

WORKING PAPER

# Active Depositors

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## Abstract

Do depositors react to negative non-financial information about their banks? By using branch level data for the United States, I show that banks, that financed the highly controversial Dakota Access Pipeline, experienced significant decreases in deposit growth. These effects were greater in localities with higher support for the protests, higher environmental and social awareness and closer proximity to the pipeline. Data suggests that locally oriented banks were among the main beneficiaries of this depositor movement. Overall, this paper adds significantly to our understanding on the non-financial preferences of household financial investment decisions.

**Keywords:** Depositor Discipline, Bank Scandals, Environment

**JEL Classification Codes:** G21, G41, M14.

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# 1 Introduction

Do households value the non-financial characteristics of their financial intermediaries? As an example, understanding depositor preferences has been fundamental to the banking literature. So far, the attention has concentrated on the depositor perceptions of bank fundamentals, such as solvency and probability of default; hence, once banks are deemed too risky, depositors take disciplinary action by either withdrawing their funds or by demanding higher interest rates. To this date, however, there has been little to no research on whether depositors react to information that goes beyond financial fundamentals. Moreover, if depositors do in fact react to such information, is it because of financial motives or non-financial motives, such as social conscience? To shed light on these new ideas, this paper will attempt to test these hypotheses by examining the effects of the Dakota Access Pipeline scandal on depositor movement. By utilizing this major reputational shock, I find that deposit growth decreased for bank branches that financed the highly controversial pipeline and that non-financial factors (e.g., environmental beliefs) influenced this relationship. These results highlight the alternative explanations of this new form of depositor discipline. Overall, this paper significantly contributes to academic research by identifying the non-financial preferences of household investors and by showing that these preferences have real impact on investment decisions.

An extensive literature has established the importance of the banking system for the financing of the real economy. In the recent decade however, the banking sector has been under significant public scrutiny as it has been perceived as a major conduit of business activities deemed unsustainable for the global economy. Even to this day, banks continue financing major coal and carbon intensive projects that undermine the Paris Agreement's aim of limiting global warming to  $1.5^{\circ}\text{C}$  above pre-industrial levels (Bank Track, 2017a). In addition, on March 13, 2019, Representative Alexandria Ocasio-Cortez asked Wells Fargo's CEO at the House Financial Services Committee whether his bank was involved in "caging children", since the bank was involved in financing privately run detention facilities. In addition, she asked, "if there was a leak from the Dakota Access Pipeline, why shouldn't Wells Fargo pay for the cleanup of it, since it paid for the construction of the pipeline itself?". Wells Fargo and other banks have been similarly questioned for their involvement in financing gun manufacturers connecting them to the rising gun violence in the US. Given the rather crucial role of banks in these perceivably unethical activities in conjunction with the surprising level of publicity, it is important to understand to what extent depositors are aware and or internalize

these factors in their savings decisions.

This paper tests whether depositors react to bank scandals. As such, it is a thorough attempt examining whether depositors discipline their financial institutions based on other sources of information than just financial health. With branch level data from the United States, I make use of the 2016 Dakota Access Pipeline (DAPL) protests. DAPL was a highly controversial project that was financed by, among others, nine major banks in the United States. These banks faced large scale nationally focused protest campaigns by activist groups because of their involvement in the pipeline, which was intended to cross major rivers as well as ancient burial grounds. In certain petitions, close to a million protesters admitted to having accounts in the treated banks, of whom all were threatening to divest their deposits if the banks continued their involvement with the pipeline. The results from the empirical analysis show that DAPL financing banks had significant decreases in deposit growth. Treated branches across the US were affected by this movement, ultimately demonstrating the national scale of the depositor reactions.

Which branches were more likely to be affected? First of all, the findings show that branches were significantly more likely to lose deposits in states across the U.S. where people were more willing to donate to the pipeline protesters. This suggests that the pro-social movement preferences were a significant driver contributing to people's likelihood to withdraw their deposits. Secondly, to get a sense of where these preferences originated from, additional results show that the branch level losses were greater in environmentally as well as socially conscious counties, highlighting the other non-financial drivers of this depositor movement. Lastly, the effects were stronger for branches located in states where the pipeline was present indicating that proximity was a significant driver as well. In sum, these findings showcase that the depositor movement was less likely to be influenced by financial interests and are overall more consistent with alternative explanations of depositor discipline stemming from social preferences, proximity and environmental consciousness.

The results also show that savings banks, which tend to be more localized institutions with more transparent asset allocations relative to larger banks, were among the main beneficiaries of this unanticipated depositor movement. I find that savings banks located in counties with proportionally more DAPL banks had significantly higher deposit growth rates, which is in line with prior findings (Brown et al., 2017). Overall, this paper contributes to a range of scholarly research utilizing a novel

approach for identifying the non-financial preferences of household's financial investment decisions.

The first contribution of this paper relates to the evolving literature on corporate social responsibility and ESG (environmental, social, and governance) finance. While there is much evidence that investors and corporations are significantly more active in addressing and pricing positive and negative externalities, there remains much debate as to what exactly these value adding or decreasing mechanisms are.<sup>1</sup> Therefore, the first contribution of this paper is documenting a new and novel channel by which tractable ESG risks affect a firm's (in this case bank's) bottom line. Furthermore, this paper contributes to a much broader theoretical debate on the purpose of the firm. Hart and Zingales (2017) re-evaluate the purpose by making a crucial distinction that considers how individuals place different weights on the choice to take a socially efficient action. For them, this is highly dependent on the degree to which an individual feels responsible for the action in question. I directly tackle this novel distinction by showing that an individual's degree of responsibility (proxied by deposit ownership, social norms, and climate change beliefs) has a direct effect on the choice to do the right or socially efficient action. In line with Hart and Zingales's theoretical conclusion that corporations should maximize shareholder welfare, this paper is the first to show empirically that it makes financial sense to optimize corporations' strategies, conditional on the non-financial preferences of their creditors. In addition to addressing such a overarching question, this paper contributes to a broader theoretical literature involving pro-social investors. While a variety of papers and models have assumed that pro-social investors exist in the market place (Bénabou and Tirole, 2006; Baron, 2007; Bénabou and Tirole, 2010), this paper thoroughly identifies their existences.

This paper further contributes to a range of literature on depositor behavior. In general, studies have shown that depositors discipline banks by either withdrawing deposits or by requiring higher interest rates (Martinez Peria and Schmukler, 2001; Maechler and McDill, 2006). While depositors have traditionally been seen as reactive to fundamental information (Saunders and Wilson, 1996; Schumacher, 2000; Goldberg and Hudgins, 2002; Schnabel, 2009), recent evidence has indicated that they are sensitive to other sources of information (e.g., negative press rumors and regulatory signals), mechanisms (e.g., banking relationships and social networks), and bank characteristics (e.g.,

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<sup>1</sup>There is an extensive literature documenting these new developments: Hong and Kacperczyk (2009); Edmans (2011); Krüger (2015); Dimson et al. (2015); Ferrell et al. (2016); Lins et al. (2017); Liang and Renneboog (2017); Hartzmark and Sussman (2018), just to name a few. Servaes and Tamayo (2017) and Kitzmueller and Shimshack (2012) also provide useful literature reviews.

Euro-area affiliation and perception of too-big-to-fail) (Hasan et al., 2013; Correa et al., 2013; Iyer et al., 2013; Oliveira et al., 2014; Iyer and Puria, 2012). While this paper contributes to the findings of “other sources of information,” the novelty here comes from the information beyond financial fundamentals. Even though these papers demonstrate behavioral frictions may cloud depositor judgment, behavior is still largely founded on the perception of financial loss. As a counter example, Brown et al. (2017) examine Swiss depositor movement from the two largest banks in Switzerland during the financial crisis and find that the role of switching costs in deterring deposit withdrawals was independent of deposit insurance. They argue that it is reasonable to assume that the withdrawals of deposits were at least partly driven by disagreement with the bank’s corporate policy, rather than by fear about losing savings.<sup>2</sup> While their paper provides indicative evidence of the non-financial preferences of depositors, as of yet there exists no systematic analysis nor understanding of the other motivators of depositor discipline. This paper’s next contribution is filling this gap, specifically, the other non-financial sources of depositor discipline.

Direct policy recommendations from this paper are difficult to justify, since there exist endless nuances as to what kinds of regulation are better fit for addressing various externalities. Nonetheless, the findings of this study show that depositor discipline can play an important role in forcing banks to internalize non-financial externalities on society from their risk decisions. While the findings of this study cannot infer the relative importance of regulatory and market responses to such externalities, they clearly show that reliance purely on government intervention might not be necessary. Future studies would highly contribute to our understanding by finding a methodology to better quantify the magnitude of this market response and its individual impact on consequential bank behavior.

The remainder of the paper is structured as follows: Section 2 elaborates on the composition of the data and section 3 presents the main empirical findings. Section 4 tackles a series of additional findings. Section 5 concludes.

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<sup>2</sup>Blickle (2017), further document this movement extensively.

## 2 Data

The Dakota Access Pipeline protests were grassroots movements that began early 2016 in reaction to an approved oil pipeline project in the northern United States. The pipeline begins in the Bakken shale oil fields in northwest North Dakota and continues through South Dakota and Iowa, ending in Illinois. The pipeline sparked a lot of controversy from environmental activists as well Native Americans because the pipeline was intended to cross both the Missouri and Mississippi Rivers as well as ancient burial grounds. There was a total of 17 banks directly funding the construction of the DAPL and the banks that had a significant proportion of branches in the United States were Bank of Tokyo Mitsubishi UFJ, BBVA, BNP Paribas, Citigroup, SunTrust Robinson Humphrey, TD Bank, Mizuho Bank, SMBC, and Wells Fargo.<sup>3</sup> The protests themselves were large in scale, but the rather surprising outcome was the attention on banks as well as the financial coordination among activists. By February 2017, over 700,000 people had signed one of six petitions addressed to banks financing the DAPL. Individuals who signed the petition collectively reported having over \$2.3 billion invested in these banks through checking, mortgage, and credit card accounts. They threatened to divest their wealth if the banks continued financing DAPL, and by then thousands had already closed their accounts, removing over \$55 million from these banks (BankTrack, 2017b). While the true extent of this movement is difficult to document, it is very likely that these actions and associated reputational costs were significant both in the United States and across the globe. Many banks, including ABN Amro and ING were quick to make public statements as a reaction to the scandal. They were publicly re-evaluating their commitments to the project; by March 2017, ING had sold its stake in the DAPL loan (ING, 2017). Soon after, other banks, including DNB ASA and BNP Paribas, had sold their stakes as well. Interestingly, public pressure further increased and was not only directed at those financing the pipeline directly, but also those who provided corporate financing to the pipeline companies. Furthermore, Seattle ended up cutting ties with Wells Fargo, Los Angeles moved to divest from Wells Fargo, San Francisco moved to divest \$1.2 billion from companies financing the DAPL, Norwegian wealth fund stated its intent to drop fossil energy investments, and numerous

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<sup>3</sup>The 17 banks were Bank of Tokyo Mitsubishi UFJ, BayernLB, BBVA, BNP Paribas, Citigroup, Cr dit Agricole, DNB ASA, ICBC, ING, Intesa Sanpaolo, Mizuho Bank, Natixis, SMBC, Soci t  G n rale, SunTrust Robinson Humphrey, TD Bank, and Wells Fargo. The energy and pipeline companies involved in the project were Dakota Access, LLC, a company owned by Philips 66, Energy Transfer Partners LP, and Sunoco Logistics Partners LP. At a later stage, stakes in the pipeline were bought by MarEn Bakken Co LLC, which was a joint venture by Enbridge Incorporated and Marathon Petroleum Corporation.

Norwegian pension funds divested from companies behind DAPL. Interestingly, U.S. Bank stated its intent to stop financing pipeline projects, though, later retracted, and Nordea (the Nordic Banking and Investment group) had decided to exclude three companies behind DAPL, which was partially due to the unwillingness of those companies to talk about these issues.

To clearly identify depositor movement, I first collect the Federal Deposit Insurance Corporation (FDIC) summary of deposits (SOD) data for years 2012 - 2017. The data is based on an annual survey of branch office deposits as of June 30 for all FDIC-insured institutions, including insured US branches of foreign banks. All institutions with branch offices are required to submit the survey, and all responses are required by July 31. While the DAPL protests began April 2016, the attention on banks started around September 2016 as indicated by the timeline in figure 1. For this reason, the analysis assumes that the main shock took place in 2017 (i.e., July 2016 - June 2017). However, many regressions will be accounting for any effects that might have already risen in 2016 (i.e. July 2015 - June 2016).<sup>4</sup>

Overall, the dataset has detailed information on total deposits and other branch characteristics (including location) for over 100,000 bank branches across the United States. In the analysis, I only consider branches that have less than \$1.0 billion and more than \$100,000 in deposits, since larger branches often house deposits from all over the country (including corporate, municipal, and nonlocal retail consumers), while deposit growth rates for smaller branches might mislead the analysis with abnormally high or low growth rates. I also exclude banks that had been acquired in either 2017, 2016, or 2015 to retain the focus of the analysis on established branches. Overall, these exclusions remove less than 1.6% of the total sample. Furthermore, as certain regressions will attempt to identify non-financial determinants of depositor behavior, it will be important to rule out alternative explanations that might be correlated with locational characteristics. Therefore, later analyses will include county level data on education, specifically, the percentage of people with a bachelor's degree or higher. The data is for 2012 - 2016 and collected from the *United States Department of Agriculture* county-level data sets. The analysis will also incorporate the percentage of the county that voted for

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<sup>4</sup>Interestingly, the pressure on banks did not peak in 2017. Protests have continued since June 2017 and with an even broader focus, e.g., with the inclusion of Tar Sand projects and the Keystone XL pipeline. The current banks are still being targeted since the June 2017 petitions, and more banks have been included in subsequent petitions. NGOs have reported that financial activism continues to this day and there have been no signs of these protests stopping as of yet.



Figure 1: Timeline of Events



Barack Obama in the 2012 presidential elections as a measurement for political affiliation. The data for this measurement was collected from *the Guardian*. In addition, the analysis will control for the county population, which is collected from the *Northeast Regional Center for Rural Development*. Lastly, in order to investigate the non-financial determinants of depositor behavior, the analysis will make use of county level climate change beliefs as well as proxies for social preferences. This data will be further discussed in later sections.

The summary statistics can be found in table 1, and panel B presents the two-sample *t*-tests for equal means. The population of banks is split between those banks that financed the DAPL and those that did not. The results show that branches whose parent banks financed the DAPL had higher levels of deposits and slightly lower deposit growth rates. Furthermore, DAPL financing branches were located in relatively populous, educated, and pro-Democratic counties. It was mainly larger commercial banks that financed the pipeline, and data suggests that these characteristics were

reflected in the branch level data. Panel C provides bank level summary statistics on the number of branches as well as the distribution of deposit growth data.

[Insert here Table 1]

## 3 Empirical Results

### 3.1 Main Results

To document the effects of the DAPL scandal on depositor behavior, I begin by visualizing the phenomenon with heat maps shown in figure 2. The first heat map shows the deposit growth rates for 2015 (i.e., July 2014 - June 2015) and the second one for 2016 (i.e., July 2015 - June 2016). Values are based on the average deposit growth rates for branches that financed the DAPL minus average state level deposit growth rates.<sup>5</sup> The darker colors in the heat maps translate to higher than state average deposit growth rates for the treated banks. As one can see, the areas closest to the pipeline, turn increasingly lighter in 2016 (first year of the scandal). This change means that on average, banks who financed the DAPL became more likely to have lower than state average deposit growth rates during the first year of the scandal. Furthermore, once you take a glimpse into 2017 (i.e., July 2016 - June 2017), the changes look even starker. A clear majority of the states turn lighter, indicating that depositor movement had become a nationwide phenomenon.

[Insert here Figure 2]

To better identify the effects of the scandal, I continue the analysis by estimating a simple diff-in-diff style analysis shown below. The treatment is equal to one if the year was 2017 and the bank was involved in financing the DAPL. Since the assignment to the treatment group is not random by nature, this is not a pure diff-in-diff analysis. Therefore, it will be important to control for a host of factors. For the majority of base results, all regressions will include bank, state, and year fixed effects to be assured that the results are not driven by any year or state level shocks nor any bank specific characteristics. In addition, the regressions will include a range of bank and branch specific

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<sup>5</sup>Kentucky, Louisiana, Ohio, and Rhode Island are the only states in which these banks did not have any significant operations; hence, there is no branch level information for them. This is why the states are white (i.e., "No data").

controls as described in table 1 and standard errors will be clustered at the branch level.<sup>6</sup>

$$Deposit\ Growth_{it} = \alpha_0 + \beta_1 Financed\ DAPL_i * 2017_{it} + \lambda X_{it} + \alpha_i + \theta_t + \epsilon_{it} \quad (1)$$

The regression results for this exercise are shown in table 2. All the columns include the full sample of US states and show that financing the DAPL had a significant negative effect on deposit growth. Overall, financing the DAPL project had cost the affected banks 1.5 - 2.2 percentage point decrease in deposit growth. The economic effects of the event are quite substantial, considering that the average deposit growth rate for the full sample is 8.6% and for the treated banks is 8.3%. The results demonstrate that the incident was indeed a nationwide phenomenon as already evidenced by the high level of public awareness and engagement. To account for any time-varying, county-level, demand-side shocks or branch specific characteristics, columns 3-4 report the interaction results with the inclusion of bank fixed effects (at the institution level), branch fixed effects, and county-year fixed effects. The results hold after including these exhaustive controls. Overall, the results remain significant across the specifications, and the magnitudes change very little.

[Insert here Table 2]

To get a better sense of the real impacts of the DAPL, I calculate the approximate loss of deposits for the affected group. In other words, I estimate the losses for the 10 902 (treated) branches in 2017, which had average branch level deposits of \$101 million in 2016. Using the previously identified economic effect of -0.015% (and -0.020%) deposit growth rate, this would imply that the bank branches lost approximately \$101 million \* 0.015 (0.020) \* 10 902 = \$16.5 (\$22.0) billion in total deposits in 2017 alone. While this is a large economic effect, generating reliable loss estimates is difficult, and one might argue that if all these effects were caused by switchers, the estimates would be inflated due to double counting (though unlikely, since losses due to any unmet new deposit demand surely played a role as well). In other words, a “deposit loss” for treated banks naturally means “deposit gain” for other banks (due to switching), and this puts an upward bias in the diff-in-diff estimates.

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<sup>6</sup>The majority of the results control for total assets of the institution, total domestic deposits of the institution, asset specialization (international, agricultural, credit-card, commercial lending, mortgage lending, consumer lending, other specialized under 1 billion, all other under 1 billion, and all other over 1 billion), type of branch service (brick and mortar, retail, cyber, military, drive through, mobile/seasonal, and trust), major institution grouping (national member bank, state member bank, state nonmember bank, savings banks and savings and loans, state stock savings and loans, and other insured institution).

This means the estimates may double-count the effect by taking the difference between these two types of banks. Therefore, with full-switching, we can assume that these banks lost at least \$8.25 - \$11 billion in total deposits as a result of the scandal. This estimate is by far the most conservative, considering that the analysis also does not incorporate the largest US bank branches (those with over \$1 billion in deposits), which undoubtedly suffered from deposit losses as well. In addition, the FDIC does not collect data on credit unions, which were primary locations to which NGOs instructed their petitioners to transfer their funds. This biases against finding a result and implies that the deposit loss estimates would be understated. Later analysis incorporating bank level credit union data from call reports provides strong support for this claim.

While it is difficult to establish how many people might have moved their deposits, the results and anecdotal evidence may provide some indications. As stated earlier, 700,000 petitioners collectively reported having over \$2.3 billion invested in these banks through checking, mortgage, and credit card accounts. They threatened to divest their wealth if the banks continued financing DAPL (BankTrack, 2017b). Furthermore, in the second *Signforgood* petition, 150,000 petitioners had pledged to divest \$4.4 billion. While it is difficult to get a sense of the actual amount of people who were responsible for the overall deposit losses, comparing petitioner statements with the estimated \$8.25 - \$22.0 billion change, gives us a glimpse of the extent and potential. Overall, the results highlight a large cost of doing business for these banks, yet we must be aware that this analysis is unable to capture further business losses as a result of employee morale or lower demand for other consumer products, which surely had some impact on these banks as well.

To further evaluate whether these changes were driven by traditional retail clients, figure A1 in the appendix reports the uninsured deposit growth rates of the treated and non-treated banks. The information was collected from the Federal Financial Institutions Examination Council (FFIEC) Central Data Repository's Public Data Distribution web site and more specifically, the Call Reports, which are available at the institution level (i.e., not the branch level). Bank branches can receive sizeable funding from large time deposits from US money market funds, so it is important to examine whether these changes might have impacted the overall deposit growth results. The figure fails to indicate any substantial changes in these markets. It seems that large time deposits were not the primary driver of depositor movement. Furthermore, it was difficult to find any mentions of this event in analyst reports, which further yields support for this claim. The figure also serves as a

partial test for arguments in favor of financial motives. If anyone were to move their deposits due to fears of these banks facing future financial difficulties, it would have been the uninsured depositors, who again show no clear sign of movement. As a final point, those who might argue that financially less experienced retail clients might be biased in interpreting these events as a sign of future distress, depositors are insured by the FDIC up to at least \$250,000. Therefore, it would be difficult to argue in favor of misguided movement in the retail deposit channel. Overall, the results indicate that retail depositors are, therefore, a likely candidate for driving the changes in deposit growth.

In order to alleviate concerns that the empirical analyses might not be identifying a unique event specific to these banks, figure A2 in the appendix reports the total deposit growth rates of the treated and non-treated banks. This data is also from the FFIEC Call Reports. The graph provides some convincing evidence that these banks were facing abnormally lower deposit growth rates. However, as a reminder, the data is only available at the institutional level, so we must be careful before making any strong statements based on these results. As an additional note, the advantage stemming from this figure is its comparison to the previous one on uninsured deposit growth rates, which saw no meaningful reaction. This relative comparison gives a strong indication for the retail (instead of wholesale) channel as being a significant source of depositor movement. As a reminder, if DAPL was to be considered a financially negative event for these banks, we would have expected the uninsured deposit growth rates to be more reactive, which is the opposite of what these figures suggest.

It is important to acknowledge that identification is further complicated by the fact that DAPL specific events took place across several accounting quarters and most of these banks experienced positive deposit growth rates during the overall time frame. While the figure provides partial evidence that the treated banks witnessed abnormally lower deposit growth rates, in order to provide further evidence that the results are identifying a unique event, table A1 in the appendix provides branch level regressions, whereby the interaction  $2017*FinancedDAPL$  is kept as the base variable. As the results show, all the alternative year times  $FinancedDAPL$  interactions are positive and significant. These banks were doing strictly better across all years before and compared to 2017, further highlighting the importance and uniqueness of the DAPL events. As a final examination of the data, figure A3 provides graphical representation of the pre-treatment trends of the branch level FDIC data used in the main analyses. The graph does not suggest any clear violations of the parallel trend assumption.

## 3.2 Channels of Depositor Movement

The next step of the analysis is to identify the non-financial motivators of this unanticipated depositor movement. To begin, it is important to recognize that the DAPL protests involved a variety of stakeholder groups including Native Americans, environmentalists and even U.S. army war veterans. Therefore, it is best to begin by finding a common measure that proxies for the overall level of national attention and across-state protest support for this movement. To do so, this analysis makes use of state level information from *Google Trends*. To be more specific, the analysis uses a variable *Donate to Standing Rock*, which is equal to the intensity of Google searches between 4/4/2016 and 11/9/2017 for the search term. As a reminder, the pipeline was intended to cross the Standing Rock Indian Reservation and representatives from the Standing Rock Sioux Tribe were among the first to begin the on-site pipeline resistance movement. As a result, *Donate to Standing Rock* became a popular search term. Figure A4 in the appendix displays the heterogeneity of those searches across the United States. In order to conduct this analysis, I run the same regression for the full sample of US states similar to earlier regressions, while including a triple interaction term accounting for intensity of the *Donate to Standing Rock* search query. Table 3 shows the results of this analysis. The interactions are negative and significant, suggesting that people who supported the protests, were also significantly more likely to move their deposits. Overall, the findings show that non-financial factors were a significant driver of this depositor movement.

To make sure the effects are not driven by other factors that might be correlated with climate change beliefs, all regressions include county level data on education, specifically, the percentage of people with a bachelor's degree or higher, as well as county level population data for 2014. In addition, the results also include the percentage of the county that voted for Barack Obama in the 2012 presidential elections as a measurement for political affiliation. All the results hold after controlling for these alternative determinants of depositor behavior. As an additional robustness test, it is important to mention that there are states that had missing values for the *Donate to Standing Rock* search term, as indicated in the earlier figure. To mitigate this concern, columns 1-3 show the results, while converting the missing values to zero, and columns 4-6 include the unconverted results. The results hold under both specifications. Furthermore, table A3 shows the results of the analysis using more generic terms, specifically *Standing Rock Indian Reservation* and *Dakota Access Pipeline*, which provide more state level observations for the analysis. The results hold after

using these alternative search queries as well. While this adds overall strength to the analysis, the earlier results are much more reliable since the query *Donate to Standing Rock* is a much better representation of local DAPL support. Lastly, table A4 shows the results of all four previous search query specifications, while including state-year fixed effects, branch fixed effects and bank-year fixed effects in all specifications. The results remain significant and negative. This is by far the most conservative test of this paper, thereby adding significant strength to the analysis.

[Insert here Table 3]

As stated earlier, the overall support for the movement was undoubtedly determined by a variety of beliefs and preferences. Therefore, the next step of the analyses is to uncover and identify some of these factors and to examine whether they also had an effect on depositor behaviour. As a first step, I collected county level data from the *Yale Program on Climate Change Communication* (YPCCC). This data is based on surveys that evaluate Americans' climate change beliefs, risk perceptions, and policy support (Howe et al., 2015). I use their data from 2016, and in the analysis I include a dummy, "Happening 70," which is equal to 1 if at least 70% of the county thinks that global warming is happening. Approximately 17% of US counties fall under this category. The dummy is used as a way to represent the counties where a clear majority of the population think climate change is happening. While incorporating a continuous variable might be of interest, the effects are mostly expected to appear in communities with relatively strong climate change beliefs as a result of the intense polarization of public opinion (Hoffman, 2011). Table 4 shows the results of this analysis. The interactions are negative and significant, demonstrating that changes in deposits were further aggravated by local beliefs in climate change. Bank branches who financed the DAPL had a greater negative deposit growth rate if they were located in a county with stronger beliefs in climate change. As in earlier analyses, the results also hold after controlling for education, political beliefs and population. As a further test, the third column of the analysis includes bank-year and state-year fixed effects as a way to control for any other bank and state specific effects that might have risen in 2017. The results hold after including this conservative test. As a final conservative test, the analysis makes use of the YPCCC data for 2014. One might argue that the DAPL event had an effect on local climate change beliefs, and therefore, it would be more appropriate to incorporate prior county-level beliefs on climate change. Table A2 in the appendix shows the results of this analysis. The findings remain the same and demonstrate that local climate change beliefs had an effect on depositor movement.

[Insert here Table 4]

The next stage of the analysis is to further gauge the effects of personal responsibility that depositors might feel due to the negative externalities caused by their banks (as proposed by Hart and Zingales, 2017). To further tackle this responsibility channel, the analysis includes a variable “Human 55,” which is equal to 1 if at least 55% of the county thinks global warming is caused mostly by human activities. Approximately 9% of US counties fall under this category. The results from this analysis remain similar to earlier findings and provide additional insights into the non-financial determinants of depositor discipline.

[Insert here Table 5]

As another examination of non-financial drivers, the analysis makes use of the county level social capital data from Rupasingha et al. (2006). More specifically, the analysis will incorporate their 2014 data on the number of non-profit organizations within a county (without including those with an international approach) to proxy for county level willingness to tackle societal issues. Table 6 shows the results of this analysis. The interactions are negative and significant across the US, demonstrating that changes in deposit growth were further aggravated by local social norms. The results hold after controlling for county level education, population, and political affiliation.

[Insert here Table 6]

As a final examination of the non-financial drivers, it will be worthwhile to examine whether proximity to the scandal played any significant role. The motivation for running this analysis is to understand whether those who were located closer to the scene of the controversy were more likely to move their deposits. To be more specific, the interaction terms will account for whether the branch was present in a pipeline state (i.e., North Dakota, South Dakota, Iowa, and Illinois). The results from this analysis are shown in table 7, which demonstrate that on average, bank branches who financed the DAPL had suffered an additional negative deposit growth rate if they were located in the pipeline states. Even though the DAPL scandal was a nationwide phenomenon, the results further highlight that people who were closest to the scene of the controversy, and hence more likely to be impacted, were the ones who were more likely to move their deposits. These results are similar to findings by Levine et al. (2018), who document the increased migration of corporate executives after firms open industrial plants emitting toxic air pollutants. It is important to clarify that, in



total, nine banks with branches in the United States financed the DAPL; however, not all of them had operations in the pipeline states. The banks that had a presence in these states were BNP Paribas, Citigroup, Wells Fargo, and Mitsubishi UFJ. In total, they collectively held 17% of all deposits in South Dakota, 12% in North Dakota, 9% in Iowa, and 3% in Illinois. The results from this analysis are in line with earlier findings and further highlight an additional amplifying factor for depositor movement.

[Insert here Table 7]

## 4 Further Findings

### 4.1 Savings Banks

While deposit growth decreases for banks involved in the DAPL incident, it is worthwhile exploring whether the uninvolved banks enjoy any spillovers as a result of depositor movement. To do so, I create a dummy equal to one if the branch did not finance the DAPL and is a state-chartered savings bank. This test is motivated by Brown et al. (2017) who found that deposit withdrawals from distressed banks in Switzerland were unrelated to household coverage by deposit insurance. They assume that deposit withdrawals from UBS (distressed bank that incurred investment losses in the wake of the US subprime crisis) were at least partly driven by disagreement with the bank's corporate policy, rather than by fear about losing savings. This view was further supported by the fact that while customer deposits declined strongly at the two large banks (UBS and Credit Suisse), deposits at the domestically focused cantonal banks and savings banks increased throughout the crisis. More specifically, there is additional documentation that local mortgage lenders (Raiffeisen-banks) were direct recipients of the new clients that migrated away from UBS (Blickle, 2017). In similar spirit, Giannetti and Wang (2016) find that in the United States, state-level corporate fraud, decrease stock market participation and, more interestingly, Gurun et al. (2017) find that residents who were exposed to the infamous Madoff Ponzi scheme, were more likely to withdraw their assets from investment advisors and subsequently increase their deposits at banks. Motivated by these findings and insights, I test whether US savings banks faced similar advantages during the DAPL incident.

The results in table 8 show that savings banks were the main beneficiaries of this unanticipated depositor movement. This is done by incorporating a triple interaction term with a variable measuring the proportion of DAPL branches in a given county. Intuitively, if the locality has more DAPL branches, the likelihood of savings banks exhibiting higher deposit growth should increase as a result of greater levels of depositor movement. The results demonstrate that savings banks in counties with more DAPL banks enjoyed higher deposit growth rates as a result of the scandal. In order to be assured that the results are not driven by any time-varying, state-level, demand-side shocks nor bank-year specific characteristics, column 10 reports the interaction results with the inclusion of state-year fixed effects as well as bank-year fixed effects. Overall, these results demonstrate the impacts of the pipeline controversy and its heterogenous effects on depositors.

[Insert here Table 8]

## 4.2 Wells Fargo

During the DAPL scandal, Wells Fargo was going through a series of corruption scandals unrelated to the DAPL incident. The bank had created (without customers' permission) millions of fraudulent accounts as sales staff desperately tried to hit unreasonable sales targets. Furthermore, thousands of auto loan customers were charged for car insurance that they did not need (Fox and Duren, 2017). As a result of all these scandals, 18% of Wells Fargo's branches lost deposits, while competitor deposit growth rates had improved during the same time frame (Tor, 2017). These incidents do not necessarily go against the main findings of the extended analysis; however, to establish that changes in deposits were partially driven by the pipeline scandal as well as the proximity to the pipeline, I exclude the Wells Fargo branches from the sample. Wells Fargo had the largest amount of branches in the treatment group, so excluding them serves as a conservative approach to the analysis. The results in table A5 in the appendix show that branches that financed the DAPL had incurred significantly greater deposit losses, even after excluding the branches owned by Wells Fargo.

## 4.3 Credit Unions

The overall results of this study are most likely understated. As mentioned earlier, the FDIC does not cover nor insure credit unions, which hold a non-negligible amount of \$1 trillion in total deposits. Credit unions are covered by the National Credit Union Administration (NCUA), and as a

comparison, the FDIC covers approximately \$11.1 trillion in total deposits. Overall, not including these banks in the analysis biases against finding any results as NGOs quite often instructed petitioners to move their funds to more local institutions (i.e., savings banks, and more relevantly, credit unions). Unfortunately, this paper cannot include credit union data in the main analysis. Though branch level data is provided by the NCUA, their data does not provide deposit information at the branch level. Therefore, this analysis will incorporate call report data at the institutional level as an alternative. This data is added to the main dataset, providing approximately 6,000 additional banks to the main analysis. The analysis will assume that each institution operates as its own individual branch, located at the headquarter's address. Overall, this is not a major problem for the analysis as most credit unions in the United States are small with few branches, which operate within a geographically close proximity. The main drawback is that the data cannot be used in the primary analyses of this paper as it would not allow for specific controls found in the FDIC dataset nor for bank-year fixed effects that are useful in the extended analyses of the paper.

Table 9 shows the main results after incorporating credit union data in the analysis. As a comparison, columns 3-4 show the very same results excluding credit unions. In line with prior expectations, the results show that branches which financed the DAPL had significant decreases in deposit growth. The results are greater in magnitude once the credit unions are incorporated in the analysis. This provides further evidence that the earlier results were indeed underestimating the effects of the DAPL incident on the treated branches.

[Insert here Table 9]

As an additional test, table A6 in the appendix re-creates the earlier deposit windfall results for the non-treated branches. More specifically, the analysis tests whether savings and credit unions had higher deposit growth rates if there were more DAPL financing branches operating in the same county. The variable savings bank is a dummy equal to one if the entity is either a savings bank or a credit union. In line with earlier results, the findings show that these entities were in fact doing well if there were more DAPL financing branches in the vicinity. It would be interesting to test whether there were any heterogenous effects on these institutions (e.g., whether credit unions received more of the deposit windfall than savings banks did). Unfortunately, this analysis will not be able to make any further inference as the credit union data is only available at the institution level, which therefore limits the reliable identification strategies available for further tests.

## 4.4 Further Protests

Between September 2016 and June 2017, bank protests often concentrated on the “project” financing banks, as emphasized in earlier sections and analyses. However, as time went on, protests grew larger and so did the list of banks that were targeted. Among the major petitions, “DefundDAPL” and “Signforgood” began including banks that provided corporate loans to the companies in charge of the pipeline construction. These were known as the corporate financing banks. While these banks were not generally targeted until June 2017, some early stage protests took place already in February 2017. These were mainly as a result of the “DefundDAPL” movement that had started in November 2016. The banks that were in these extended lists included Citizens Bank, Comerica, U.S. Bank, PNC, JP-Morgan Chase, Bank of America, RBC, Origin Bank and HSBC. While other banks were included in these lists as well, all of these banks specifically had major branch level presence in the United States.

Table 10 reports the main empirical results by incorporating the extended treatment group, i.e., by including both the project and corporate financing banks. The results are significant and provide evidence that even the extended group was affected during the treatment period. Interestingly, the overall results are weaker, which suggests that the larger and perceptionally vaguer group was not being targeted as successfully on average. Anecdotal evidence does suggest that some of the corporate financing banks also received much attention and public scrutiny. For example, U.S. Bank, Bank of America, and Citizens Bank experienced numerous branch level protests, and, after major public pressure, Citizens Bank ended up withdrawing from the pipeline loan in March 2018. While U.S. Bank received much attention from branch level protests, activists also climbed the U.S. Bank stadium in Minneapolis, Minnesota and hung large banners protesting the bank’s commitment to financing the DAPL project. This pressure initially led U.S. Bank to publicly state that it would stop financing future pipelines; however, this later turned out to be false. U.S. Bank was later found financing new pipeline projects not too long after the protests.<sup>7</sup> While some banks faced immense public pressure, certain banks, including HSBC, which has large branch level presence in the United States, faced very limited public scrutiny. This disparity would indicate that there were some levels of heterogeneity as to which banks were ultimately targeted by local grassroots movements. Most likely, both the heterogeneity and the timing are partial explanations as to why the overall effect on

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<sup>7</sup>To be more specific, U.S. Bank had committed to cease project financing loans. The new loans that were then issued were corporate financing loans to pipeline companies for general use, which included pipeline construction.

deposit growth is smaller compared to earlier results. The next sections will test for whether the extended group was differentially affected by the non-financial motivators of depositor discipline, i.e., proximity to pipeline, climate change beliefs, and social values.

[Insert here Table 10]

Table A7 reports the results for branches located in pipeline states with the inclusion of the extended treatment group. Overall, the results are similar, but most importantly, the results are stronger compared to earlier findings. These coefficient results are greater not only in size but also in significance as they hold after accounting for branch and county-year fixed effects. This result highlights some of the earlier heterogeneity. While the extended group of banks were generally being targeted by protesters, it seems banks were targeted more in areas where it really mattered, in this case, the pipeline states.

While the pipeline state results in itself are interesting, perhaps there are other channels that show a similar story. Tables A8 and A9 take a further dive into the drivers of alternative sources of depositor movement while incorporating the extended treatment group. Table A8 shows the results of the analysis after the incorporation of the YPCCC data on climate change beliefs. While the coefficient signs are negative, the results remain insignificant. On the other hand, the effects of local societal attitudes proxied by county level number of NGOs, in table A9, show negative and significant results similar to earlier findings. What is most notable about these results is that while the coefficient size is smaller, the results are stronger. The results hold for all previous specifications, but also after the inclusion of state-year and bank-year fixed effects. Overall, the results highlight that while the masses did not pay as much attention to this larger list of banks, there was clear heterogeneity as to how and when these branches were targeted. Results suggest that proximity to the pipeline had a clear effect on all banks and that county level attitudes had further heterogeneous impacts on the extended treatment group.

As a sanity check, table A10 shows the results for savings banks after adjusting for the amount of extended DAPL group financing banks present in each county. It is likely that savings banks experienced higher deposit windfalls in counties with more extended group DAPL financing banks. Results are similar to earlier findings and showcase the phenomenon that savings banks that were

located in DAPL heavy counties, benefited from the DAPL incident.

## 5 Conclusion

The purpose of this study is to document the non-financial preferences of household financial investment decisions as well as to showcase a new and novel channel of depositor discipline. By using US branch level deposit data, I find that banks who financed the controversial Dakota Access Pipeline had significantly lower deposit growth rates, especially for branches located in states where people supported the protestors, branches located in environmentally and socially conscious counties and branches located closer to the pipeline. I find that local savings banks were among the major beneficiaries of this deposit movement, which is also in line with prior evidence.

While one may still argue that DAPL had relatively little impact on the balance sheets of these banks, a closer examination has revealed surprising bank level operational changes. After the DAPL incident, several banks re-evaluated their commitments to the pipeline loan, after which many ended up in fully selling their stakes in the project. While it is difficult to truly identify how and to what extent the depositor channel influenced these and other operational decisions, it has certainly played a role.

The results from this study highlight the strength of the household market force and the importance of depositor activism on bank fundamentals. The findings suggest that bank involvement in perceptually non-ethical activities not only requires regulatory oversight; depositors can have real impact as well. As financial institutions are increasingly being evaluated for their financial and non-financial activities, I show a surprising, yet important, disciplinary channel for bank behavior. Future studies should aim to better identify the extent to which banks actually internalize these forces and whether they significantly influence their corporate behaviour.

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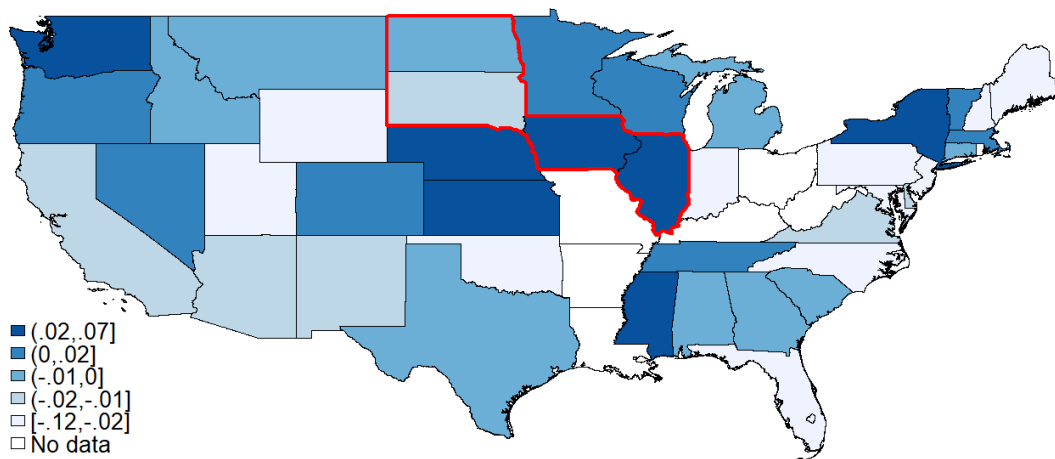


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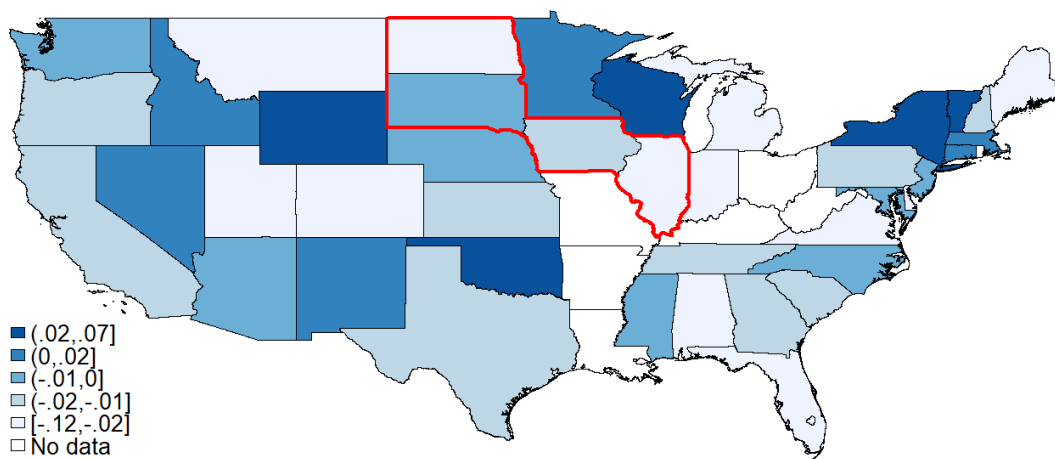
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Figure 2: Dakota Access Pipeline: State-Average Adjusted Deposit Growth Rates for Treated Banks

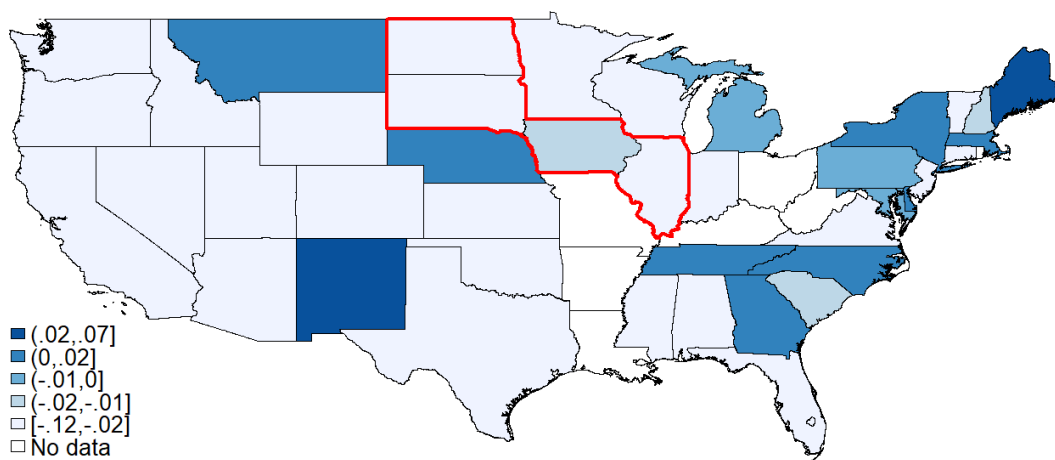
(a) July 2014 - June 2015



(b) July 2015 - June 2016



(c) July 2016 - June 2017



*Notes:* The red line highlights the pipeline states. Kentucky, Louisiana, Arkansas, Missouri, West Virginia, Ohio and Rhode Island are categorized as "No data", because these states had either zero or less than eight branches in total from the treatment group. Legends are determined by the five quartiles from 2015.

Table 1: Summary Statistics

## (a) Branch Controls

VARIABLES	(1) N	(2) mean	(3) sd
<b>Branch Data and Controls</b>			
Annual branch level deposit growth, winsorized at the 1st and 99th percentile	416,594	0.0862	0.230
Factor variable that defines the type of service the branch office provides	416,594	11.18	1.254
Industry classification grouping which indicates the institution's primary asset specialization	416,594	4.853	2.399
Factor variable that indicates major groupings of the institution	416,594	2.330	1.810
Total assets of the institution	416,594	3.930e+08	6.689e+08
Total deposits of the institution	416,594	2.543e+08	4.229e+08
<b>Treatment Variables</b>			
Equal to one if the branch financed the Dakota Access Pipeline	416,594	0.131	0.337
Equal to one if the branch financed the Dakota Access Pipeline and the year is 2016	416,594	0.0260	0.159
Equal to one if the branch financed the Dakota Access Pipeline and the year is 2017	416,594	0.0253	0.157
<b>County Level Information</b>			
Percentage of the county that thinks global warming is happening	415,533	69.43	6.287
Percentage of the county that thinks global warming is caused mostly by human activities	415,533	52.62	6.006
Number of non-profit organizations (without including those with an international approach)	416,578	3,853	6,533
Percent of adults with a bachelor's degree or higher, 2012-2016	416,578	30.16	11.32
Percentage of the county that voted for Barack Obama in the 2012 presidential elections	400,110	47.44	16.84
Population 2014	416,578	898,249	1.649e+06

(b) Two-Sample  $t$ -Test for Equal Means

VARIABLES	(1)		(2)	(3)	(4)
	N	Did not	Mean	Mean	$t$ -test
Branch Deposits	416594		63250	95241	***
Annual branch level deposit growth, winsorized at the 1st and 99th percentile	416594		0.087	0.083	***
Percent of adults with a bachelor's degree or higher, 2012-2016	416578		29.64	33.56	***
Percentage of the county that voted for Barack Obama in the 2012 presidential elections	400110		46.96	50.66	***
Population 2014	416578		830554	1347573	***

## (c) Deposit Growth by Bank

BANKS	(1) Number of Branches	(2) N	(3) mean	(4) sd
MITSUBISHI UFJ FINANCIAL GROUP, INC.	351	1,475	0.118	0.257
BANCO BILBAO VIZCAYA ARGENTARIA, S.A.	653	3,278	0.0973	0.219
BNP PARIBAS	526	2,747	0.101	0.227
CITIGROUP INC.	714	4,030	0.105	0.254
MIZUHO FINANCIAL GROUP, INC.	1	5	0.199	0.735
SUNTRUST BANKS, INC.	1395	7,124	0.0466	0.191
TORONTO-DOMINION BANK, THE	1237	6,302	0.126	0.268
WELLS FARGO & COMPANY	5937	29,538	0.0744	0.149
SUMITOMO MITSUI FINANCIAL GROUP, INC. / TRUST HOLDINGS, INC.	10	51	0.0456	0.215

*Notes:* Branch level data and controls are all collected from the *FDIC* for 2012-2017. County level education information come from the *United States Department of Agriculture* county-level data sets. County-level information on climate change beliefs come from the *Yale Program on Climate Change Communication*. Population data and number of non-profit organizations come from the *Northeast Regional Center for Rural Development* website. Lastly, the full US 2012 election county-level results is collected online from the *the Guardian*. Variable descriptions can be found from section 2.

Table 2: DAPL Main Results

VARIABLES	(1) Deposit Growth	(2) Deposit Growth	(3) Deposit Growth	(4) Deposit Growth	(5) Deposit Growth
Financed DAPL * 2017	-0.020*** (0.002)	-0.018*** (0.002)	-0.022*** (0.003)	-0.015*** (0.003)	-0.015*** (0.003)
Financed DAPL	-0.022*** (0.002)	-0.022*** (0.002)			
Observations	416,594	416,594	416,513	412,557	411,930
Controls	Yes	Yes	Yes	Yes	Yes
Branch FE	No	No	No	Yes	Yes
Bank FE	No	No	Yes	No	No
State FE	Yes	No	No	No	No
Year FE	Yes	No	No	No	No
State*Year FE	No	Yes	Yes	Yes	No
County*Year FE	No	No	No	No	Yes

Notes: This table shows the effect of financing the Dakota Access Pipeline (DAPL) on branch level deposit growth. The variable “Financed DAPL” takes a value of one if the branch financed the Dakota Access Pipeline. The variable “2017” is a dummy variable indicating the year of the DAPL scandal. The dependent variable is annual branch level deposit growth winsorized at the 1st and 99th percentiles. Fixed effects are reported in the bottom of the table and controls are summarized in Table 1. Standard errors are in parentheses and clustered at the branch level. \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$

Table 3: DAPL & Donating to Standing Rock

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)
	Deposit Growth	Deposit Growth	Deposit Growth	Deposit Growth	Deposit Growth	Deposit Growth
	Converted Missing Values			Non-Converted Missing Values		
Ln(Donate to Standing Rock) * Financed DAPL * 2017	-0.003** (0.001)	-0.003** (0.001)	-0.006*** (0.002)	-0.019*** (0.004)	-0.020*** (0.004)	-0.029*** (0.005)
Ln(Donate to Standing Rock) * 2017	0.002*** (0.001)	0.002*** (0.001)	0.002*** (0.001)	0.007*** (0.002)	0.006*** (0.002)	0.008*** (0.002)
Ln(Donate to Standing Rock) * Financed DAPL	0.001 (0.001)	0.001 (0.001)	-0.040** (0.016)	0.021*** (0.003)	0.020*** (0.003)	-0.042*** (0.016)
Financed DAPL * 2017	-0.011** (0.005)	-0.014** (0.005)	0.003 (0.006)	0.052*** (0.016)	0.050*** (0.017)	0.091*** (0.018)
Ln(Donate to Standing Rock)	-0.000 (0.000)	0.000 (0.000)	-0.012 (0.021)	-0.015*** (0.001)	-0.015*** (0.002)	0.081 (0.104)
Financed DAPL	-0.021*** (0.003)			-0.103*** (0.010)		
Percent of Adults With a Bachelor's Degree or Higher	0.002*** (0.000)	0.002*** (0.000)	0.001 (0.001)	0.002*** (0.000)	0.001*** (0.000)	0.000 (0.001)
Percent of Votes for Obama	-0.000*** (0.000)	0.000 (0.000)	0.002 (0.001)	-0.000** (0.000)	0.000 (0.000)	0.001 (0.001)
Population 2014	0.000*** (0.000)	0.000*** (0.000)	-0.000 (0.000)	0.000*** (0.000)	0.000*** (0.000)	-0.000 (0.000)
Observations	400,110	400,026	396,187	318,789	318,722	315,583
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Bank FE	No	Yes	No	No	Yes	No
Branch FE	No	No	Yes	No	No	Yes
State FE	No	No	No	No	No	No
Year FE	Yes	Yes	Yes	Yes	Yes	Yes

Notes: This table shows the effect of financing the Dakota Access Pipeline (DAPL) and public opinion on branch level deposit growth. “Donate to Standing Rock” is equal to the search intensity of the Google search term using Google Trends. These are state specific values between 15 and 100. Columns 1-3 convert all missing values to zero and columns 4-6 are unconverted. The variable “Financed DAPL” takes a value of one if the branch financed the Dakota Access Pipeline. The variable “2017” is a dummy variable indicating the year of the DAPL scandal. The dependent variable is annual branch level deposit growth winsorized at the 1st and 99th percentiles. Fixed effects are reported in the bottom of the table and controls are summarized in Table 1. Standard errors are in parentheses and clustered at the branch level. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Table 4: DAPL & Climate Change Beliefs

VARIABLES	(1) Deposit Growth	(2) Deposit Growth	(3) Deposit Growth	(4) Deposit Growth
Happening 70 * Financed DAPL * 2017	-0.013*** (0.005)	-0.018*** (0.005)	-0.019*** (0.005)	-0.012** (0.005)
Happening 70 * 2017	-0.002 (0.002)	-0.005** (0.002)	-0.003 (0.003)	-0.003 (0.003)
Happening 70 * Financed DAPL	0.001 (0.002)	-0.022 (0.041)	-0.032 (0.041)	0.004 (0.003)
Financed DAPL * 2017	-0.016*** (0.004)	-0.006 (0.004)	-0.004 (0.004)	
Happening 70	0.001 (0.002)	-0.020 (0.028)	-0.019 (0.028)	0.017*** (0.001)
Percent of Adults With a Bachelor's Degree or Higher	0.002*** (0.000)	0.001 (0.001)	0.001 (0.001)	
Percent of Votes for Obama	0.000 (0.000)	0.002* (0.001)	0.002* (0.001)	
Population 2014	0.000*** (0.000)	-0.000 (0.000)	-0.000 (0.000)	
Observations	398,980	395,158	395,158	407,998
Controls	Yes	Yes	Yes	Yes
Bank FE	Yes	No	No	No
Branch FE	No	Yes	Yes	No
State FE	No	No	No	No
Year FE	Yes	Yes	No	No
State*Year FE	No	No	Yes	Yes
Bank*Year FE	No	No	No	Yes

Notes: This table shows the effect of financing the Dakota Access Pipeline (DAPL) and environmental awareness on branch level deposit growth. “Happening 70” is equal to 1 if at least 70% of the county thinks that global warming is happening. The variable “Financed DAPL” takes a value of one if the branch financed the Dakota Access Pipeline. The variable “2017” is a dummy variable indicating the year of the DAPL scandal. The dependent variable is annual branch level deposit growth winsorized at the 1st and 99th percentiles. Fixed effects are reported in the bottom of the table and controls are summarized in Table 1. Standard errors are in parentheses and clustered at the branch level. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

Table 5: DAPL & Climate Change and Human Responsibility

VARIABLES	(1) Deposit Growth	(2) Deposit Growth	(3) Deposit Growth
Human 55 * Financed DAPL * 2017	-0.010** (0.005)	-0.015*** (0.005)	-0.016*** (0.005)
Human 55 * 2017	-0.004* (0.002)	-0.008*** (0.002)	-0.007** (0.003)
Human 55 * Financed DAPL	0.003 (0.003)	-0.026 (0.048)	-0.036 (0.047)
Financed DAPL * 2017	-0.020*** (0.003)	-0.009*** (0.004)	-0.008** (0.004)
Human 55	0.004** (0.002)	-0.022 (0.034)	-0.019 (0.034)
Percent of Adults With a Bachelor's Degree or Higher	0.002*** (0.000)	0.001 (0.001)	0.001 (0.001)
Percent of Votes for Obama	-0.000 (0.000)	0.002* (0.001)	0.002* (0.001)
Population 2014	0.000*** (0.000)	-0.000 (0.000)	-0.000 (0.000)
Observations	398,980	395,158	395,158
Controls	Yes	Yes	Yes
Bank FE	Yes	No	No
Branch FE	No	Yes	Yes
State FE	No	No	No
Year FE	Yes	Yes	No
State*Year FE	No	No	Yes

Notes: This table shows the effect of financing the Dakota Access Pipeline (DAPL) and environmental awareness on branch level deposit growth. “Human 55” is equal to 1 if at least 55% of the county thinks global warming is caused mostly by human activities. The variable “Financed DAPL” takes a value of one if the branch financed the Dakota Access Pipeline. The variable “2017” is a dummy variable indicating the year of the DAPL scandal. The dependent variable is annual branch level deposit growth winsorized at the 1st and 99th percentiles. Fixed effects are reported in the bottom of the table and controls are summarized in Table 1. Standard errors are in parentheses and clustered at the branch level. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.



Table 6: DAPL & Charitable Behavior

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)
	Deposit Growth	Deposit Growth	Deposit Growth	Deposit Growth	Deposit Growth	Deposit Growth
Ln(Number of Non-Profits) * Financed DAPL * 2017	-0.004*** (0.001)	-0.004*** (0.002)	-0.005*** (0.002)	-0.007*** (0.002)	-0.005*** (0.002)	-0.006*** (0.002)
Ln(Number of Non-Profits) * 2017	-0.001*** (0.001)	-0.000 (0.001)	0.001 (0.001)	-0.002*** (0.001)	-0.000 (0.001)	-0.002*** (0.001)
Ln(Number of Non-Profits) * Financed DAPL	0.000 (0.001)	-0.000 (0.001)	0.001 (0.001)	-0.014** (0.006)	-0.000 (0.001)	-0.018*** (0.006)
Financed DAPL * 2017	0.014 (0.012)	0.015 (0.012)	0.014 (0.012)	0.038*** (0.013)	0.013 (0.012)	0.035*** (0.013)
Ln(Number of Non-Profits)	0.010*** (0.001)	0.008*** (0.001)	0.008*** (0.001)	0.030* (0.016)	0.009*** (0.001)	0.030* (0.016)
Financed DAPL	-0.020*** (0.007)	-0.021*** (0.007)				
Percent of Adults With a Bachelor's Degree or Higher	0.001*** (0.000)	0.001*** (0.000)	0.001*** (0.000)	-0.001 (0.001)	0.001*** (0.000)	-0.001 (0.001)
Percent of Votes for Obama	-0.000*** (0.000)	-0.000*** (0.000)	-0.000 (0.000)	0.001 (0.001)	-0.000*** (0.000)	0.001 (0.001)
Population 2014	0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000* (0.000)	0.000 (0.000)	-0.000* (0.000)
Observations	400,110	400,110	400,026	396,187	400,026	396,187
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Bank FE	No	No	Yes	No	Yes	No
Branch FE	No	No	No	Yes	No	Yes
State FE	No	No	No	No	No	No
Year FE	Yes	No	No	Yes	Yes	No
State*Year FE	No	Yes	Yes	No	No	Yes

Notes: This table shows the effect of financing the Dakota Access Pipeline (DAPL) and charitable behavior on branch level deposit growth. The variable “Number of Non-Profits” is equal to the number of domestically focused non-profits at the county level. The variable “Financed DAPL” takes a value of one if the branch financed the Dakota Access Pipeline. The variable “2017” is a dummy variable indicating the year of the DAPL scandal. The dependent variable is annual branch level deposit growth winsorized at the 1st and 99th percentiles. Fixed effects are reported in the bottom of the table and controls are summarized in Table 1. Standard errors are in parentheses and clustered at the branch level. \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$

Table 7: DAPL and Proximity: Full Sample Analysis

VARIABLES	(1) Deposit Growth	(2) Deposit Growth	(3) Deposit Growth
Financed DAPL * 2017 * DAPL State	-0.029** (0.012)	-0.026** (0.012)	-0.023* (0.012)
Financed DAPL * 2016 * DAPL State	-0.041*** (0.012)	-0.036*** (0.012)	-0.033*** (0.012)
Financed DAPL * 2017	-0.020*** (0.002)	-0.016*** (0.003)	-0.023*** (0.003)
Financed DAPL * 2016	0.001 (0.002)	0.003 (0.002)	-0.004 (0.003)
Finance DAPL * DAPL State	0.000 (0.008)	-0.001 (0.008)	0.011 (0.009)
Financed DAPL	-0.022*** (0.002)	-0.022*** (0.002)	
Observations	416,594	416,594	416,513
Controls	Yes	Yes	Yes
Bank FE	No	No	Yes
State FE	Yes	No	No
Year FE	Yes	No	No
State*Year FE	No	Yes	Yes

Notes: This table shows the effect of financing the Dakota Access Pipeline (DAPL) and proximity on branch level deposit growth. The variable “DAPL State” takes a value of one if the branch is located in one of the pipeline states. The variable “Financed DAPL” takes a value of one if the branch financed the Dakota Access Pipeline. The variable “2017” is a dummy variable indicating the year of the DAPL scandal. The dependent variable is annual branch level deposit growth winsorized at the 1st and 99th percentiles. Fixed effects are reported in the bottom of the table and controls are summarized in Table 1. Standard errors are in parentheses and clustered at the branch level. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Table 8: DAPL &amp; Savings Banks

VARIABLES	(1)	(2)	(3)	(4)	(5)
	Deposit Growth	Deposit Growth	Deposit Growth	Deposit Growth	Deposit Growth
Savings Bank * 2017 * Proportion of DAPL Banks	0.085** (0.040)	0.090** (0.041)	0.077* (0.042)	0.135*** (0.051)	0.140** (0.071)
Savings Bank * 2017	-0.005 (0.005)	-0.003 (0.005)	-0.003 (0.005)	-0.012** (0.006)	
Savings Bank * Proportion of DAPL Banks	-0.027 (0.023)	-0.027 (0.023)	-0.001 (0.028)	0.212*** (0.052)	
Proportion of DAPL Banks * 2017	-0.045*** (0.008)	-0.033*** (0.012)	-0.021* (0.013)		
Savings Bank	-0.013*** (0.003)	-0.013*** (0.003)	0.019** (0.009)		
Proportion of DAPL Banks	0.104*** (0.007)	0.098*** (0.007)	0.079*** (0.007)		
Observations	416,594	416,594	416,513	411,930	408,123
Controls	Yes	Yes	Yes	Yes	Yes
Branch FE	No	No	No	Yes	No
Bank FE	No	No	Yes	No	No
State FE	Yes	No	No	No	No
Year FE	Yes	No	No	No	No
State*Year FE	No	Yes	Yes	No	No
Year*County FE	No	No	No	Yes	Yes
Bank*Year FE	No	No	No	No	Yes

Notes: This table shows the effect of the Dakota Access Pipeline (DAPL) on branch level deposit growth for savings banks. The variable “Savings Bank” takes a value of one if the branch is classified as a savings bank. The variable “Proportion of DAPL Banks” is equal to the percentage of DAPL financing branches at the county level. The variable “2017” is a dummy variable indicating the year of the DAPL scandal. The dependent variable is annual branch level deposit growth winsorized at the 1st and 99th percentiles. Fixed effects are reported in the bottom of the table and controls are summarized in Table 1. Standard errors are in parentheses and clustered at the branch level. \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$

Table 9: DAPL Main Results and Credit Unions

VARIABLES	(1)	(2)	(3)	(4)
	Deposit Growth	Deposit Growth	Deposit Growth	Deposit Growth
	With Credit Unions		Without Credit Unions	
Financed DAPL * 2017	-0.014*** (0.003)	-0.013*** (0.003)	-0.012*** (0.003)	-0.011*** (0.003)
Financed DAPL	0.002 (0.043)	-0.032 (0.048)	0.000 (0.043)	-0.035 (0.048)
Observations	443,145	442,521	412,562	411,935
Branch FE	Yes	Yes	Yes	Yes
State*Year FE	Yes	No	Yes	No
County*Year FE	No	Yes	No	Yes

Notes: This table shows the effect of financing the Dakota Access Pipeline (DAPL) on branch level deposit growth. The first two columns include credit unions in the sample and the last two columns exclude them. The variable “Financed DAPL” takes a value of one if the branch financed the Dakota Access Pipeline. The variable “2017” is a dummy variable indicating the year of the DAPL scandal. The dependent variable is annual branch level deposit growth winsorized at the 1st and 99th percentiles. Fixed effects are reported in the bottom of the table and controls are summarized in Table 1. Standard errors are in parentheses and clustered at the branch level. \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$

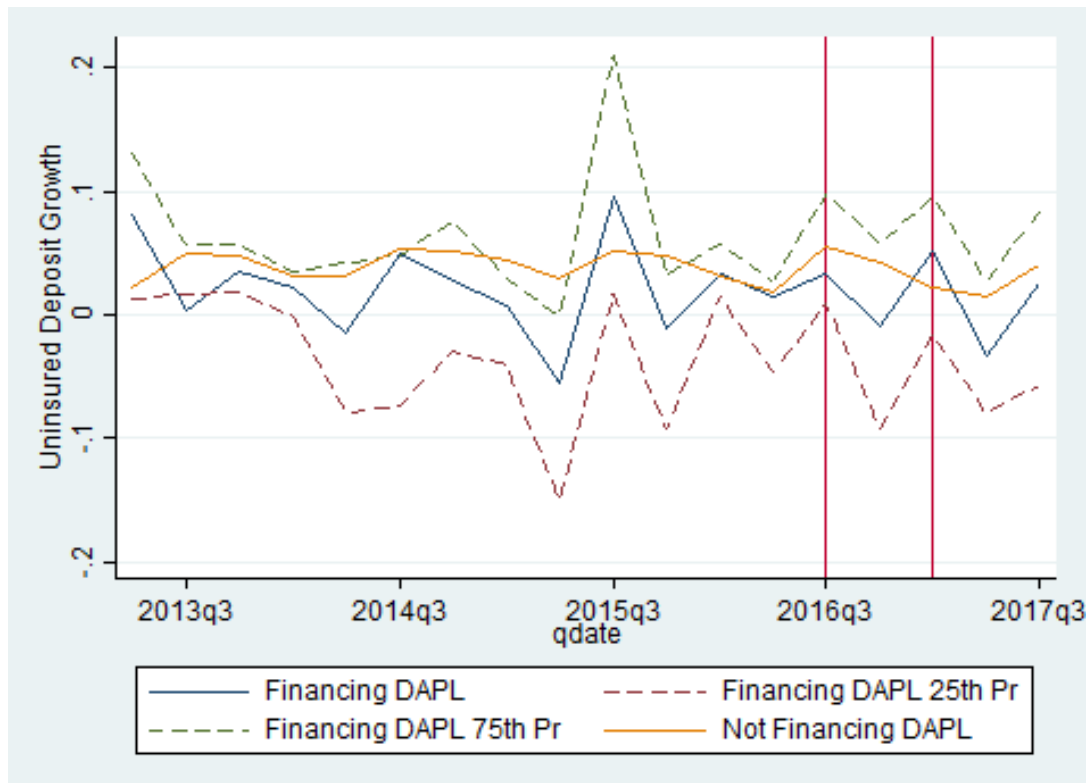
Table 10: DAPL Main Results and Extended Treatment Group

VARIABLES	(1) Deposit Growth	(2) Deposit Growth	(3) Deposit Growth
Financed DAPL * 2017	-0.010*** (0.002)	-0.008*** (0.002)	-0.008*** (0.002)
Financed DAPL	-0.002 (0.002)	-0.002 (0.002)	
Observations	416,594	416,594	416,513
Controls	Yes	Yes	Yes
Bank FE	No	No	Yes
State FE	Yes	No	No
Year FE	Yes	No	No
State*Year FE	No	Yes	Yes

Notes: This table shows the effect of financing the Dakota Access Pipeline (DAPL) on branch level deposit growth. The variable “Financed DAPL” takes a value of one if the branch provided project or corporate financing to the Dakota Access Pipeline. The variable “2017” is a dummy variable indicating the year of the DAPL scandal. The dependent variable is annual branch level deposit growth winsorized at the 1st and 99th percentiles. Fixed effects are reported in the bottom of the table and controls are summarized in Table 1. Standard errors are in parentheses and clustered at the branch level. \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$

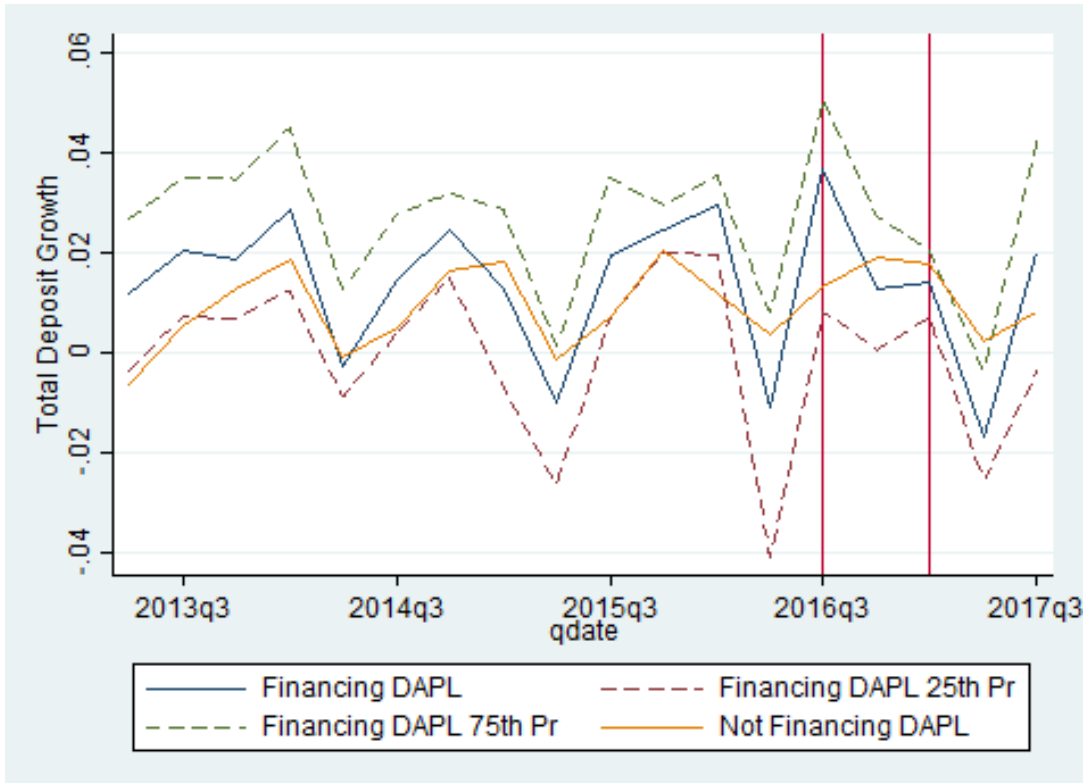
## 6 Appendix

Figure A1: Quarterly Uninsured Deposit Growth



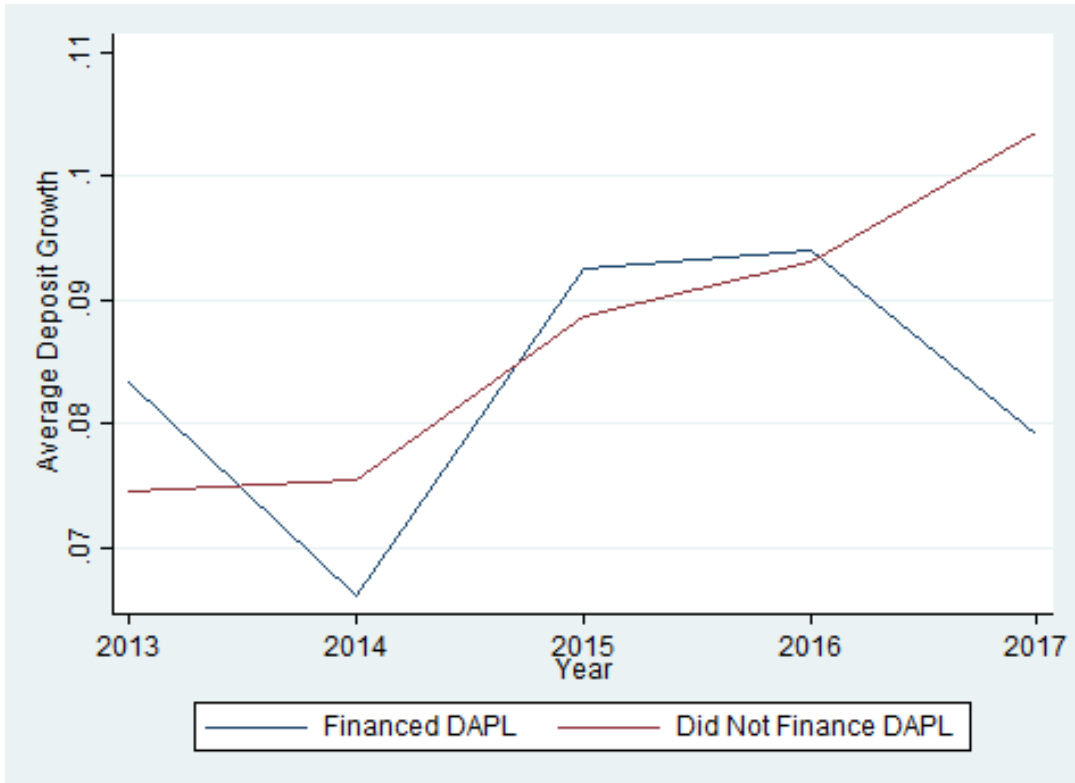
The graph includes uninsured deposit growth for banks who financed the DAPL and those who did not. The left red vertical line indicates the date at which banks were being targeted as a result of the DAPL scandal. The second vertical line indicates the date at which the 700,000 collective petition had come public. Uninsured deposit growth rates are winsorized at the 1% and 99% level.

Figure A2: Quarterly Deposit Growth



The graph includes deposit growth for banks who financed the DAPL and those who did not. Data for institutions that financed the DAPL include all institutions with \$1 billion or more in total deposits and institutions that are associated with the majority of FDIC branches (e.g. the analysis excludes all cases where for example a Wells Fargo entity had only one branch). The left red vertical line indicates the date at which banks were being targeted as a result of the DAPL scandal. The second vertical line indicates the date at which the 700,000 collective petition had come public. Deposit growth rates are winsorized at the 1% and 99% level.

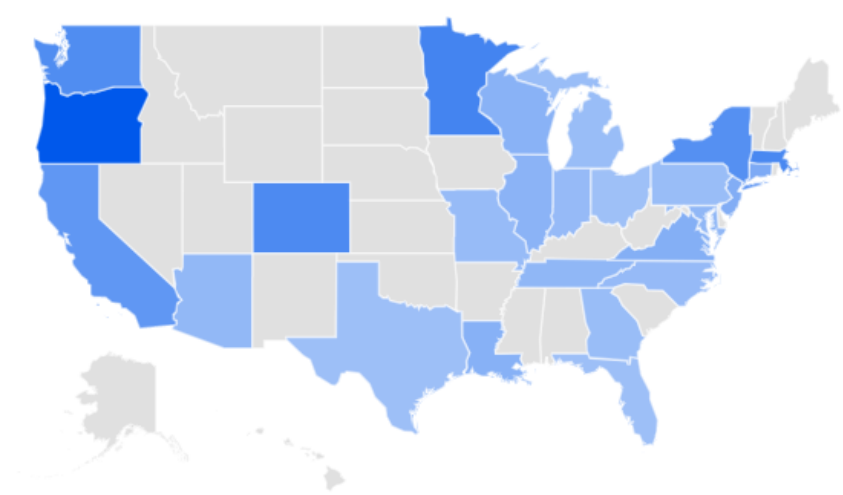
Figure A3: Annual Deposit Growth



This graph shows the pre-treatment trends of the treated and control group. The graph includes the mean deposit growth for banks who financed the DAPL and those who did not finance the DAPL at the annual level. This graph is made using the main FDIC branch level dataset used in all main analyses of this paper.



Figure A4: Google Trends: “Donate to Standing Rock”



*Notes:* This figure shows the popularity of the search term “Donate to Standing Rock” across the US between 4/4/2016 and 11/9/2017. The darker the color, the more popular the search query in *Google Search*.

Table A1: Treatment Group Times Year Interactions

VARIABLES	(1) Deposit Growth	(2) Deposit Growth	(3) Deposit Growth	(4) Deposit Growth	(5) Deposit Growth
Financed DAPL * 2016	0.020*** (0.003)	0.019*** (0.003)	0.019*** (0.003)	0.014*** (0.003)	0.015*** (0.003)
Financed DAPL * 2015	0.023*** (0.003)	0.017*** (0.003)	0.022*** (0.003)	0.015*** (0.003)	0.014*** (0.004)
Financed DAPL * 2014	0.009*** (0.003)	0.009*** (0.003)	0.018*** (0.003)	0.009** (0.003)	0.008** (0.004)
Financed DAPL * 2013	0.026*** (0.003)	0.025*** (0.003)	0.036*** (0.004)	0.023*** (0.004)	0.022*** (0.004)
Financed DAPL	-0.041*** (0.002)	-0.040*** (0.002)			
Observations	416,594	416,594	416,513	412,557	411,930
Controls	No	Yes	Yes	Yes	Yes
Branch FE	No	No	No	Yes	Yes
Bank FE	No	No	Yes	No	No
State FE	Yes	No	No	No	No
Year FE	Yes	No	No	No	No
State*Year FE	No	No	Yes	Yes	No
County*Year FE	No	No	No	No	Yes

Notes: This table shows the effect of financing the Dakota Access Pipeline (DAPL) on branch level deposit growth. The purpose of this test is to show that DAPL financing branches had on average, positive deposit growth rates before the year of the scandal (i.e. the base "Financed DAPL \* 2017"). The variable "Financed DAPL" takes a value of one if the branch financed the Dakota Access Pipeline. The dependent variable is annual branch level deposit growth winsorized at the 1st and 99th percentiles. Fixed effects are reported in the bottom of the table and controls are summarized in Table 1. Standard errors are in parentheses and clustered at the branch level. \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$

Table A2: Climate Change Beliefs Using 2014 YPCC Values

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)
	Deposit Growth	Deposit Growth	Deposit Growth	Deposit Growth	Deposit Growth	Deposit Growth
Happening 70 * Financed DAPL * 2017	-0.004 (0.007)	-0.017** (0.007)	-0.019*** (0.007)			
Happening 70 * 2017	-0.008*** (0.003)	-0.010*** (0.003)	-0.012*** (0.004)			
Happening 70 * Financed DAPL	0.013*** (0.004)	-0.050 (0.051)	-0.062 (0.051)			
Financed DAPL * 2017	-0.023*** (0.003)	-0.014*** (0.003)	-0.012*** (0.003)			
Happening 70	-0.002 (0.002)	0.021 (0.042)	0.028 (0.043)			
Human 55 * Financed DAPL * 2017				-0.001 (0.006)	-0.015** (0.007)	-0.016** (0.007)
Human 55 * 2017				-0.012*** (0.003)	-0.016*** (0.003)	-0.016*** (0.004)
Human 55 * Financed DAPL				0.004** (0.002)	-0.045 (0.043)	-0.054 (0.042)
Financed DAPL * 2017				-0.024*** (0.003)	-0.013*** (0.003)	-0.012*** (0.003)
Human 55				-0.000 (0.002)	0.007 (0.042)	0.011 (0.043)
Percent of Adults With a Bachelor's Degree or Higher	0.002*** (0.000)	0.001 (0.001)	0.000 (0.001)	0.002*** (0.000)	0.001 (0.001)	0.000 (0.001)
Percent of Votes for Obama	0.000 (0.000)	0.002 (0.001)	0.002 (0.001)	0.000 (0.000)	0.002* (0.001)	0.002 (0.001)
Population 2014	0.000*** (0.000)	-0.000 (0.000)	-0.000 (0.000)	0.000*** (0.000)	-0.000 (0.000)	-0.000 (0.000)
Observations	400,026	396,187	396,187	398,980	395,158	395,158
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Bank FE	Yes	No	No	Yes	No	No
Branch FE	No	Yes	Yes	No	Yes	Yes
State FE	No	No	No	No	No	No
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
State*Year FE	No	No	Yes	No	No	Yes

Notes: This table shows the effect of financing the Dakota Access Pipeline (DAPL) and environmental awareness on branch level deposit growth. “Happening 70” is equal to 1 if at least 70% of the county thinks that global warming is happening in 2014. “Human 55” is equal to 1 if at least 55% of the county thinks global warming is caused mostly by human activities in 2014. The variable “Financed DAPL” takes a value of one if the branch financed the Dakota Access Pipeline. The variable “2017” is a dummy variable indicating the year of the DAPL scandal. The dependent variable is annual branch level deposit growth winsorized at the 1st and 99th percentiles. Fixed effects are reported in the bottom of the table and controls are summarized in Table 1. Standard errors are in parentheses and clustered at the branch level. \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

Table A3: Alternative Google Trends Search Queries

VARIABLES	(1) Deposit Growth	(2) Deposit Growth	(3) Deposit Growth	(4) Deposit Growth	(5) Deposit Growth	(6) Deposit Growth
Ln(Standing Rock Indian Reservation) * Financed DAPL * 2017	-0.026*** (0.005)	-0.033*** (0.006)	-0.025*** (0.005)			
Ln(Standing Rock Indian Reservation) * 2017	-0.000 (0.002)	0.001 (0.002)	-0.002 (0.002)			
Ln(Standing Rock Indian Reservation) * Financed DAPL	0.023*** (0.003)	-0.057** (0.023)	0.025*** (0.003)			
Ln(Standing Rock Indian Reservation)	-0.013*** (0.001)	0.089 (0.064)	-0.014*** (0.002)			
Ln(Dakota Access Pipeline) * Financed DAPL * 2017				-0.034*** (0.006)	-0.039*** (0.006)	-0.033*** (0.006)
Ln(Dakota Access Pipeline) * 2017				-0.007*** (0.002)	-0.006** (0.002)	-0.009*** (0.002)
Ln(Dakota Access Pipeline) * Financed DAPL				0.021*** (0.003)	-0.062** (0.025)	0.028*** (0.004)
Ln(Dakota Access Pipeline)				-0.009*** (0.002)	0.140** (0.059)	-0.017*** (0.003)
Financed DAPL * 2017	0.040*** (0.012)	0.061*** (0.014)	0.034*** (0.013)	0.044*** (0.011)	0.058*** (0.013)	0.039*** (0.011)
Financed DAPL	-0.072*** (0.007)			-0.059*** (0.006)		
Percent of adults with a bachelor's degree or higher, 2012-2016	0.002*** (0.000)	0.001 (0.001)	0.002*** (0.000)	0.002*** (0.000)	0.001 (0.001)	0.002*** (0.000)
Percent of Votes for Obama	-0.000*** (0.000)	0.002 (0.001)	0.000 (0.000)	-0.000*** (0.000)	0.002 (0.001)	0.000 (0.000)
Population 2014	0.000*** (0.000)	-0.000 (0.000)	0.000*** (0.000)	0.000*** (0.000)	-0.000 (0.000)	0.000*** (0.000)
Observations	400,110	396,187	400,026	400,110	396,187	400,026
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Bank FE	No	No	Yes	No	No	Yes
Branch FE	No	Yes	No	No	Yes	No
State FE	No	No	No	No	No	No
Year FE	Yes	Yes	Yes	Yes	Yes	Yes

Notes: This table shows the effect of financing the Dakota Access Pipeline (DAPL) and public opinion on branch level deposit growth. “Standing Rock Indian Reservation” and “Dakota Access Pipeline” is equal to the search intensity of the Google search term using Google Trends. The variable “Financed DAPL” takes a value of one if the branch financed the Dakota Access Pipeline. The variable “2017” is a dummy variable indicating the year of the DAPL scandal. The dependent variable is annual branch level deposit growth winsorized at the 1st and 99th percentiles. Fixed effects are reported in the bottom of the table and controls are summarized in Table 1. Standard errors are in parentheses and clustered at the branch level. \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$

Table A4: Google Trends Search Queries with Additional Fixed Effects

VARIABLES	(1) Deposit Growth	(2) Deposit Growth	(3) Deposit Growth	(4) Deposit Growth
Ln(Donate to Standing Rock) * Financed DAPL * 2017	-0.006*** (0.002)			
Ln(Donate to Standing Rock) * Financed DAPL * 2017		-0.017*** (0.006)		
Ln(Standing Rock Indian Reservation) * Financed DAPL * 2017			-0.020** (0.008)	
Ln(Dakota Access Pipeline) * Financed DAPL * 2017				-0.020** (0.009)
Percent of adults with a bachelor's degree or higher, 2012-2016	-0.000 (0.001)	-0.000 (0.001)	-0.000 (0.001)	-0.000 (0.001)
Percent of votes for Obama	0.001 (0.001)	0.001 (0.001)	0.001 (0.001)	0.001 (0.001)
Population 2014	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)
Observations	388,573	310,511	388,573	388,573
Controls	Yes	Yes	Yes	Yes
Branch FE	Yes	Yes	Yes	Yes
State*Year FE	Yes	Yes	Yes	Yes
Bank*Year FE	Yes	Yes	Yes	Yes

Notes: This table shows the effect of financing the Dakota Access Pipeline (DAPL) and public opinion on branch level deposit growth. The variables are equal to the search intensity of the Google search term using Google Trends. The variable “Financed DAPL” takes a value of one if the branch financed the Dakota Access Pipeline. The variable “2017” is a dummy variable indicating the year of the DAPL scandal. The dependent variable is annual branch level deposit growth winsorized at the 1st and 99th percentiles. Fixed effects are reported in the bottom of the table and controls are summarized in Table 1. Standard errors are in parentheses and clustered at the branch level. \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$

Table A5: DAPL &amp; No Wells Fargo

VARIABLES	(1) Deposit Growth	(2) Deposit Growth	(3) Deposit Growth	(4) Deposit Growth	(5) Deposit Growth
Financed DAPL * 2017	-0.024*** (0.004)	-0.023*** (0.004)	-0.031*** (0.004)	-0.022*** (0.004)	-0.021*** (0.005)
Financed DAPL	-0.006** (0.002)	-0.006** (0.002)			
Observations	387,056	387,056	386,975	383,094	382,411
Controls	Yes	Yes	Yes	Yes	Yes
Branch FE	No	No	No	Yes	Yes
Bank FE	No	No	Yes	No	No
State FE	Yes	No	No	No	No
Year FE	Yes	No	No	No	No
State*Year FE	No	Yes	Yes	Yes	No
County*Year FE	No	No	No	No	Yes

Notes: This table shows the effect of financing the Dakota Access Pipeline (DAPL) on branch level deposit growth without including Wells Fargo branches in the sample. The variable “Financed DAPL” takes a value of one if the branch financed the Dakota Access Pipeline. The variable “2017” is a dummy variable indicating the year of the DAPL scandal. The dependent variable is annual branch level deposit growth winsorized at the 1st and 99th percentiles. Fixed effects are reported in the bottom of the table and controls are summarized in Table 1. Standard errors are in parentheses and clustered at the branch level. \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$

Table A6: DAPL, Savings Banks & Credit Unions - Full Sample Analysis

VARIABLES	(1)	(2)	(3)	(4)
	Deposit Growth	Deposit Growth	Deposit Growth	Deposit Growth
	With Credit Unions		Without Credit Unions	
Savings Bank * 2017 * Proportion of DAPL Banks	0.111*** (0.022)	0.124*** (0.024)	0.122** (0.048)	0.147*** (0.052)
Savings Bank * 2017	-0.008*** (0.003)	-0.003 (0.003)	-0.003 (0.005)	-0.010* (0.006)
Savings Bank * Proportion of DAPL Banks	0.018 (0.031)	0.222*** (0.068)	0.018 (0.033)	0.260*** (0.078)
Observations	446,483	442,521	415,896	411,935
Controls	Yes	Yes	Yes	Yes
Branch FE	No	Yes	No	Yes
Bank FE	Yes	No	Yes	No
Year*County FE	Yes	Yes	Yes	Yes

Notes: This table shows the effect of the Dakota Access Pipeline (DAPL) on branch level deposit growth for savings banks and credit unions. The variable “Savings Bank” takes a value of one if the branch is classified as a savings bank or a credit union. The variable “Proportion of DAPL Banks” is equal to the percentage of DAPL financing branches at the county level. The variable “2017” is a dummy variable indicating the year of the DAPL scandal. The dependent variable is annual branch level deposit growth winsorized at the 1st and 99th percentiles. Fixed effects are reported in the bottom of the table and controls are summarized in Table 1. Standard errors are in parentheses and clustered at the branch level. \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$

Table A7: DAPL States Full Sample Analysis and Extended Treatment Group

VARIABLES	(1) Deposit Growth	(2) Deposit Growth	(3) Deposit Growth	(4) Deposit Growth
Financed DAPL * 2017 * DAPL State	-0.027*** (0.007)	-0.032*** (0.007)	-0.030*** (0.007)	-0.041*** (0.009)
Financed DAPL * 2016 * DAPL State	-0.030*** (0.007)	-0.031*** (0.007)	-0.027*** (0.007)	-0.035*** (0.009)
Financed DAPL * 2017	-0.013*** (0.002)	-0.011*** (0.002)	-0.015*** (0.003)	-0.001 (0.003)
Financed DAPL * 2016	-0.013*** (0.002)	-0.015*** (0.002)	-0.017*** (0.002)	-0.013*** (0.003)
Finance DAPL * DAPL State	0.034*** (0.005)	0.036*** (0.005)	0.013** (0.006)	-0.019 (0.016)
Financed DAPL	-0.001 (0.002)	-0.001 (0.002)		
Observations	416,594	416,594	416,513	411,930
Controls	Yes	Yes	Yes	Yes
Branch FE	No	No	No	Yes
Bank FE	No	No	Yes	No
State FE	Yes	No	No	No
Year FE	Yes	No	No	No
State*Year FE	No	Yes	Yes	No
County*Year FE	No	No	No	Yes

Notes: This table shows the effect of financing the Dakota Access Pipeline (DAPL) and proximity on branch level deposit growth. The variable “DAPL State” takes a value of one if the branch is located in one of the pipeline states. The variable “Financed DAPL” takes a value of one if the branch provided project or corporate financing to the Dakota Access Pipeline. The variable “2017” is a dummy variable indicating the year of the DAPL scandal. The dependent variable is annual branch level deposit growth winsorized at the 1st and 99th percentiles. Fixed effects are reported in the bottom of the table and controls are summarized in Table 1. Standard errors are in parentheses and clustered at the branch level. \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$



Table A8: Climate Change Beliefs and Extended Treatment Group

VARIABLES	(1) Deposit Growth	(2) Deposit Growth	(3) Deposit Growth	(4) Deposit Growth	(5) Deposit Growth	(6) Deposit Growth
Happening 70 * Financed DAPL * 2017	-0.003 (0.004)	-0.002 (0.004)	-0.001 (0.004)			
Happening 70 * 2017	-0.003 (0.002)	-0.007*** (0.003)	-0.006** (0.003)			
Happening 70 * Financed DAPL	-0.006** (0.002)	-0.048*** (0.018)	-0.046** (0.018)			
Financed DAPL * 2017	-0.008*** (0.003)	0.001 (0.003)	0.001 (0.003)			
Happening 70	0.004** (0.002)	-0.013 (0.027)	-0.013 (0.027)			
Human 55 * Financed DAPL * 2017				-0.003 (0.004)	-0.004 (0.004)	-0.004 (0.004)
Human 55 * 2017				-0.004 (0.003)	-0.010*** (0.003)	-0.009** (0.003)
Human 55 * Financed DAPL				-0.001 (0.002)	-0.054** (0.021)	-0.052** (0.021)
Financed DAPL * 2017				-0.008*** (0.003)	0.002 (0.003)	0.003 (0.003)
Human 55				0.005** (0.002)	-0.013 (0.032)	-0.012 (0.032)
Percent of Adults With a Bachelor's Degree or Higher	0.002*** (0.000)	0.001 (0.001)	0.001 (0.001)	0.002*** (0.000)	0.001 (0.001)	0.001 (0.001)
Percent of Votes for Obama	0.000 (0.000)	0.002* (0.001)	0.002* (0.001)	-0.000 (0.000)	0.002* (0.001)	0.002* (0.001)
Population 2014	0.000*** (0.000)	-0.000 (0.000)	-0.000 (0.000)	0.000*** (0.000)	-0.000 (0.000)	-0.000 (0.000)
Observations	398,980	395,158	395,158	398,980	395,158	395,158
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Bank FE	Yes	No	No	Yes	No	No
Branch FE	No	Yes	Yes	No	Yes	Yes
State FE	No	No	No	No	No	No
Year FE	Yes	Yes	No	Yes	Yes	No
State*Year FE	No	No	Yes	No	No	Yes

Notes: This table shows the effect of financing the Dakota Access Pipeline (DAPL) and environmental awareness on branch level deposit growth. “Happening 70” is equal to 1 if at least 70% of the county thinks that global warming is happening in 2014. “Human 55” is equal to 1 if at least 55% of the county thinks global warming is caused mostly by human activities in 2014. The variable “Financed DAPL” takes a value of one if the branch provided project or corporate financing to the Dakota Access Pipeline. The variable “2017” is a dummy variable indicating the year of the DAPL scandal. The dependent variable is annual branch level deposit growth winsorized at the 1st and 99th percentiles. Fixed effects are reported in the bottom of the table and controls are summarized in Table 1. Standard errors are in parentheses and clustered at the branch level. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

Table A9: Charitable Behavior and Extended Treatment Group

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Deposit Growth	Deposit Growth	Deposit Growth	Deposit Growth	Deposit Growth	Deposit Growth	Deposit Growth
Ln(Number of Non-Profits) * Financed DAPL * 2017	-0.003*** (0.001)	-0.002* (0.001)	-0.001 (0.001)	-0.003** (0.001)	-0.003** (0.001)	-0.001 (0.001)	-0.003** (0.002)
Ln(Number of Non-Profits) * 2017	-0.001 (0.001)	-0.000 (0.001)	0.001 (0.001)	-0.003*** (0.001)	0.000 (0.001)	-0.003*** (0.001)	0.001 (0.001)
Ln(Number of Non-Profits) * Financed DAPL	-0.001 (0.001)	-0.001 (0.001)	-0.004*** (0.001)	-0.007*** (0.002)	-0.004*** (0.001)	-0.006*** (0.002)	-0.003*** (0.001)
Financed DAPL * 2017	0.016* (0.009)	0.007 (0.009)	0.001 (0.009)	0.023** (0.010)	0.011 (0.009)	0.011 (0.010)	
Ln(Number of Non-Profits)	0.010*** (0.001)	0.008*** (0.001)	0.009*** (0.001)	0.029* (0.016)	0.010*** (0.001)	0.029* (0.016)	0.009*** (0.001)
Financed DAPL	-0.000 (0.006)	0.001 (0.006)					
Percent of Adults With a Bachelor's Degree or Higher	0.001*** (0.000)	0.001*** (0.000)	0.001*** (0.000)	-0.001 (0.001)	0.001*** (0.000)	-0.001 (0.001)	0.001*** (0.000)
Percent of Votes for Obama	-0.000*** (0.000)	-0.000*** (0.000)	-0.000 (0.000)	0.001 (0.001)	-0.000*** (0.000)	0.001 (0.001)	-0.000 (0.000)
Population 2014	0.000 (0.000)	0.000 (0.000)	-0.000 (0.000)	-0.000** (0.000)	0.000*** (0.000)	-0.000* (0.000)	0.000 (0.000)
Observations	400,110	400,110	400,026	396,187	400,026	396,187	392,560
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Bank FE	No	No	Yes	No	Yes	No	No
Branch FE	No	No	No	Yes	No	Yes	No
State FE	No	No	No	No	No	No	No
Year FE	Yes	No	No	Yes	Yes	No	No
State*Year FE	No	Yes	Yes	No	No	Yes	Yes
Bank*Year FE	No	No	No	No	No	No	Yes

Notes: This table shows the effect of financing the Dakota Access Pipeline (DAPL) and charitable behavior on branch level deposit growth. The variable “Number of Non-Profits” is equal to the number of domestically focused non-profits at the county level. The variable “Financed DAPL” takes a value of one if the branch provided project or corporate financing to the Dakota Access Pipeline. The variable “2017” is a dummy variable indicating the year of the DAPL scandal. The dependent variable is annual branch level deposit growth winsorized at the 1st and 99th percentiles. Fixed effects are reported in the bottom of the table and controls are summarized in Table 1. Standard errors are in parentheses and clustered at the branch level. \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$

Table A10: Savings Banks and Extended Treatment Group

VARIABLES	(1) Deposit Growth	(2) Deposit Growth	(3) Deposit Growth	(4) Deposit Growth
Savings Bank * 2017 * Proportion of DAPL Banks	0.058*** (0.020)	0.054*** (0.020)	0.038* (0.021)	0.078*** (0.026)
Savings Bank * 2017	-0.012** (0.006)	-0.009 (0.006)	-0.005 (0.006)	-0.020*** (0.007)
Savings Bank * Proportion of DAPL Banks	-0.054*** (0.013)	-0.053*** (0.013)	0.009 (0.016)	0.104*** (0.023)
Proportion of DAPL Banks * 2017	-0.028*** (0.004)	-0.025*** (0.006)	-0.014** (0.007)	
Savings Bank	-0.001 (0.004)	-0.001 (0.004)	0.016* (0.009)	
Proportion of DAPL Banks	0.088*** (0.004)	0.087*** (0.004)	0.072*** (0.004)	
Observations	416,594	416,594	416,513	411,930
Controls	Yes	Yes	Yes	Yes
Branch FE	No	No	No	Yes
Bank FE	No	No	Yes	No
State FE	Yes	No	No	No
Year FE	Yes	No	No	No
State*Year FE	No	Yes	Yes	No
Year*County FE	No	No	No	Yes

Notes: This table shows the effect of the Dakota Access Pipeline (DAPL) on branch level deposit growth for savings banks. The variable “Savings Bank” takes a value of one if the branch is classified as a savings bank. The variable “Proportion of DAPL Banks” is equal to the percentage of DAPL project and corporate financing branches at the county level. The variable “2017” is a dummy variable indicating the year of the DAPL scandal. The dependent variable is annual branch level deposit growth winsorized at the 1st and 99th percentiles. Fixed effects are reported in the bottom of the table and controls are summarized in Table 1. Standard errors are in parentheses and clustered at the branch level. \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$