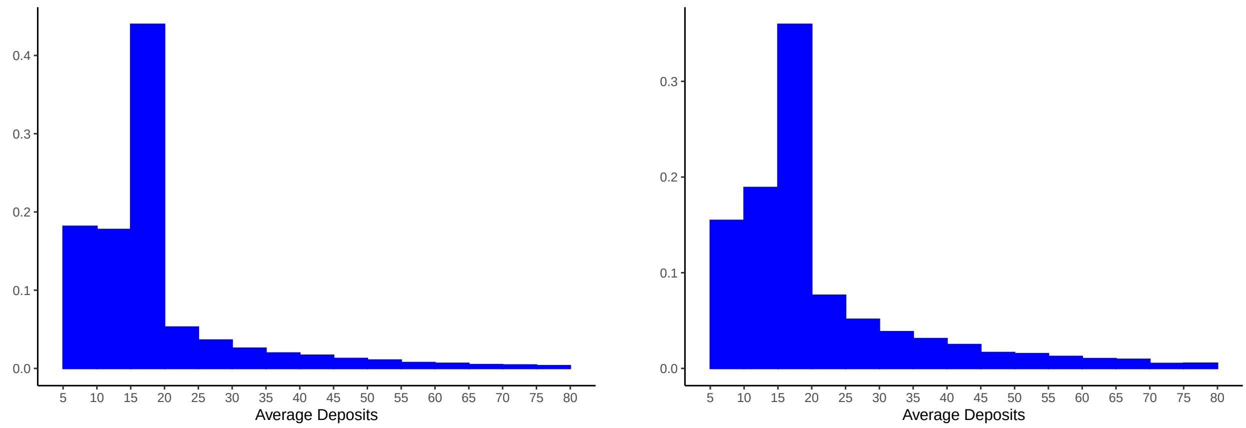
Notes: This figure presents the distribution across individuals of average deposits in millions of COP in the period previous to the policy change (April 2016-April 2017). The threshold of insured deposits previous to the change was 20 million COP.

Figure 3: Event Study Design



Notes: This figure reports results from the event-study of equation 1. The y-axis reports the coefficients of the effect of the policy change on the log of deposits, for each bin. The x-axis reports the corresponding lead or lag, where 0 corresponds to May 2017. See the notes of Table 1 for the description of the sample and the bins. Vertical lines represent 95% confidence intervals.

Figure 4: Average Deposits - Pre-policy by Sophistication Level

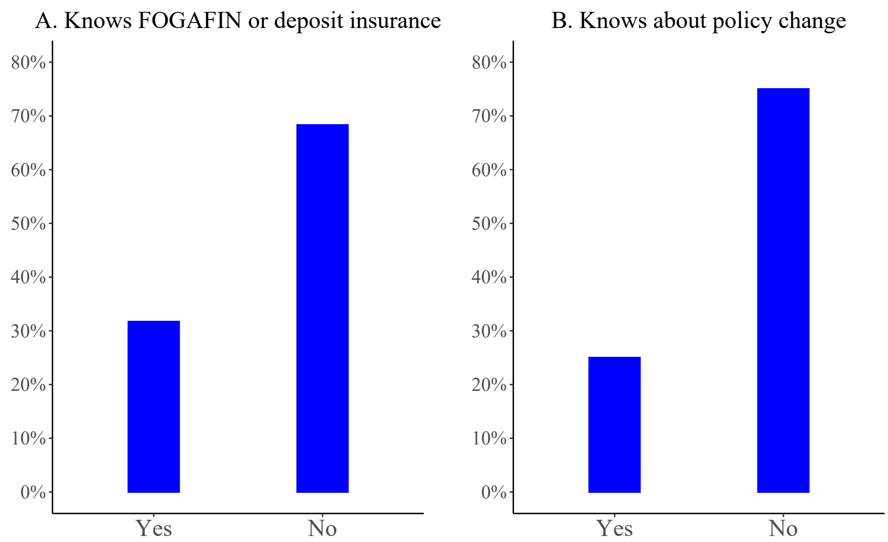


Sophisticated Depositors

Unsophisticated Depositors

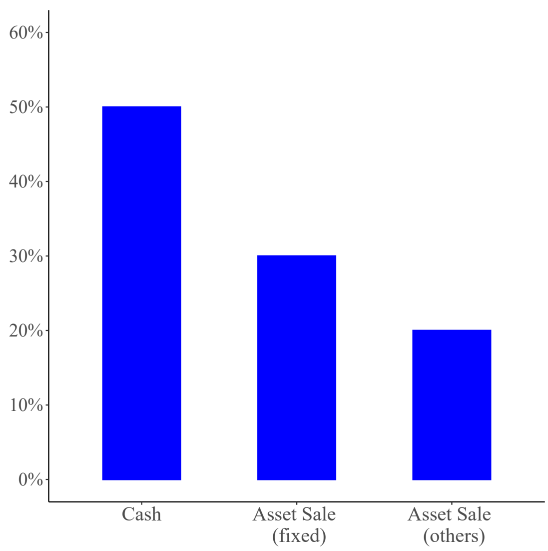
Notes: This figure presents the distribution across individuals of average deposits in millions of COP in the period previous to the policy change (April 2016-April 2017). We say that a depositor is sophisticated if the depositor has another bank product (a loan in particular). Panel A shows the distribution for sophisticated borrowers and Panel B shows the distribution for unsophisticated ones.

Figure 5: Knowledge of FOGAFIN and of the Policy Change



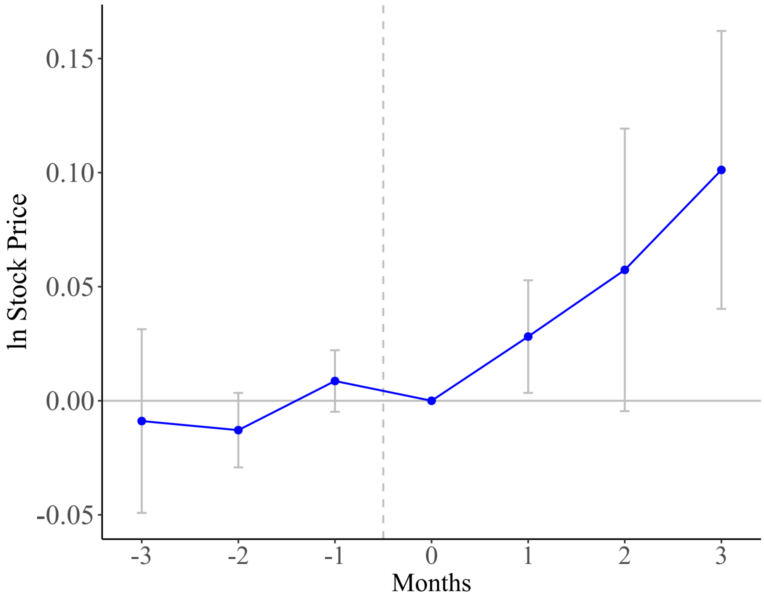
Notes: This figure shows results of the survey to 990 of the bank customers in our sample. Panel A shows the response rates to the question "Do you know about FOGAFIN or about deposit insurance?" and Panel B to "Do you know about the policy change?" 388 clients answered the first question and 128 answered the second one.

Figure 6: Deposit Insurance and Liquidated Assets



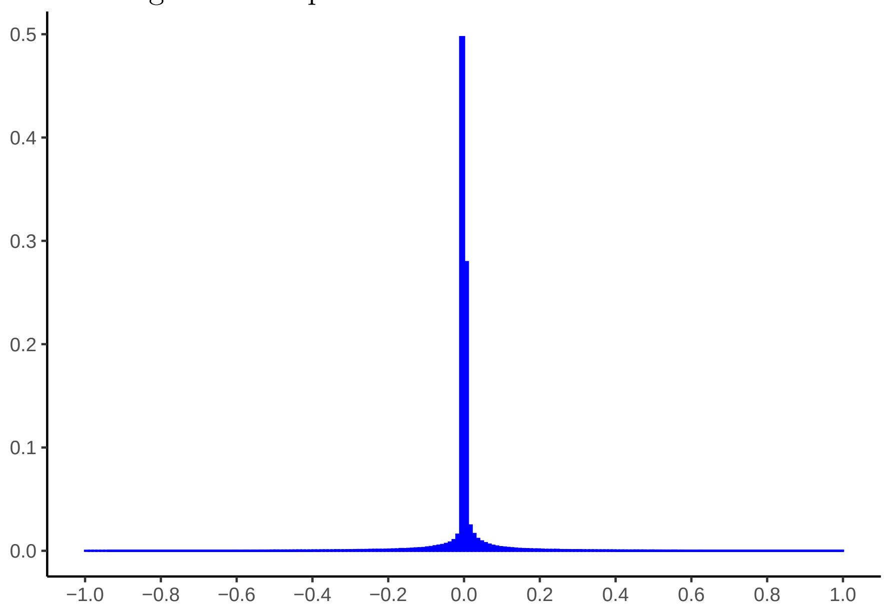
Notes: This figure shows results of the survey to 990 of the bank customers in our sample. The figure reports the main liquidated asset among customers who increased deposits and liquidated some asset between 2017 and 2019.

Figure 7: Deposit Insurance and Stock Prices



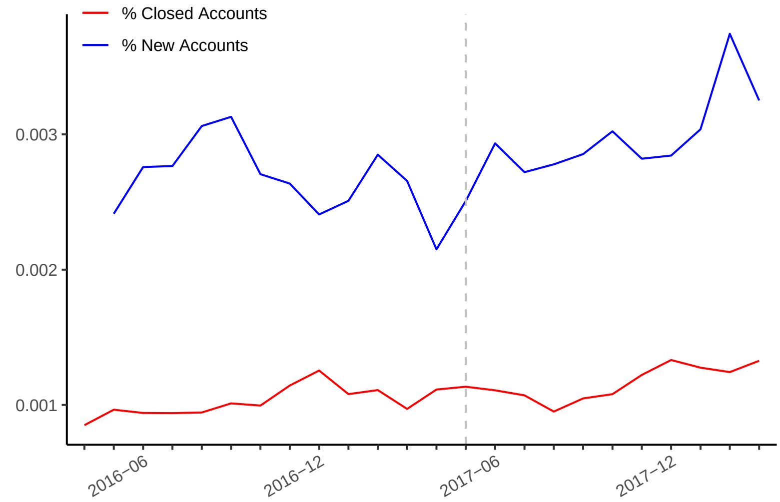
Notes: This figure reports results from the event-study of equation 10 of the effect of the policy change on the log daily price of the stock of Colombian companies. The sample contains daily prices of 19 companies that had daily prices listed in Bloomberg. Each reported coefficient corresponds to the interaction of $Financial_i$, an indicator equal to one for financial companies, and X_t, a leads and lags indicator. We code $X_0 = 1$ for the 19th of April 2017, X_{-1} for the days between the 19th of March and the 18th of April, and $X_1 = 1$ for the days between the 20th of April and the 19th of May. We code X_2, X_{-2}, X_3, X_{-3} analogously. Vertical lines represent 95% confidence intervals.

Figure 8: Deposit Growth Rates - Post Period



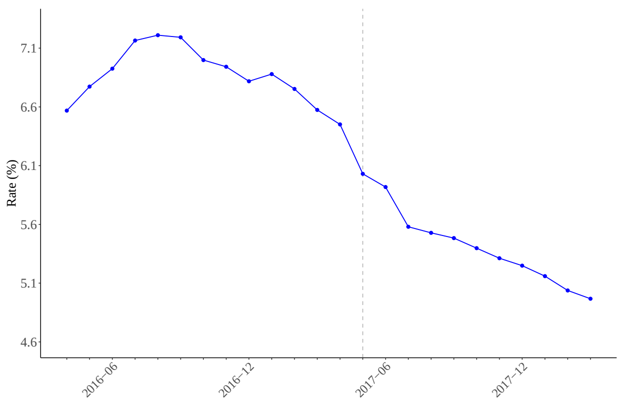
Notes: This figure reports the distribution of the growth rate of deposits in the period after the policy change (May 2017 to April 2018). The unit of observation is the month-depositor. The deposit growth rate in t is defined as $(total\_deposits_t - total\_deposits_{t-1})/total\_deposits_{t-1}$.

Figure 9: Accounts Openings and Closings - % of Total Accounts

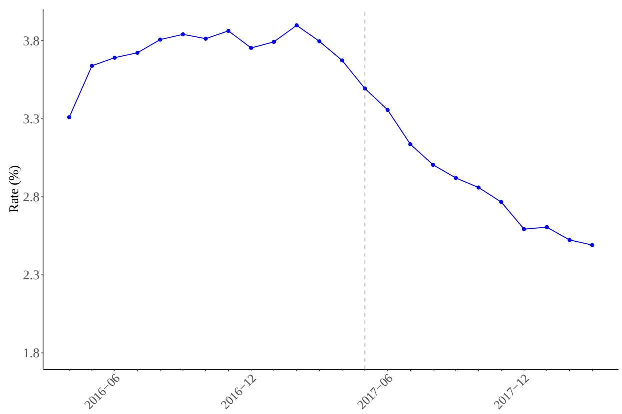


Notes: This figure reports the number of accounts closings and openings as a percentage of the total number of bank accounts in a given month. An account opening occurs in month t if the account was not observed before t and in t deposits were at least 5 million COP. An account closing occurs in month t if the account is observed at t but not at $t+1$ and it had at least 5 million COP at t.

Figure 10: Deposit Interest Rates



A. Fixed Term Deposits, 90 days



B. Savings Accounts

Notes: This figure shows the evolution of the average across financial institutions of the annual effective interest rate of Fixed Term Deposits of 90-days (Panel A) and of savings accounts (panel B). Data comes from the Banco de la República, the central bank of Colombia.