Transparency Lost:
Analyzing Banks' Behavior After the Cessation of Dispute Disclosure

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Abstract

This study explores how a significant and targeted regulatory change—the cessation of dispute disclosures—affects banks' responses to consumer complaints. Our findings indicate that after this public signal of service quality was terminated, banks with lower dispute-to-complaint ratios (i.e., banks that had previously invested more effort in complaint resolution) were more likely to provide consumers with explanations rather than monetary relief. The regulatory change distorted banks' incentives to resolve complaints and the actions taken to address them, resulting in an increase in the number of complaints. We extend our analysis and find that the cessation of dispute disclosure provokes a decrease in the number of loan applications and approvals, highlighting a spillover effect of reduced market discipline.

Keywords: dispute disclosure cessation, market discipline, complaint resolution, complaint frequency, spillover effect, CFPB, real effects.
JEL Codes: G21, L51, L15, D63, M48.
Data Availability: The replication data and code are available upon request.

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1 Introduction

The 2007–2009 financial crisis precipitated a series of significant and sweeping policy and regulatory changes, many of which were codified in the Dodd-Frank Act (2010). One of the crisis's most critical drivers, the increase in mortgage fraud and subprime lending, led to the establishment of the Consumer Financial Protection Bureau (CFPB), an independent agency within the Federal Reserve. The CFPB was intended to protect consumers and ensure fair, competitive financial markets. It does so by regulating consumer financial products and services, providing consumer education, and collecting and publishing complaints.

Recent research has explored how the CFPB's formation and the public disclosure of consumer complaints affect consumer demand and competitors' strategic decisions (e.g., Hayes et al., 2021; Flannery et al., 2023; Dou et al., 2024; Dou and Roh, 2024). Our study relies on a new quasi-natural experiment and expands this purview by examining public disclosure of a salient yet unexplored aspect of service quality: banks' handling of consumer complaints.

Consumer complaints provide a vital mechanism for regulatory oversight and improvement of bank operations. As an example, the CFPB leverages consumer complaints in enforcement decisions, which can result in substantial fines against offending institutions.[1] Their collective fiscal impact is significant, with over $19.6 billion in consumer relief provided to date and penalties totaling $5 billion.[2] Once a consumer complaint has been filed, banks are required to investigate it and take necessary action to resolve the underlying issue. If a consumer is not satisfied with the resolution, they can dispute it. Financial institutions are increasingly recognizing that effective complaint management is not just a regulatory obligation but a strategic priority for enhancing customer satisfaction, loyalty, and

[1] As an example, in 2022, the CFPB ordered Wells Fargo to pay $3.7 billion for widespread mismanagement of auto loans, mortgages, and deposit accounts. In the same year, the CFPB imposed a $10 million penalty on Bank of America for illegal garnishments.

[2] See https://www.consumerfinance.gov/enforcement/actions/.

reputation (e.g., Cambra-Fierro et al., 2015; Gambetta et al., 2015; Yilmaz et al., 2016). In private conversations with bank representatives, we were told that their institutions invest in dedicated teams and systems to manage, analyze, and resolve complaints in order to address immediate customer grievances and refine internal operations, processes, and training initiatives.

Our paper explores a unique setting, the CFPB's detailed public disclosures on consumer responses to banks' handling of complaints. We examine how transparency requirements shape banks' incentives and processes in complaint management. To answer our research question, we leverage the CFPB's 2017 decision to replace the public disclosure of consumer disputes with a confidential consumer survey process.[3] Prior to 2017, consumer disputes were publicly observable (See Appendix A and B). As of 2017, the CFPB stopped publicly disclosing feedback results on their website.[4]

Banks are significantly influenced by public disclosure of consumer disputes for several reasons. First, dispute data complements signals from complaint frequency, enabling consumers to better assess service quality and adjust demand accordingly. This disciplinary effect can be directly manifested through an increase in complaints or through a more complex and protracted process that results in reduced applications (See Figure 1), both of which may influence changes in banks' behavior ex ante (Jin and Leslie, 2003; Dou and Roh, 2024). Additionally, if banks are concerned about reputational costs and perceived social pressure, public and salient information on disputes can increase banks' conformity and equip them to better handle consumer complaints (e.g., Bursztyn and Jensen, 2017; Hayes et al., 2021; Baik et al., 2024).

We use a binary Difference-in-Differences (DID) model for our main analyses (Callaway et al., 2021). To identify a treatment group, we focus on banks with lower dispute-to-complaint ratios.[5] We

[3] Because this regulatory change is not linked to any specific bank characteristics, we can establish causation.
[4] Based on discussions with several industry professionals, it appears that pressure imposed by banks on the Trump administration may have influenced the removal of public dispute disclosure.
[5] We show that the dispute-to-complaint ratios of banks remain relatively stable in 2015, 2016, and 2017. In addition, we use a continuous Difference-in-Differences (DID) model for robustness testing, and our results remain similar as shown in Panel A of Appendix F.

select this criterion to reflect the supposition that these banks encouraged their employees to invest significant resources in dispute resolution before the regulatory change.[6] After 2017, under diminished public pressure, banks may be incentivized to pursue expedient resolution. We theorize that those banks that are less concerned with complaint resolution, and thus associated with higher dispute-to-complaint ratios, are unlikely to significantly respond to the change in dispute disclosure. Accordingly, based on the medium pre-period dispute-to-complaint ratios, we define banks with a lower dispute-to-complaint ratio as treatment banks and employ a binary DID research design to evaluate the impact of reduced transparency on banks' incentive distortions.[7]

Using more than 300,000 complaints from 2015 to 2019, we find that among treated banks there is a 10.80% increase in the propensity to resolve a consumer complaint with an explanation after the cessation of dispute disclosure. In contrast, the propensity to resolve a consumer complaint with either monetary or non-monetary relief[8]—options more favorable to consumers but costlier for banks—diminishes by 5.70% and 5.40%, respectively, after the regulatory change.[9]

To address concerns that the severity of complaints may have shifted following the regulatory change, we conduct textual analyses of consumer complaint narratives to assess their sentiments and informativeness and show that both remain consistent with the pre-change period. This suggests that the cessation of dispute disclosure leads treatment banks to resolve complaints more expediently and to provide narrative explanations rather than more substantive, consumer-favorable remedies.

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[6] We calculate the ratio of banks' monthly complaints to total assets and find no significant difference between the treatment and control groups (p-value = 0.239).

[7] A similar approach is used in financial research, e.g., Vig (2013), Campello and Larrain (2016), and Aretz et al. (2020). Our results are robust to an alternative classification of treatment and control banks using tertiles of pre-period dispute-to-compliant rations. The re-estimated results, as detailed in the Panel B of Appendix F, confirm the consistency of our finding.

[8] Closing a complaint with non-monetary relief may involve actions such as adjusting account terms, rectifying incorrect submissions to a credit bureau, or providing a foreclosure alternative that does not directly offer monetary value to the consumer.

[9] We focus on banks for our empirical tests. In the robustness tests, we extend the analysis to nonbank institutions and find consistent results. However, since banks and nonbanks are not comparable, we analyze them separately rather than pooling them.

Next, we validate that market discipline is the mechanism through which the discontinuation of disclosure reduces banks' effort to resolve complaints. To this end, we focus on a subsample of complaints with redacted ZIP codes.[10] While the CFPB still monitors complaints with redacted ZIP codes, banks receive significantly less public scrutiny given that the branch is not identified and communicated to consumers. Consistent with a reduced market discipline effect, we find that the cessation of dispute disclosure minimally impacts the behavior of banks with redacted ZIP codes.

We examine regional and bank variations to strengthen our argument that the regulatory change distorted banks' incentives. First, we show that the treatment effect is less pronounced in banks with greater local market power. This finding is consistent with the observation that monopolistic entities are often less responsive to the disciplinary effects of consumer markets (Nier and Baumann, 2006; Cubillas et al., 2017; Hett and Schmidt, 2017). Second, in line with the notion that insufficient capital encourages more short-termism (Degeorge et al., 1999; Caskey and Ozel, 2017; Li et al., 2024), we find that banks with lower return on assets (ROA) are more likely to resolve consumer complaints in "bank-friendly" ways after the cessation of dispute disclosure. These findings collectively suggest that reduced transparency limits market discipline on banks' responses to consumer complaints, thereby reducing their propensity to resolve complaints in a reputation-driven or consumer-centered manner.

The cessation of disclosure mitigates the reputational cost of disputes and the cost per complaint resolution. We thus examine whether banks' altered responses exert a feedback effect. Holding the resources allocated to complaint resolutions constant, banks can handle a larger volume of complaints, potentially inviting laxity or negligence in their duties ex ante. This can manifest at various stages during the financial services lifecycle, e.g., application, origination, service, or renegotiations. Therefore, a reduction of market discipline on the resolution process could encourage complacency,

[10] The CFPB withholds ZIP codes if the consumer agrees to publish their complaint narrative, if the ZIP code has been submitted with non-numeric values, or if fewer than 20,000 people reside in a given ZIP code.

impairing not just the immediate handling of complaints but also service quality across other areas (e.g., Agarwal et al., 2024). Consistent with this prediction, we find a 19.96% increase in the number of complaints for treatment banks relative to control banks after the cessation of dispute disclosure.

Finally, we extend our analysis to investigate how curtailment of dispute disclosure affects banks' behaviors across different stages of the financial services cycle (See Figure 1), with a particular focus on mortgage services. This targeted approach allows us to comprehensively analyze the entire mortgage journey, as we observe information related to applications, approvals, modifications, and foreclosures (e.g., Agarwal et al., 2024). In this analysis, we do not find any significant changes in the levels of mortgage modifications and foreclosures after the cessation of dispute disclosure. However, we do find a reduction in loan application and approval volumes for treatment banks, suggesting a spillover effect beyond the resolution domain. This finding complements the work of Dou and Roh (2024), who argue that public disclosure of complaints enhances product market discipline. Our study extends their finding by underscoring how transparency in complaint-handling exerts a product market disciplinary effect.

By introducing a new lens through which to examine consumer-driven discipline in financial markets, our paper contributes to the growing literature on the market's disciplinary effect on banks (e.g., Ertan et al., 2017; Hayes et al., 2021; Kielty et al., 2023; Flannery et al., 2023; Agarwal et al., 2024; Dou et al., 2024; Dou and Roh, 2024). Unlike the aforementioned studies, which rely on broad policy interventions, such as the CFPB's establishment, to observe shifts in mortgage costs or application volumes, our research employs a more focused and targeted lens—the discontinuation of dispute disclosure. As Chetty (2015) suggests, targeted interventions expose the nuances of decision-making and facilitate more precise insight into behavioral shifts. We show that disclosing consumer responses to complaint handling significantly empowers consumers to influence and discipline banks' behavior. Second, our granular analysis of banks' micro-actions reflects banks' prioritization and incentivization

dynamics under varying levels of market discipline. The examination of the pecking order in banks' micro-actions is important but rarely explored in prior studies.[11]

Third, we expand on the feedback loop of consumer responses across the financial services cycle, demonstrating that distinct consumer response metrics yield varying insights depending on their occurrence within the cycle. For instance, Kielty et al. (2023) highlight mortgage costs as a disciplinary indicator, while Dou and Roh (2024) emphasize application volume. Our research shows that the impact of consumer discipline is highly context-dependent, influenced by the specific service cycle stage targeted by the intervention. For example, while the quality of complaint handling directly impacts filings, its effect on downstream metrics, such as application volumes, is indirect, thereby complicating the interpretation of consumer disciplinary effects across metrics.

Our paper also contributes to the literature on the interaction between capital markets and product quality, with a focus on banking services (Jarrell and Peltzman, 1985; Hansman et al., 2020; Hayes et al., 2021; Li et al., 2024; Dou et al., 2024; Dou and Roh, 2024). A key challenge in this field is measuring unobservable quality (Hansman et al., 2020). Prior studies often rely on consumer complaints as proxies for financial service quality (e.g., Hayes et al., 2021; Dou and Roh, 2024; Dou et al., 2024). However, this measure is not directly tied to bankers' actions (i.e., inputs), and complaints can be influenced by both bankers' actions and consumers' behavioral factors (e.g., Law and Zuo, 2022). Further, external shocks may affect both parties, which complicates causal inferences. By utilizing the CFPB's detailed disclosures of banks' actions in individual complaint cases, we identify not just quantitative but qualitative changes in banks' complaint management and provide a more precise measure of service quality. Our findings reveal that, following the cessation of public dispute disclosure, banks moved away from substantive remedies like monetary relief toward narrative

[11] Dou et al. (2024) and Dou and Roh (2024) use banks' responses to consumer complaints to classify their severity. To our knowledge, we are the first to examine and characterize banks' responses as strategic decisions.

explanations. This observation cannot be detected by focusing solely on complaint frequency.

Our research yields meaningful implications for policymakers. Our findings suggest that diminished transparency on dispute resolution can significantly weaken the disciplinary effect on banks, undermine the effectiveness of complaint resolution processes, and affect service quality provided to consumers in earlier stages of the financial services cycle. Our study suggests that straightforward, accessible disclosure can be effective in promoting bank accountability. This indicates that policies favoring transparent communication on consumer rights and dispute resolution mechanisms could enhance the overall efficacy of discipline in the banking sector.

2 Institutional Background and Hypotheses Development

2.1 Institutional Background

In 2010, the Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act) created the Consumer Financial Protection Bureau (CFPB) as an independent bureau within the Federal Reserve System to protect consumers of financial product and services and ensure fair and competitive operations in consumer financial markets. The CFPB supervises banks, thrifts, and credit unions with assets over $10 billion and their affiliates. The agency also oversees nonbank mortgage originators and servicers, payday lenders, and private student lenders of all sizes. The CFPB initiated its operations on July 21, 2011, becoming the first federal agency dedicated solely to consumer financial protection.

One of the CFPB's central functions is to receive, resolve, and analyze consumer complaints about financial products or services. They make these complaints publicly available on their website and maintain the Consumer Complaint Database. As a financial services watchdog, the CFPB receives complaints that are substantive and therefore not easily resolved between consumers and financial institutions. Consumer submissions range from allegations of significant performance lapses in consumer service to claims regarding institutions' egregious exploitative behavior (Begley and

Purnanandam, 2021). Appendix C presents the consumer complaint process.

The CFPB accepts complaints through various channels, such as online submissions, phone calls, mail, and referrals from other federal and state agencies. Once received, the complaints are forwarded directly to the identified company for review and response. The company is required to provide a substantive response to each consumer complaint within 15 days and expected to resolve and close the complaint within 60 days.[12] After receiving the response, the consumer can review and provide feedback on it. At this point, the consumers can determine whether to dispute the resolution, which influences ensuing outcomes, including closure of the complaint cycle.

Consumer complaints are a critical input to CFPB's policy formulations and enforcement decisions, which can result in large fines against the offending institutions. The CFPB's Consumer Response team prioritizes complaints for further review and investigation when the consumer disputes the response or the financial institution fails to provide a timely response.[13]

Financial institutions are increasingly recognizing the value of effective complaint management, not just as a regulatory requirement but as a crucial lever to improve customer experience and retention (e.g., Gambetta et al., 2015; Yilmaz et al., 2016). In private conversations with bankers, we learned that they invest in dedicated complaint management teams and systems to promptly address and track complaint progress. These teams also analyze the complaints they receive, as well as those of their competitors, to identify potential weaknesses in operations, processes, training, and controls, that can be remedied to improve their service scope and delivery.

On April 24, 2017, the CFPB made a significant change to its Consumer Complaint Database. Effective on that date, the database no longer publicly discloses whether the consumer disputes the

[12] If the financial service provider fails to meet the 15-day deadline for responding to a complaint, the bureau will mark it as "untimely."

[13] See https://www.consumerfinance.gov/about-us/newsroom/consumer-financial-protection-bureau-launches-consumer-complaint-database/.

company's response to their complaint. The new "dispute" option directs consumers to complete a consumer feedback survey, which is not publicly disclosed.[14]

The CFPB believed that detailed feedback culled from the survey would prove more substantive and actionable than the previous "dispute" function.[15] As early as March 24, 2015, the Bureau sought public comment on potential adjustments to the consumer "dispute" function.[16] On November 29, 2016, the CFPB published the feedback it received and announced the introduction of a Consumer Complaint Company Response Survey, which would replace the "dispute" option. After a series of revisions, the final survey provided consumers with the opportunity to evaluate three areas: whether the company's response addressed all the consumer's issues, whether the consumer understands the company's response, and whether the company fulfilled the commitments made in response to the complaint. Consumers can also provide a narrative description to support their responses.

Upon reviewing the Consumer Complaint Database, we observed that before April 24, 2017, the field "Did consumer dispute the response?" had options for "Yes" or "No". During this period, approximately 18.29% of company responses were disputed by consumers (as shown in Appendix A). However, after April 24, 2017, the field changed to "N/A". Appendix B provides snapshots of three complaint records to illustrate this shift.

Although dispute information is no longer publicly available, consumers can still submit feedback on the company's complaint management. Accordingly, we view the CFPB's regulatory change as an exogenous shock that decreased the transparency of financial services.

[14] As part of our field research, we reached out to over 200 chief risk officers and were able to speak with five from various commercial banks. They have chosen to remain anonymous, but their input is included in our institutional background section.

[15] See https://www.federalregister.gov/documents/2016/11/29/2016-28651/agency-information-collection-activities-submission-for-omb-review-comment-request.

[16] See https://www.federalregister.gov/documents/2015/03/24/2015-06707/request-for-information-regarding-the-consumer-complaint-database.

2.2 Hypothesis Development

The CFPB's structured process ensures that consumers have a platform to voice their concerns and seek resolution for financial grievances. Within this framework, the act of disputation—when a consumer feels compelled to escalate a complaint or challenge a company's resolution—is a salient indicator of dissatisfaction. More expansively, a high dispute frequency pertaining to a given institution may flag systemic issues, which could be related to their training, culture, or incentive structures.

The CFPB's 2017 decision to replace the consumer "dispute" option with an undisclosed consumer feedback survey is comparable to removing a "dislike" option, in effect suppressing an explicit qualitative indicator accessible to the public and to the regulator.[17] This alteration not only attenuates the visibility of negative feedback but also decreases its potential disciplinary effect. Before the change, banks were highly incentivized to expeditiously and satisfactorily address consumer complaints in order to mitigate their public disclosure, reduce the likelihood of CFPB regulatory discipline, and retain consumer loyalty. Specifically, salient information on complaints can trigger CFPB regulatory discipline, thereby reshaping banks' ex ante behaviors in handling them (e.g., Stigler, 1971; Goldstein and Sapra, 2014). Banks are also subject to the disciplinary effect from information that leads consumers to switch from banks with lower quality signals to those with higher quality signals (Jin and Leslie, 2003; Kanodia and Sapra, 2016). The removal of public disclosure on complaints may inadvertently incentivize banks to seek more expedient resolution, broadly influencing banks' decision-making processes regarding complaint management.

A bank can respond to a consumer complaint in four ways, each associated with varying levels

[17] This decision is conceptually akin to a social media platform's removal of a "dislike" or "downvote" button for user content, which can obfuscate public sentiment, decrease overall transparency, and reduce visibility of unpopular or contentious content. Weitzl and Hutzinger (2017) find that dissatisfied consumers increasingly voice their complaints on social media. These comments and subsequent responses serve as a valuable information source for potential consumers (Stevens et al., 2018). Dou and Roh (2024) find a greater reduction in mortgage applications to banks that receive more mortgage complaints in local markets after the disclosures.

of cost and effort. For example, they can provide objective, measurable, and verifiable monetary relief. Approximately 6.14% of all individual complaints from 2015 until the regulatory change were closed via this method. Common forms of monetary relief include a refund, compensation, interest payments, or a settlement offer.[18] Banks can also offer non-monetary relief, e.g., service enhancements, policy adjustments, or product or service substitutions. Approximately 12.18% of the complaints were closed without monetary relief. While this response type does not involve direct financial compensation, it still requires significant effort on the bank's part.[19] Alternately, banks may close the complaint with an explanation via written or telephonic communication, provision of documentation or evidence, or engagement with specialized personnel. About 79.02% of the complaints were closed in this manner. Lastly, a bank may choose to simply close the complaint without relief or explanation. This is very rare, constituting approximately 2% of the total complaints, and usually stems from insufficient information provided by the consumer or repetitive complaints.

We expect the removal of the dispute option to mitigate the market disciplinary effect and influence banks' responses to consumer complaints. Given that monetary relief involves the highest cost and explanation incurs the lowest cost, we predict that:

H1: *After the cessation of dispute disclosure, banks are more likely to close a consumer complaint with an explanation and less likely to close it with monetary or non-monetary relief.*

The cessation of dispute disclosure reduces reputational costs and cost per complaint. Holding constant the same level of resources allocated to resolutions, banks can accommodate a larger volume of complaints. This may provide leeway for negligence in their duties ex ante and could manifest at different stages of the financial services lifecycle, e.g., application, origination, service, or

[18] Two examples are: (1) "Ronald who overpaid his mortgage for more than three years because he could not find the right paperwork. When the CFPB contacted the bank, it reimbursed him $30,000" and (2) "Tom who got the runaround for three years from his bank while he tried to modify his mortgage. After the CFPB got involved, the bank reimbursed Tom $20,000 for their errors."

[19] E.g., "Due to a malfunction on the credit card issuer's website, Jonna incurred additional fees. After the CFPB intervened, the issuer compensated her with a gift card to a national retail store."

renegotiations. Thus, diminished market discipline could encourage banks' complacency, which, in turn, could not only impair the immediate handling of complaints but also adversely impact service quality across other stages (e.g., Agarwal et al., 2024). We thus predict that following CFPB's regulatory shift, banks may begin to offer lower-quality services, which could lead to an increase in complaints:

H2: *After the cessation of dispute disclosure, the number of consumer complaints will increase.*

3 Research Design

3.1 Data and Sample Selection

To promote fair treatment and consumer protection, the CFPB created a comprehensive consumer complaint process and made individual-level data publicly available on the Consumer Complaint Database. The Bureau excludes complaints referred to other regulators, those with incomplete information or involving ongoing litigation, those that are anonymous, and those where a commercial relationship cannot be confirmed. All complaints are published on the database after the financial service provider responds to the complaint, or after 15 days, whichever comes first.

We focused on the two years before and after the regulatory change to avoid overlapping with the COVID-19 period and collected all complaints submitted to the CFPB from 2015 to 2019, totaling 1,137,392 records. Each complaint contains basic information (e.g., date received, product, issue, consumer complaint narrative, and submission method), individual information (e.g., state, ZIP code, and tags), the company's response (e.g., how the company responded and whether the response was timely), and whether the consumer disputed the company's response (available only for records before April 24, 2017).[20]

Our analysis uses the CFPB's regulatory change to evaluate the impact of dispute transparency on banks' incentive distortions. We use a binary DID model for our main analyses, making it critical

[20] The unique identifier of financial service providers in the dataset is the string indicator "company." Please see more details in https://www.consumerfinance.gov/complaint/data-use/.

to identify the treatment group and control group. We note that banks with lower dispute-to-complaint ratios, whose significant investment in complaint resolution is compromised by the cessation of dispute disclosure, are expected to show a more pronounced response to the change. Accordingly, based on the median dispute-to-complaint ratios of banks in the pre-period, we construct our treatment and control groups.

Our sample construction includes the following steps. First, as the Consumer Complaint Database provides limited information about the identified company, we employ a fuzzy matching method to correspond the data collected with a comprehensive list of banks, yielding 334,493 complaint records. Second, we aggregate the total number of complaints and the number of consumer dispute-related complaints at the bank level before April 24, 2017, to calculate the dispute ratio of banks' responses, and we exclude banks with a total number of complaints less than or equal to three to avoid extreme influence[21]. To enhance the sample's comparability around the cessation of dispute disclosure, we also require banks to have at least one observation before and after the change. Finally, we classify banks with dispute-to-complaint ratios at or below the median as treatment banks, and those with dispute-to-complaint ratios above the median as control banks.[22] Our final sample consists of 50 banks in the treatment group and 50 banks in the control group.

We use the HMDA database to obtain the total volume (amount) of mortgage applications and approvals. This database provides information on mortgage applications received by various originators; it includes loan characteristics (purpose and amount), the applicant's income, property location, and census information. We combine datasets from Fannie Mae and Freddie Mac to analyze mortgage loan modifications and foreclosures. These two datasets provide details about mortgage

[21] We demonstrate that our findings remain consistent when using other cutoffs, such as removing banks with total complaints less than or equal to 10, 20, and 50 in the pre-period.

[22] We also examine the stability of banks' dispute-to-complaint ratios. Specifically, we calculate their dispute ratios for the years 2015, 2016, and 2017, and subsequently compute the cosine similarity between these ratios in pairs. The findings reveal a significant degree of similarity, with cosine similarity values of 0.830 for the comparison between 2015 and 2016, 0.831 for the comparison between 2015 and 2017, and 0.792 for the comparison between 2016 and 2017.

characteristics (e.g., loan purpose, interest rate, loan terms, borrower's credit score, LTV ratio at origination, original UPB, and property location) and subsequent performance (e.g., remaining months to maturity, current loan delinquency status, and modification flag).

All quarterly financial data, including total assets, deposits, personal loans, Tier 1 capital ratio, and return on assets (ROA), are obtained from SNL Financial Institutions and Bank Data. Data on deposit amounts at the branch level are sourced from the FDIC Summary of Deposits (SOD). We keep all full-service branches to calculate county-level estimates of the Herfindahl-Hirschman Index (HHI, based on deposits) and collapse them at the bank level to obtain the number of branches. Information on mortgage growth comes from mortgage data (HMDA). We retain all originated loans and compile the loan amounts at the bank level to calculate annual growth rates.

The Consumer Complaint Database only provides consumers' ZIP codes; thus, we match ZIP codes with county-level FIPS using data from the Department of Housing and Urban Development.[23] We obtain annual per capita income and population data at the county level from the Bureau of Economic Analysis (BEA). Other county-level control variables are obtained from the United States Census Bureau.

3.2 Research Design

3.2.1 The effect of dispute disclosure cessation on banks' responses to consumers

To test Hypothesis 1 (H1), we formally adopt a difference-in-differences (DID) framework to evaluate the impact of dispute disclosure cessation on banks' responses. The DID approach is widely employed in recent research because it helps mitigate the confounding effects of additional factors and omitted variables on causal inference (e.g., Vig, 2013; Campello and Larrain, 2016; Aretz et al., 2020; Roth et al., 2023). Our treatment group consists of banks with lower dispute-to-complaint ratios

[23] Since a ZIP code can span multiple counties, this dataset also provides information on the percentage of a ZIP code's population that lies in each county where it may overlap. When mapping ZIP codes to counties, we assign each ZIP code to the county where the largest proportion of its population resides.

in the pre-period, and our control group consists of higher dispute-to-complaint ratios in the pre-period. The first difference measures the change in banks' responses before and after the cessation, and the second difference captures the variation in bank's responses between the treatment and control groups. The regression model is specified below:

$$Y_{i,c,p,t} = \beta_0 + \beta_1 Treat_i * Post + \beta_2 Treat_i + \beta_3 Post + Controls + \gamma_i + \mu_c + \upsilon_t + \sigma_p + \varepsilon_{i,c,p,t} \quad (1)$$

where subscript *i* denotes the bank, *c* denotes the county based on consumer location, *p* denotes the identified financial product, and *t* denotes the time at a monthly frequency. The dependent variable, $Y_{i,c,p,t}$, is a generic notation for the three dummy variables *Explanation*, *Monetary*, and *Nonmonetary*. *Explanation* is a dummy variable equal to one if a complaint is closed with an explanation, and zero otherwise. *Monetary* is a dummy variable equal to one if a complaint is closed with monetary relief, and zero otherwise. *Nonmonetary* is a dummy variable equal to one if a complaint is closed with non-monetary relief, and zero otherwise. $Treat_i$ is a dummy variable equal to one for banks with below-the-median dispute-to-complaint ratios in the pre-period, and zero for banks with above-the-median dispute-to-complaint ratios in the pre-period. *Post* is a dummy variable that equals one for dates after the cessation of dispute disclosure (i.e., April 24, 2017 to December 31, 2019), and zero for dates before the cessation (i.e., January 1, 2015 to April 23, 2017). The coefficient β_1 captures the average change in the propensity to close a consumer complaint with an explanation (or monetary or non-monetary relief) in the treatment group relative to the average change in the control group after the regulatory change.

Controls represents a vector of lagged, time-varying bank-level characteristics, including the number of branches, total assets, deposit growth, personal loan growth, mortgage growth, Tier 1 capital ratio, and return on assets (ROA), as well as county-level demographic variables, including the percentage of females, average age, bachelor, population, per capita income, and the Herfindahl-Hirschman Index (HHI). Appendix D provides detailed definitions of all variables.

γ_i represents bank fixed effects that absorb all time-invariant characteristics (perfect multicollinearity with $Treat_i$, the latter will be omitted). μ_c is county fixed effects that absorb county-level time-invariant characteristics that affect banks' responses. υ_t denotes year-month fixed effects that control for time trends. σ_p denotes product fixed effects that remove any time-invariant characteristics of the financial products. We employ OLS regressions to separately estimate the impact of transparency on the three types of banks' responses, *Explanation*, *Monetary*, and *Nonmonetary*.[24] To address concerns about autocorrelation, we cluster standard errors at the bank level, given that the key independent variable of interest is at the bank level (Imbens and Wooldridge, 2009).

3.2.2 The effect of dispute disclosure cessation on consumer complaint frequency

To test Hypothesis 2 (H2), we aggregate complaint records at the bank, county, and year-monthly levels. We again employ a DID design to evaluate the impact of dispute disclosure cessation on overall complaint frequency. The first difference compares the change in the banks' monthly complaints before and after the cessation, and the second difference captures the disparity in monthly complaints between the treatment and control groups.

$$Complaints_{i,c,t} = \beta_0 + \beta_1 Treat_i * Post_t + \beta_2 Treat_i + \beta_3 Post_t + Controls + \gamma_i + \mu_c + \upsilon_t + \varepsilon_{i,c,t} \quad (2)$$

where subscript i, c, and t denote the bank, county, and time at monthly frequency, respectively. $Complaints_{i,c,t}$ represents the number of monthly complaints received by bank i in county c. $Post_t$ is a dummy that equals one for the months after the cessation of dispute disclosure (i.e., April 2017 to December 2019), and zero for the months before the cessation (i.e., January 2015 to March 2017). All control variables are the same as those in Equation (1). The regression also includes bank, county, and year-month fixed effects, denoted as γ_i, μ_c, and υ_t respectively. $Treat_i$ and $Post_t$ exhibit perfect multicollinearity with the bank and year-month fixed effects, respectively, and are therefore absorbed.

[24] We opt to estimate OLS regressions instead of Logit or Probit models to avoid the incidental parameter problem associated with a considerable number of fixed effects.

Standard errors are clustered at the bank level. Recent research demonstrates that a simple fixed-effects Poisson model produces more consistent and efficient estimates than the common practice of estimating linear regressions of the log of one plus the outcomes (Cohn et al., 2022). Therefore, we estimate Equation (2) using panel Poisson regression.

4 Main Results

4.1 Summary Statistics

Table 1 reports summary statistics for our sample's key variables, including the differences in means between treatment and control groups. Standard errors are clustered by bank to examine the mean differences between pre- and post-periods (Panel A) or between treatment and control groups (Panels B and C). Panel A displays summary statistics of the dependent variables for both the pre- and post-periods, detailing the full sample, treatment group, and control group separately. Following the regulatory change, treatment banks are generally more likely to close a consumer complaint with an explanation (0.707 vs. 0.791) and less likely to provide monetary (0.160 vs. 0.115) or non-monetary relief (0.123 vs. 0.095). Treatment banks experience an increase of 0.015 complaints per month per county following the cessation, representing a 14.42% rise from the pre-period average of 0.104 complaints. In comparison, control banks exhibit a reverse trend, albeit to a lesser extent. Regarding the number of complaints, control group banks show no significant change after the cessation.

Panel B presents summary statistics of bank-level characteristics and county-level demographic variables in the pre-period at the individual complaint level for both the treatment and control groups and overall sample. Notably, in the pre-period, none of the control variables of the treatment and control groups exhibit significant differences, except for ROA. Panel C outlines the summary of pre-period bank- and county-level control variables for both treatment and control groups at the aggregated bank-county-month level. Mirroring Panel B's observations, treatment group banks show slightly lower ROA, while other variables do not display notable differences. These findings suggest

that the classification of banks into treatment or control groups is unlikely to be driven by their fundamental characteristics.

4.2 The Cessation of Dispute Disclosure and Banks' Responses

4.2.1 Baseline results

Table 2 reports the average treatment effect of dispute disclosure cessation on banks' responses by estimating Equation (1).[25] Columns (1) and (2), (3) and (4), (5), and (6) display parameter estimates for the dependent variables represented by the indicators *Explanation*, *Monetary*, and *Nonmonetary*, respectively. The coefficient on *Treat*Post* captures the average difference in banks' responses between the treatment and control groups during the post-period (April 24, 2017 to December 31, 2019) compared to the baseline period (January 1, 2015 to April 23, 2017). In all Columns, we include bank characteristics, bank, year-month, county, and product fixed effects.

The coefficient on *Treat*Post* in Column (1) is significantly positive (0.108, t = 2.730). Incorporating county-level demographic variables in Column (2) yields a similar result in both magnitude and statistical significance for *Treat*Post* (0.108, t = 2.733), suggesting that, all else being equal, banks are 10.80% more likely to close a consumer complaint with an explanation after the cessation of dispute disclosure. Given that the average probability of treatment banks closing a consumer complaint with an explanation in the pre-period is 70.70% (as detailed in Table 1), the cessation's economic impact is 15.28% (calculated as 10.80%/70.70%). In comparison, the significantly negative coefficients on *Treat*Post* in Columns (3) and (5) reveal that, all else being equal, the likelihood of closing a consumer complaint with monetary or non-monetary relief decreases by 5.70% and 5.40%, respectively, after the cessation. The coefficient on *Treat*Post* remains consistent when we further control for county-level demographic variables in Columns (4) and (6). These results

[25] Our results remain consistent when we replace county fixed effects with state fixed effects and use logit regressions. The logit regression outcomes are shown in Appendix E.

support Hypothesis 1, i.e., that the cessation increases banks' propensity to close complaints with an explanation and reduces the likelihood of resolution via monetary or non-monetary relief.

4.2.2 Dynamic effects

DID's integrity hinges on the parallel trend assumption, which posits that, in the absence of dispute disclosure's termination, the differences in banks' complaint handling would remain unchanged between the two groups. To validate this assumption, we define a semi-annual period and construct event study models to explore the dynamic effects of dispute disclosure's cessation. Since the regulatory change occurred in April 2017, we designate the first half of 2017 as period 0.

Figure 2 displays the dynamic effect of the dispute disclosure cessation on banks' responses. The benchmark period is the first semi-year period of the sample (i.e., January 2015 to June 2015). Panel A reports the estimates for closing a consumer complaint with an explanation (i.e., *Explanation*), while Panels B and C report the estimates for closing a consumer complaint with monetary or non-monetary relief (i.e., *Monetary* and *Nonmonetary*), respectively. Across all three panels, Figure 2 does not indicate a pre-trend, meaning the difference in responses between treatment and control groups is statistically insignificant during the three semi-years leading up to the cessation of dispute disclosure. Subsequently, the coefficients in Panel A (Panels B and C) become significantly positive (negative) following the regulatory change. This suggests that the cessation has an immediate and significant long-term impact on banks' consumer responses.[26]

4.2.3 Do consumer complaint narratives change?

To address the concern that shifts in banks' complaint management may result from changes in their severity, we conduct a detailed textual analysis of published complaint narratives.[27] Specifically,

[26] In untabulated results, we find that the parallel trends in the outcome variables are still observed when we only include bank characteristics, along with bank, year-month, county, and product fixed effects. Similarly, parallel trends remain when we only include bank, year-month, county, and product fixed effects.

[27] In Release 10 (see https://cfpb.github.io/api/ccdb/release-notes.html), the CFPB expanded the database to include consumer complaint narratives dating back to March 19, 2015. If consumers consent to publishing their descriptions, the

we examine whether consumers' inclination to publish their narratives and the narratives' level of informativeness and sentiment shift after the regulatory change.

Our first analysis tests the cessation's impact on consumers' propensity to publish their complaint narratives. We define *Narrative_dum* as a dummy variable, with a value of one if they consent to publish, and zero otherwise. We use *Narrative_dum* as the dependent variable, controlling for bank characteristics, and include state fixed effects instead of county fixed effects, as the CFPB preserves the ZIP code for complaints with narratives. In Column (1) of Table 3, we find that the regulatory change does not significantly impact consumers' propensity to publish their complaint narratives.

We use Python to perform a textual analysis on the complaint narratives. This involves processes such as tokenization, lemmatization, and the removal of stop words and special characters to extract meaningful vocabulary, with *Usefulwords* representing the number of useful words. We also use the SnowNLP package to determine the number of positive and negative words in each consumer's narrative and calculate a sentiment score by dividing the number of positive words by the total number of positive and negative words. We use the count of useful words (*Usefulwords*) and the sentiment score (*Sentiment*) as the dependent variables, while controlling for bank characteristics, bank, year-month, state, and product fixed effects. Columns (2) and (3) of Table 3 show that the narrative content of complaints remains constant, indicating that severity is also unchanged and alleviates the concern that shifts in banks' complaint management result from changes in the severity of consumer complaints.

4.2.4 Isolating the public pressure channel

We argue that the discontinuation of dispute disclosure reduces market discipline on banks' decision-making processes, thereby affecting their approaches to complaint resolution. To validate the public pressure channel, we focus on a subsample of complaints with redacted ZIP codes. The CFPB

CFPB takes reasonable steps to scrub personal information from each complaint to prevent consumer identification. The sample for this section utilizes consumer complaint records from March 19, 2015 to the end of 2019.

withholds ZIP codes when: (1) the consumer agrees to publish their complaint narrative, (2) the ZIP code has been submitted with non-numeric values, or (3) fewer than 20,000 people reside in a given ZIP code. While complaints with redacted ZIP codes are still monitored by the CFPB, they receive significantly less public scrutiny because consumers cannot identify the exact branch of the implicated bank. We anticipate that given this reduced public pressure, the cessation of dispute disclosure would minimally impact banks' behaviors. To test this, we re-estimate Equation (1) for complaints without ZIP codes. As the county-level FIPS codes for these complaints cannot be matched, we replace county fixed effects with state fixed effects and exclude county-level demographic variables from our analysis. The selection and definition of other variables remain consistent with Equation (1). The re-estimation results are reported in Table 4. For brevity, we exclude the presentation of coefficients pertaining to bank-level characteristics. In Column (1), although the coefficient on *Treat*Post* is significantly positive (0.072, t = 1.896), its magnitude is smaller than the baseline results, and the coefficients in Columns (3) and (5) are not significantly different from zero. These results reveal a clear difference compared to the regression outcomes for the unredacted ZIP codes subgroup (See Columns (2), (4) and (6)), consistent with a reduced market discipline effect for the banks with redacted ZIP codes.

4.2.5 Cross-sectional analysis

We further exploit variations across different regions and banks to strengthen our argument that the regulatory change distorted banks' incentives in responding to complaints. First, we test whether banks' responses vary with local market power. We measure financial competition within a county using -1 × HHI based on local branch deposits in 2014 and divide our sample into two subgroups based on the variable's median values. The subgroup with an HHI index above the median is identified as the low-competition subgroup. Panel A of Table 5 reports the cross-sectional heterogeneous results of banks' responses. For brevity, we exclude the presentation of coefficients pertaining to bank-level characteristics and county-level demographic variables. In Columns (1) and (2), the coefficient on

*Treat*Post* is significantly smaller in the subsample of counties with low financial competition (0.101, t = 2.699) than in those with higher financial competition (0.115, t = 2.805), implying that the probability of resolving a complaint with an explanation after the cessation increases by 10.10% in counties with low competition and 11.50% in counties with high competition. The findings from Columns (3) and (4) display similar but contrasting effects. This evidence suggests that the shift in their approaches is not as pronounced in areas with less local financial competition, aligning with the notion that monopolistic entities tend to be less affected by the disciplinary effects of consumer markets (Nier and Baumann, 2006; Cubillas et al., 2017; Hett and Schmidt, 2017).

Second, we examine whether banks' reactions vary according to their ROA. We posit that banks with lower ROA might be more incentivized to cut costs associated with consumer complaint resolution. By categorizing our sample into two subgroups based on the median ROA in 2014, we explore the cross-sectional heterogeneity in Panel B of Table 5. In Columns (1) and (2), the coefficient on *Treat*Post* is significantly larger for banks with lower ROA (0.141, t = 3.189) than for those with higher ROA (0.080, t = 2.741). This suggests that banks with lower ROA are 14.10% more likely to resolve a complaint with an explanation after the regulatory change, in contrast to an 8.00% increase for banks with higher ROA. Furthermore, Columns (3) and (4), along with (5) and (6) of Panel B, illustrate that the reduction in dispute transparency affects the probability of resolving a complaint with or without monetary relief in banks with lower ROA. These findings suggest that banks with lower ROA exhibit a more pronounced shift in their approaches to complaint management and resolution after the regulatory change, consistent with the notion that limited financial leeway promotes a focus on short-term objectives (Degeorge et al., 1999; Caskey and Ozel, 2017; Li et al., 2024).

We also examine the heterogeneity of treatment effects across different ethnic groups. Consumers who maintain ongoing relationships with specific banks are well-positioned to detect

changes in service quality. However, their reactions to service quality depend on their financial literacy and tolerance for subpar service (e.g., Campbell, 2006; Carlin and Gervais, 2012). Previous studies indicate that white groups, on average, possess higher financial literacy (Lusardi and Mitchell, 2007, 2008). Consequently, we anticipate that the market discipline effect and the treatment effect will vary across ethnic groups.

We match county-level racial data from the 2010 Census to our individual-level complaints dataset, dividing it into two subgroups based on whether the local minority population proportion is above or below the median. The regression results for these subgroups are presented in Appendix G. In Columns (1) and (2), the coefficient on *Treat*Post* is significantly higher in counties with a higher minority population proportion (0.115, t = 2.944) compared to those with a lower minority population proportion (0.101, t = 2.522). This indicates that the probability of closing a consumer complaint with an explanation increases by 11.50% in counties with a higher minority population proportion after the cessation of dispute disclosures, while the probability increases by only 10.10% in counties with a lower minority population proportion. Conversely, as shown in Columns (3) and (4) and (5) and (6), the cessation of dispute disclosures has a more significant negative effect on the probability of closing a complaint with non-monetary relief in counties with a higher minority population proportion, whereas closure with monetary relief does not show a significant difference between the two subgroups. These results indicate that banks in areas with high minority populations show a more pronounced shift in their approaches to complaint management after the cessation of dispute disclosures, consistent with a weaker market discipline effect for areas with high minority populations.

4.3 The Cessation of Dispute Disclosure and Complaint Frequency

4.3.1 Baseline results

To test Hypothesis 2 (H2), we aggregate individual complaint records in the matched sample to

the bank, county, and year-monthly level[28] and examine the impact of the cessation of dispute disclosure on the number of complaints by estimating Equation (2). The results of the Poisson regression, as detailed in Table 6, show the coefficient on *Treat*Post* representing the average difference in complaint frequency between treatment and control groups after the cessation (April 2017 to December 2019).

Column (1) includes controls for bank-level characteristics, bank, year-month, and county fixed effects. In Column (2), we further incorporate county-level demographic variables. The findings indicate a significant increase in complaints received by treatment banks following the regulatory change, supporting our hypothesis that reduced investment in complaint resolution has a feedback effect. Specifically, the coefficient of *Treat*Post* is 0.182, statistically significant at the 5% level. Given that monthly complaint frequency averages 0.104 per county for the treatment group in the pre-period (as reported in Table 1), the cessation results in a 19.96% increase in the number of complaints (e^0.182-1 = 19.96%), equivalent to an average increase of 0.021 complaints per month per county.

We further aggregate complaint records into a bank-month panel to conduct robustness tests, controlling for bank characteristics, bank fixed effects, and year-month fixed effects. The Poisson regression results, reported in Column (3), remain consistent.

4.3.2 Dynamic effects

To test the parallel trend assumption and examine the regulatory change's impact on the number of complaints, we define a semi-annual period, as described in Section 4.2.2, and construct an event study model. Consistent with the baseline regression, we control for bank-level characteristics, county-level demographic variables, bank fixed effects, year-month fixed effects, and county fixed effects. The

[28] To mitigate survivorship bias from months or counties without any consumer complaints submitted to the CFPB, we thoroughly investigate each bank's historical records (see https://banks.data.fdic. gov/bankfind-suite/bankfind). We then remove observations from banks that had either closed or been acquired. Moreover, we include bank-county-month observations with zero complaints in our sample, provided the bank was operational and maintained at least one branch in the county. This approach allows us to compile a bank-county-month panel dataset encompassing all operational banks, regardless of whether they received complaints.

coefficients and 95% confidence intervals are plotted in Figure 3. Compared with the benchmark period (i.e., January 2015 to June 2015), there is no significant increase in the number of complaints received by treatment banks in the three semi-years prior to the cessation. This observation validates the parallel trend assumption. Following the regulatory change, the coefficient becomes significantly positive and shows a gradual increase, with the economic effects escalating from 16.88% in the first semi-year to 28.79% after two years.[29] These findings suggest that the cessation has a significant and sustained long-term effect on a county's number of monthly complaints.[30]

4.4 Robustness Analyses

4.4.1 Is the effect driven by complaints about specific products?

CFPB information reveals that the volume of complaints related to credit or consumer reporting, credit repair services, and debt collection has increased over time.[31] To address concern that our results may be driven by a change in complaint type, we drop complaints related to these specific products and re-estimate Equations (1) and (2). The results, reported in Panel A of Table 7, show that the magnitude and statistical significance on *Treat*Post* are consistent with our baseline findings.

4.4.2 Are results applicable to the remaining nonbank samples?

The Consumer Complaint Database includes complaints against banks as well as nondepository mortgage originators and servicers, payday lenders, and private student lenders. To confirm the robustness of our baseline findings, we validate the remaining nonbank samples. We hypothesize that the cessation of dispute disclosure may also influence these financial institutions' complaint resolution efforts. Specifically, we calculate their pre-period dispute-to-complaint ratios and categorize those with

[29] The estimated coefficient increases from 0.222 in the first semi-year to 0.246 after two years, with the corresponding economic effect rising from 24.86% to 27.89% (e^0.222-1 = 24.86%; e^0.246-1 = 27.89%).

[30] We also rerun the parallel-trends test using a simpler specification. Parallel trends in the outcome variables are still observed when we include only bank characteristics, bank fixed effects, year-month fixed effects, and county fixed effects, and when we include only bank fixed effects, year-month fixed effects, and county fixed effects.

[31] See https://files.consumerfinance.gov/f/documents/cfpb_2022-consumer-response-annual-report_2023-03.pdf.

ratios at or below the median as the treatment group and those with ratios above the median as the control group. We are unable to obtain the characteristic variables for all non-bank institutions; therefore, we do not control for these variables in the regression. The selection and definition of other variables remain consistent with Equation (1). The re-estimation results presented in Panel B of Table 7 indicate that, following the cessation, treatment group firms are more likely to resolve a consumer complaint with an explanation and less likely to resolve it with monetary or non-monetary relief.[32]

4.5 Chain Effects of the Cessation of Dispute Disclosure: Evidence From Mortgage Loans

We have shown that decreased disclosure reduces banks' incentives to prioritize consumer-favoring responses. Extending our analysis beyond the resolution process, we investigate the stages of the financial service cycle where banks exhibit a noticeable decline in effort following the cessation of dispute disclosure. For a more detailed examination, we focus on mortgage services to study the entire mortgage journey, as we can observe information related to mortgage applications, approvals, and subsequent modifications and foreclosures (e.g., Agarwal et al., 2024).

To this end, we examine the cessation's impact on county-level aggregate annual mortgage applications and approvals. Utilizing the HMDA data, we measure the total application and approval volume (or amount). As in Section 3, we merge the HMDA data with the Consumer Complaint Database, dividing the sample into treatment and control groups based on lenders' median pre-period dispute ratios. Our regression analysis uses the natural logarithm of the total application and approval volume (or amount) plus one of a lender in a county (*Ln_appl_vol* / *Ln_appl_dol*, and *Ln_appr_vol* / *Ln_appr_dol*) as dependent variables.[33] We control for county-level demographic variables (percentage

[32] We also use the onset of COVID-19 as a means to conduct a falsification test, as detailed in Panel C of Appendix F. Specifically, we use the Consumer Complaint Database from 2017 to 2022, with "*Post*" defined as one for complaints occurring in 2020-2022, and zero otherwise. The null results confirm that the observed changes in banks' handling of consumer complaints are caused by the exogenous shock of the cessation of dispute disclosures.

[33] We include the lender-county-year observations with the total application and approval volume (or amount) as zero to the sample if the lender is in operation. Thus, we use the log of one plus the outcomes as dependent variables.

of females, average age, bachelor, population, per capita income, and HHI), as well as lender, year-month, and county fixed effects. The results, presented in Panel A of Table 8, show a slight reduction in loan application and approval volumes for treatment banks, suggesting a spillover effect beyond the resolution domain. This finding complements Dou and Roh (2024), who emphasize the importance of public disclosure of complaints rather than resolution information

We also examine the cessation's effect on subsequent modifications and foreclosures. By merging data from Fannie Mae and Freddie Mac with the Consumer Complaint Database and dividing the sample into treatment and control groups based on the median pre-period dispute ratio of mortgage loan servicers, our analysis includes mortgages originated between January 1, 2015 and December 31, 2019, tracking their performance information through September 30, 2022. Initially, we test the impact on mortgage default risk, defining a loan as defaulted if it is 90+ days past due, in line with mortgage literature (Agarwal and Ben-David, 2018; O'Malley, 2021). Our regression controls for the borrower's credit score (*Score*), the natural logarithm of the original unpaid principal balance (*ln_UPB_org*), loan-to-value ratio at origination (*LTV_org*), and interest rate at origination (*Interest_org*). It includes origination date, lender, loan purpose, MSA, and Zip fixed effects. The results, presented in Column (1) of Panel B, indicate that the cessation closure has no significant impact on mortgage default risk.

Subsequently, we link each delinquent loan's origination data with its performance data, creating a cross-sectional dataset of all delinquent mortgages, which includes information on loan characteristics, modification status, and foreclosure occurrences. Columns (2) and (3) present the results of the modification and foreclosure analyses, respectively, with the dependent variable being a modification dummy (*Modify*) and a foreclosure dummy (*Foreclose*). The modification dummy equals one if the delinquent loan is modified, and zero otherwise, while the foreclosure dummy equals one if the property associated with the loan was ultimately foreclosed, and zero otherwise. The specification of control variables is the same as above. The coefficient on *Treat*Post* is quite small and

statistically insignificant, suggesting no significant shift in modification or foreclosure levels following the cessation.

5 Conclusion

In this paper, we focus on the CFPB's decision to end dispute disclosure. We employ a DID design to explore how the decision impacts banks' management of consumer complaints. We find that treated banks demonstrate a 10.80% increase in the propensity to close a consumer complaint with a low-cost explanation after the cessation of dispute disclosure. Conversely, the propensity to resolve a consumer complaint with either monetary or non-monetary relief diminishes by 5.70% and 5.40%, respectively. Cross-sectional analyses show that the treatment effect is less pronounced in banks with greater local market power. Banks with lower ROA exhibit a more pronounced shift in their approaches to complaint management and resolution after the cessation of dispute disclosure. These findings collectively suggest that reduced transparency curtails market discipline on banks' complaint management behaviors. The shift toward cost-saving resolutions signifies a reduction in banks' prioritization of service quality, as indicated by a 19.96% increase in the number of complaints for treatment banks relative to control banks after the cessation of dispute disclosure.

Our paper contributes to the growing literature on how bank discipline practices in the financial services industry. Our findings reveal that, following the cessation of dispute disclosure, banks moved away from offering consumers substantive remedies such as monetary relief to providing narrative explanations. Our paper is also relevant to policymakers. We find that reduced transparency curtails market discipline on banks' investment to resolve complaints and that this impact varies significantly across different consumer groups. Our study suggests that policies favoring transparent communication about consumer rights and available dispute resolution mechanisms could enhance the overall efficacy of discipline in the banking sector.

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Appendix A
Consumer Disputes to Banks' Responses

This table summarizes consumer disputes in the overall dataset from 2015 to 2019. Prior to April 24, 2017, 18.29% of banks' responses were disputed by consumers.

	Pre-period			Post-period			All years	Percentage
	2015	2016	2017	2017	2018	2019	(2015-2019)	of Total
Yes	34,283	34,788	10,002	0	0	0	79,073	6.95%
No	134,181	156,666	62,354	0	0	0	353,201	31.05%
N/A	0	0	0	170,564	257,239	277,315	705,118	62.00%
All Complaints	**168,464**	**191,454**	**72,356**	**170,564**	**257,239**	**277,315**	**1,137,392**	**100%**
Dispute-to-complaint Ratio	**18.29% (= 79,073 / 432,274)**			**-**			**-**	**-**

Appendix B
Snapshots of Complaint Records for Three Different Dispute Statuses

Figure A: Consumer disputes the response

2439861

Date CFPB received the complaint
4/19/2017

Consumer's state
TX

Consumer's zip
75115

Submitted via
Web

Tags

Did consumer dispute the response?
Yes

Product
Credit reporting

Issue
Credit reporting company's investigation
Sub-issue: No notice of investigation status/result

Consumer consent to publish narrative
Consent provided

Consumer complaint narrative
On XXXX / XXXX / XXXX I submitted an online dispute for a account I have 'No Knowledge ' of and On XXXX / XXXX / XXXX received email dispute was completed without results. However, when accessed credit report on XXXX / XXXX / XXXX and item is still showing 'Under Investigation a nd I should have my results soon '. I 've attached a copy of credit report to support complaint, the item in question is the very last item in the attached. Thank you.

Company information

Date complaint sent to company
4/19/2017

Company name
EQUIFAX, INC.

Timely response?
Yes

Company response to consumer
Closed with explanation

Company public response

Figure B: Consumer agrees with the response

2447675

Date CFPB received the complaint
4/23/2017

Consumer's state
IL

Consumer's zip
60643

Submitted via
Web

Tags

Did consumer dispute the response?
No

Product
Bank account or service
Sub-product: (CD) Certificate of deposit

Issue
Account opening, closing, or management

Consumer consent to publish narrative
Consent provided

Consumer complaint narrative
Bank accounts (CD & Money Markets) w as opened by single account owner with XXXX XXXX . XXXX XXXX closed. The bank accounts wound up with XXXX XXXX , and now with U.S. Bank. Somehow during this time, an additional name was added to account, without original owner knowing or authorizatio n. U.S. Bank r efuses to correct error and refuses to produce the SIGNATURE CARDS. We have been trying to get cooperation fr om U.S. Bank for over six (6) months. We have contacted their Executive Offices and spoken to several persons in Fraud Department and Senior Banker a t (XXXX XXXX XXXX . Finally, one person to ld me to contact the XXXX XXXX branc h manager named xxxx, in XXXX and that is where the signature cards are located. (I have never previously conducted any business in this branch.) Several calls were made, messages left, and could not get a call back response. Finally spoke to Assistant Branch Manager who told me to come into bank. She took my personal and all contact information and promised to get back to me. She did not. Then she was getting information from Corporate Office and they would send letter directly. Allotted time passed without any response. She became increasingly more hostile with each additional phone call. She finally said they do not have to give any information or put anything in writing. Later, I went to another branch, a suburban branch. Spoke to the branch manager, w ho listened, then said she would followup and get back in touch the next week. After not hearing back, I called, but was told she was busy. Left a message. After no call back and it was almost at the end of the business day, I contacted her. She said was waiting for information back from another source and In a very unfriendly voice stated she would contact me in two (2) days. Time pas sed without contact. I called again, left message. Called again and she had someone tell me she no information for me. With each contact person that I have spoken to over the las t six months, I told them there is a legal issue and the information is needed. Also, that I NEVER authorized anyone else to be on my accounts. They will not own up to AND refuses to correct the bank errors! However, they have given out incorrect information, which has caused a XXXX legal issue, currently in court.

Company information

Date complaint sent to company
4/23/2017

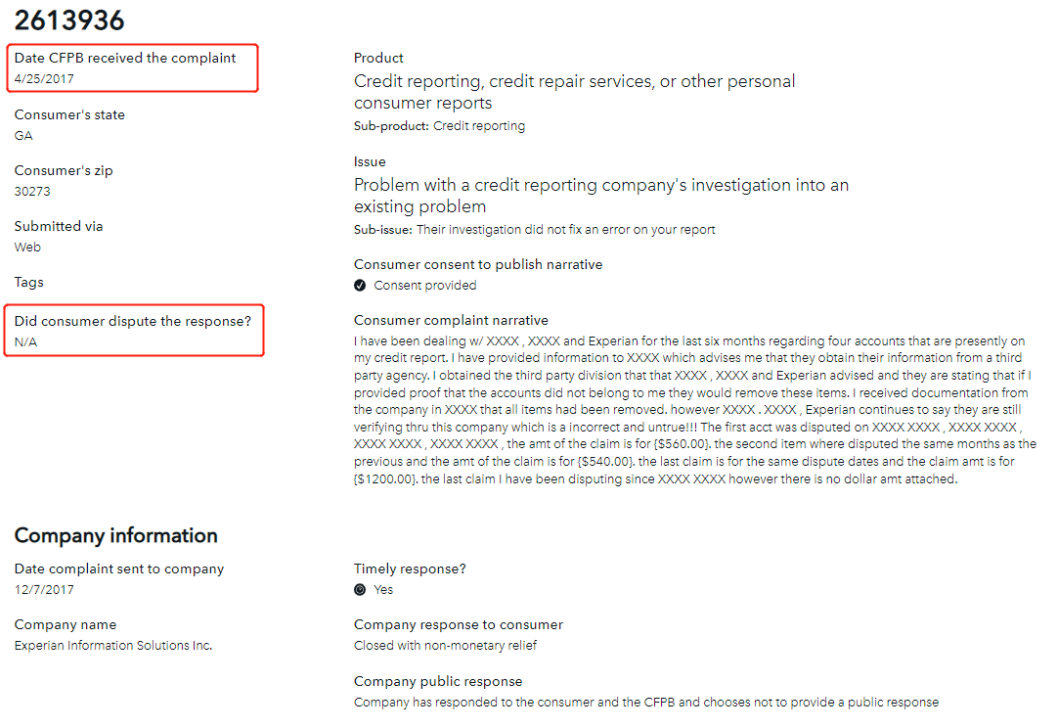
Company name
U.S. BANCORP

Timely response?
Yes

Company response to consumer
Closed with explanation

Company public response
Company has responded to the consumer and the CFPB and chooses not to provide a public response

Figure C: Cessation of consumer dispute information disclosure



2613936

Date CFPB received the complaint
4/25/2017

Consumer's state
GA

Consumer's zip
30273

Submitted via
Web

Tags

Did consumer dispute the response?
N/A

Product
Credit reporting, credit repair services, or other personal consumer reports
Sub-product: Credit reporting

Issue
Problem with a credit reporting company's investigation into an existing problem
Sub-issue: Their investigation did not fix an error on your report

Consumer consent to publish narrative
Consent provided

Consumer complaint narrative
I have been dealing w/ XXXX , XXXX and Experian for the last six months regarding four accounts that are presently on my credit report. I have provided information to XXXX which advises me that they obtain their information from a third party agency. I obtained the third party division that that XXXX , XXXX and Experian advised and they are stating that if I provided proof that the accounts did not belong to me they would remove these items. I received documentation from the company in XXXX that all items had been removed. however XXXX . XXXX , Experian continues to say they are still verifying thru this company which is a incorrect and untrue!!! The first acct was disputed on XXXX XXXX , XXXX XXXX , XXXX XXXX , XXXX XXXX , the amt of the claim is for {$560.00}. the second item where disputed the same months as the previous and the amt of the claim is for {$540.00}. the last claim is for the same dispute dates and the claim amt is for {$1200.00}. the last claim I have been disputing since XXXX XXXX however there is no dollar amt attached.

Company information

Date complaint sent to company
12/7/2017

Company name
Experian Information Solutions Inc.

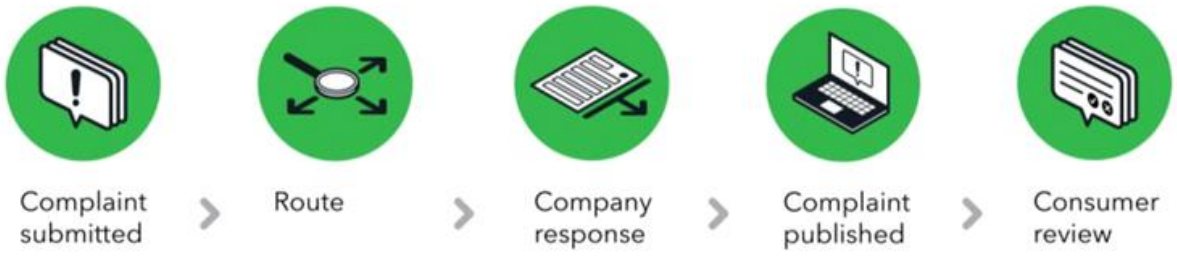
Timely response?
Yes

Company response to consumer
Closed with non-monetary relief

Company public response
Company has responded to the consumer and the CFPB and chooses not to provide a public response

These figures display three different answers to the option "Did consumer dispute the response?" As shown in Figures A and B, before April 24, 2017, consumers could choose whether to dispute the company's response, and the CFPB publicly disclosed the information. After April 24, 2017, as shown in Figure C, the CFPB ceased disclosing consumer dispute information, meaning the answer to the question "Did the consumer dispute the response?" became "N/A."

Appendix C
Consumer Complaint Process



Source: Consumer Financial Protection Bureau

This figure illustrates the consumer complaint cycle: (1) the consumer's submission of a complaint, (2) the CFPB's forward of the complaint to the identified company, (3) the company's response, (4) the CFPB's publication of the complaint information (excluding confidential consumer identity information), and (5) the consumer's feedback on the company's response.

Appendix D
Variable Definitions

Variable	Definition
Dependent variable	
Explanation	An indicator variable equal to one if a complaint is closed with an explanation, and zero otherwise. [Source: Consumer Complaint Database]
Monetary	An indicator variable equal to one if a complaint is closed with monetary relief, and zero otherwise. [Source: Consumer Complaint Database]
Nonmonetary	An indicator variable equal to one if a complaint is closed with non-monetary relief, and zero otherwise. [Source: Consumer Complaint Database]
Complaints	The number of monthly complaints received by a bank within a county. [Source: Consumer Complaint Database]
Variable of interest	
Treat	An indicator variable equal to one for banks with low dispute ratios in the pre-period, and zero for banks with high dispute ratios in the pre-period.
Post	An indicator variable equal to one for the months after the cessation of dispute disclosure when the discrete variable *Complaints* is the dependent variable, or for the dates after the cessation of dispute disclosure when the indicator variable *Explanation*, *Monetary*, or *Nonmonetary* is the dependent variable, and zero otherwise.
Bank level variable	
Log(branches)	The number of branches, calculated as the natural logarithm of the number of branches each year. [Source: FDIC Summary of Deposits]
Log(asset)	Total assets, calculated as natural logarithm of total assets each quarter. [Source: SNL Database]
Deposit Growth	The quarterly growth rate in a bank's deposits. Its value is zero if there is no change in deposit amounts. [Source: SNL Database]
Personal Loan Growth	The quarterly growth rate in a bank's personal loans. Its value is zero if there is no change in personal loans. [Source: SNL Database]
Mortgage Growth	The annual growth rate in a bank's mortgage loan originations. Its value is zero if there is no change in mortgage loan originations. [Source: Mortgage data (HMDA)]
Capital Ratio	Tier 1 capital ratio, calculated as the ratio of a bank's equity capital to its total risk-weighted assets each quarter. [Source: SNL Database]
ROA	Return on assets, calculated as the ratio of a bank's net income to its total assets each quarter. [Source: SNL Database]
County level variable	
Percentage of Females	Fraction of females in a county's population. [Source: United States Census Bureau]
Age	Average age of a county's population. [Source: United States Census Bureau]
Bachelor	Fraction of the adult population in the county with at least a bachelor's degree. [Source: United States Census Bureau]
Population	Total population (in millions). [Source: Bureau of Economic Analysis (BEA)]
PercapitaInc	Annual per capita income (in thousands). [Source: Bureau of Economic Analysis (BEA)]
HHI	Herfindahl–Hirschman Index, calculated using the county's bank deposits. [Source: FDIC]

Appendix E
Logit Results of the Cessation of Dispute Disclosure on Banks' Responses

This table shows the logit regressions examining the impact of dispute transparency on banks' responses to consumers. Due to perfect multicollinearity with the bank fixed effects, $Treat_i$ is omitted. z-statistics are reported in parentheses and based on standard errors clustered by bank. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively. The estimation of the logit model results in the exclusion of observations due to the control of bank fixed effects. Marginal effects reported are calculated using Stata's "margins" command. All variables are defined in Appendix D.

	Closed with explanation		Closed with monetary relief		Closed with non-monetary relief	
	(1)	(2)	(3)	(4)	(5)	(6)
Treat*Post	**0.624*** **	**0.623*** **	**-0.498*** **	**-0.498*** **	**-0.686*** **	**-0.685*** **
	(3.033)	**(3.031)**	**(-2.634)**	**(-2.635)**	**(-2.631)**	**(-2.629)**
Post	-0.031	-0.031	0.001	0.001	0.158	0.158
	(-0.212)	(-0.212)	(0.011)	(0.009)	(0.807)	(0.813)
Log(branches)	0.863	0.862	-0.607	-0.607	-0.867	-0.864
	(0.796)	(0.795)	(-0.722)	(-0.722)	(-0.686)	(-0.683)
Log(asset)	-0.146	-0.145	-0.068	-0.068	0.047	0.046
	(-0.459)	(-0.456)	(-0.274)	(-0.278)	(0.200)	(0.195)
Deposit Growth	0.104	0.103	0.016	0.018	-0.180	-0.179
	(0.755)	(0.745)	(0.146)	(0.156)	(-1.161)	(-1.152)
Personal Loan Growth	-0.014	-0.014	-0.110*	-0.110*	0.202	0.202
	(-0.116)	(-0.113)	(-1.654)	(-1.653)	(1.075)	(1.072)
Mortgage Loan Growth	0.104	0.104	-0.116*	-0.116*	-0.081	-0.081
	(1.596)	(1.594)	(-1.884)	(-1.878)	(-1.149)	(-1.150)
Capital Ratio	-0.001	-0.001	-0.002	-0.002	0.006	0.006
	(-0.131)	(-0.127)	(-0.167)	(-0.173)	(0.424)	(0.421)
ROA	-2.142**	-2.137**	2.618**	2.618**	1.917	1.910
	(-2.124)	(-2.125)	(2.134)	(2.135)	(1.379)	(1.373)
Percentage of Females		0.623		0.379		-1.733*
		(0.829)		(0.404)		(-1.841)
Age		0.000		0.001		-0.001
		(0.049)		(0.448)		(-0.492)
Bachelor		-0.004***		0.004***		0.002
		(-2.978)		(2.847)		(1.484)
Population		0.005		-0.002		-0.009***
		(1.594)		(-0.516)		(-2.700)
PercapitaInc		0.000		-0.000		-0.000
		(0.967)		(-0.601)		(-0.559)
HHI		0.002		0.063		-0.069
		(0.052)		(1.167)		(-0.871)
Constant	-2.299	-2.543	4.370	4.037	0.257	1.158
	(-0.339)	(-0.378)	(0.910)	(0.829)	(0.033)	(0.151)
Fixed effects	Bank, Year-month, Product, State					
Observations	316,947	316,947	316,017	316,017	315,419	315,419
(Pseudo) R^2	0.058	0.059	0.117	0.117	0.091	0.091
Marginal Effects	10.54%	10.52%	-5.33%	-5.32%	-5.47%	-5.46%

Appendix F
Additional Robustness Tests

This table reports the results of additional robustness tests. Panel A displays the regression results from running a continuous DID model, where the core explanatory variable *Treat*Post* with *Dispute_ratio *Post*. Panel B shows the estimation results from redividing the treatment and control banks. We divide the banks into three groups based on their dispute ratios. Banks with the lowest dispute ratios are classified as treatment groups, while those with the highest dispute ratios are designated as control groups. Panel C reports the falsification results using COVID-19 as an alternative to the cessation of dispute disclosure. In these panels, Columns (1) to (3) present the regression results for bank responses, while Column (4) reports the fixed-effects Poisson regression estimates for the number of complaints. In Columns (1) to (3), we control for bank, year-month, county, and product fixed effects. In Column (4), we control for bank, year-month, and county fixed effects. We report z-statistics in parentheses (in Column (4)), and the rest are *t*-statistics, based on standard errors clustered by bank. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively. All variables are defined in Appendix D.

Panel A: Continuous Difference-in-Differences design

	Closed with explanation	Closed with monetary relief	Closed with non-monetary relief	# of complaints
	(1)	(2)	(3)	(4)
Dispute_ratio * Post	**-1.326****	**0.622***	**0.636*****	**-2.549****
	(-2.556)	**(1.906)**	**(2.697)**	**(-2.415)**
Dispute_ratio	**5.833*****	**-3.886*****	**-0.963**	**2.635**
	(2.892)	**(-2.963)**	**(-1.049)**	**(0.113)**
Controls	YES	YES	YES	YES
Fixed Effects	Bank, Year-month, County, Product			Bank, Year-month, County
Observations	317,348	317,348	317,348	1,924,062
Wald				222.772
(Pseudo / Adj) R^2	0.057	0.080	0.058	0.327

Panel B: Redivide treats and controls

	Closed with explanation	Closed with monetary relief	Closed with non-monetary relief	# of complaints
	(1)	(2)	(3)	(4)
Treat*Post	**0.106*****	**-0.040***	**-0.052*****	**0.235****
	(4.456)	**(-1.945)**	**(-4.525)**	**(2.251)**
Controls	YES	YES	YES	YES
Fixed Effects	Bank, Year-month, County, Product			Bank, Year-month, County
Observations	126,252	126,252	126,252	915,093
Wald				278.985
(Pseudo / Adj) R^2	0.066	0.079	0.070	0.311

Panel C: Falsification test: onset of COVID-19

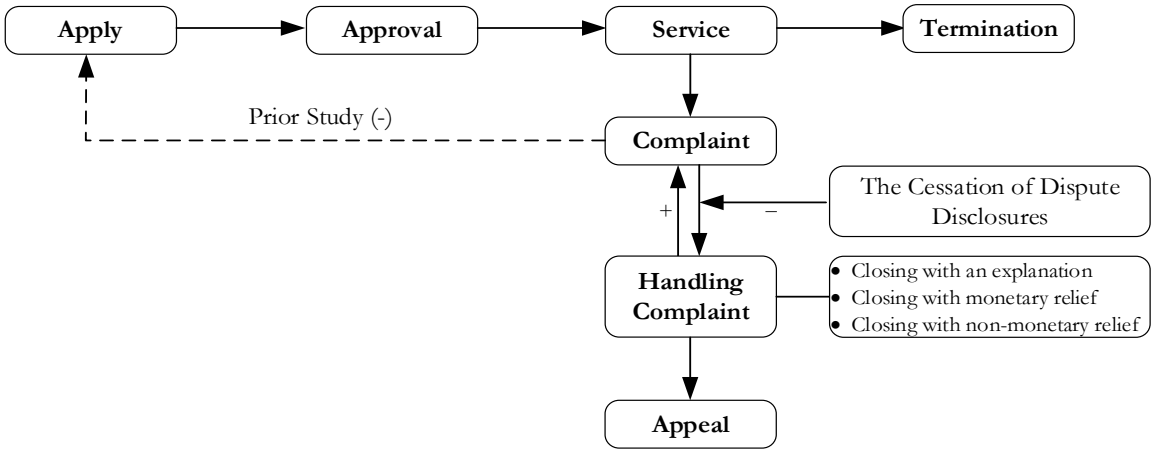
	Closed with explanation	Closed with monetary relief	Closed with non-monetary relief	# of complaints
	(1)	(2)	(3)	(4)
Treat*Post	**0.013**	**0.008**	**-0.021**	**0.020**
	(0.715)	**(0.672)**	**(-1.610)**	**(0.292)**
Controls	YES	YES	YES	YES
Fixed Effects	Bank, Year-month, County, Product			Bank, Year-month, County
Observations	457,435	457,435	457,435	2,657,187
Wald				64.768
(Pseudo / Adj) R^2	0.051	0.082	0.075	0.363

Appendix G
Ethnicity Disparity in Banks' Incentive Distortions

This table presents the estimated results on ethnic disparities in banks' incentive distortions. We report *t*-statistics in parentheses, based on standard errors clustered by bank. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively. The regressions control for bank, year-month, county, and product fixed effects. The empirical *p*-values, derived from 1,000 iterations of bootstrap sampling, are used to test the significance of the difference in the *Treat*Post* coefficient between the two subgroups. All variables are defined in Appendix D.

	Closed with explanation		Closed with monetary relief		Closed with non-monetary relief	
	(1)	(2)	(3)	(4)	(5)	(6)
	Whites	Minorities	Whites	Minorities	Whites	Minorities
Treat*Post	**0.101****	**0.115*****	**-0.055****	**-0.058****	**-0.050****	**-0.058*****
	(2.522)	**(2.944)**	**(-2.339)**	**(-2.347)**	**(-2.516)**	**(-3.183)**
Controls	YES	YES	YES	YES	YES	YES
Fixed Effects	Bank, Year-month, County, Product					
Observations	162,300	155,046	162,300	155,046	162,300	155,046
Adj R^2	0.061	0.056	0.082	0.080	0.062	0.057
Empirical *p*-values	0.013		0.296		0.031	

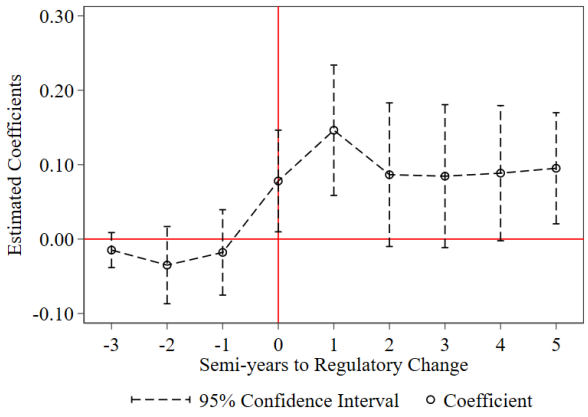
Figure 1
The Process of Financial Product and Service



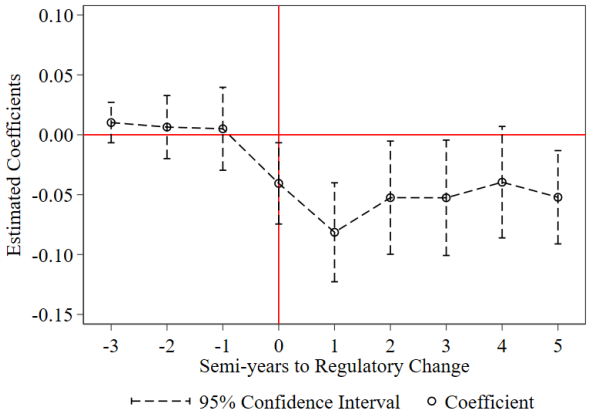
This figure shows the interaction between financial institutions and consumers throughout the financial product and service process. Financial institutions provide a variety of financial products, including but not limited to checking or savings accounts, credit card or prepaid cards, mortgages, and debt collection. These products undergo stages such as application, approval, service, and termination. During this process, consumers can submit complaints to the CFPB, or even file appeals. After the cessation of dispute disclosure, changes are observed in both financial institutions' complaint resolution behaviors and the number of complaints.

Figure 2
Dynamic Effect of the Cessation of Dispute Disclosure on Banks' Responses

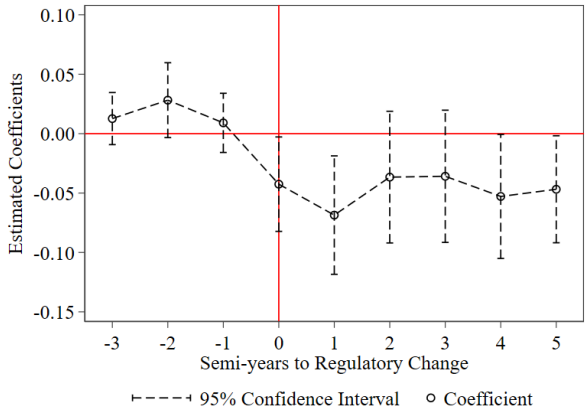
Panel A: Closed with explanation



Panel B: Closed with monetary relief

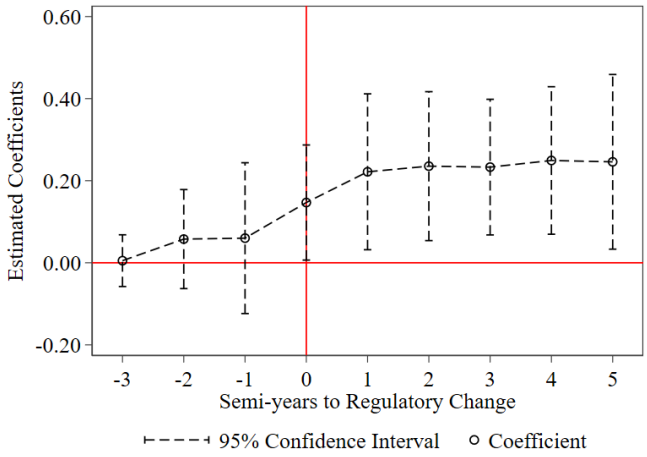


Panel C: Closed with non-monetary relief



These figures validate the dynamic effect of the dispute disclosure cessation on banks' responses. Panel A reports the estimates for closing a consumer complaint with an explanation (i.e., *Explanation*), while Panels B and C report the estimates for closing a consumer complaint with monetary or non-monetary relief (i.e., *Monetary* and *Nonmonetary*), respectively. Circles represent the coefficients, and dashed lines represent the 95% confidence intervals.

Figure 3
Dynamic Effect of the Cessation of Dispute Disclosure on the Number of Complaints



This figure validates the dynamic effect of the dispute disclosure cessation on the number of complaints. Circles represent the coefficients, and dashed lines represent the 95% confidence intervals.

Table 1
Summary Statistics of Key Variables

This table reports the descriptive statistics of the key variables. Panel A summarizes the dependent variables in both the pre- and post-periods, detailing individual-level complaints as well as the bank-county-month panel for the treatment and control groups. Panel B provides a summary of pre-period variables in the individual-level complaints dataset, focusing on the bank and county levels for both groups. Panel C presents the summary of pre-period control variables for the treatment and control groups within the bank-county-month panel dataset. The final column reports the results of tests for mean differences between the pre- and post-periods (Panel A) or between the treatment and control groups (Panels B and C). The standard errors for the differences are robust to clustering by bank. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively. All continuous variables are winsorized at the 1st and 99th percentiles in each month to mitigate the effects of outliers. All variables are defined in Appendix D.

Panel A: Dependent variables

Variables	Mean	SD.	Median	Mean	SD.	Median	Mean	SD.	Median	Diff
	Full Period			Before Event			After Event			
Full Sample										
Explanation	0.766	0.423	1.000	0.764	0.425	1.000	0.768	0.422	1.000	0.004
Monetary	0.135	0.341	0.000	0.134	0.341	0.000	0.135	0.342	0.000	0.001
Nonmonetary	0.093	0.291	0.000	0.089	0.285	0.000	0.097	0.295	0.000	0.008
Complaints	0.131	0.476	0.000	0.130	0.477	0.000	0.132	0.475	0.000	0.002
Treatment group										
Explanation	0.755	0.430	1.000	0.707	0.455	1.000	0.791	0.407	1.000	0.083**
Monetary	0.134	0.341	0.000	0.160	0.367	0.000	0.115	0.319	0.000	-0.045*
Nonmonetary	0.106	0.308	0.000	0.123	0.328	0.000	0.095	0.293	0.000	-0.028
Complaints	0.112	0.431	0.000	0.104	0.416	0.000	0.119	0.443	0.000	0.015
Control group										
Explanation	0.772	0.419	1.000	0.792	0.406	1.000	0.754	0.431	1.000	-0.038*
Monetary	0.135	0.342	0.000	0.121	0.327	0.000	0.148	0.355	0.000	0.027**
Nonmonetary	0.086	0.280	0.000	0.073	0.260	0.000	0.098	0.297	0.000	0.025*
Complaints	0.146	0.509	0.000	0.151	0.520	0.000	0.142	0.499	0.000	-0.009

Panel B: Control variables for matching individual-level complaint dataset

Variables	Mean	SD.	Median	Mean	SD.	Median	Mean	SD.	Median	Diff
	Full Sample			Control Group			Treatment Group			
Bank level variables										
Log(branches)	6.653	2.800	7.866	7.231	2.692	8.505	5.494	2.650	6.672	-1.737
Log(asset)	19.775	2.135	21.018	20.225	1.719	21.197	18.872	2.558	19.426	-1.353
Deposit Growth	0.056	0.075	0.058	0.063	0.075	0.064	0.043	0.074	0.033	-0.020
Personal Loan Growth	0.154	0.356	0.056	0.179	0.407	0.048	0.105	0.212	0.074	-0.074
Mortgage Growth	0.015	0.412	0.072	-0.016	0.374	0.044	0.077	0.473	0.194	0.093
Capital Ratio	13.149	6.395	12.600	13.414	7.713	12.590	12.619	1.789	12.630	-0.795

ROA	0.009	0.014	0.008	0.011	0.017	0.009	0.006	0.004	0.005	-0.005**
County level variables										
Percentage of Females	0.510	0.009	0.510	0.510	0.009	0.510	0.511	0.009	0.511	0.001
Age	37.681	3.727	37.000	37.642	3.720	36.900	37.757	3.739	37.200	0.115
Bachelor	33.019	10.222	31.100	33.105	10.182	31.100	32.847	10.299	31.000	-0.258
Population	1.508	2.151	0.791	1.561	2.222	0.810	1.403	1.997	0.772	-0.158
PercapitaInc	52.657	18.106	48.491	52.791	18.181	48.681	52.390	17.953	48.241	-0.401
HHI	0.071	0.104	0.032	0.070	0.105	0.030	0.073	0.103	0.035	0.003

Panel C: Control variables for matching bank-county-month panel dataset

Variables	Mean	SD.	Median	Mean	SD.	Median	Mean	SD.	Median	Diff
	Full Sample			Control Group			Treatment Group			
Bank level variables										
Log(branches)	5.283	3.059	6.512	5.713	3.189	6.921	4.753	2.801	6.172	-0.960
Log(asset)	18.344	2.395	18.611	18.820	2.206	19.045	17.756	2.486	18.464	-1.064
Deposit Growth	0.074	0.124	0.060	0.072	0.122	0.064	0.076	0.126	0.053	0.004
Personal Loan Growth	0.163	0.417	0.068	0.137	0.415	0.047	0.196	0.417	0.093	0.059
Mortgage Growth	0.142	1.275	0.000	0.185	1.626	0.000	0.089	0.602	0.072	-0.096
Capital Ratio	14.092	8.618	12.530	15.277	11.288	12.740	12.633	2.212	12.160	-2.644
ROA	0.010	0.022	0.006	0.014	0.029	0.008	0.006	0.004	0.005	-0.008*
County level variables										
Percentage of Females	0.505	0.014	0.508	0.505	0.014	0.507	0.506	0.014	0.508	0.001
Age	39.195	4.696	39.100	39.271	4.751	39.100	39.102	4.626	39.000	-0.169
Bachelor	25.802	10.580	23.800	25.784	10.519	23.800	25.825	10.655	23.900	0.041
Population	0.321	0.538	0.112	0.307	0.524	0.105	0.337	0.556	0.121	0.030
PercapitaInc	43.857	12.054	40.966	43.918	11.983	41.139	43.783	12.141	40.797	-0.135
HHI	0.118	0.126	0.077	0.121	0.128	0.079	0.115	0.123	0.074	-0.006

Table 2
Effect of the Cessation of Dispute Disclosure on Banks' Responses

This table shows the average impact of dispute disclosure cessation on banks' responses to consumers. We use OLS regressions for *Explanation*, *Monetary*, and *Nonmonetary*. Due to perfect multicollinearity with the bank fixed effects, $Treat_i$ is omitted. *t*-statistics are reported in parentheses and based on standard errors clustered by bank. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively. Additionally, we substitute county fixed effects with state fixed effects and employ logit regressions, which yield consistent results. All variables are defined in Appendix D.

	Closed with explanation		Closed with monetary relief		Closed with non-monetary relief	
	(1)	(2)	(3)	(4)	(5)	(6)
Treat*Post	**0.108*** **	**0.108*** **	**-0.057** **	**-0.057** **	**-0.054*** **	**-0.054*** **
	(2.730)	**(2.733)**	**(-2.380)**	**(-2.371)**	**(-2.805)**	**(-2.824)**
Post	-0.007	-0.007	0.002	0.002	0.011	0.011
	(-0.315)	(-0.310)	(0.143)	(0.138)	(0.824)	(0.823)
Log(branches)	0.131	0.131	-0.074	-0.074	-0.051	-0.051
	(1.015)	(1.017)	(-1.163)	(-1.160)	(-0.785)	(-0.790)
Log(asset)	-0.041	-0.041	0.000	0.000	0.019	0.019
	(-0.658)	(-0.663)	(0.010)	(0.012)	(0.682)	(0.688)
Deposit Growth	0.022	0.022	0.006	0.006	-0.023	-0.023
	(0.802)	(0.808)	(0.445)	(0.443)	(-1.419)	(-1.423)
Personal Loan Growth	0.002	0.002	-0.021***	-0.021***	0.019	0.019
	(0.099)	(0.090)	(-3.053)	(-3.034)	(1.617)	(1.633)
Mortgage Loan Growth	0.016	0.016	-0.012**	-0.011**	-0.002	-0.002
	(1.587)	(1.588)	(-2.065)	(-2.060)	(-0.416)	(-0.425)
Capital Ratio	-0.000	-0.000	-0.000	-0.000	0.000	0.000
	(-0.054)	(-0.051)	(-0.168)	(-0.170)	(0.217)	(0.217)
ROA	-0.370**	-0.370**	0.233*	0.233*	0.183	0.183
	(-2.031)	(-2.037)	(1.784)	(1.789)	(1.528)	(1.526)
Percentage of Females		-2.006		0.655		1.223
		(-1.456)		(0.818)		(1.312)
Age		-0.001		-0.000		-0.000
		(-0.207)		(-0.085)		(-0.062)
Bachelor		0.000		-0.001		0.002
		(0.197)		(-0.521)		(1.653)
Population		-0.011		0.014		-0.015
		(-0.216)		(0.360)		(-0.563)
PercapitaInc		0.001		0.000		-0.001**
		(0.733)		(0.120)		(-2.144)
HHI		0.009		-0.009		0.007
		(0.416)		(-0.534)		(0.405)
Constant	0.707	1.742	0.619	0.296	0.043	-0.584
	(0.598)	(1.346)	(1.082)	(0.669)	(0.079)	(-0.739)
Fixed Effects	Bank, Year-month, County, Product					
Observations	317,348	317,348	317,348	317,348	317,348	317,348
Adj R^2	0.058	0.058	0.081	0.081	0.059	0.059

Table 3
Effect of the Cessation of Dispute Disclosure on Complaint Narratives

This table presents the impact of dispute disclosure cessation on consumer complaint narratives. We control only for bank characteristics and substitute state fixed effects for county fixed effects, as the CFPB preserves ZIP codes for complaints containing consumer narratives, which cannot be matched with county-level FIPS codes. *t*-statistics are reported in parentheses and based on standard errors clustered by bank. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively. All variables are defined in Appendix D.

	(1)	(2)	(3)
	Narrative_dum	*Usefulwords*	*Sentiment*
Treat*Post	**0.006**	**-1.982**	**0.002**
	(0.980)	**(-1.172)**	**(0.593)**
Post	0.086***	22.888***	0.012*
	(6.601)	(7.531)	(1.669)
Log(branches)	0.010	4.642	0.012**
	(0.731)	(1.052)	(2.092)
Log(asset)	0.004	-8.456***	0.011**
	(0.257)	(-3.084)	(2.251)
Deposit Growth	-0.004	5.384***	-0.003
	(-0.425)	(3.229)	(-0.948)
Personal Loan Growth	0.009	-2.078**	-0.004
	(1.606)	(-2.188)	(-1.171)
Mortgage Loan Growth	-0.000	-0.422	-0.001
	(-0.177)	(-0.591)	(-0.319)
Capital Ratio	0.000	0.093**	0.000**
	(0.753)	(2.256)	(1.989)
ROA	0.056	-25.502	0.041
	(0.572)	(-1.223)	(1.067)
Constant	0.199	232.129***	0.423***
	(0.602)	(4.612)	(4.309)
Fixed Effects		Bank, Year-month, State, Product	
Observations	321,254	131,074	129,182
Adj R^2	0.041	0.049	0.030

Table 4
Isolation of the Public Pressure Channel

This table presents the results of the test designed to isolate the public pressure channel. Specifically, we re-estimate consumer complaints with or without ZIP codes. Since the complaints without ZIP codes cannot be matched with county-level FIPS codes, we replace county fixed effects with state fixed effects and exclude county-level demographic variables from our analysis. T-statistics, reported in parentheses, are based on standard errors clustered by bank. ***, **, and * represent significance levels at 1%, 5%, and 10%, respectively. The empirical p-values, derived from 1,000 bootstrap sampling iterations, are used to test the significance of the difference in the *Treat*Post* coefficients between the redacted and unredacted ZIP codes subgroups. All variables are defined in Appendix D.

	Closed with explanation		Closed with monetary relief		Closed with non-monetary relief	
	(1)	(2)	(3)	(4)	(5)	(6)
	Redacted	Unredacted	Redacted	Unredacted	Redacted	Unredacted
Treat*Post	**0.072***	**0.107*****	**-0.042**	**-0.057****	**-0.034**	**-0.054*****
	(1.896)	**(2.736)**	**(-1.363)**	**(-2.399)**	**(-1.383)**	**(-2.795)**
Controls	Bank	Bank	Bank	Bank	Bank	Bank
Fixed Effects			Bank, Year-month, State, Product			
Observations	8,925	317,347	8,925	317,347	8,925	317,347
Adj R^2	0.042	0.057	0.052	0.080	0.065	0.058
Empirical *p*-values	0.000		0.000		0.000	

Table 5
The Cessation of Dispute Disclosure and Banks' Responses: Cross-sectional Analyses

This table reports the cross-sectional heterogeneous results of dispute transparency and banks' responses. Panel A reports the heterogeneous results on banks' responses varying with local financial competition. Panel B reports the heterogeneous results of banks' responses varying with the bank's ROA. For brevity, we exclude the presentation of coefficients pertaining to bank-level characteristics and county-level demographic variables. *t*-statistics are reported in parentheses and based on standard errors clustered by bank. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively. The empirical *p*-values, derived from 1,000 iterations of bootstrap sampling, are used to test the significance of the difference in the *Treat*Post* coefficient between the two subgroups. All variables are defined in Appendix D.

Panel A: Grouped by local financial competition

	Closed with explanation		Closed with monetary relief		Closed with Non-monetary relief	
	(1)	(2)	(3)	(4)	(5)	(6)
	Low	High	Low	High	Low	High
Treat*Post	**0.101*** **	**0.115*** **	**-0.051** **	**-0.063** **	**-0.054*** **	**-0.055*** **
	(2.699)	**(2.805)**	**(-2.215)**	**(-2.540)**	**(-2.936)**	**(-2.718)**
Controls	YES	YES	YES	YES	YES	YES
Fixed Effects	Bank, Year-month, County, Product					
Observations	158,700	158,642	158,700	158,642	158,700	158,642
Adj R^2	0.058	0.059	0.079	0.083	0.061	0.058
Empirical *p*-values	0.013		0.007		0.404	

Panel B: Grouped by bank's ROA

	Closed with explanation		Closed with monetary relief		Closed with Non-monetary relief	
	(1)	(2)	(3)	(4)	(5)	(6)
	Low	High	Low	High	Low	High
Treat*Post	**0.141*** **	**0.080*** **	**-0.075*** **	**-0.024**	**-0.074*** **	**-0.034***
	(3.189)	**(2.741)**	**(-2.944)**	**(-1.050)**	**(-3.853)**	**(-1.982)**
Controls	YES	YES	YES	YES	YES	YES
Fixed Effects	Bank, Year-month, County, Product					
Observations	163,170	153,688	163,170	153,688	163,170	153,688
Adj R^2	0.076	0.047	0.087	0.078	0.081	0.040
Empirical *p*-values	0.000		0.000		0.000	

Table 6
Effect of the Cessation of Dispute Disclosure on the Number of Consumer Complaints

This table reports the impact of dispute disclosure cessation on complaint frequency. Column (1) includes bank-level characteristics, along with year-month, bank, and county fixed effects. Column (2) further adds county-level demographic variables. Column (3) shows the results of the regulatory change on the number of monthly complaints. We also conduct a thorough investigation of each bank's historical records and remove monthly observations from banks that have closed or been acquired. We add the bank-month observations with the number of complaints as zero to the sample if the bank is in operation. Z-statistics are reported in parentheses and based on standard errors clustered by bank. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively. All variables are defined in Appendix D.

	(1)	(2)	(3)
	Complaints	*Complaints*	*Complaints*
Treat*Post	**0.184****	**0.182****	**0.212****
	(2.248)	**(2.236)**	**(2.012)**
Log(branches)	-0.227	-0.233	-0.425
	(-1.155)	(-1.191)	(-1.419)
Log(asset)	0.519***	0.517***	0.597***
	(3.147)	(3.164)	(3.000)
Deposit Growth	-0.089	-0.087	-0.099
	(-1.256)	(-1.239)	(-1.167)
Personal Loan Growth	0.042**	0.042**	0.050**
	(2.036)	(2.047)	(2.017)
Mortgage Loan Growth	0.005	0.005	0.001
	(0.221)	(0.213)	(0.034)
Capital Ratio	0.005**	0.005**	0.006**
	(2.496)	(2.515)	(2.410)
ROA	-0.759*	-0.768*	-0.768
	(-1.698)	(-1.739)	(-1.400)
Percentage of Females		1.928	
		(0.663)	
Age		-0.025*	
		(-1.749)	
Bachelor		-0.008	
		(-1.605)	
Population		1.342***	
		(3.301)	
PercapitaInc		0.001	
		(0.353)	
HHI		0.027	
		(0.419)	
Constant	-9.771***	-10.683***	-3.567
	(-3.289)	(-3.285)	(-1.032)
Fixed Effects	Bank, Year-month, County		Bank, Year-month
Observations	1,924,062	1,924,062	5,856
Wald	97.229	251.647	116.952
(Pseudo) R^2	0.327	0.327	0.966

Table 7
Robustness Tests

This table reports the results of the robustness tests. Panel A reports the re-estimated results after removing complaints related to credit or consumer reporting, credit repair services, and debt collection. Panel B presents the estimation results based on remaining nonbank samples. Columns (1) to (3) show the regression results of the relationship between reduced transparency and banks' responses, while Column (4) represents the fixed-effects Poisson regression estimates of the relationship between reduced transparency and the number of complaints. In Columns (1) to (3), we control for bank (firm), year-month, county, and product fixed effects. In Column (4), we control for bank, year-month, and county fixed effects. Panel A includes bank-level characteristics and county-level demographic variables, while Panel B includes only county-level demographic variables. We report z-statistics in parentheses (in Column (4)), and the rest are *t*-statistics, based on standard errors clustered by bank. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively. All variables are defined in Appendix D.

Panel A: Remove complaints about two specific products

	Closed with explanation	Closed with monetary relief	Closed with non-monetary relief	# of complaints
	(1)	(2)	(3)	(4)
Treat*Post	**0.104****	**-0.064****	**-0.042****	**0.156***
	(2.426)	**(-2.290)**	**(-2.121)**	**(1.943)**
Controls	YES	YES	YES	YES
Fixed Effects	Bank, Year-month, County, Product			Bank, Year-month, County
Observations	264,455	264,455	264,455	1,904,082
Wald				137.350
(Pseudo / Adj) R^2	0.061	0.065	0.031	0.327

Panel B: Test on the remaining nonbank samples

	Closed with explanation	Closed with monetary relief	Closed with non-monetary relief
	(1)	(2)	(3)
Treat*Post	**0.113****	**-0.011*****	**-0.104****
	(2.398)	**(-2.669)**	**(-2.317)**
Controls	County	County	County
Fixed Effects	Firm, Year-month, County, Product		
Observations	761,260	761,260	761,260
Adj R^2	0.213	0.141	0.213

Table 8
Chain Effects of the Cessation of Dispute Disclosure: Evidence from Mortgage Loans

This table reports regression results on the cessation's impact on the entire mortgage journey. Panel A shows the impact of cessation on mortgage application volume, application amount, approval volume, and approval amount. Panel B presents loan-level regressions estimating the regulatory change's impact on subsequent modification and foreclosure. The Freddie Mac dataset lacks an indicator for foreclosure, leading to a reduction in observations in the subsequent regression results compared to those focusing on the dependent variable "*Modify*." Column (1) in Panel B reports results related to the relationship between the cessation and mortgage default risk. Columns (2) and (3) report the impact on the modification and foreclosure of all 90+ days delinquent loans. *t*-statistics are reported in parentheses and based on standard errors clustered by lender. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

Panel A: Application and approval volumes

	(1)	(2)	(3)	(4)
	Ln_appl_vol	*Ln_appl_dol*	*Ln_appr_vol*	*Ln_appr_dol*
Treat*Post	-0.163*	-0.363	-0.113*	-0.295
	(-1.681)	(-1.293)	(-1.846)	(-1.430)
Percentage of Females	0.553***	1.340	0.589***	1.865**
	(2.630)	(1.392)	(3.295)	(2.334)
Age	0.010***	0.025**	0.009***	0.027***
	(4.156)	(2.522)	(3.986)	(3.165)
Bachelor	-0.001	-0.006	-0.001	-0.002
	(-0.558)	(-0.995)	(-0.476)	(-0.326)
Population	1.520**	3.516**	1.210*	4.074**
	(2.016)	(1.990)	(1.686)	(2.526)
PercapitaInc	0.004	0.010	0.003	0.011*
	(1.642)	(1.469)	(1.450)	(1.876)
HHI	-0.001	-0.008	-0.005	-0.052
	(-0.020)	(-0.060)	(-0.175)	(-0.467)
Constant	0.360	2.079**	-0.002	0.211
	(1.244)	(2.052)	(-0.009)	(0.249)
Fixed effects		Lender, Year, County		
Observations	943,745	943,745	943,745	943,745
Adj R^2	0.500	0.389	0.437	0.379

Panel B: Subsequent modifications and foreclosures: delinquent loans

	(1)	(2)	(3)
	Default	*Modify*	*Foreclose*
Treat*Post	**-0.005**	**0.021**	**-0.000**
	(-1.312)	**(0.975)**	**(-0.131)**
Score	-0.001***	-0.001***	0.000
	(-12.102)	(-9.903)	(1.165)
ln_UPB_org	0.004**	0.028***	-0.012***

	(2.658)	(5.890)	(-5.923)
LTV_org	0.001***	0.001***	0.000***
	(12.049)	(5.878)	(5.394)
Interest_org	0.019***	0.032***	0.005***
	(12.429)	(7.031)	(3.587)
Constant	0.400***	0.051	0.092***
	(12.495)	(0.951)	(10.056)
Fixed effects	Origination date, Lender, Purpose, MSA, Zip		
Observations	8,262,277	441,779	245,678
Adj R^2	0.041	0.079	0.034