The Hidden Costs of Financial Services:
Consumer Disputes and Financial Restitution*

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Abstract

Financial disputes are a widespread but understudied feature of consumer financial markets. Using confidential data from the Consumer Financial Protection Bureau (CFPB), we analyze nearly two million consumer complaints filed since 2014, which have led to over $200 million in financial restitution, with an average payout of $1,470 per successful complaint. The volume of complaints and total restitution have increased substantially over time, suggesting significant scope for additional compensation. When understanding who secures restitution—and why—we find little evidence that differences across firms systematically drive restitution outcomes. Instead, product complexity and consumer engagement play key roles—consumers with higher income and education (high-SES) are more likely to explicitly request refunds, claim fraud, and submit supporting documentation, making firms more responsive. Leveraging previously unexamined CFPB investigations, where the agency systematically reviewed company responses and issued confidential report cards highlighting deficiencies, we show that regulatory scrutiny increases restitution but disproportionately benefits high-SES consumers, reinforcing individual-specific mechanisms. Our results highlight the complementary nature of regulatory interventions and suggest that financial sophistication and self-advocacy are critical determinants of consumer redress.

*We are grateful to Lewis Kirvan who helped facilitate access to the confidential data and provided invaluable feedback. This paper subsumes findings from a previous working paper called: "The Financial Restitution Gap in Consumer Finance: Evidence from Complaints to the CFPB." The CFPB contacted us upon its distribution and allowed us access to their internal data sources. Heimer was previously an unpaid contract employee of the CFPB and the opinions of this article do not reflect the opinions of the CFPB or any governmental entity. Any errors or omissions are the authors' responsibility.

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1 Introduction

Financial services are a fundamental part of economic life, providing individuals with access to banking, credit, and investment opportunities. Unlike purchasing most physical goods, financial services rely on bilateral contracts between firms and consumers, typically requiring complex agreements that unfold over time. These services do not always function as expected—whether due to errors, ambiguous contract terms, or outright misconduct—leading to disputes between consumers and financial institutions. Despite the importance of these disputes, little is known about their prevalence, resolution, and economic significance. This paper provides the first large-scale study of disputed financial services, leveraging confidential complaint data compiled by the Consumer Financial Protection Bureau (CFPB) to systematically examine the market for financial complaints and the determinants of financial restitution.

Economic models of financial services typically assume frictionless transactions, where the costs to consumers are primarily determined by interest rates and fees (Green (1973); Jaffee and Russell (1976); Stiglitz and Weiss (1981); Jappelli and Pagano (1993)). However, in reality, financial disputes represent hidden and underappreciated costs consumers bear when services fail or contractual terms are contested. While regulatory bodies sometimes engage in large-scale enforcement actions against financial firms, and class-action lawsuits occasionally secure mass restitution for affected consumers, these efforts target common issues with specific firms and do not capture the individual disputes that consumers must navigate on their own (Schwemm and Taren (2010); Agarwal et al. (2014); Eisenberg and Miller (2015); Shavell (2016)). Whether and how individual consumers secure redress remains largely unexplored, despite its relevance for the efficiency of the financial sector and consumer welfare.

Our paper starts by documenting that disputes over financial services are both widespread and economically significant. Since 2014, consumers have filed nearly two million complaints with the CFPB, with approximately 7.5% resulting in financial restitution to the consumer.[1] The total volume of complaints has tripled since 2014, reflecting growing consumer awareness of the complaint process. Nonetheless, the proportion of complaints leading to financial restitution has remained mostly stable, indicating that the increase is not driven by an influx of frivolous or unfounded claims. This pattern highlights financial disputes as an underutilized avenue for consumer redress, where many affected individuals may be unaware of the opportunity to seek compensation.

The financial stakes are substantial. Over the course of the sample, firms have returned over $200 million in restitution, averaging approximately $1,470 per successful complaint. Notably, relief amounts have risen significantly over time, indicating considerable scope for additional restitution. To estimate the potential scale of unclaimed compensation, consider the possibility that the 7.5% restitution rate applies to the over one hundred million households who hold at least one financial product (according to the FDIC). Under this assumption, 7.5 million additional consumers could be eligible for financial restitution, amounting to approximately $11 billion in potential compensation.

Next, we explore the mechanisms that shape financial restitution outcomes. One possibility is that certain firms are systematically bad actors, engaging in overcharging practices and disproportionately targeting vulnerable consumers. Evidence of firms fostering financial misconduct has been documented in specific segments of the financial sector, particularly financial advising (Dimmock et al. (2018); Egan et al. (2019)). Alternatively, financial firms are imperfect and prone to errors, while consumers, facing complex financial products, may struggle to recognize when they are entitled to restitution. This

[1]We exclude credit reporting disputes and errors because of their distinct nature and because the credit reporting agencies are not providing in-kind financial service obligations.

explanation highlights the role of consumer financial aptitude and self-advocacy, as some individuals are more adept at identifying and articulating disputes, making it easier for firms to acknowledge and correct mistakes. Disentangling these explanations is critical for determining whether financial restitution outcomes are primarily shaped by firm misconduct or by consumers' ability to navigate the dispute process.

To assess whether some firms systematically engage in unfair practices that should result in financial restitution, we begin by examining restitution rates across different types of financial products. Many financial firms operate across multiple product lines, and if firm-level misconduct were the primary driver of restitution outcomes, we would expect similar restitution patterns across a firm's various products. However, our analysis suggests otherwise. Using variance decomposition, we find that product type is by far the strongest determinant of restitution outcomes, with significantly more variation explained by the type of financial product than by firm identity. Moreover, restitution rates appear to be closely tied to the complexity of the financial product and the ease with which consumers can articulate and substantiate their claims. Complaints related to bank accounts and credit cards, which involve relatively straightforward disputes, have the highest restitution rates, whereas term loans such as mortgages, student loans, and auto loans—which entail more complex contracts and repayment structures—result in significantly lower compensation rates. While approximately 17% of banking and credit card complaints lead to monetary relief, less than 5% of consumer loans do. These findings suggest that product complexity plays a key role in shaping restitution outcomes (as in Carlin (2009)), leaving considerable room for consumer awareness and financial sophistication to influence whether complaints result in compensation.

We find substantial evidence to support the mechanism of financial sophistication and self-advocacy. Beyond product-level differences, we document significant differences in financial restitution by consumer demographics. Consumers from high-income and highly

educated areas (high-SES) are approximately 70% more likely to secure monetary relief after filing a complaint. The financial restitution gap is stark. For example, consumers from the top quintile in Census tract incomes and education receive restitution in approximately 10% of cases, while consumers in the bottom quintile see relief in just fewer than 6% of complaints. We also document significant differences by race, which we identify using the CFPB confidential data. Asian filers (according to Bayesian Improved Surname and Geocoding algorithms) are the most likely to receive restitution and the largest amounts of restitution. Hispanic filers are the least likely. These results are highly robust to regressions that include time fixed effects and geographic fixed effects, and company fixed effects, product fixed effects, and their interaction.

We identify key mechanisms that help explain this variation. Using the written narratives of their complaints, high-SES consumers are more likely to explicitly request refunds and claim fraud or misconduct, indicating a role for self-advocacy. High-SES filers are also more likely to attach supporting documentation. Both self-advocacy and documentation significantly increase the likelihood of financial restitution, often by as much as a 50%. On the other hand, we do not find much evidence that socioeconomic differences result from differences in the resources that companies employ to respond to complaints. Using confidential data, we observe separate identifiers for which company employees handle each complaint. Though we do not have personal information about these employees, we can classify them by their levels of experience and the amount of effort they exert toward each complaint. We find no evidence that firms allocate more resources to resolving disputes for wealthier and more educated consumers.

In the remaining parts of the paper, we leverage previously unexamined data on the CFPB's internal review of the complaint process and its communications with firms. Beginning in 2020, the CFPB initiated investigations to assess whether companies were properly responding to complaints. As part of this initiative, the CFPB reviewed company

responses and continued monitoring a large sample of individual complaints. When companies were found to be improperly addressing a significant fraction of complaints, the CFPB issued confidential report cards highlighting these deficiencies. Nearly fifty companies received these reports, some on multiple occasions. Crucially, these reports were delivered at staggered intervals over the sample period, creating an ideal setting for a difference-in-differences analysis of the effect of private regulatory pressure on firm behavior.

First, we use the CFPB's investigations to examine whether socioeconomic differences in financial restitution stem from firms treating different consumer groups unequally. The CFPB's investigation results serve as a benchmark for how complaints should have been handled. We find that complaints from low-SES consumers are more likely to receive an unsatisfactory response. However, the disparity in complaint handling is relatively small compared to the large gap in financial restitution outcomes. Moreover, when controlling for exhaustive fixed effects, the observed socioeconomic differences in how complaints were evaluated by regulators disappear. This suggests that the financial restitution gap is not solely driven by firms failing to process low-SES complaints properly, but rather by differences in how consumers engage with the complaint process.

Second, we explore whether regulatory pressure affects firm behavior by analyzing how companies respond to heightened CFPB scrutiny. After receiving a regulatory report card, firms increase the share of complaints resolved with monetary relief by several percentage points. However, this effect is stronger for high-SES consumers, suggesting that regulatory interventions disproportionately benefit wealthier and more educated individuals. Instead of leveling the playing field, heightened scrutiny appears to reinforce pre-existing differences in financial restitution. Firms improve their responsiveness primarily to consumers who are already more likely to secure restitution, while complaints from low-SES consumers remain less likely to result in compensation. This finding fur-

ther supports the role of financial aptitude and self-advocacy in determining restitution outcomes—consumers who can effectively navigate the dispute resolution process are best positioned to benefit from regulatory oversight.

Our findings reveal fundamental limits of regulation in safeguarding consumer welfare in financial markets. Consumer protection policies often focus on firm misconduct and regulatory enforcement, yet our results suggest that even well-designed interventions may be insufficient to strengthen consumer protections. The complaint resolution process does not function in isolation—firms respond not only to regulatory scrutiny but also to how effectively consumers advocate for themselves. When financial products are complex, and dispute resolution requires persistence and documentation, regulation alone cannot substitute for consumer engagement. More broadly, these results highlight a key challenge in financial regulation: rules designed to protect consumers may be least effective for those who struggle to navigate the system.

Related Literature

Though our paper is unique in its focus on disputes over financial services, which does not necessarily imply misconduct, the paper most closely relates to the growing literature on financial misconduct towards households. Much of this emerging literature focuses on the financial misconduct of financial advisers (Gurun et al. (2018); Dimmock et al. (2018); Egan et al. (2019)). Financial advisor misconduct is relevant to households with relatively higher incomes and net worth. On the other hand, our paper focuses on a widespread set of financial products that are relevant to everyday life. Another set of papers study financial disputes between individuals and financial firms. Egan et al. (forthcoming) studies arbitration between consumers and financial advisers. They show that firms choose industry-friendly arbitrators and that uninformed consumers lose out. Cheng et al. (2020) and LaVoice and Vamossy (2024) study court judgments on debt collection cases in Missouri. LaVoice and Vamossy (2024) specifically documents

racial differences in court outcomes. Relative to these papers, our analysis of the CFPB data comes from a setting that includes a broad selection of financial products and where consumers do not need to go through formal legal proceedings. As such, our paper speaks to a broader class of financial outcomes and focuses on mechanisms that determine the causes and outcomes of such disputes.

Lastly, our paper contributes to a growing literature on differences in financial outcomes by socioeconomic status. One stream of literature studies differences in individual characteristics and its effect on financial outcomes. These papers find differences in risk taking (Beshears et al. (2015); Kuhnen and Miu (2017)), expectations (Das et al. (2020)), and financial literacy (Bernheim and Garrett (2003); Lusardi et al. (2017)). Related, a long literature studies how the supply of credit can be different for different socioeconomic and race groups. Most notably, there are long-running differences in the propensity for racial minorities to obtain mortgages. This literature extends from historical differences, such as redlining (Appel and Nickerson (2016); Aaronson et al. (2021)), to modern-day gaps in credit access.[2] Another literature studies broader differences in access to financial services (see e.g., Brown et al. (2019); Akey et al. (2020)). Begley and Purnanandam (2021) also uses the CFPB complaints database. However, they focus on mortgage-related complaints, use the number of complaints in a zip code to proxy for the 'quality' of financial services, and study a fundamentally different question – how regulations affect the supply of financial services. Our paper looks at *all* categories of consumers' filings. We study the *outcomes* of these filings and, to the best of our knowledge, we are the only paper to document the substantial heterogeneity in financial restitution and its sizable costs.

[2]The literature on socioeconomic differences in mortgage credit is lengthy. The literature starts with papers such as Berkovec et al. (1994); Munnell et al. (1996); Tootell (1996); Berkovec et al. (1998); Ladd (1998). A more recent literature seeks to understand the effects of institutional characteristics on outcome disparity (see e.g., Bayer et al. (2018); Ambrose et al. (2020); Bhutta and Hizmo (2020)), and some particularly emphasize the role of technology (see e.g., Fuster et al. (2022); Buchak et al. (2018); Bartlett et al. (2022)). Giacoletti et al. (2020) examines the effects of performance incentives on lending discrimination.

2 Data

Since its inception in 2011, the CFPB website contains a portal to submit complaints against financial service providers. Approximately 80% of complaints are submitted via the portal and our Internet Appendix illustrates the different steps the online submission entails. The remaining 20% are submitted via e-mail, fax, phone, postal mail or referral. In general, the submission process is as follows. First, the filer identifies the product or service that best matches the complaint. Second, the filer describes the problem both using a form provided by the CFPB and a narrative free-form response. Finally, the filer identifies the company that is the subject of the complaint, what would be the desired resolution, and submits their contact information. The CFPB then passes the complaint on to the company and works to get a response to the consumer within 15 days.

The CFPB publishes each complaint on its website for public screening and accountability. However, to protect the anonymity of the consumer on the one side and the firm internal dealings on the other, it includes limited information on the demographics of filers and on the resolution process. On the filer side, the public data include the zip code of the filer (sometimes only the first three digits of the zip code), an indicator variable for whether the filer is elderly, and an indicator for whether the filer is a service member or veteran. On the firm side, the public data include company name, product and issue categories, and answer category (closed with explanation, closed with non-monetary relief, closed with monetary relief).

To systemically analyze the market for financial complaints and the determinants of financial restitution, this paper leverages instead the full internal CFPB complaint database. With respect to the public version of the complaints data, these confidential data display greater granularity of personal information (filer name and address), as well as significantly more detailed complaint and complaint processing information.

Absent in the public data but present in the confidential data are, among others, the amount of monetary relief granted, whether the filer attached a document to support the complaint, personal IDs for the employees inside the company handling the complaint, and complaint system login records for both company employees and filers. Furthermore, the public data only report the complaint narrative—the free-text with which the filer explains the issue she has with the company—if the filer agrees to disclose it. The confidential data contain complaint narrative data for all complaints, as well as the complaint desired resolution—an additional field where the filer reports with free-text what would be her desired resolution.

In addition to using for the first time in the literature confidential complaint information, having filer name and address further allows us to maintain a higher granularity for filer demographics than the public data. We are able to merge income information (household median income) and education information (percentage of population over 25 with a bachelor degree) at the tract level from the Census, and we run Bayesian Improved Surname and Geocoding (BISG) algorithms based on surname and address to directly estimate the race of each filer (Asian, Black, Hispanic, White).[3]

We further had access to information regarding internal complaint review processes at the Bureau. Starting in 2020, the CFPB introduced internal "complaint investigations". The Bureau would routinely select some companies, and randomly pull some of their complaints from the previous couple year to analyze how accurately they have been handled and addressed. If the complaints analyzed did not pass the scrutiny of the Bureau, the company would be delivered a confidential report card highlighting the deficiencies. These report cards have only been delivered to the firms found deficient, and in a staggered

[3]BISG algorithms have been employed at several government agencies that are tasked with ensuring compliance to fair lending laws, since they have been found to produce proxies that correlate highly with self-reported race in tests and are more accurate than relying only on demographic information from place of residence or surname alone (Elliott et al. (2008), Elliott et al. (2009), CFPB (2014).

fashion. We use this information to test the effect of private regulatory pressure on firm behavior in a difference-in-differences setting.

Our analysis includes all complaints filed between January 2014 and December 2024.[4] Figure 1 shows the ways in which complaints filed with the CFPB are resolved. Complaints can be resolved in the following ways: *Closed with explanation*, *Closed with monetary relief*, *Closed with non-monetary relief*. The majority of complaints, 81.59%, are closed when the provider explains to the consumer the issue they raised with the financial product or service. We are primarily interested in complaints that are resolved with monetary relief for the consumer; these account for 7.61% of all complaints. The next section provides in-depth information regarding the likelihood of receiving monetary relief and the amount.

Complaints can be filed with the CFPB regarding any financial product the consumer uses and can be about any financial institution the consumer interacts with. We only exclude complaints regarding the "credit reporting" product in the CFPB (private and public) categorization from our samples because of their distinct nature and because the credit reporting agencies are not providing in-kind financial service obligations.

Figure 2 illustrates complaint trends over time and within product. Panel A illustrates how more and more consumers have been filing complaints with the Bureau each year. Complaints started at 123,789 in 2014 and reached 363,838 in 2024, with an average annual growth rate of around 10%. Furthermore, as the overall number of complaints grows, the likelihood of a complaint resulting in monetary restitution remains relatively stable over time (around 7-8%). Panel B shows that the largest product categories in the CFPB complaints are *debt collection*, *cards* (debit, credit, prepaid cards), *mortgage*, and *accounts* (checking or savings).[5] They are also the fastest-growing categories over time, with debt collection, cards, and accounts witnessing particularly significant increases over the

[4]We exclude the complaints filed prior to 2014 as the complaint system was not up to speed on all products yet.

[5]These categories constitute 33.58%, 18.76%, 16.18%, and 15.49% of all complaints, respectively.

last 5 years.[6] The other categories include issues with money transfers (money transfer, virtual currency, or money service), student loans, car loans, and other loans (payday, title, personal loans). This extensive product coverage makes our study the first large-scale study of disputed financial services.

3 Financial Restitution

Over the course of the sample (2014-2024), firms have returned over 200 million in restitution to consumers who filed a complaint with the CFPB. The following subsections explore trends in complaint restitution and investigate its possible determinants on the company and the filer side.

3.1 Financial Restitution

We find that 7.61% of all complaints filed with the CFPB throughout our sample receive restitution in the form of monetary relief, for an overall total of $205 million paid back from companies to consumers.

Figure 1 further investigates trends in restitution over time and across products. Panel A shows that while the number of yearly complaints has nearly tripled over time, the % of complaints receiving restitution has consistently hovered around 7-8%.[7] Furthermore, Panel B illustrates how the average amount of monetary relief has been growing over time, from $694 in 2014 to $2,280 in 2024. Due to both an increase in overall complaints and the growth in the relief amount, the second half of the sample (2020-2024) is where around

[6] *A note on debt collection in 2024.* Debt collection complaints have doubled in volume in 2024. This appears to be largely due to the fact that consumers claimed more debt collection cases linked to erroneous information on their credit reports and used this product category to complain about the three credit bureaus. This further explains the lower percentage of complaints receiving monetary relief in 2024 with respect to the previous years since debt collection is less prone to this kind of resolution.

[7] The only exception is 2024, where it drops to 6%. This is likely due to the spike in debt collection complaints and the dynamics mentioned in the above footnote.

75% of the overall $205 million amount is handed back to consumers. Panel C shows how complaints about accounts and credit cards are the most prone to financial restitution, with 17.39% and 17.13% of them being resolved with monetary relief, respectively. Among the least prone to being solved with monetary relief, there are student loan and debt collection complaints, with 2.07% and 0.67% of them receiving financial restitution, respectively.

Overall, these statistics hint at a broader scope for restitution in the U.S. financial sector. The amount of complaints is growing over time, yet the percentage of complaints solved with restitution is stable, and the average restitution amount is ever-increasing.

3.2 Financial Restitution Determinants

Next, we investigate the determinants of financial restitution outcomes. In particular, we focus on the likelihood of receiving restitution upon filing a complaint and what drives it.

On the one hand, there could be certain firms that are systemically bad actors, engaging in dubious practices that disproportionally target vulnerable consumers. The literature has already documented several such instances, especially in specific segments of the financial sector like financial advising (Dimmock et al. (2018), Egan et al. (2019)). This dynamic would result in companies carrying most of the explanatory power of the likelihood of a complaint being solved with monetary relief, with little difference across products since they frequently offer many of them.

On the other hand, consumers interacting with financial firms that are generally imperfect and prone to mistakes could have trouble understanding when they have the right to restitution, especially regarding complex financial products. This dynamic would translate in the product type carrying most of the explanatory power, with less complex products witnessing higher likelihoods of monetary relief.

Distinguishing between these two possible dynamics is crucial to understanding whether financial restitution is mostly coming from misconduct on the firm side or from consumers' knowledge and ability to navigate the financial sector and the dispute process. We use variance decomposition analysis in an attempt to do so. Panel A of Table 2 reports the model variance decomposition of regressing *solved wMR*, a dummy variable equal to 1 if the complaint is resolved with monetary relief, on different combinations of quarter fixed effects, company fixed effects, product fixed effects, and county fixed effects. Column 1 highlights how quarter fixed effects and company fixed effects alone explain around 10% of overall *solved wMR* variation, with quarter covering a third of said variation and company two-thirds. However, adding product fixed effects to the regression increases the explanatory power of the model to 12.18%, of which product fixed effects now carry over 99% of it, significantly overshadowing company and quarter fixed effects.

Variance decomposition analysis suggests that financial restitution likelihood is less a result of concentrated company misconduct and more a matter of product complexity and understanding. This is further supported by the previous finding that the complaints receiving the highest restitution rates are those regarding accounts, cards, and monetary transfers (Table 1). These products typically see straightforward disputes, whereas complaints on loan products (mortgage, car loan, student loan, and debt collection, which involve more complex contracts and repayment structures) witness lower restitution likelihood.

With product complexity seemingly playing a key role in shaping restitution outcomes, there is also further room for consumer awareness and financial sophistication to influence whether a complaint results in restitution. Panel B of 2 shows indeed substantial differences in financial restitution likelihood across consumer demographics. Splitting the raw complaint data into high- vs. low-income subsamples based on whether the complaint was filed from a tract with above vs. below household median income, we find that 8.74%

of complaints in the high-income subsample receive monetary relief vs. only 5.67% of complaints in the low-income subsample. Repeating the exercise for education (based on the census tract percentage of the population 25 and older with a bachelor's degree), we find that 8.86% of complaints in the high-education subsample receive monetary relief vs 6.36% in the low-education subsample. There are substantial differences by race as well, which we estimate using Bayesian Improved Surname and Geocoding (BISG) algorithms based on filer surname and address. 12.80% of complaints from Asian filers result in monetary relief, against 7.75% of complaints from White filers, 6.89% of complaints from Hispanic filers, and 4.37% of complaints from Black filers. The financial restitution gap across demographics appears substantial.

Figure 3 further explores these dynamics. In Figure 3, we analyze whether the likelihood of a complaint resulting in financial restitution is monotonically increasing in socioeconomic status. Instead of splitting the raw complaint sample at the median, we create quintiles for census tract household median income, census tract percentage of population above 25 with a bachelor's degree, and census tract percentage of minority (non-White) population. We then plot the % of complaints solved with monetary relief within those quintiles in Panels A to C. Indeed, the likelihood of financial restitution appears to be monotonically increasing in filer income and education and monotonically decreasing in the filer's likelihood of belonging to a minority group. We find that complaints in the top quintile of filer tract income/education are $\sim$70% more likely to receive financial restitution than complaints in the bottom income/education quintiles. We find that complaints in the top quintile of filer minority likelihood are $\sim$50% less likely to receive financial restitution than complaints in the bottom quintile. Panel D further checks that these dynamics are not driven by low-socioeconomic filers self-selecting into products that have lower likelihoods of monetary relief. It plots for each product the average between the percentage of complaints filed from the bottom quintile of income, the percentage of complaints filed

from the bottom quintile of education, and the percentage of complaints filed from the top quintile of minority likelihood. Said average keeps within the 15-25% range, suggesting that low socioeconomic status consumers are not concentrating their complaints on certain products.

We further look into product and relief amount dynamics. Figure 4 plots differences in the % of complaints resulting in financial restitution between the top and the bottom quintiles of socioeconomic status (the financial restitution gap) by product. Across income, education, and race, the financial restitution gap is the largest within cards (debit, credit, prepaid cards) and monetary transfers (money transfer, virtual currency, or money service). It is the smallest within student loans and debt collection. Figure 5 further plots the total monetary relief amount across socioeconomic statuses. From Panel A, we can deduce that low-income and low-education complaints have consistently received lower amounts of restitution over time with respect to their high-income and high-education counterparts. Panel B and summary statistics in Table 2 show that Asian filers are the race group that is most successful in obtaining high amounts of monetary relief, followed by Hispanic filers, White filers, and Black filers, respectively.

Additionally, we estimate the financial restitution gap across demographics with complaint-level regression analysis, which allows us to control for company, product, and time trends. Table 3 reports estimates. Across specifications, the dependent variable is $solved\ w/MR_{i,f,c,r,q,tr}$, a dummy equal to 1 if complaint i from filer f in tract tr against company c in quarter q has been solved with monetary relief (by company employee r). For income and education, we regress $solved\ w/MR_{i,f,c,r,q,tr}$ on dummies for above median census tract tr income and education or dummies for census tract tr income and education quintiles (Panels A and B). For race, we regress $solved\ w/MR_{i,f,c,r,q,tr}$ on a minority (non-White) dummy, or separate dummies for Asian, Black, Hispanic filer f (Panel C). Specifications are progressively loading fixed effects: across panels, columns 1

and 4 have quarter and company fixed effects, columns 2 and 5 have quarter and company x product fixed effects, and columns 3 and 6 add the filer's county fixed effects. Even in the strictest specification, a complaint being filed from a tract with above median income (education) results in an 11.41% (11.13%) increase in the likelihood of receiving monetary relief with respect to the unconditional sample mean (Panel A (B), column 3). A complaint being filed from an Asian (Black) (Hispanic) filer results in a 91.85% higher (12.52% lower) (4.34% lower) likelihood of being resolved with financial restitution with respect to the unconditional sample mean (Panel C, column 6). We conclude that the financial restitution gap is highly robust to all these fixed effect combinations.

We repeat the exercise for monetary relief amounts in Table 4, with the dependent variable now being $monetary\ relief\ amount_{i,f,c,r,q,tr}$, the amount of monetary relief granted to complaint i filed from tract tr against company c in quarter q. Given that the dependent variable is now a continuous variable with high jumps, we employ fixed-effects Poisson models to estimate regressions. Estimates show that even under the strictest specification (with quarter, company x product, and county fixed effects) a complaint from a tract with above median income (education) receives 27.1% (23.6%) higher relief amounts than complaints from a tract with below median income (education), while complaints from Asian (Black) (Hispanic) filers receive 14.7% higher (37.9% lower) (14.3% lower) relief amount than complaints from White filers.

Overall, we gather substantial evidence that product complexity plays a pivotal role in determining the likelihood of financial restitution. This leaves much room for consumers' understanding of the product and dispute process to influence restitution dynamics, as we find that complaints from low-socioeconomic-status individuals and minorities are less likely to be awarded restitution. In the next section, we investigate the mechanisms that might be at the core of this financial restitution gap.

3.3 Financial Restitution Gap Mechanisms

In this section, we exploit the detailed complaint and complaint processing information in the confidential CFPB data to investigate the several mechanisms that might contribute to the significant disparities in financial restitution across demographics highlighted in the previous section.

Self-advocacy. We start by exploiting the fact that the confidential Bureau data contain two free-text fields that the filer compiles when submitting the complaint. The first free-text field is called *complaint description*, and filers use it to explain the issue they are complaining about. This field is also available in the public version of the CFPB data, but only since 2015 and if the filer agrees to its public disclosure. The second field is called *complaint desired resolution*, and filers use it to explain what would be their desired outcome upon complaining. We analyze these two fields and create two variables. $I(mention\ of\ refund/fraud\ \&\ similar\ words\ in\ descr.)_{i,f,c,r,q,tr}$ is a dummy variable equal to 1 if the complaint description field contains the words "refund" or "fraud" or other similar words. $I(mention\ of\ refund/fraud\ \&\ similar\ words\ in\ desired\ res.)_{i,f,c,r,q,tr}$ is a dummy variable equal to 1 if the complaint desired resolution field contains the words "refund" or "fraud" or other similar words.[8] These variables proxy for whether or not the consumer is self-advocating for financial restitution upon filing the complaint.

[8]We target both refund and fraud since monetary restitution is a refund and detecting fraud is part of the CFPB mandate. The similar words we consider include "refunding", "refunded", "refunds", "repay", "reimburse", "reimbursement", "reimbursements", "reimbursing", "reimbursed", "repayment", "repayments", "repaying", "pay back", "paying back", "paid back", "make good", "making good", "made good", "compensate", "compensation", "compensations", "compensating", "compensated", "recoup", "recoups", "recouping", "recouped", "remunerate", "remuneration", "remunerations", "remunerating", "remunerated", "squaring accounts with", "squared accounts with", "square accounts with") or "fraud" and similar words ("deceit", "deception", "trickery", "rip-off", "fake", "con", "impostor", "fraudster", "deceive", "deceiving", "deceived", "defraud", "defrauded", "cheat", "cheating", "cheated", "trick", "tricked", "tricking", "mislead", "misled", "misleading", "misguide", "misguided", "misguiding".

We regress these novel variables on consumer demographics in Table 5 to gauge whether they could be one of the mechanisms behind the financial restitution gap highlighted in the previous section. We find that complaints filed from above-median-income (above-median-education) tracts are 3.6% (4.1%) more likely to self-advocate in the complaint description with respect to the unconditional sample mean than complaints filed from below-median-income (below-median-education) tracts. Black and Hispanic filers are also significantly less likely to self-advocate in the complaint description than White and Asian filers. Self-advocacy in the complaint desired resolution field displays similar patterns and economic magnitudes.

Therefore, low-socioeconomic-status filers and Black and Hispanic filers are not only less likely to receive monetary relief but also less inclined to self-advocate while filing the complaint. Self-advocacy appears to be a good candidate for the mechanisms behind the financial restitution gap highlighted in the previous section.

Attachments. The consumer has the option to attach supporting documentation when filing the complaint. Based on the confidential CFPB data, we are able to generate $I(filer;attachment)_{i,f,c,r,q,tr}$, a dummy variable equal to 1 if the complaint has an attachment from the filer. We regress the novel variable on consumer demographics in Table 6. We find that complaints filed from above-median-income (above-median-education) tracts are 1.04% (1.58%) more likely to be supported by an attachment with respect to the unconditional sample mean than complaints filed from below-median-income (below-median-education) tracts. Black and Hispanic filers are also significantly more likely to be supported by an attachment than White and Asian filers.

Therefore, low-socioeconomic-status filers are slightly less likely to attach supporting documentation, while Black and Hispanic filers are slightly more likely to do so. It is

unclear whether filer attachments would be a good candidate for the mechanisms behind the financial restitution gap highlighted in the previous section.

Self-selection. A potential mechanism for the financial restitution gap highlighted in the previous section is that low-socioeconomic-status consumers and Black and Hispanic consumers self-select into companies that address complaints poorly. We use internal CFPB review processes at the Bureau to analyze this mechanism. Since 2020, the CFPB has been conducting investigations to assess whether companies are properly addressing complaints. As part of this initiative, the Bureau has reviewed company responses to a large number of individual complaints and flagged whether each and every investigated complaint was poorly addressed or not. For each investigated company, we are therefore able to build a firm-level measure that captures how poorly the company answers complaints on average. We do so by taking the overall number of company complaints flagged as poorly addressed by the Bureau and dividing it by the overall number of investigated company complaints.

We set up Heckman Sample Selection Models, wherein in the first stage, the firm self-selects into poorly addressing complaints, and in the second stage, we analyze how many complaints the company gets from below-median-income or below-median-education tracts as well as from White filers conditional on having self-selected into providing poor complaint responses. We do not find significant evidence that companies with higher percentages of poorly addressed complaints attract low-socioeconomic-status and minority filers. Therefore, this mechanism does not seem to explain the financial restitution gap.

Company Resources. Another potential mechanism for the financial restitution gap highlighted in the previous section is that companies allocate fewer resources to low-socioeconomic-status and minority complaints. In the confidential CFPB data, we have

access to information on the previous experience of the company employee assigned to respond to the complaint and information on when the employee logs into the system to manage complaints actively. Based on such data, we build two variables. $Prev.exp._{i,f,c,r,q,tr}$ is the natural logarithm of how many complaints company employees r responded to before getting to the current complaint i. $\%Days\ w/login_{i,f,c,r,q,tr}$ is the % of days between complaint filing and resolution that company employee r assigned to complaint i has logged into the complaint system.

We regress these novel variables on consumer demographics in Table 8 to gauge whether company resource allocation could be one of the mechanisms behind the financial restitution gap highlighted in the previous section. We do not find statistical nor economic significance across specifications, so it does not seem to be the case that companies allocate fewer resources to low-socioeconomic-status and Black or Hispanic complaints.

Company employees. Whereas the company itself is not allocating resources differently across complaints, it could be that the single employees within the company drive the observed patterns in financial restitution. To test this mechanism, we add company employee fixed effects (*respondent fixed effects*) to the regression of $solved\ w/MR_{i,f,c,r,q,tr}$ on consumer demographics. Table 9 reports results. Since employee ID is not always available in the data, for reference, we first replicate the baseline analysis of the previous section (Table 3, no respondent fixed effects) on the subsample for which employee ID is available in columns 1, 3, and 5, then we introduce respondent fixed effects in columns 2, 4, and 6. The coefficients of interest barely change with the introduction of the new fixed effects. Therefore, it is not the case that the financial restitution gap highlighted in the previous section is driven by single-employee dynamics.

Takeaways. To conclude this financial restitution gap mechanism analysis, we directly horse-race each potential mechanism against the main effect. To do so, we regress $solved\ w/\ MR_{i,f,c,r,q,tr}$ on each and every mechanism mentioned, further interacting the mechanisms that seem to move with filer demographics with the demographics themselves. Table 10 presents regression estimates. Since employee ID is not always available in the data, for reference, we first replicate the baseline analysis of the previous section (Table 3, no respondent fixed effects) on the subsample for which employee ID is available in columns 1, 3, and 5, then we introduce the mechanisms and their interactions with demographics in columns 2, 4, and 6.

Comparing columns 1 and 2 of Table 10, we deduce that controlling for the possible mechanisms reduces the coefficient on the main variable of interest $I(above\ med.\ hh\ med.\ income)_{q,tr}$ from 0.00925 to 0.00368. Therefore, complaints from above-median-income tracts are now only 4.84% more likely to get financial restitution with respect to the unconditional sample mean, while the differential with the previous estimate of ((0.00925-0.00368)/0.0761=) 7.32% is now explained by the mechanisms introduced above. In particular, while both self-advocating for financial restitution and attaching supporting documentation positively influence the likelihood of financial restitution (positive and significant coefficients on $I(des.\ res.\ adv.\ mon.\ rel.)_{i,f,c,r,q,tr}$ and $I(filer\ attachment)_{i,f,c,r,q,tr}$), the influence is even greater in the case of complaints from above-median-income tracts (positive and significant coefficients on their interactions with $I(above\ med.\ hh\ med.\ income)_{q,tr}$).

Comparing columns 3 and 4 of Table 10, we deduce that controlling for the possible mechanisms reduces the magnitude of the main coefficient of interest $I(above\ med.\ \%\ pop.\ w/higer\ ed.)_{q,tr}$ from 0.00902 to 0.00348. Therefore, complaints from above-median-education tracts are now only 4.57% more likely to get financial restitution with respect to the unconditional sample mean, while the differential with the previous estimate of ((0.00902-0.00348)/0.0761=) 7.28% is now explained by the mechanisms introduced above. In particu-

lar, while both self-advocating for financial restitution and attaching supporting documentation positively influence the likelihood of financial restitution (positive and significant coefficients on $I(des.\ res.\ adv.\ mon.\ rel.)_{i,f,c,r,q,tr}$ and $I(filer\ attachment)_{i,f,c,r,q,tr}$), the influence is even greater in the case of complaints from above-median-education tracts (positive and significant coefficients on their interactions with $I(above\ med.\ \%\ pop.\ w/higer\ ed.)_{q,tr}$).

Comparing columns 5 and 6 of Table 10, we deduce that controlling for the possible mechanisms reduces the magnitudes on the main coefficients of interest ($I(Asian\ filer)_{i,f,c,r,q,tr}$, $I(Black\ filer)_{i,f,c,r,q,tr}$, $I(Hispanic\ filer)_{i,f,c,r,q,tr}$), especially in the case of Black filers. Here again, while both self-advocating for financial restitution and attaching supporting documentation positively influence the likelihood of financial restitution (positive and significant coefficients on $I(des.\ res.\ adv.\ mon.\ rel.)_{i,f,c,r,q,tr}$ and $I(filer\ attachment)_{i,f,c,r,q,tr}$), the influence is even greater in the case of complaints from Asian filers (positive and significant coefficients on their interactions with $I(Asian\ filer)_{i,f,c,r,q,tr}$) and even smaller in the case of complaints from Black and Hispanic filers (negative and significant coefficients on their interactions with $I(Black\ filer)_{i,f,c,r,q,tr}$ and $I(Hispanic\ filer)_{i,f,c,r,q,tr}$).

The only other mechanism that seems to matter for financial restitution in this horse race beyond self-advocacy and attachments is $\%\ days\ w/login_{i,f,c,r,q,tr}$, which displays negative and significant coefficients across all specifications in Table 10. However, this might be capturing some mechanical effects that stem from the fact that employees at larger companies deal with more complaints at once and log into the system more often.

Overall, even controlling for potential mechanisms, we witness a financial restitution gap across demographics, whereby complaints from low-socioeconomic-status filers and Black or Hispanic filers are around 4.5% less likely to receive monetary restitution. Regarding the potential mechanisms on the filer side, both self-advocacy and attaching supporting documentation matter for financial restitution and vary across demographics. Regarding potential mechanisms on the company side, companies do not allocate resources

differently across demographics, but they do seem to weigh the importance they give to self-advocacy and attachments differently across demographics in a way that exacerbates the existing financial restitution gap.

4 CFPB Investigations

We proceed to leverage highly confidential data on the Bureau's internal reviews of the complaint process. Since 2020, the CFPB has been conducting so-called investigations on complaint processing to assess whether companies are properly managing the complaints and the relative responses. In these investigations, the Bureau routinely picks a number of firms and analyzes how they responded to a random selection of complaints over the previous couple of years. Between 2020 and 2024, nearly 194,000 complaints filed against over 550 companies have been directly screened by the Bureau. These numbers represent around 10% of both the number of all companies that have ever received a CFPB complaint and the number of total complaints, highlighting the broad scope of this investigative effort. Furthermore, the investigated companies are often among the largest players in their fields.

Once the random complaint is screened as part of the investigation, the Bureau assigns some metrics to the complaint that capture how well the company processed it. In particular, we focus on the two internal metrics that value the company's response to the filer. $I(company\ not\ address\ compl.)_{i,f,c,r,q,tr}$ is a dummy variable equal to 1 if the Bureau deemed that the company did not properly address the complaint i following its investigation. $I(response\ not\ substantive)_{i,f,c,r,q,tr}$ is a dummy variable equal to 1 if the Bureau deemed that the company did not provide a substantive response to the filer of complaint i following its investigation. In around 5.25% of investigated complaints, the company did not properly address them, while in around 3.4% of the investigated

complaints, the company did not provide a substantive response. If a company is found to be processing complaints particularly poorly during an investigation, the Bureau issues said company a confidential report card highlighting the deficiencies. We witness 85 such report cards being sent over the 2020-2024 time frame in a staggered fashion over time.

In what follows, we first employ these confidential investigation data to explore the ideal benchmark against which companies should be held accountable and then to assess whether regulatory pressure affects firm behavior.

4.1 CFPB Investigations as Benchmark

By looking at the investigated complaints that the CFPB flags and doesn't flag as properly processed, we can gather information on the optimal benchmark for complaint processing. Further, having found differences in restitution across demographics, we can use this information to test whether such differences are at least partially driven by companies also not correctly processing complaints across demographics.

We find that complaints from low-socioeconomic-status and minority filers are more likely to be poorly addressed or receive an unsatisfactory response, especially at firms that end up receiving a negative report card from the Bureau. Figure 8 plots $I(company\ not\ address\ compl.)_{i,f,c,r,q,tr}$ (graphs on the left) and $I(response\ not\ substantive)_{i,f,c,r,q,tr}$ (graphs on the right) by quintiles of the investigates complaints' census tract household median income (Panel A), education (Panel B), and share of minority population (non-White, Panel C). Within each Panel, the top graphs pool together all investigated complaints, while the bottom graphs distinguish between investigated complaints that did result in a confidential report card being sent to the company highlighting the deficiencies and investigated complaints that did not. The graphs depict a clear monotonic trend that

reversely mirrors the one we found in financial restitution, specially marked at companies that receive investigation report cards.

However, the disparities in complaint processing are much smaller than those previously highlighted in financial restitution. Comparing Figure 8 back with Figure 3, complaints in the bottom quintile of filer tract income/education are ∼20% more likely to be flagged as poorly handled in investigations, while they were ∼70% less likely to receive financial restitution (then complaints in the top income/education quintiles). Complaints in the top quintile of filer minority likelihood are ∼10% more likely to be flagged as poorly handled in investigations, while they were ∼50% less likely to receive financial restitution (then complaints in the bottom quintile).

Table 11 further re-presents these results in regression form, which allows us to additionally control for time, company, and quarter fixed effects. Introducing company or quarter fixed effects kills the significance of the coefficients of interest across the board, probably due to a combination of the small magnitudes mentioned above and the fact that only a limited random selection of complaints gets investigated for each company.

Overall, while there is some evidence that the financial restitution gap is exacerbated by firms failing to process low-socioeconomic-status and Black or Hispanic complaints properly, the main known driver of the gap seems to keep being how consumers engage with the complaint process (self-advocating, attaching supporting documentation, etc.).

4.2 CFPB Investigations as Increased Scrutiny

Next, having noticed that failing to process low-socioeconomic-status and minority complaints properly is a dynamic that is particularly marked at companies that end up receiving a report card from the CFPB highlighting the deficiencies (8), we analyze how such

companies respond to receiving the card itself and the added regulatory scrutiny that comes with it.

Figure 7 provides some information on the firms that received an investigation report card from the CFPB. Panel A highlights how a total of 85 firms out of the 550+ that have been investigated received an investigation report card between 2020 and 2024. Panel B shows how these firms usually account for around 0.5% of all complaints, and they also have been growing over time.

We use these firms as our treated sample and the remaining investigated firms that never received an investigation report card as controls as long as they registered at least 100 yearly complaints in 2018 (prior to investigations). This restriction on the treated sample is dictated by the fact that firms that receive investigation report cards tend to be large, on average. Table 12, Panel A presents the balance t-tests for the treated and the control groups prior to the start of investigations in 2020. Even imposing a size threshold, treated firms tend to receive, on average, significantly more complaints. Treated firms also tend to attract more deposit-related complaints than control firms, suggesting they are more likely to be banks than specialized institutions or fintech firms. Treated firms then also register more attachments to their complaints than control firms. Importantly, there is no difference across treated and controls on how many low-socioeconomic-status and minority filers they have on average. Panel B presents balance t-tests for the early-treated companies (2020-2021-2022) and the late-treated companies (2023-2024). The CFPB first targeted larger banks, then expanded to smaller banks and other financial institutions, which happen to get a lower percentage of complaints from low-socioeconomic-status and minority filers, on average.

We apply a difference-in-differences methodology to complaint-level data, regressing $solved\ w/MR_{i,f,c,r,q,tr}$ on $I(post\text{-}report)_{i,c,q}$ in interaction with filer demographics under quarter and company (and product and county) fixed effects. $Solved\ w/MR_{i,f,c,r,q,tr}$ is our

dummy equal to 1 if complaint i from filer f in tract tr against company c in quarter q has been solved with monetary relief by company employee r. $I(post\text{-}report)_{i,c,q}$ is a dummy equal to 1 if complaint i is filed against company c in quarter q, the quarter of or after which company c received an investigation report card from the CFPB (negative feedback from the CFPB).[9] Panel A presents results of regressing $solved\ w/\ MR_{i,f,c,r,q,tr}$ on the interaction of $I(post\text{-}report)_{i,c,q}$ with filer income, Panel B presents interaction with filer education, and Panel C with minority dummies.

We find that after receiving an investigation report card, firms increase the share of complaints resolved with monetary relief by several percentage points. However, they do so mostly for complaints filed by high-socioeconomic-status filers and Asian filers (positive but not significant coefficients on $I(post\text{-}report)_{i,c,q}$, positive and significant coefficients on the interaction between $I(post\text{-}report)_{i,c,q}$ and dummies for high education/income, Asian filers). This result suggests that regulatory interventions disproportionately benefit wealthier and more educated individuals. Instead of leveling the playing field, heightened scrutiny seems to reinforce preexisting differences in financial restitution.

Since our treatment effects are heterogeneous over time and likely across groups, we also employ the Callaway and Sant'Anna Estimator in place of the two-way fixed effects diff-in-diffs model. Figure 8 reports the estimator's coefficient plots. Panel A distinguishes between the % of complaints solved with monetary relief coming from below-median-income tracts (left graph) and the % of complaints solved with monetary relief coming from above-median-income tracts (right graph). We clearly see a marked increase in the likelihood of financial restitution in the above-median-income tracts following increased regulatory scrutiny with the delivery of the investigation report card by the Bureau. Financial restitution likelihood presents a much smaller and delayed uptick instead in

[9] $I(post\text{-}report)_{i,c,q}$ is the equivalent of *Treated x Post* in the traditional difference-in-differences setup, with *Treated* and *Post* being here absorbed by company and quarter fixed effects.

below-median-income tracts. Panel B repeats the exercise for above- and below-median-education tracts and displays similar patterns. Panel C distinguishes between the % of complaints solved with monetary relief coming from minority filers (as per the BISG algorithm) and the % of complaints solved with monetary relief coming from White filers. Again, White filer complaints see an immediate and marked increase in restitution likelihood after the company receives the CFPB investigation report card, while minority filers witness a much smaller and delayed uptick.

The Internet Appendix contains further robustness checks.

In Table B.1, we replicate the difference-in-differences analysis but with $I(\textit{low-income complaint})_{q,tr}$ (columns 1 to 3), $I(\textit{low-education complaint})_{q,tr}$ (columns 4 to 6), and $I(\textit{minority complaint})_{i,f,c,r,q,tr}$ (columns 7 to 9) as dependent variables in the place of $\textit{solved w/ MR}_{i,f,c,r,q,tr}$. Regressing these variables on $I(\textit{post-report})_{i,c,q}$, we test whether there is a change in the composition of submitted complaints across demographics at companies once they receive the CFPB investigation report card. This analysis is conducted to rule out the scenario in which the increase in financial restitution only for the high-socioeconomic-status and Asian segments of the population simply derives from companies getting more such complaints after receiving the CFPB report card. We do not find this to be the case, as we only see a slight increase in minority complaints.

In Table B.2 and B.1, we replicate the analysis in Table 13 and Figure B.1 on a matched sample. Instead of keeping as controls all investigated firms with at least 100 complaints in 2018 (prior to investigations), we restrict control companies to the three nearest neighboring to the treated ones based on overall number of complaints, share of complaints regarding loan-related products, and share of complaints with filer attachments—the three dimensions on which treated and controls differed the most (Table 12). Untabulated tests show that the matched sample is more balanced, while output shows virtually no significant change with respect to previous results.

Lastly, we investigate the changes companies that receive a CFPB investigation report card apply to their complaint processing due to the highlighted deficiencies and the increased scrutiny. Table 14 reports regression estimates of several company complaint-handling measures on $I(post\text{-}report)_{i,c,q}$ under company and quarter fixed effects. Panel A shows some evidence of an increase in the number of company employees devoted to complaints handling after the delivery of the investigation report card, albeit only significant at the ∼13% level. Panel B shows no increase in the frequency with which the company accesses the complaint system under increased scrutiny, if anything, a slight decrease. Panel C shows no sign of allocating more experienced employees to complaint processing after receiving a report card.[10] Panel D investigates whether companies take more into account filer self-advocacy when deciding to grant financial restitution after receiving a CFPB investigation report card. We find that self-advocacy increases the likelihood of receiving financial restitution by (0.0178/0.0761=) 23.39% in normal times but by ((0.0178+0.0203)/0.0761=) 50.07% after the company receives a CFPB investigation report card. Panel E investigates whether companies take more into account filer attachments when deciding to grant financial restitution after receiving a CFPB investigation report card. We find that attaching supporting documentation increases the likelihood of receiving financial restitution by (0.0117/0.0761=) 15.38% in normal times but by ((0.0117+0.0162)/0.0761=) 36.66% after the company receives a CFPB investigation report card. Further, the post-report financial restitution likelihood with attachments gets even higher if the complaint is filed from an above-median-income/education tract and by an Asian or White filer.

Overall, under regulatory pressure, companies improve their responsiveness primarily to consumers who are already more likely to secure restitution, while complaints from low-socioeconomic-status and minority consumers remain less likely to result in compens-

[10] Experience being measured in terms of how many complaints the employee had already resolved.

ation. This finding further supports the role of financial aptitude and self-advocacy in determining restitution outcomes—consumers who can effectively navigate the dispute resolution process are best positioned to benefit from regulatory oversight.

5 Conclusion

Financial disputes are a pervasive yet understudied aspect of consumer financial markets. This paper provides the first systematic study of financial complaints and restitution, using confidential regulatory data from the CFPB. We document a large and growing volume of complaints, with hundreds of millions of dollars in restitution paid out over the past decade. However, securing restitution remains highly dependent on product complexity and consumer engagement.

Our findings highlight the complementary nature of regulatory oversight and financial sophistication or self-advocacy. We find little evidence that firm identity systematically predicts restitution, suggesting that financial disputes are not driven primarily by a subset of bad actors. Instead, product complexity plays a central role, with simpler products like bank accounts and credit cards generating higher restitution rates than mortgages and other structured financial products. Moreover, consumers who actively advocate for themselves—by explicitly requesting refunds, claiming fraud, or providing supporting documentation—are far more likely to receive restitution.

While regulatory scrutiny increases restitution rates, it is most effective when paired with consumer engagement, reinforcing the complementary relationship between regulation and financial sophistication. These findings suggest that ensuring broad access to financial redress requires more than firm oversight. Policies aimed at simplifying complaint resolution, enhancing financial literacy, and making consumer redress mechanisms more accessible could help ensure that financial protections benefit a wider set of consumers.

References

Aaronson, D., Hartley, D., Mazumder, B., 2021. The effects of the 1930s holc âredliningâ maps. American Economic Journal: Economic Policy 13, 355–392.

Agarwal, S., Amromin, G., Ben-David, I., Chomsisengphet, S., Zhang, Y., 2014. Mortgage modification and strategic behavior: Evidence from a legal settlement with countrywide. American Economic Review 104, 2830–2857.

Akey, P., Heimer, R. Z., Lewellen, S., 2020. Politicizing consumer credit. Journal of Financial Economics Forthcoming.

Ambrose, B. W., Conklin, J. N., Lopez, L. A., 2020. Does borrower and broker race affect the cost of mortgage credit? The Review of Financial Studies Forthcoming.

Appel, I., Nickerson, J., 2016. Pockets of poverty: The long-term effects of redlining. Working Paper .

Bartlett, R., Morse, A., Stanton, R., Wallace, N., 2022. Consumer-lending discrimination in the fintech era. Journal of Financial Economics 143, 30–56.

Bayer, P., Ferreira, F., Ross, S. L., 2018. What drives racial and ethnic differences in high-cost mortgages? the role of high-risk lenders. The Review of Financial Studies 31, 175–205.

Begley, T. A., Purnanandam, A., 2021. Color and credit: Race, regulation, and the quality of financial services. Journal of Financial Economics 141, 48–65.

Berkovec, J. A., Canner, G. B., Gabriel, S. A., Hannan, T. H., 1994. Race, redlining, and residential mortgage loan performance. The Journal of Real Estate Finance and Economics 9, 263–294.

Berkovec, J. A., Canner, G. B., Gabriel, S. A., Hannan, T. H., 1998. Discrimination, competition, and loan performance in fha mortgage lending. Review of Economics and Statistics 80, 241–250.

Bernheim, B. D., Garrett, D. M., 2003. The effects of financial education in the workplace: Evidence from a survey of households. Journal of Public Economics 87, 1487–1519.

Beshears, J., Choi, J. J., Laibson, D., Madrian, B. C., Milkman, K. L., 2015. The effect of providing peer information on retirement savings decisions. The Journal of finance 70, 1161–1201.

Bhutta, N., Hizmo, A., 2020. Do minorities pay more for mortgages? The Review of Financial Studies Forthcoming.

Brown, J. R., Cookson, J. A., Heimer, R. Z., 2019. Growing up without finance. Journal of Financial Economics 134, 591–616.

Buchak, G., Matvos, G., Piskorski, T., Seru, A., 2018. Fintech, regulatory arbitrage, and the rise of shadow banks. Journal of Financial Economics 130, 453–483.

Carlin, B. I., 2009. Strategic price complexity in retail financial markets. Journal of Financial Economics 91, 278–287.

CFPB, 2014. Using publicly available information to proxy for unidentified race and ethnicity, a methodology and assessment .

Cheng, H., Severino, F., Townsend, R. R., 2020. How do consumers fare when dealing with debt collectors? evidence from out-of-court settlements. Review of Financial Studies Forthcoming.

Das, S., Kuhnen, C. M., Nagel, S., 2020. Socioeconomic status and macroeconomic expectations. The Review of Financial Studies 33, 395–432.

Dimmock, S. G., Gerken, W. C., Graham, N. P., 2018. Is fraud contagious? coworker influence on misconduct by financial advisors. The Journal of Finance 73, 1417–1450.

Egan, M., Matvos, G., Seru, A., 2019. The market for financial adviser misconduct. Journal of Political Economy 127, 233–295.

Egan, M. L., Matvos, G., Seru, A., forthcoming. Arbitration with uninformed consumers. Review of Economic Studies .

Eisenberg, T., Miller, G. P., 2015. An empirical look at compensation in consumer class actions. NYU Journal of Law Business 11, 767–802.

Elliott, M. N., Fremont, A., Morrison, P. A., Pantoja, P., Lurie, N., 2008. A new method for estimating race/ethnicity and associated disparities where administrative records lack self-reported race/ethnicity. Health services research 43, 1722–1736.

Elliott, M. N., Morrison, P. A., Fremont, A., McCaffrey, D. F., Pantoja, P., Lurie, N., 2009. Using the census bureauâs surname list to improve estimates of race/ethnicity and associated disparities. Health Services and Outcomes Research Methodology 9, 69–83.

Fuster, A., Goldsmith-Pinkham, P., Ramadorai, T., Walther, A., 2022. Predictably unequal? the effects of machine learning on credit markets. The Journal of Finance 77, 5–47.

Giacoletti, M., Heimer, R., Yu, E., 2020. Using high-frequency evaluations to estimate discrimination: Evidence from loan officers. Working paper .

Green, J. R., 1973. Information, Efficiency, and Equilibrium. Harvard Economic Studies, Harvard University Press.

Gurun, U. G., Stoffman, N., Yonker, S. E., 2018. Trust busting: The effect of fraud on investor behavior. The Review of Financial Studies 31, 1341–1376.

Jaffee, D. M., Russell, T., 1976. Imperfect information, uncertainty, and credit rationing. Quarterly Journal of Economics 90, 651–666.

Jappelli, T., Pagano, M., 1993. Information sharing in credit markets. Journal of Finance 48, 1693–1718.

Kuhnen, C. M., Miu, A. C., 2017. Socioeconomic status and learning from financial information. Journal of Financial Economics 124, 349–372.

Ladd, H. F., 1998. Evidence on discrimination in mortgage lending. Journal of Economic Perspectives 12, 41–62.

LaVoice, J., Vamossy, D. F., 2024. Racial disparities in debt collection. Journal of Banking & Finance 164, 107208.

Lusardi, A., Michaud, P.-C., Mitchell, O. S., 2017. Optimal financial knowledge and wealth inequality. Journal of Political Economy 125, 431–477.

Munnell, A. H., Tootell, G. M., Browne, L. E., McEneaney, J., 1996. Mortgage lending in Boston: Interpreting HMDA data. The American Economic Review pp. 25–53.

Schwemm, R. G., Taren, J. L., 2010. Discretionary pricing, mortgage discrimination, and the fair housing act. Harv. CR-CLL Rev. 45, 375.

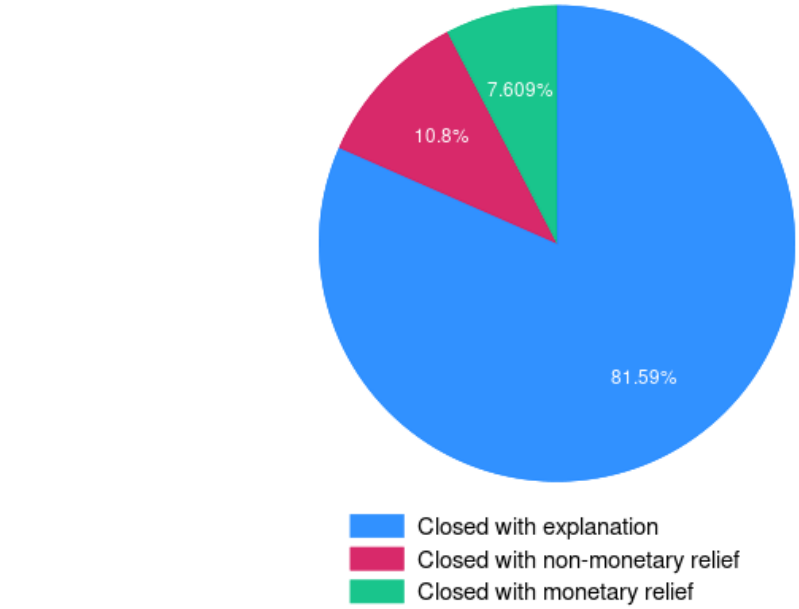
Shavell, S., 2016. The economics of class actions and class action waivers. The Journal of Legal Studies 45, S107–S136.

Stiglitz, J. E., Weiss, A., 1981. Credit rationing in markets with imperfect information. American Economic Review 71, 393–410.

Tootell, G. M., 1996. Redlining in Boston: Do mortgage lenders discriminate against neighborhoods? The Quarterly Journal of Economics 111, 1049–1079.

Figure 1: **Company Answers to Complaints**

This figure illustrates the ways in which companies answer consumer complaints. The vast majority of complaints is closed with an explanation (80%), followed by 10.5% closed with an action that does not entail monetary relief, then 7.4% of complaints are solved with monetary relief.

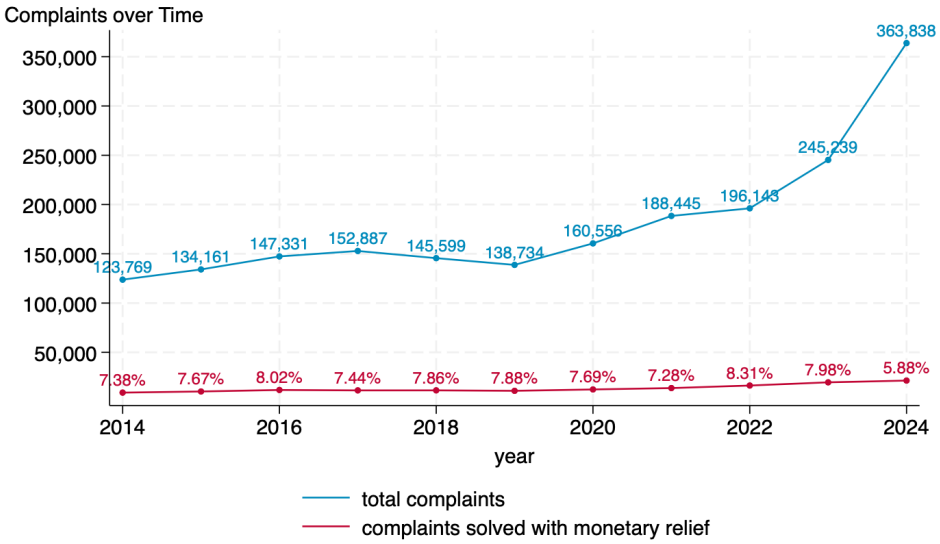


Source: CFPB data, 2014m1 - 2024m12.

Figure 2: **Complaints Dynamics**

This figure investigates trends in CFPB complaints over time. Panel A plots the overall number of complaints filed with the CFPB (blue line) and the overall number of complaints that received monetary relief (red line, with labels in % of overall complaints) over time. Panel B reports the overall number of complaints within each product over time, distinguishing across debt collection, cards (debit, credit, prepaid), accounts (checking or savings), mortgage, money transfer (money transfer, virtual currency, or money service), student loan, car loan, other loan (payday, title, personal loan), and other (a residual category).

Panel A: Complaints over time



Panel B: Product complaints over time

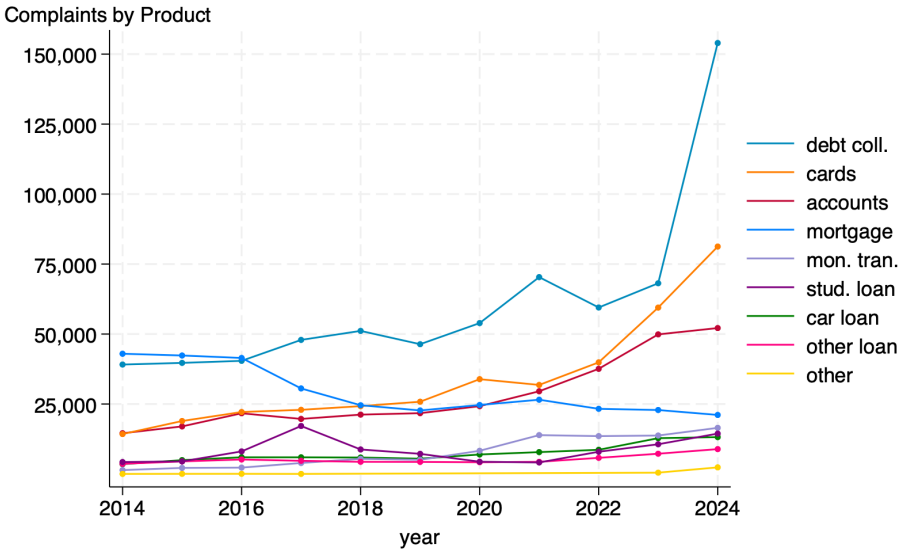
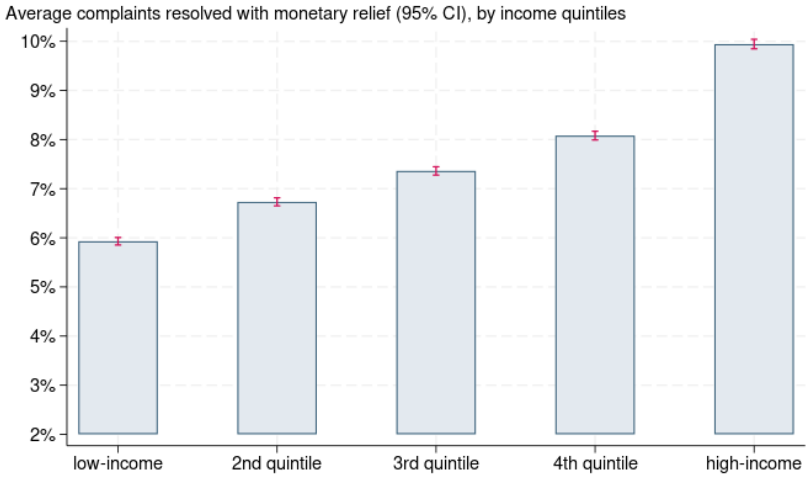


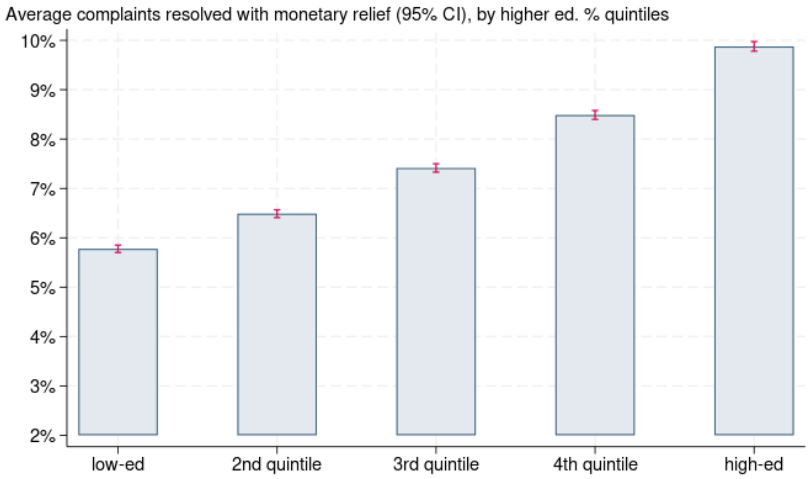
Figure 3: **The Financial Restitution Gap**

This figure reports the percentage of complaints solved with monetary relief by quintiles of the filer's census tract income (household median income, Panel A), education (% of population above 18yo with a bachelor degree, Panel B), and minority population (% of non-white population, Panel C). Panel B plots the product average across the share of complaints filed from the lowest quintile of tract household median income, the share of complaints filed from the lowest quintile of tract % population above 25 with a bachelor degree, and the share of complaints filed from the highest quintile of tract % population of non-white ethnicity.

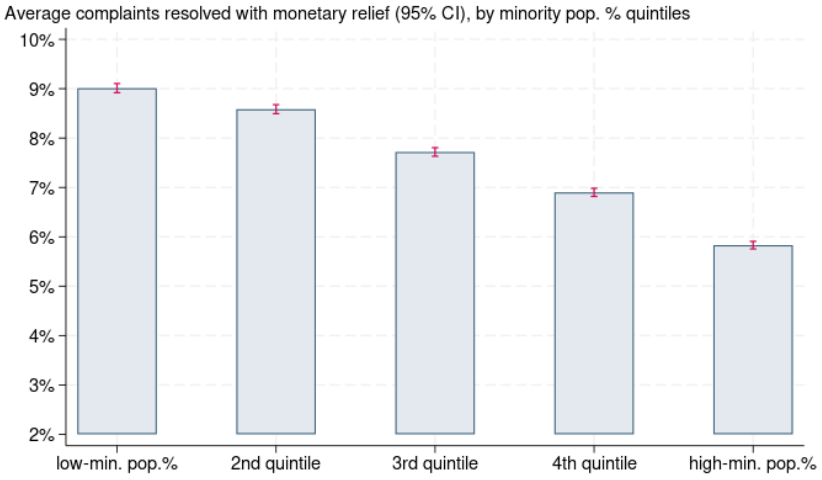
Panel A:Monetary relief likelihood on Census tract income quintiles



Panel B:Monetary relief likelihood on Census tract education quintiles



Panel C:Monetary relief likelihood on Census tract education quintiles



Panel D: Avg share of complaints filed from bottom quintile of socioeconomic status

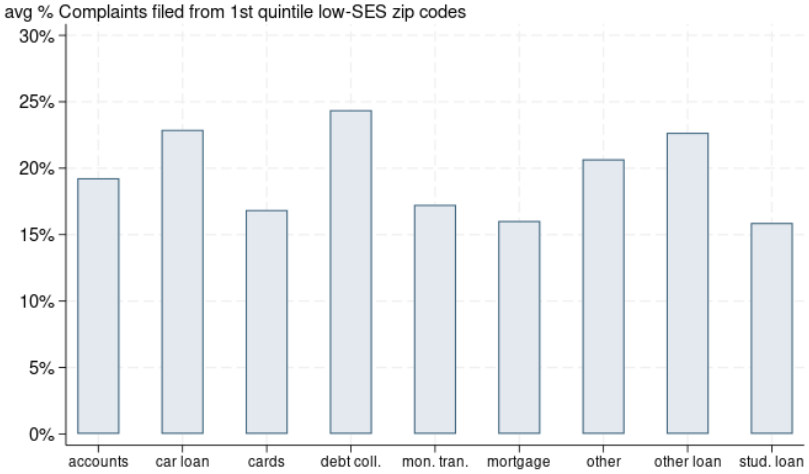


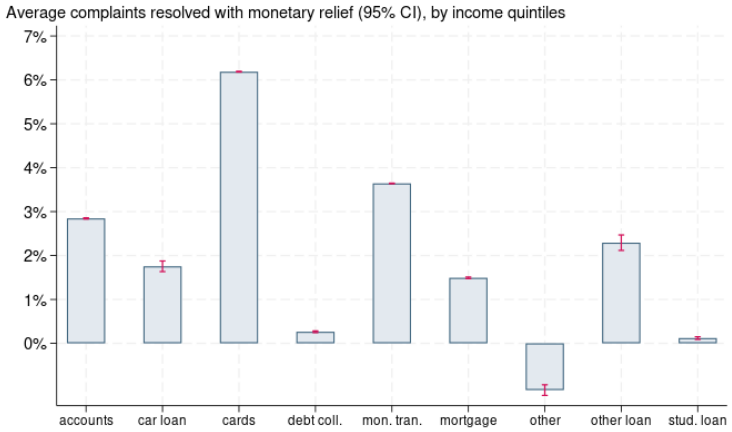
Figure 4: **Financial Restitution Gap by Product**

This figure reports dynamics by product. Panel C investigates the financial restitution gap across products. In Panel A, within each product we take the share of complaints solved with monetary relief in the highest quintile of filer's tract household median income and subtract the share of complaints solved with monetary relief in the lowest quintile of filer's tract household median income. In Panel B, within each product we take the share of complaints solved with monetary relief in the highest quintile of filer's tract % of population above 25 with a bachelor degree and subtract the share of complaints solved with monetary relief in the lowest quintile of filer's tract % of population above 25 with a bachelor degree. In Panel C, within each product we take the share of complaints solved with monetary relief in the highest quintile of filer's tract % of minority population and subtract the share of complaints solved with monetary relief in the lowest quintile of filer's tract % of minority population.

Panel A: Highest **income** quintile - lowest income quintile:



Panel B: Highest **education** quintile - lowest education quintile:



Panel C: Lowest **minority** quintile - highest minority quintile:

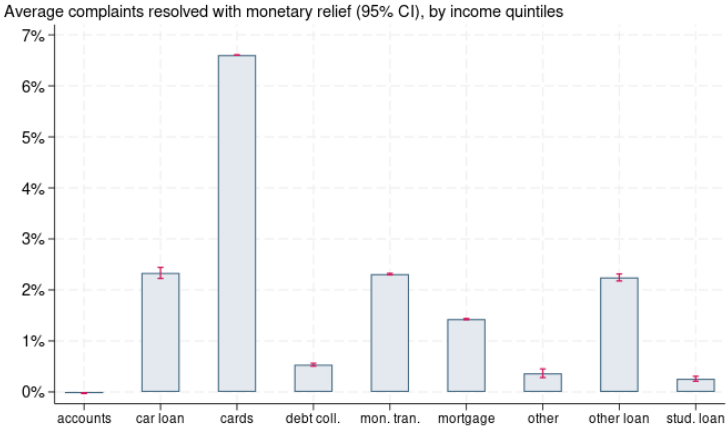
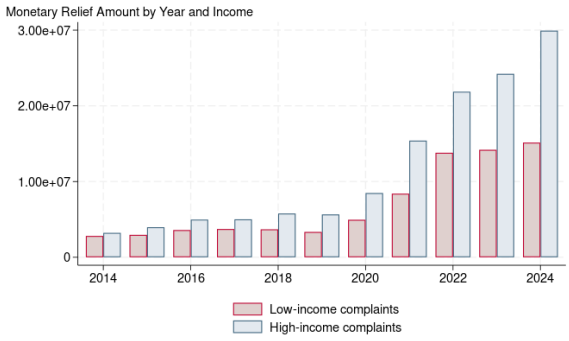


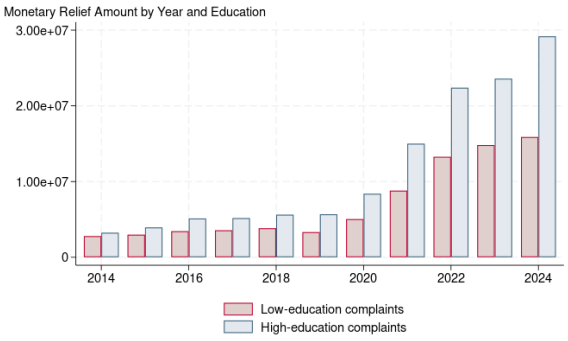
Figure 5: **Monetary Relief Dynamics**

This figure reports on the evolution of the total amount of monetary relief granted over time. Panel A separates complaints based on whether the complaint is or not filed from a tract that has below median income that year (left plot) or below median education (right plot). Panel B distinguishes total monetary relief amounts between complaints from Asian and White filers, Black and White filers, and Hispanic and White filers (from left to right, respectively).

Panel A: Monetary relief over time by income and education

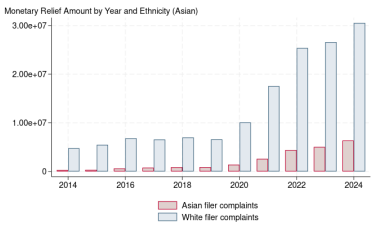


Income

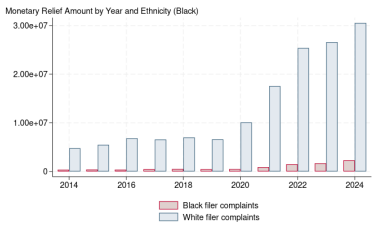


Education

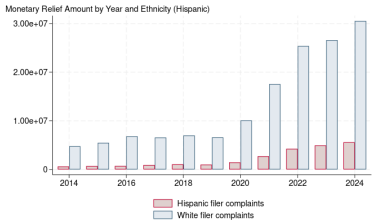
Panel B: Monetary relief over time by ethnicity



Asian and White



Black and White

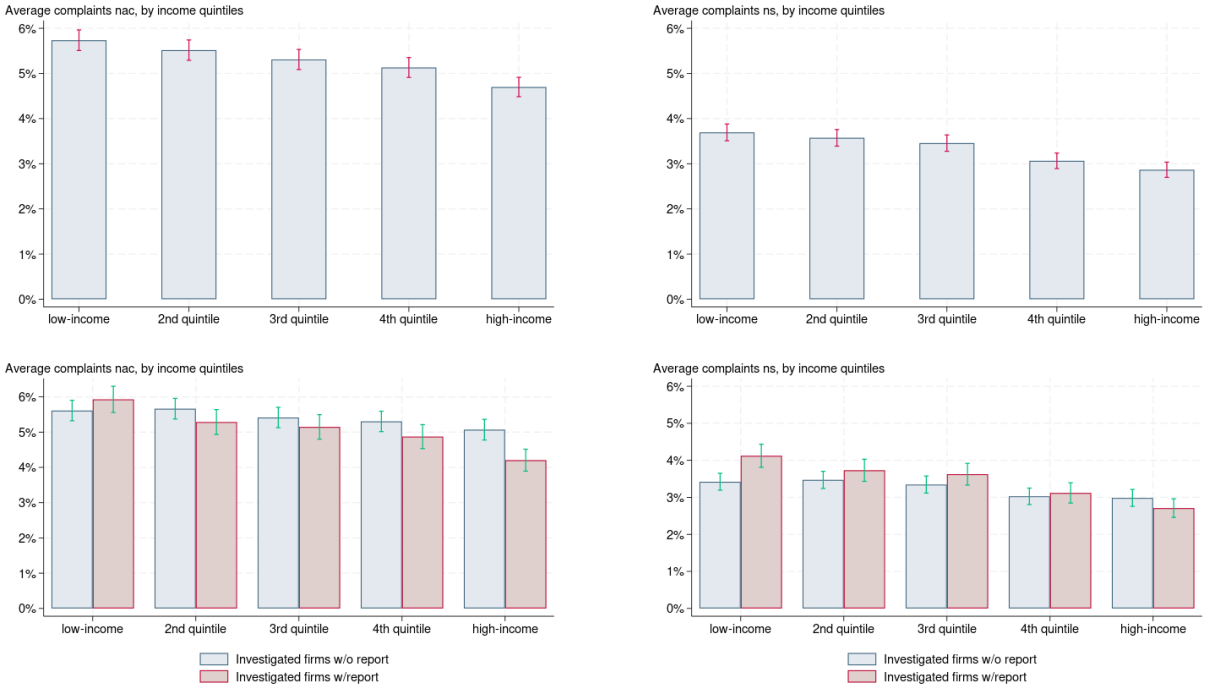


Hispanic and White

Figure 6: **CFPB Investigations across Demographics**

This figure reports the percentage of complaints flagged as having a problematic response by quintiles of the filer's census tract income (household median income, Panel A), education (% of population above 18yo with a bachelor degree, Panel B), and minority population (% of non-white population, Panel C). Throughout all panels, plots on the left report about the % of investigated complaints not addressed properly by the company, plots on the right report about the % of investigated complaints with a not substantive response. Within each panel, the top two graphs report results for all investigated complaints, the bottom two graphs distinguish between complaints at investigated firms that never received an investigation report (negative feedback from CFPB) and complaints at investigated firms that received an investigation report at least once.

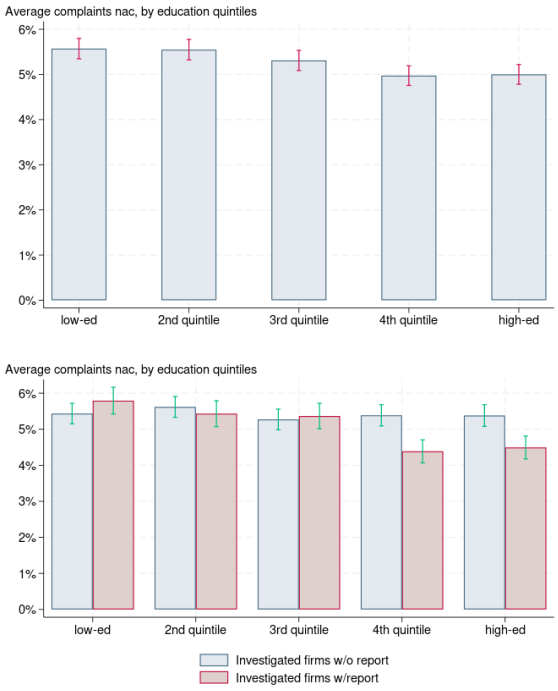
Panel A: CFPB investigations by Census tract income quintiles



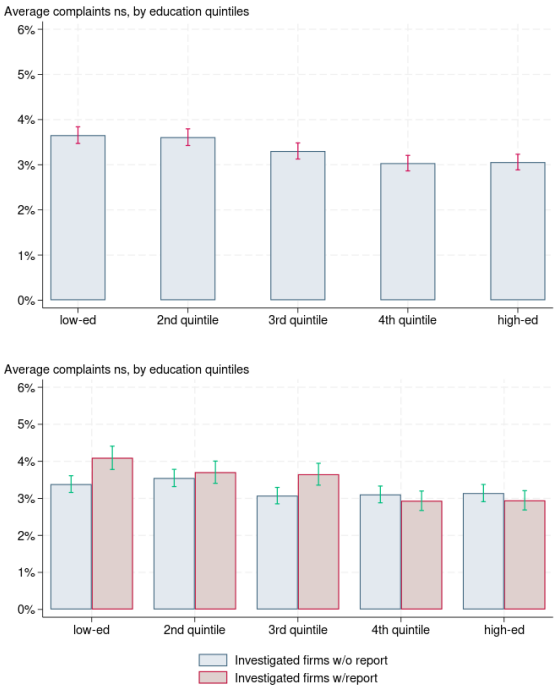
Company did not address complaint

Company response not substantive

Panel B: CFPB investigations by Census tract education quintiles

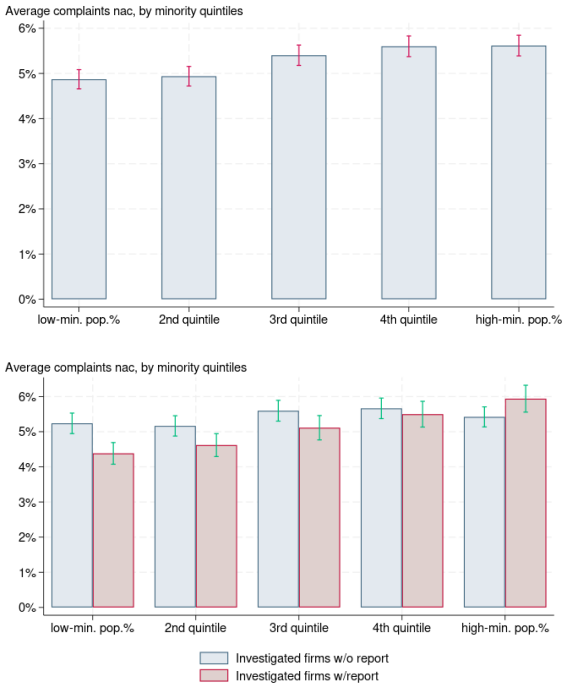


Company did not address complaint

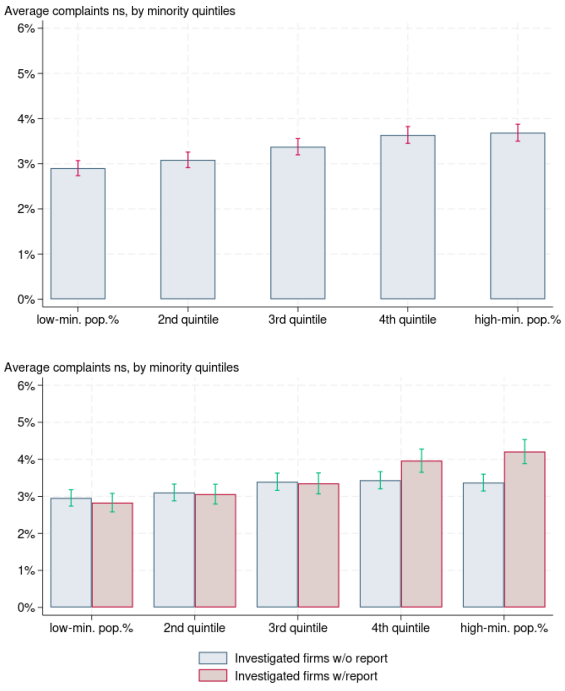


Company response not substantive

Panel C: CFPB investigations by Census tract minority quintiles



Company did not address complaint



Company response not substantive

Figure 7: **Firms Receiving a CFPB Investigation Report Card**

text This figure reports information on CFPB report cards. Panel A illustrates how many firms the CFPB has sent report cards to between 2021 and 2024 (sign of negative feedback from the agency). Panel B plots the evolution over time of the total number of complaints received by firms that the CFPB has sent a report card to between 2014 and 2024. The labels in red represent the share that these complaints represent of overall complaints, in %.

Panel A: Report cards per year

Year	Reported Firms
2021	14
2022	20
2023	31
2024	20

Panel B: Complaints of reported firms

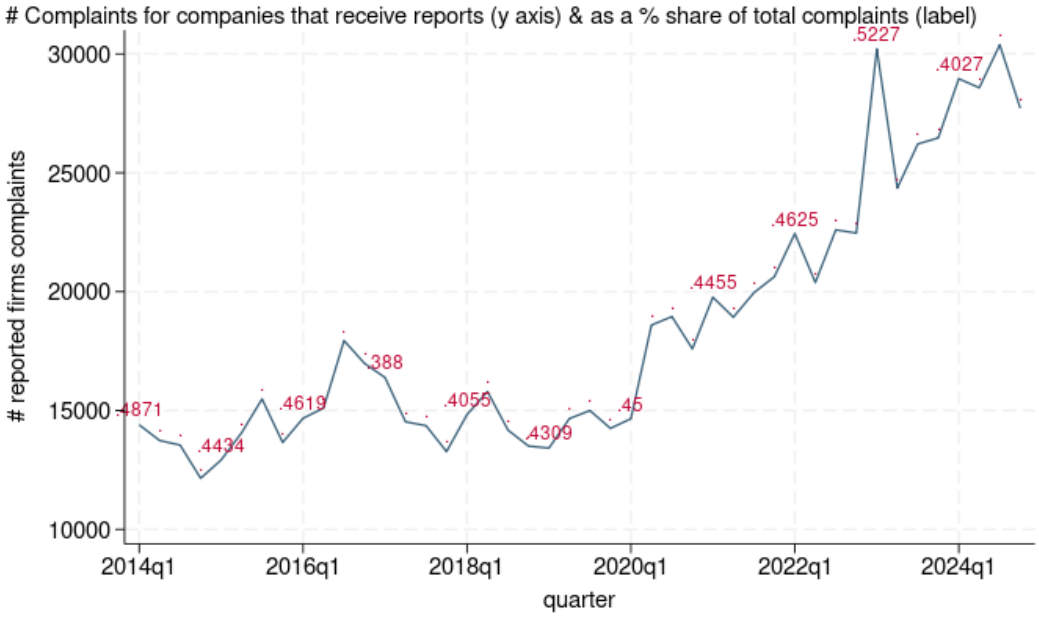
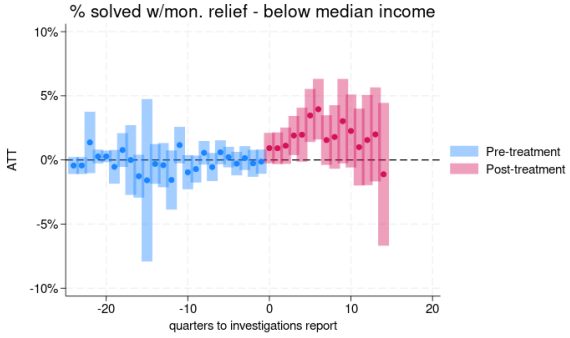


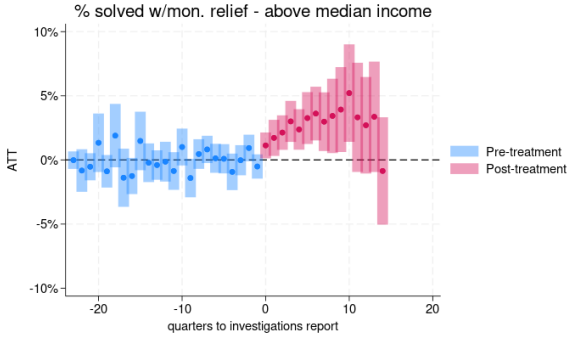
Figure 8: **CFPB Investigations - Dynamic Difference in Differences**

This figure reports the dynamic difference-in-differences Callaway and Sant'Anna estimators of the percentage of complaints solved with monetary relief each quarter by each company around receiving an investigation report. The subsamples distinguish between high and low household median income (Panel A), high and low education (% of population above 18yo with a bachelor degree, Panel B), minority and white population (% of non-white population, Panel C). The sample is restricted to companies that were investigated and received and investigation report (negative feedback from CFPB, treatment) and investigated companies that did not receive a report but had at least 100 yearly complaints prior the start of the investigations period (controls).

Panel A: CFPB reports by low and high income

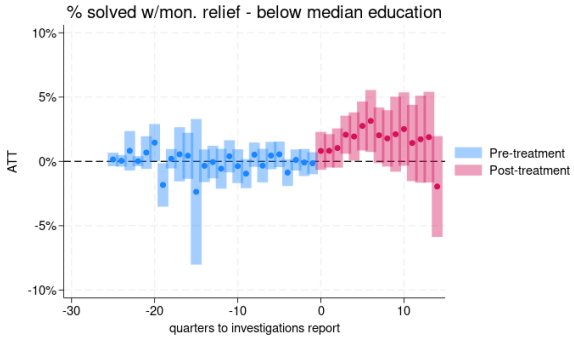


Low-income complaints

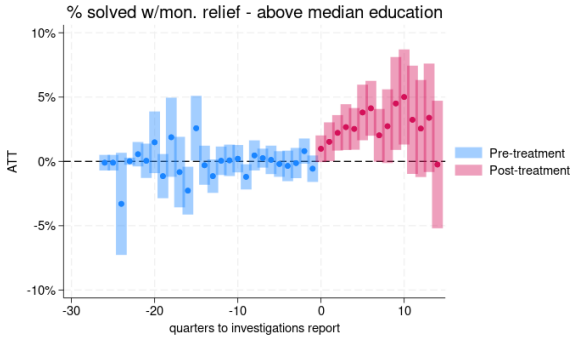


High-income complaints

Panel B: CFPB reports by low and high education

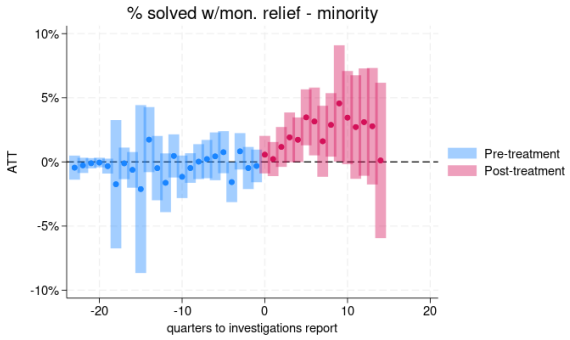


Low-education complaints

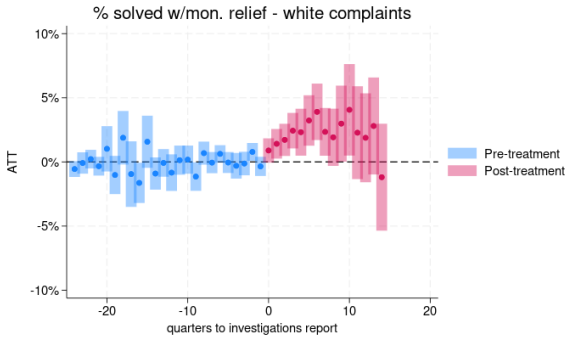


High-education complaints

Panel C: CFPB reports by minority and white filer



Minority complaints

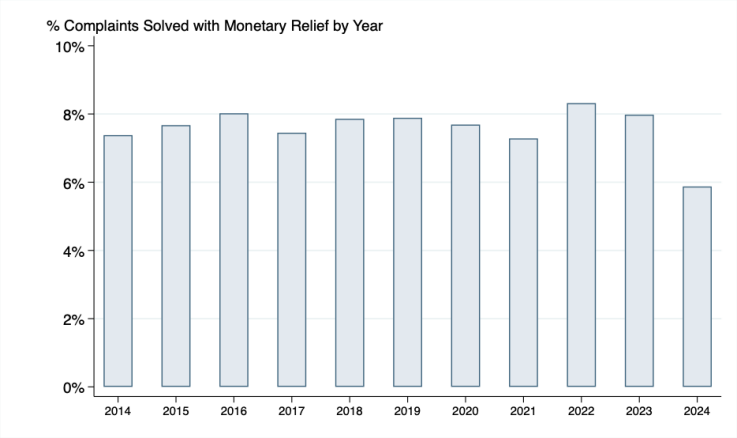


White complaints

Table 1: **Monetary Relief Dynamics**

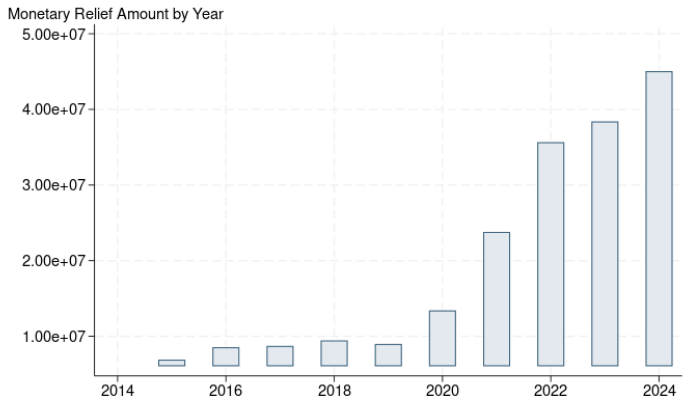
Description: This table shows financial restitution trends over time and across products. Panel A reports the evolution over time of the number of total complaints and the number of complaints solved with monetary relief. Panel B reports the evolution over time of the amount of monetary relief granted. Panel C reports the evolution of the number of total complaints and the number of complaints solved with monetary relief across products.

Panel A: Complaints solved with monetary relief over time



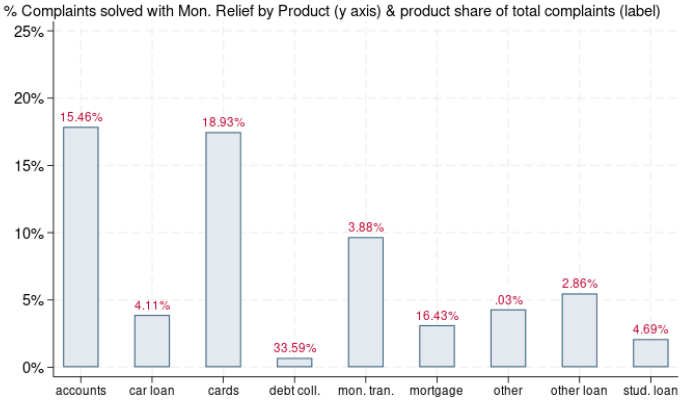
year	complaints	solved wMR	% solved wMR
2014	113,551	8,693	7.65%
2015	122,691	9,804	7.99%
2016	135,380	11,233	8.30%
2017	140,999	10,710	7.60%
2018	133,724	10,654	7.97%
2019	129,364	10,295	7.96%
2020	148,708	11,548	7.77%
2021	176,256	12,943	7.34%
2022	186,052	15,605	8.39%
2023	225,482	18,004	7.99%
2024	317,988	19,779	6.22%
total	1,830,195	139,268	7.61%

Panel B: Monetary relief amount over time



year	total relief	relief mean	relief st. dev.
2014	6,034,036	694.13	429.71
2015	6,924,295	706.27	494.88
2016	8,566,959	762.66	538.85
2017	8,734,339	815.53	546.06
2018	9,460,498	887.98	603.62
2019	8,994,702	873.70	581.50
2020	1.34e+07	1,160.37	775.06
2021	2.38e+07	1,838.83	1,286.96
2022	3.57e+07	2,287.73	1,634.78
2023	3.84e+07	2,132.86	1,458.12
2024	4.51e+07	2,280.20	1,418.00
total	2.05e+08	1,471.98	1102.94

Panel C: Complaints solved with monetary relief by product



product	complaints	solved wMR	% solved wMR
accounts	309,287	53,789	17.39%
car loan	81,222	3,081	3.79%
cards	374,629	64,154	17.13%
debt coll.	670,457	4,504	.67%
mon. tran.	86,290	7,860	9.11%
mortgage	323,034	9,873	3.06%
other	30,55	144	4.71%
other loan	57,192	3,052	5.34%
stud. loan	91,536	1,898	2.07%

Table 2: **Determinants of Restitution**

Description: This table reports statistics on the determinants of the likelihood of receiving financial restitution. Panel A reports variance decompositions of regressing $solved\ wMR$, a dummy variable equal to 1 if the complaint is resolved with monetary relief, on different combinations of quarter fixed effects, company fixed effects, product fixed effects, and county fixed effects. Panel B reports financial restitution summary statistics across different splits of the complaint data based on filer demographics.

Panel A: Company and Product weight

dep. variable	**% model variation explained**		
= **solved wMR**	(1)	(2)	(3)
quarter FE	33.33%	0.5%	0.5%
company FE	66.67%	0.24%	0.24%
product FE		99.26%	99.23%
county FE			0.03%
model variation (R-squared)	10.29%	12.18%	12.56%

Panel B: Filer demographics

filer	**complaints**	**solved wMR**	**% solved wMR**	**tot. relief**	**avg. relief**
low income	915,161	51,884	5.67%	7.64e+07	1,472.50
high income	915,034	79,963	8.74%	12.86e+07	1,608.24
low education	915,123	58,204	6.36%	7.78e+07	1,336.09
high education	915,072	81,064	8.86%	12.74e+07	1,571.29
asian	99,638	12,749	12.80%	2.36e+07	1,848.06
black	162,472	7,095	4.37%	0.94e+07	1,318.62
hispanic	219,655	15,138	6.89%	2.39e+07	1,580.80
white	1,338,544	103,744	7.75%	14.73e+07	1,420.15

Table 3: **The Financial Restitution Gap - Baseline effects on Financial Restitution Likelihood**

Description: This table presents evidence of a Financial Restitution Gap in consumer finance, i.e. the lower likelihood of receiving financial restitution when filing a complaint from low socioeconomic statuses. Across panels, the outcome variable $solved\ w/MR_{i,f,c,r,q,tr}$ is a dummy equal to one if filer i's complaint c from Census tract tr against company c filed in quarter q has been solved with monetary relief, zero otherwise. Panel A regresses this complaint-level information on $I(above\ med.\ household\ med.\ income)_{q,tr}$, a dummy equal to one if complaint c comes from a Census tract tr that has above median household median income in quarter q, in columns 1 to 3, and on quintiles of the tract household median income in columns 4 to 6. Panel B regresses this complaint-level information on $I(above\ med.\ \%\ pop.\ w/higher\ ed.)_{q,tr}$, a dummy equal to one if complaint c comes from a Census tract tr that has above median % of population above 25 with a bachelor's degree in quarter q, in columns 1 to 3, and on quintiles of the tract higher education in columns 4 to 6. Panel C regresses this complaint-level information on $I(minority\ filer)_{i,f,c,r,q,tr}$, a dummy equal to one if complaint c comes from filer i who is non-white according to Bayesian Improved Surname and Geocoding (BISG) in columns 1 to 3, and on dummies for Asian, Black, and Hispanic filer ethnicity in columns 4 to 6. Across panels, standard errors are clustered at the company level; ***, **, and * denote 1%, 5%, and 10% statistical significance, respectively; - denotes a coefficient absorbed by fixed effects.

Panel A: Income

	solved w/MR$_{i,f,c,r,q,tr}$					
	income above med.			income quintiles		
	(1)	(2)	(3)	(4)	(5)	(6)
I(above med. household med. income)$_{q,tr}$	0.0101***	0.00951***	0.00868***			
	(0.0019)	(0.0016)	(0.0014)			
household med. income quintile$_{q,tr}$				-	-	-
household med. income quintile$_{q,tr}$=2				0.00474***	0.00531***	0.00482***
				(0.0010)	(0.0011)	(0.0010)
household med. income quintile$_{q,tr}$=3				0.00747***	0.00792***	0.00748***
				(0.0015)	(0.0014)	(0.0013)
household med. income quintile$_{q,tr}$=4				0.0104***	0.0109***	0.0106***
				(0.0021)	(0.0019)	(0.0018)
household med. income quintile$_{q,tr}$=5				0.0182***	0.0169***	0.0165***
				(0.0033)	(0.0028)	(0.0027)
quarter FE	x	x	x	x	x	x
company FE	x			x		
company x product FE		x	x		x	x
county FE			x			x
observations	1,828,730	1,826,276	1,826,203	1,828,730	1,826,276	1,826,203
R-squared	0.104	0.137	0.139	0.104	0.137	0.139

Panel B: Education

	solved w/MR$_{i,f,c,r,q,tr}$					
	education above med.			education quintiles		
	(1)	(2)	(3)	(4)	(5)	(6)
I(above med. % pop. w/higher ed.)$_{q,tr}$	0.0117***	0.00935***	0.00847***			
	(0.0021)	(0.0016)	(0.0014)			
% pop. w/higher ed. quintile$_{q,tr}$				-	-	-
% pop. w/higher ed. quintile$_{q,tr}$=2				0.00358***	0.00382***	0.00366***
				(0.00080)	(0.00076)	(0.00082)
% pop. w/higher ed. quintile$_{q,tr}$=3				0.00807***	0.00776***	0.00784***
				(0.0015)	(0.0014)	(0.0014)
% pop. w/higher ed. quintile$_{q,tr}$=4				0.0130***	0.0114***	0.0111***
				(0.0023)	(0.0019)	(0.0019)
% pop. w/higher ed. quintile$_{q,tr}$=5				0.0197***	0.0159***	0.0157***
				(0.0036)	(0.0028)	(0.0028)
quarter FE	x	x	x	x	x	x
company FE	x			x		
company x product FE		x	x		x	x
county FE			x			x
observations	1,828,730	1,826,276	1,826,203	1,828,730	1,826,276	1,826,203
R-squared	0.104	0.137	0.139	0.104	0.137	0.139

Panel C: Ethnicity

	solved w/MR$_{i,f,c,r,q,tr}$					
	minority filer			filer ethnicity		
	(1)	(2)	(3)	(4)	(5)	(6)
I(minority filer)$_{i,f,c,r,q,tr}$	-0.00243**	-0.00269***	-0.00173**			
	(0.0011)	(0.00072)	(0.00068)			
I(Asian filer)$_{i,f,c,r,q,tr}$				0.0239***	0.0158***	0.0146***
				(0.0042)	(0.0031)	(0.0030)
I(Black filer)$_{i,f,c,r,q,tr}$				-0.0149***	-0.0116***	-0.00953***
				(0.0032)	(0.0024)	(0.0020)
I(Hispanic filer)$_{i,f,c,r,q,tr}$				-0.00435***	-0.00386***	-0.00330***
				(0.0016)	(0.0011)	(0.00091)
quarter FE	x	x	x	x	x	x
company FE	x			x		
company x product FE		x	x		x	x
county FE			x			x
observations	1,828,730	1,826,276	1,826,203	1,828,730	1,826,276	1,826,203
R-squared	0.104	0.137	0.139	0.104	0.137	0.139

Table 4: **The Financial Restitution Gap - Baseline effects on Financial Restitution Amounts**

Description: This table presents evidence on how the financial restitution amounts correlate with socioeconomic status. Across panels, the outcome variable $Monetary\ Relief\ amount_{i,f,c,r,q,tr}$ is the $ amount of relief awarded if the complaint c has been solved with monetary relief (winsorized at the 2.5% level in each tail) and zero otherwise. We use fixed-effects Poisson models to estimate this table due to the nature of the data. More in detail, Panel A regresses this complaint-level information on $I(above\ med.\ household\ med.\ income)_{q,tr}$, a dummy equal to one if complaint c comes from a Census tract tr that has above median household median income in quarter q, in columns 1 to 3, and on quintiles of the tract household median income in columns 4 to 6. Panel B regresses this complaint-level information on $I(above\ med.\ \%\ pop.\ w/higher\ ed.)_{q,tr}$, a dummy equal to one if complaint c comes from a Census tract tr that has above median % of population above 25 with a bachelor's degree in quarter q, in columns 1 to 3, and on quintiles of the tract higher education in columns 4 to 6. Panel C regresses this complaint-level information on $I(minority\ filer)_{i,f,c,r,q,tr}$, a dummy equal to one if complaint c comes from filer i who is non-white according to Bayesian Improved Surname and Geocoding (BISG) in columns 1 to 3, and on dummies for Asian, Black, and Hispanic ethnicity in columns 4 to 6. Across panels, standard errors are clustered at the company level; ***, **, and * denote 1%, 5%, and 10% statistical significance, respectively; - denotes a coefficient absorbed by fixed effects.

Panel A: Income

	monetary relief amount$_{i,f,c,r,q,tr}$					
	income above med.			income quintiles		
	(1)	(2)	(3)	(4)	(5)	(6)
I(above med. household med. income)$_{q,tr}$	0.299***	0.295***	0.271***			
	(0.028)	(0.027)	(0.031)			
household med. income quintile$_{q,tr}$				-	-	-
household med. income quintile$_{q,tr}$=2				0.141***	0.156***	0.140***
				(0.025)	(0.025)	(0.028)
household med. income quintile$_{q,tr}$=3				0.210***	0.228***	0.213***
				(0.032)	(0.031)	(0.040)
household med. income quintile$_{q,tr}$=4				0.323***	0.342***	0.336***
				(0.041)	(0.037)	(0.045)
household med. income quintile$_{q,tr}$=5				0.506***	0.500***	0.489***
				(0.042)	(0.040)	(0.050)
quarter FE	x	x	x	x	x	x
company FE	x			x		
company x product FE		x	x		x	x
county FE			x			x
observations	1,517,592	1,439,004	1,433,561	1,517,592	1,439,004	1,433,561

Panel B: Education

	monetary relief amount$_{i,f,c,r,q,tr}$					
	education above med.			education quintiles		
	(1)	(2)	(3)	(4)	(5)	(6)
I(above med. % pop. w/higher ed.)$_{q,tr}$	0.278***	0.256***	0.236***			
	(0.029)	(0.024)	(0.024)			
% pop. w/higher ed. quintile$_{q,tr}$				-	-	-
% pop. w/higher ed. quintile$_{q,tr}$=2				0.0968**	0.106**	0.107***
				(0.045)	(0.044)	(0.040)
% pop. w/higher ed. quintile$_{q,tr}$=3				0.239***	0.244***	0.244***
				(0.037)	(0.034)	(0.028)
% pop. w/higher ed. quintile$_{q,tr}$=4				0.349***	0.340***	0.340***
				(0.043)	(0.038)	(0.035)
% pop. w/higher ed. quintile$_{q,tr}$=5				0.442***	0.411***	0.415***
				(0.056)	(0.049)	(0.048)
quarter FE	x	x	x	x	x	x
company FE	x			x		
company x product FE		x	x		x	x
county FE			x			x
observations	1,517,592	1,439,004	1,433,561	1,517,592	1,439,004	1,433,561

Panel C: Ethnicity

	monetary relief amount$_{i,f,c,r,q,tr}$					
	minority filer			filer ethnicity		
	(1)	(2)	(3)	(4)	(5)	(6)
I(minority filer)$_{i,f,c,r,q,tr}$	-0.000605	-0.0318*	-0.0831***			
	(0.023)	(0.017)	(0.025)			
I(Asian filer)$_{i,f,c,r,q,tr}$				0.316***	0.222***	0.147***
				(0.050)	(0.031)	(0.042)
I(Black filer)$_{i,f,c,r,q,tr}$				-0.419***	-0.396***	-0.379***
				(0.033)	(0.031)	(0.036)
I(Hispanic filer)$_{i,f,c,r,q,tr}$				-0.0466	-0.0658**	-0.143***
				(0.033)	(0.031)	(0.027)
quarter FE	x	x	x	x	x	x
company FE	x			x		
company x product FE		x	x		x	x
county FE			x			x
observations	1,517,592	1,439,004	1,433,561	1,517,592	1,439,004	1,433,561

Table 5: **Financial Restitution Gap Mechanisms - Advocating for Relief**

Description: This table reports results on how the likelihood of attaching a supporting document changes across socioeconomic statuses. The outcome variable is $I(mention\ of\ refund/fraud\ \&\ similar\ words\ in;[])_{i,f,c,r,q,tr}$, a dummy equal to one if filer i of complaint c has mentioned either "refund" or similar words ("refunding", "refunded", "refunds", "repay", "reimburse", "reimbursement", "reimbursements", "reimbursing", "reimbursed", "repayment", "repayments", "repaying", "pay back", "paying back", "paid back", "make good", "making good", "made good", "compensate", "compensation", "compensations", "compensating", "compensated", "recoup", "recoups", "recouping", "recouped", "remunerate", "remuneration", "remunerations", "remunerating", "remunerated", "squaring accounts with", "squared accounts with", "square accounts with") or "fraud" and similar words ("deceit", "deception", "trickery", "rip-off", "fake", "con", "impostor", "fraudster", "deceive", "deceiving", "deceived", "defraud", "defrauded", "cheat", "cheating", "cheated", "trick", "tricked", "tricking", "mislead", "misled", "misleading", "misguide", "misguided", "misguiding") while filing the complaint in either the complaint description/narrative (columns 1, 3, 5) or in the desired resolution field (columns 2, 4, 6), zero otherwise. The independent variables of interest are: $I(above\ med.\ household\ med.\ income)_{q,tr}$ in columns 1 and 2 (a dummy equal to one if complaint c comes from a Census tract tr that has above median household median income in quarter q), $I(above\ med.\ \%\ pop.\ w/higher\ ed.)_{c,q,tr}$ in columns 3 and 4 (a dummy equal to one if complaint c comes from a Census tract tr that has above median % of population above 18o with a bachelor degree in quarter q), and dummies for Asian, Black, and Hispanic filer ethnicity in columns 5 and 6. Standard errors are clustered at the company level; ***, **, and * denote 1%, 5%, and 10% statistical significance, respectively.

	I(mention of refund/fraud & similar words in [ ] $_{i,f,c,r,q,tr}$)					
	income		education		ethnicity	
	[ ]=descr.	[ ]=desired res.	[ ]=descr.	[ ]=desired res.	[ ]=descr.	[ ]=desired res.
	(1)	(2)	(3)	(4)	(5)	(6)
I(above med. household med. income)$_{q,tr}$	0.0233***	0.0134***				
	(0.0015)	(0.0016)				
I(above med. % pop. w/higher ed.)$_{q,tr}$			0.0265***	0.0194***		
			(0.0018)	(0.0017)		
I(Asian filer)$_{i,f,c,r,q,tr}$					-0.00590	0.00868*
					(0.0045)	(0.0051)
I(Black filer)$_{i,f,c,r,q,tr}$					-0.0171***	-0.0106***
					(0.0026)	(0.0031)
I(Hispanic filer)$_{i,f,c,r,q,tr}$					-0.0250***	-0.0141***
					(0.0030)	(0.0022)
quarter FE	x	x	x	x	x	x
company x product FE	x	x	x	x	x	x
county FE	x	x	x	x	x	x
observations	1,741,564	1,805,330	1,741,564	1,805,330	1,741,564	1,805,330
R-squared	0.0304	0.0242	0.0306	0.0244	0.0303	0.0242

Table 6: **Financial Restitution Gap Mechanisms - Attachments**

Description: This table reports results on how the likelihood of attaching a supporting document changes across socioeconomic statuses. The outcome variable is $I(filer\ attachment)_{i,f,c,r,q,tr}$, a dummy equal to one if filer i of complaint c has attached a supporting document while filing the complaint, zero otherwise. The independent variables of interest are: $I(above\ med.\ household\ med.\ income)_{q,tr}$ in column 1 (a dummy equal to one if complaint c comes from a Census tract tr that has above median household median income in quarter q), $I(above\ med.\ \%\ pop.\ w/higher\ ed.)_{q,tr}$ in column 2 (a dummy equal to one if complaint c comes from a Census tract tr that has above median % of population above 25 with a bachelor degree in quarter q), and dummies for Asian, Black, and Hispanic filer ethnicity in column 3. Standard errors are clustered at the company level; ***, **, and * denote 1%, 5%, and 10% statistical significance, respectively.

	I(filer attachment)$_{i,f,c,r,q,tr}$		
	(1)	(2)	(3)
I(above med. household med. income)$_{q,tr}$	0.00373***		
	(0.0010)		
I(above med. % pop. w/higher ed.)$_{q,tr}$		0.00569***	
		(0.0013)	
I(Asian filer)$_{i,f,c,r,q,tr}$			-0.00116
			(0.016)
I(Black filer)$_{i,f,c,r,q,tr}$			0.00586**
			(0.0024)
I(Hispanic filer)$_{i,f,c,r,q,tr}$			0.00840***
			(0.0019)
quarter FE	x	x	x
company x product FE	x	x	x
county FE	x	x	x
observations	1,826,203	1,826,203	1,826,203
R-squared	0.281	0.281	0.281

Table 7: **Financial Restitution Gap Mechanisms - Selection**

Description: This table presents results from Heckman Sample Selection Models to investigate the likelihood of low socioeconomic status consumers filing with companies that the CFPB deems do not address complaints properly during investigations. In the first stage, the model predicts the likelihood of a firm not addressing complaints properly during investigations. In the second stage, the percentage of company complaints coming from below median income tracts (column 1) or the percentage of company complaints coming from below median education tracts (column 2) or the percentage of company complaints coming from white filers (column 3) are regressed on the likelihood of a firm not addressing complaints properly during investigations, correcting for the selection bias identified in the first stage. text

	% compl. from below median household median income	**% pop. w/higher ed.**	**% compl. from white filers**
	(1)	(2)	(3)
% poorly addressed complaints$_c$	0.135	0.0630	0.00858
	(0.15)	(0.15)	(0.058)
select			
I(company poorly addressing complaints)$_c$	0.522***	0.505***	0.656***
	(0.18)	(0.18)	(0.18)
lambda	0.326	0.320	-0.0899
	(0.30)	(0.31)	(0.081)
observations	1,143	1,143	1,143

Table 8: **Financial Restitution Gap Mechanisms - Company Resources**

Description: This table analyses whether companies allocate efforts to respond to complaint filers differently across socioeconomic statuses. The dependent variables are $prev.\,experience_{i,f,c,r,q,tr}$ in columns 1, 3, and 5 and $\%\ days\ w/login_{i,f,c,r,q,tr}$ in columns 2, 4, 6. The dependent variable $prev.\,experience_{i,f,c,r,q,tr}$ is the natural logarithm of the count of how many complaints the company respondent of complaint c already solved before this one. The dependent variable $\%\ days\ w/login_{i,f,c,r,q,tr}$ is the percentage of days between complaint c submission and response that the company respondent logged into the CFPB complaint system. The independent variables of interest are: $I(above\ med.\ household\ med.\ income)_{q,tr}$ in columns 1 and 2 (a dummy equal to one if complaint c comes from a Census tract tr that has above median household median income in quarter q), $I(above\ med.\ \%\ pop.\ w/higher\ ed.)_{q,tr}$ in columns 3 and 4 (a dummy equal to one if complaint c comes from a Census tract tr that has above median % of the population above 25 with a bachelor degree in quarter q), and dummies for Asian, Black, and Hispanic filer ethnicity in columns 5 and 6. Standard errors are clustered at the company level; ***, **, and * denote 1%, 5%, and 10% statistical significance, respectively.

	resources allocated by the company = [ ]$_{i,f,c,r,q,tr}$					
	income		education		ethnicity	
	(1)	(2)	(3)	(4)	(5)	(6)
	[ ]=prev. exp.	[ ]=% days w/login	[ ]=prev. exp.	[ ]=% days w/login	[ ]=prev. exp.	% days w/login$_{i,c,q,tr}$
I(above med. household med. income)$_{q,tr}$	0.00151	-0.000208				
	(0.0030)	(0.00034)				
I(above med. % pop. w/higher ed.)$_{q,tr}$			0.00106	-0.0000837		
			(0.0030)	(0.00038)		
I(Asian filer)$_{i,f,c,r,q,tr}$					-0.00377	-0.00320*
					(0.012)	(0.0017)
I(Black filer)$_{i,f,c,r,q,tr}$					0.000193	0.00115*
					(0.0051)	(0.00065)
I(Hispanic filer)$_{i,f,c,r,q,tr}$					-0.00595	0.000179
					(0.0044)	(0.00058)
quarter FE	x	x	x	x	x	x
company x product FE	x	x	x	x	x	x
county FE	x	x	x	x	x	x
observations	1,826,203	1,730,115	1,826,203	1,730,115	1,826,203	1,730,115
R-squared	0.848	0.751	0.848	0.751	0.848	0.751

Table 9: **Financial Restitution Gap Mechanisms - Company Respondent**

Description: This table introduces respondent fixed effects (*Respondent FE*), controlling for time-invariant characteristics of the person within the company assigned to respond to the complaint. Columns 2, 4, and 6 replicate the baseline regressions of column 3 in Panels A, B, and C of Table **??**, adding respondent fixed effects. Since the information on respondent ID is not available for all complaints, columns 1, 3, and 5 replicate the same baseline regressions but over the subsample of complaints that have respondent ID information for comparison. The independent variables of interest are: $I(above\ med.\ household\ med.\ income)_{q,tr}$ in columns 1 and 2 (a dummy equal to one if complaint c comes from a Census tract tr that has above median household median income in quarter q), $I(above\ med.\ \%\ pop.\ w/higher\ ed.)_{q,tr}$ in columns 3 and 4 (a dummy equal to one if complaint c comes from a Census tract tr that has above median % of population above 18o with a bachelor degree in quarter q), and dummies for Asian, Black, and Hispanic filer ethnicity in columns 5 and 6. Standard errors are clustered at the company level; ***, **, and * denote 1%, 5%, and 10% statistical significance, respectively.

	solved w/MR$_{i,f,c,r,q,tr}$					
	income		education		ethnicity	
	(1)	(2)	(3)	(4)	(5)	(6)
I(above med. household med. income)$_{q,tr}$	0.00925***	0.00926***				
	(0.0016)	(0.0017)				
I(above med. % pop. w/higher ed.)$_{q,tr}$			0.00899***	0.00893***		
			(0.0016)	(0.0016)		
I(Asian filer)$_{i,f,c,r,q,tr}$					0.0154***	0.0160***
					(0.0031)	(0.0027)
I(Black filer)$_{i,f,c,r,q,tr}$					-0.00972***	-0.00974***
					(0.0022)	(0.0022)
I(Hispanic filer)$_{i,f,c,r,q,tr}$					-0.00307***	-0.00311***
					(0.00097)	(0.00098)
quarter FE	x	x	x	x	x	x
company x product FE	x	x	x	x	x	x
county FE	x	x	x	x	x	x
respondent FE		x		x		x
observations	1,410,810	1,410,810	1,410,810	1,410,810	1,410,810	1,410,810
R-squared	0.141	0.166	0.141	0.166	0.141	0.166

Table 10: **Financial Restitution Gap Mechanisms - All**

Description: This table pools together all potential determinants on the company and filer side to analyze how much they explain overall monetary relief patterns. Columns 1, 3, and 5 replicate baseline results of Table 3 on the same subsample where respondent ID information is available, for direct comparison with the other columns. Columns 2, 4, and 6 add all the previously introduced potential determinants of the financial restitution gap: $I(filer\ attachment)_{i,f,c,r,q,tr}$, a dummy equal to one if filer i of complaint c has attached a supporting document while filing the complaint, zero otherwise; $I(des.\ res.\ adv.\ mon.\ rel.)_{i,f,c,r,q,tr}$, a dummy equal to one if filer f of complaint c mentions words like "relief" or "fraud" and similar ones in the desired resolution; respondent fixed effects, the ID of the person the company assigns to answer the complaint; $prev.\ experience_{i,f,c,r,q,tr}$, the natural logarithm of the count of how many complaints the company respondent r of complaint c already solved before this one; $\%\ days\ w/login_{i,f,c,r,q,tr}$, the percentage of days between complaint c submission and response that the company respondent logged into the CFPB complaint system. The independent variables of interest are: $I(above\ med.\ household\ med.\ income)_{q,tr}$ in columns 1 and 2 (a dummy equal to one if complaint c comes from a Census tract tr that has above median household median income in quarter q), $I(above\ med.\ \%\ pop.\ w/higher\ ed.)_{q,tr}$ in columns 3 and 4 (a dummy equal to one if complaint c comes from a Census tract tr that has above median % of population above 25 with a bachelor's degree in quarter q), and dummies for Asian, Black, and Hispanic filer ethnicity in columns 5 and 6. Standard errors are clustered at the company level; ***, **, and * denote 1%, 5%, and 10% statistical significance, respectively.

	solved w/MR$_{i,f,c,r,q,tr}$					
	income		education		ethnicity	
	(1)	(2)	(3)	(4)	(5)	(6)
I(des. res. adv. mon. rel.)$_{i,f,c,r,q,tr}$		0.0167***		0.0169***		0.0212***
		(0.0027)		(0.0027)		(0.0031)
I(filer attachment)$_{i,f,c,r,q,tr}$		0.00962***		0.00968***		0.0114***
		(0.0016)		(0.0016)		(0.0018)
I(above med. hh med. income)$_{q,tr}$	0.00925***	0.00368***				
	(0.0016)	(0.0010)				
I(above med. hh med. income)$_{q,tr}$ × I(des. res. adv. mon. rel.)$_{i,f,c,r,q,tr}$		0.00789***				
		(0.0016)				
I(above med. hh med. income)$_{q,tr}$ × I(filer attachment)$_{i,f,c,r,q,tr}$		0.00475***				
		(0.0013)				
I(above med. % pop. w/higher ed.)$_{q,tr}$			0.00902***	0.00348***		
			(0.0016)	(0.0011)		
I(above med. % pop. w/higher ed.)$_{q,tr}$ × I(des. res. adv. mon. rel.)$_{i,f,c,r,q,tr}$				0.00734***		
				(0.0018)		
I(above med. % pop. w/higher ed.)$_{q,tr}$ × I(filer attachment)$_{i,f,c,r,q,tr}$				0.00459***		
				(0.0014)		
I(Asian filer)$_{i,f,c,r,q,tr}$					0.0154***	0.00352
					(0.0031)	(0.0032)
I(Black filer)$_{i,f,c,r,q,tr}$					-0.00964***	-0.00435**
					(0.0021)	(0.0018)
I(Hispanic filer)$_{i,f,c,r,q,tr}$					-0.00314***	-0.00279**
					(0.00098)	(0.0013)
I(Asian filer)$_{i,f,c,r,q,tr}$ × I(des. res. adv. mon. rel.)$_{i,f,c,r,q,tr}$						0.0125***
						(0.0030)
I(Black filer)$_{i,f,c,r,q,tr}$ × I(des. res. adv. mon. rel.)$_{i,f,c,r,q,tr}$						-0.00947***
						(0.0019)
I(Hispanic filer)$_{i,f,c,r,q,tr}$ × I(des. res. adv. mon. rel.)$_{i,f,c,r,q,tr}$						-0.00282*
						(0.0015)
I(Asian filer)$_{i,f,c,r,q,tr}$ × I(filer attachment)$_{i,f,c,r,q,tr}$						0.0142***
						(0.0030)
I(Black filer)$_{i,f,c,r,q,tr}$ × I(filer attachment)$_{i,f,c,r,q,tr}$						-0.00425**
						(0.0019)
I(Hispanic filer)$_{i,f,c,r,q,tr}$ × I(filer attachment)$_{i,f,c,r,q,tr}$						0.00144
						(0.0019)
prev. experience$_{i,f,c,r,q,tr}$		0.000292		0.000290		0.000308
		(0.00094)		(0.00093)		(0.00094)
% days w/login$_{i,f,c,r,q,tr}$		-0.0113***		-0.0113***		-0.0113***
		(0.0030)		(0.0030)		(0.0029)
quarter FE	x	x	x	x	x	x
company x product FE	x	x	x	x	x	x
county FE	x	x	x	x	x	x
respondent FE		x		x		x
observations	1,391,348	1,297,695	1,391,348	1,297,695	1,391,348	1,297,695
R-squared	0.142	0.169	0.142	0.169	0.142	0.170

Table 11: **CFPB Investigations across Demographics**

Description: This table presents estimations regarding the likelihood of the CFPB flagging an investigated complaint as either not properly addressed by the company (columns 1 to 3 across panels), or not having received a substantive response from the company (columns 4 to 6 across panels). The tables regress these likelihoods on quintiles of the filer's census tract income (household median income, Panel A), education (% of population above 25 with a bachelor's degree, Panel B), and ethnicity of the filer according to BISG algorithms (dummies for Asian, Black, or Hispanic filer, Panel C). Standard errors are clustered at the company level; ***, **, and * denote 1%, 5%, and 10% statistical significance, respectively.

Panel A: Income

	I(company not address compl.)$_{i,f,c,r,q,tr}$			I(response not substantive)$_{i,f,c,r,q,tr}$		
	(1)	(2)	(3)	(4)	(5)	(6)
household med. income quintile$_{q,tr}$=1	-	-	-	-	-	-
household med. income quintile$_{q,tr}$=2	-0.00216	0.00103	-0.000363	-0.00117	0.00144	0.000171
	(0.0017)	(0.0016)	(0.0011)	(0.0014)	(0.0012)	(0.00097)
household med. income quintile$_{q,tr}$=3	-0.00421**	0.00119	-0.00109	-0.00237*	0.00194^{+}	-0.0000329
	(0.0016)	(0.0015)	(0.0013)	(0.0013)	(0.0012)	(0.00095)
household med. income quintile$_{q,tr}$=4	-0.00571***	0.00178	-0.00153	-0.00606***	-0.0000156	-0.00299^{+}
	(0.0018)	(0.0015)	(0.0030)	(0.0016)	(0.0012)	(0.0018)
household med. income quintile$_{q,tr}$=5	-0.00946***	0.00113	-0.00314	-0.00759***	0.000674	-0.00318
	(0.0025)	(0.0017)	(0.0027)	(0.0021)	(0.0014)	(0.0023)
quarter FE	x			x		
company FE		x			x	
product FE			x			x
observations	194,338	193,914	194,338	194,338	193,914	194,338
R-squared	0.0139	0.0583	0.00586	0.0142	0.0653	0.00510

Panel B: Education

	I(company not address compl.)$_{i,f,c,r,q,tr}$			I(response not substantive)$_{i,f,c,r,q,tr}$		
	(1)	(2)	(3)	(4)	(5)	(6)
% pop. w/higher ed. quintile$_{q,tr}$	-	-	-	-	-	-
% pop. w/higher ed. quintile$_{q,tr}$=2	-0.000269	0.00193	0.00144	-0.000469	0.00123	0.000768
	(0.0013)	(0.0017)	(0.0014)	(0.0012)	(0.0013)	(0.0010)
% pop. w/higher ed. quintile$_{q,tr}$=3	-0.00227	0.00190	0.0000636	-0.00319**	-0.0000597	-0.00163
	(0.0016)	(0.0018)	(0.0024)	(0.0015)	(0.0014)	(0.0018)
% pop. w/higher ed. quintile$_{q,tr}$=4	-0.00561***	0.000393	-0.00218	-0.00590***	-0.00128	-0.00364^{+}
	(0.0020)	(0.0017)	(0.0032)	(0.0016)	(0.0014)	(0.0022)
% pop. w/higher ed. quintile$_{q,tr}$=5	-0.00516**	0.00225	-0.00111	-0.00554***	0.0000343	-0.00306
	(0.0022)	(0.0019)	(0.0040)	(0.0016)	(0.0015)	(0.0029)
quarter FE	x			x		
company FE		x			x	
product FE			x			x
observations	194,338	193,914	194,338	194,338	193,914	194,338
R-squared	0.0138	0.0583	0.00587	0.0142	0.0653	0.00511

Panel C: Ethnicity

	I(company not address compl.)$_{i,f,c,r,q,tr}$			I(response not substantive)$_{i,f,c,r,q,tr}$		
	(1)	(2)	(3)	(4)	(5)	(6)
I(Asian filer)$_{i,f,c,r,q,tr}$	-0.00245	0.00417*	0.00194	0.000921	0.00491**	0.00309
	(0.0027)	(0.0023)	(0.0037)	(0.0020)	(0.0019)	(0.0035)
I(Black filer)$_{i,f,c,r,q,tr}$	0.00626***	0.00188	0.00335	0.00476**	0.00182	0.00282*
	(0.0021)	(0.0021)	(0.0021)	(0.0019)	(0.0015)	(0.0015)
I(Hispanic filer)$_{i,f,c,r,q,tr}$	0.00122	0.00162	0.000496	0.00226	0.00276**	0.00197
	(0.0018)	(0.0015)	(0.0021)	(0.0017)	(0.0013)	(0.0019)
quarter FE	x			x		
company FE		x			x	
product FE			x			x
observations	194,338	193,914	194,338	194,338	193,914	194,338
R-squared	0.0137	0.0583	0.00586	0.0140	0.0653	0.00506

Table 12: **The Financial Restitution Gap - Diff-in-Diffs, Balance Tests**

Description: This table compares treated vs. controls (panel A) and treated early vs. treated late (panel B) before 2020, which the start of the investigation period that originates the treatment of receiving an investigation report (negative feedback from CFPB). In panel A, column 1 reports the pre-2020 quarterly average of the variables outlined across companies that will end up receiving an investigation report (negative feedback from CFPB). Column 2 does the same for control companies, i.e., companies that will be investigated but will not receive an investigations report and also had at least 100 complaints in 2018. In panel B, column 1 reports the pre-2020 quarterly average of the variables outlined across companies that will end up receiving an investigation report (negative feedback from CFPB) late in the investigations time period. Column 2 does the same for companies that will end up receiving an investigation report (negative feedback from CFPB) early in the investigations time period. Across panels, column 3 reports the difference across the previous two columns with its statistical significance. ***, **, and * denote 1%, 5%, and 10% statistical significance, respectively.

Panel A: Treated vs Controls

	Reported	**Control**	**Difference**
	(1)	(2)	(3)
ln(# complaints)	4.60	3.16	1.44***
% deposit-related complaints	39.21%	9.47%	29.74%***
% loan-related complaints	60.78%	90.54%	-29.75%***
% complaints w/filer attachment	13.71%	8.91%	4.80%***
% complaints from bottom income quartile	27.81%	27.83%	-0.02%
% complaints from bottom education quartile	27.30%	27.34%	-0.04%
% complaints from minorities	22.84%	23.71%	0.87%

Panel B: Treated Late vs Treated Early

	Late Report	**Early Report**	**Difference**
	(1)	(2)	(3)
ln(# complaints)	3.42	5.59	-2.18***
% deposit-related complaints	12.11%	61.75%	-49.64%***
% loan-related complaints	87.89%	38.25%	49.64%***
% complaints w/filer attachment	11.77%	15.32%	-3.55%***
% complaints from bottom income quartile	31.82%	24.47%	7.35%***
% complaints from bottom education quartile	31.19%	24.06%	7.12%***
% complaints from minorities	25.17%	20.91%	4.26%***

Table 13: **CFPB Investigations - Difference in Differences**

Description: These table presents difference-in-differences estimates around the first time a company receives an investigation report (negative feedback from the CFPB). The sample comprehends all treated companies and as controls those companies that were also investigated but did not receive a report and have at least 100 complaints in 2018 (pre-investigations). Across panels, the outcome variable is $solved\ w/MR_{i,f,c,r,q,tr}$, a dummy equal to one if filer i's complaint c from Census tract tr against company c filed in quarter q has been solved with monetary relief, zero otherwise. $I(post\text{-}report)_{i,c,q}$ is a dummy variable equal to one if complaint i was filed against company c in quarter q, which is after company c has received an investigation report (negative feedback from the CFPB). The tables regress $solved\ w/MR_{i,f,c,r,q,tr}$ on the interaction of $I(post\text{-}report)_{i,c,q}$ with the filer's census tract income being above median ($I(above\ med.\ household\ med.\ income)_{q,tr}$, Panel A), or the filer's census tract education being above median ($I(above\ med.\ \%\ pop.\ w/higher\ ed.)_{q,tr}$, Panel B), or the filer's ethnicity according to BISG algorithms (dummies for non-white, Asian, Black, or Hispanic filer, Panel C).Standard errors are clustered at the company level; ***, **, and * denote 1%, 5%, and 10% statistical significance, respectively.

Panel A: Income

	solved w/MR$_{i,f,c,r,q,tr}$		
	(1)	(2)	(3)
I(post-report)$_{i,c,q}$	-0.00586	-0.00847	-0.00817
	(0.011)	(0.011)	(0.011)
I(above med. household med. income)$_{q,tr}$	0.00727***	0.00690***	0.00570***
	(0.0020)	(0.0017)	(0.0014)
I(post-report)$_{i,c,q}$ × I(above med. household med. income)$_{q,tr}$	0.0203***	0.0178***	0.0174***
	(0.0040)	(0.0035)	(0.0035)
quarter FE	x	x	x
company FE	x		
company x product FE		x	x
county FE			x
observations	1,003,708	1,003,541	1,003,388
R-squared	0.106	0.132	0.135

Panel B: Education

	solved w/MR$_{i,f,c,r,q,tr}$		
	(1)	(2)	(3)
I(post-report)$_{i,c,q}$	-0.00659	-0.00883	-0.00857
	(0.011)	(0.011)	(0.011)
I(above med. % pop. w/higher ed.)$_{q,tr}$	0.00723***	0.00591***	0.00475***
	(0.0018)	(0.0015)	(0.0013)
I(post-report)$_{i,c,q}$ × I(above med. % pop. w/higher ed.)$_{q,tr}$	0.0216***	0.0185***	0.0181***
	(0.0045)	(0.0038)	(0.0038)
quarter FE	x	x	x
company FE	x		
company x product FE		x	x
county FE			x
observations	1,003,708	1,003,541	1,003,388
R-squared	0.106	0.131	0.135

Panel C: Ethnicity

	solved w/MR$_{i,f,c,r,q,tr}$			
	(1)	(2)	(3)	(4)
I(post-report)$_{i,c,q}$	0.00643	0.00223	0.00235	0.00266
	(0.013)	(0.012)	(0.012)	(0.012)
I(minority filer)$_{i,f,c,r,q,tr}$	-0.00223	-0.00183^{+}	-0.000444	
	(0.0016)	(0.0012)	(0.0011)	
I(post-report)$_{i,c,q}$ × I(minority filer)$_{i,f,c,r,q,tr}$	-0.00484^{+}	-0.00398^{+}	-0.00432*	
	(0.0029)	(0.0026)	(0.0026)	
I(Asian filer)$_{i,f,c,r,q,tr}$				0.00751**
				(0.0031)
I(post-report)$_{i,c,q}$ × I(Asian filer)$_{i,f,c,r,q,tr}$				0.0225***
				(0.0051)
I(Black filer)$_{i,f,c,r,q,tr}$				-0.00400**
				(0.0019)
I(post-report)$_{i,c,q}$ × I(Black filer)$_{i,f,c,r,q,tr}$				-0.0278***
				(0.0059)
I(Hispanic filer)$_{i,f,c,r,q,tr}$				-0.00106
				(0.0016)
I(post-report)$_{i,c,q}$ × I(Hispanic filer)$_{i,f,c,r,q,tr}$				-0.00778**
				(0.0038)
quarter FE	x	x	x	x
company FE	x			
company x product FE		x	x	x
county FE			x	x
observations	1,003,708	1,003,541	1,003,388	1,003,388
R-squared	0.105	0.131	0.134	0.135

Table 14: **CFPB Investigations - Difference in Differences, Mechanisms**

Description: These table presents investigates the potential mechanisms behind the rise in the number of complaints solved with monetary relief after having received an investigation report (negative feedback from the CFPB). The setting is still a difference-in-differences one around the first time a company receives the investigation report. The sample comprehends all treated companies and, as controls, those companies that were also investigated but did not receive a report and had at least 100 complaints in 2018 (pre-investigations). Panel A, B, and C investigate whether treated companies have been employing more resources after receiving the report. In Panel A, the dependent variable is $\#\ of\ company\ respondents_{c,q}$, the number of company c employees actively answering complaints in quarter q. In panel B, the dependent variable is $\%\ days\ w/login_{i,f,c,r,q,tr}$, the percentage of days between complaint i submission and resolution that company c actively logged into the CFPB complaint system. In Panel C, the dependent variable is $ln(\#\ previous\ complaints_{i,f,c,r,q,tr})$, the natural logarithm of the number of complaints that company respondent r has resolved before handling the current complaint i, a proxy for experience. Across these three panels, the independent variable of interest is then $I(post\text{-}report)_{i,c,q}$, a dummy variable equal to one if complaint i was filed against company c in quarter q after company has received an investigation report, and its interactions with income ($I(above\ med.\ household\ med.\ income)_{q,tr}$) education ($I(above\ med.\ \%\ pop.\ w/higher\ ed.)_{q,tr}$), and ethnicity (dummies for Asian, Black, or Hispanic filer). Panel D and C investigate whether treated companies pay more attention to filers advocating for monetary relief or attaching documents to the complaints after having received an investigation report. Across these two panels, the dependent variable is $solved\ w/MR_{i,f,c,r,q,tr}$, a dummy equal to one if complaint i has been solved with monetary relief, and it is regressed on $I(post\text{-}report)_{i,c,q}$ in interactions with income, education, and ethnicity. Standard errors are clustered at the company level; ***, **, and * denote 1%, 5%, and 10% statistical significance, respectively.

Panel A: Employees

	# of company respondents$_{c,q}$
	(1)
I(post-report)$_{i,c,q}$	2.509^{+}
	(1.64)
quarter FE	x
company FE	x
observations	4,466
R-squared	0.893

Panel B: Company Logins

	% days w/login$_{i,f,c,r,q,tr}$			
	(1)	(2)	(3)	(4)
I(post-report)$_{i,c,q}$	-0.0231*	-0.0224*	-0.0223*	-0.0233*
	(0.012)	(0.012)	(0.012)	(0.012)
I(above med. household med. income)$_{q,tr}$		0.000504		
		(0.00071)		
I(post-report)$_{i,c,q}$ × I(above med. household med. income)$_{q,tr}$		-0.00121		
		(0.0021)		
I(above med. % pop. w/higher ed.)$_{q,tr}$			0.000320	
			(0.00079)	
I(post-report)$_{i,c,q}$ × I(above med. % pop. w/higher ed.)$_{q,tr}$			-0.00139	
			(0.0023)	
I(Asian filer)$_{i,f,c,r,q,tr}$				-0.00435^{+}
				(0.0027)
I(post-report)$_{i,c,q}$ × I(Asian filer)$_{i,f,c,r,q,tr}$				0.000255
				(0.0035)
I(Black filer)$_{i,f,c,r,q,tr}$				-0.000730
				(0.00098)
I(post-report)$_{i,c,q}$ × I(Black filer)$_{i,f,c,r,q,tr}$				0.00368
				(0.0028)
I(Hispanic filer)$_{i,f,c,r,q,tr}$				0.000487
				(0.00082)
I(post-report)$_{i,c,q}$ × I(Hispanic filer)$_{i,f,c,r,q,tr}$				-0.000138
				(0.0019)
quarter FE	x	x	x	x
company x product FE	x	x	x	x
county FE	x	x	x	x
observations	993,924	993,924	993,924	993,924
R-squared	0.389	0.389	0.389	0.389

Panel C: Company Respondent Experience

	ln(# previous complaints$_{i,f,c,r,q,tr}$)			
	(1)	(2)	(3)	(4)
I(post-report)$_{i,c,q}$	-0.148	-0.139	-0.141	-0.151
	(0.13)	(0.13)	(0.13)	(0.13)
I(above med. household med. income)$_{q,tr}$		0.00579		
		(0.0057)		
I(post-report)$_{i,c,q}$ × I(above med. household med. income)$_{q,tr}$		-0.0164		
		(0.015)		
I(above med. % pop. w/higher ed.)$_{q,tr}$			0.00848	
			(0.0059)	
I(post-report)$_{i,c,q}$ × I(above med. % pop. w/higher ed.)$_{q,tr}$			-0.0117	
			(0.014)	
I(Asian filer)$_{i,f,c,r,q,tr}$				-0.0219
				(0.023)
I(post-report)$_{i,c,q}$ × I(Asian filer)$_{i,f,c,r,q,tr}$				0.0120
				(0.039)
I(Black filer)$_{i,f,c,r,q,tr}$				-0.0149*
				(0.0079)
I(post-report)$_{i,c,q}$ × I(Black filer)$_{i,f,c,r,q,tr}$				0.0525**
				(0.024)
I(Hispanic filer)$_{i,f,c,r,q,tr}$				0.00209
				(0.0071)
I(post-report)$_{i,c,q}$ × I(Hispanic filer)$_{i,f,c,r,q,tr}$				-0.0129
				(0.015)
quarter FE	x	x	x	x
company x product FE	x	x	x	x
county FE	x	x	x	x
observations	1,003,388	1,003,388	1,003,388	1,003,388
R-squared	0.391	0.391	0.391	0.392

Panel D: Filer Advocating for Monetary Relief

	solved w/MR$_{i,f,c,r,q,tr}$			
	(1)	(2)	(3)	(4)
I(post-report)$_{i,c,q}$	-0.00651	-0.0138	-0.0146	-0.00522
	(0.011)	(0.011)	(0.010)	(0.012)
I(des. res. adv. mon. rel.)$_{i,f,c,r,q,tr}$	0.0178***	0.0154***	0.0151***	0.0178***
	(0.0040)	(0.0036)	(0.0036)	(0.0039)
I(post-report)$_{i,c,q}$ × I(des. res. adv. mon. rel.)$_{i,f,c,r,q,tr}$	0.0203***	0.0168***	0.0175***	0.0208***
	(0.0051)	(0.0052)	(0.0053)	(0.0053)
I(above med. household med. income)$_{q,tr}$		0.00381***		
		(0.0013)		
I(post-report)$_{i,c,q}$ × I(above med. household med. income)$_{q,tr}$		0.0144***		
		(0.0035)		
I(above med. household med. income)$_{q,tr}$ × I(des. res. adv. mon. rel.)$_{i,f,c,r,q,tr}$		0.00497***		
		(0.0016)		
I(post-report)$_{i,c,q}$ × I(above med. household med. income)$_{q,tr}$ × I(des. res. adv. mon. rel.)$_{i,f,c,r,q,tr}$		0.00456		
		(0.0032)		
I(above med. % pop. w/higher ed.)$_{q,tr}$			0.00255**	
			(0.0013)	
I(post-report)$_{i,c,q}$ × I(above med. % pop. w/higher ed.)$_{q,tr}$			0.0158***	
			(0.0041)	
I(above med. % pop. w/higher ed.)$_{q,tr}$ × I(des. res. adv. mon. rel.)$_{i,f,c,r,q,tr}$			0.00561***	
			(0.0018)	
I(post-report)$_{i,c,q}$ × I(above med. % pop. w/higher ed.)$_{q,tr}$ × I(des. res. adv. mon. rel.)$_{i,f,c,r,q,tr}$			0.00325	
			(0.0032)	
I(Asian filer)$_{i,f,c,r,q,tr}$				0.00314
				(0.0037)
I(post-report)$_{i,c,q}$ × I(Asian filer)$_{i,f,c,r,q,tr}$				0.0213***
				(0.0056)
I(Asian filer)$_{i,f,c,r,q,tr}$ × I(des. res. adv. mon. rel.)$_{i,f,c,r,q,tr}$				0.0118**
				(0.0045)
I(post-report)$_{i,c,q}$ × I(Asian filer)$_{i,f,c,r,q,tr}$ × I(des. res. adv. mon. rel.)$_{i,f,c,r,q,tr}$				-0.000227
				(0.0063)
I(Black filer)$_{i,f,c,r,q,tr}$				-0.00241
				(0.0019)
I(post-report)$_{i,c,q}$ × I(Black filer)$_{i,f,c,r,q,tr}$				-0.0225***
				(0.0055)
I(Black filer)$_{i,f,c,r,q,tr}$ × I(des. res. adv. mon. rel.)$_{i,f,c,r,q,tr}$				-0.00441**
				(0.0020)
I(post-report)$_{i,c,q}$ × I(Black filer)$_{i,f,c,r,q,tr}$ × I(des. res. adv. mon. rel.)$_{i,f,c,r,q,tr}$				-0.0117**
				(0.0051)
I(Hispanic filer)$_{i,f,c,r,q,tr}$				-0.000804
				(0.0016)
I(post-report)$_{i,c,q}$ × I(Hispanic filer)$_{i,f,q,tr}$				-0.00479*
				(0.0028)
I(Hispanic filer)$_{i,f,c,r,q,tr}$ × I(des. res. adv. mon. rel.)$_{i,f,c,r,q,tr}$				-0.000794
				(0.0023)
I(post-report)$_{i,c,q}$ × I(Hispanic filer)$_{i,f,c,r,q,tr}$ × I(des. res. adv. mon. rel.)$_{i,f,c,r,q,tr}$				-0.00519
				(0.0067)
quarter FE	x	x	x	x
company x product FE	x	x	x	x
county FE	x	x	x	x
observations	991,205	991,205	991,205	991,205
R-squared	0.137	0.137	0.137	0.137

Panel E: Filer Attachment

	solved w/MR$_{i,f,c,r,q,tr}$			
	(1)	(2)	(3)	(4)
I(post-report)$_{i,c,q}$	-0.00626	-0.0128	-0.0129	-0.00347
	(0.011)	(0.011)	(0.010)	(0.012)
I(filer attachment)$_{i,f,c,r,q,tr}$	0.0117***	0.0107***	0.0109***	0.0116***
	(0.0026)	(0.0025)	(0.0025)	(0.0025)
I(post-report)$_{i,c,q}$ × I(filer attachment)$_{i,f,c,r,q,tr}$	0.0162***	0.0111***	0.0106**	0.0144***
	(0.0046)	(0.0040)	(0.0042)	(0.0045)
I(above med. household med. income)$_{q,tr}$		0.00464***		
		(0.0015)		
I(post-report)$_{i,c,q}$ × I(above med. household med. income)$_{q,tr}$		0.0128***		
		(0.0033)		
I(above med. household med. income)$_{q,tr}$ × I(filer attachment)$_{i,f,c,r,q,tr}$		0.00195		
		(0.0016)		
I(post-report)$_{i,c,q}$ × I(above med. household med. income)$_{q,tr}$ × I(filer attachment)$_{i,f,c,r,q,tr}$		0.00866***		
		(0.0032)		
I(above med. % pop. w/higher ed.)$_{q,tr}$			0.00388***	
			(0.0014)	
I(post-report)$_{i,c,q}$ × I(above med. % pop. w/higher ed.)$_{q,tr}$			0.0130***	
			(0.0041)	
I(above med. % pop. w/higher ed.)$_{q,tr}$ × I(filer attachment)$_{i,f,c,r,q,tr}$			0.00157	
			(0.0015)	
I(post-report)$_{i,c,q}$ × I(above med. % pop. w/higher ed.)$_{q,tr}$ × I(filer attachment)$_{i,f,c,r,q,tr}$			0.00944***	
			(0.0020)	
I(Asian filer)$_{i,f,c,r,q,tr}$				0.00498
				(0.0036)
I(post-report)$_{i,c,q}$ × I(Asian filer)$_{i,f,c,r,q,tr}$				0.00933
				(0.0066)
I(Asian filer)$_{i,f,c,r,q,tr}$ × I(filer attachment)$_{i,f,c,r,q,tr}$				0.00591**
				(0.0025)
I(post-report)$_{i,c,q}$ × I(Asian filer)$_{i,f,c,r,q,tr}$ × I(filer attachment)$_{i,f,c,r,q,tr}$				0.0200***
				(0.0057)
I(Black filer)$_{i,f,c,r,q,tr}$				-0.00266
				(0.0019)
I(post-report)$_{i,c,q}$ × I(Black filer)$_{i,f,c,r,q,tr}$				-0.0210***
				(0.0066)
I(Black filer)$_{i,f,c,r,q,tr}$ × I(filer attachment)$_{i,f,c,r,q,tr}$				-0.00238
				(0.0018)
I(post-report)$_{i,c,q}$ × I(Black filer)$_{i,f,q,tr}$ × I(filer attachment)$_{i,f,c,r,q,tr}$				-0.0138***
				(0.0047)
I(Hispanic filer)$_{i,f,c,r,q,tr}$				-0.00139
				(0.0016)
I(post-report)$_{i,c,q}$ × I(Hispanic filer)$_{i,f,c,r,q,tr}$				-0.0113**
				(0.0045)
I(Hispanic filer)$_{i,f,c,r,q,tr}$ × I(filer attachment)$_{i,f,c,r,q,tr}$				0.000456
				(0.0017)
I(post-report)$_{i,c,q}$ × I(Hispanic filer)$_{i,f,c,r,q,tr}$ × I(filer attachment)$_{i,f,c,r,q,tr}$				0.00589
				(0.0052)
quarter FE	x	x	x	x
company x product FE	x	x	x	x
county FE	x	x	x	x
observations	1,003,388	1,003,388	1,003,388	1,003,388
R-squared	0.135	0.136	0.136	0.136

Appendix to:

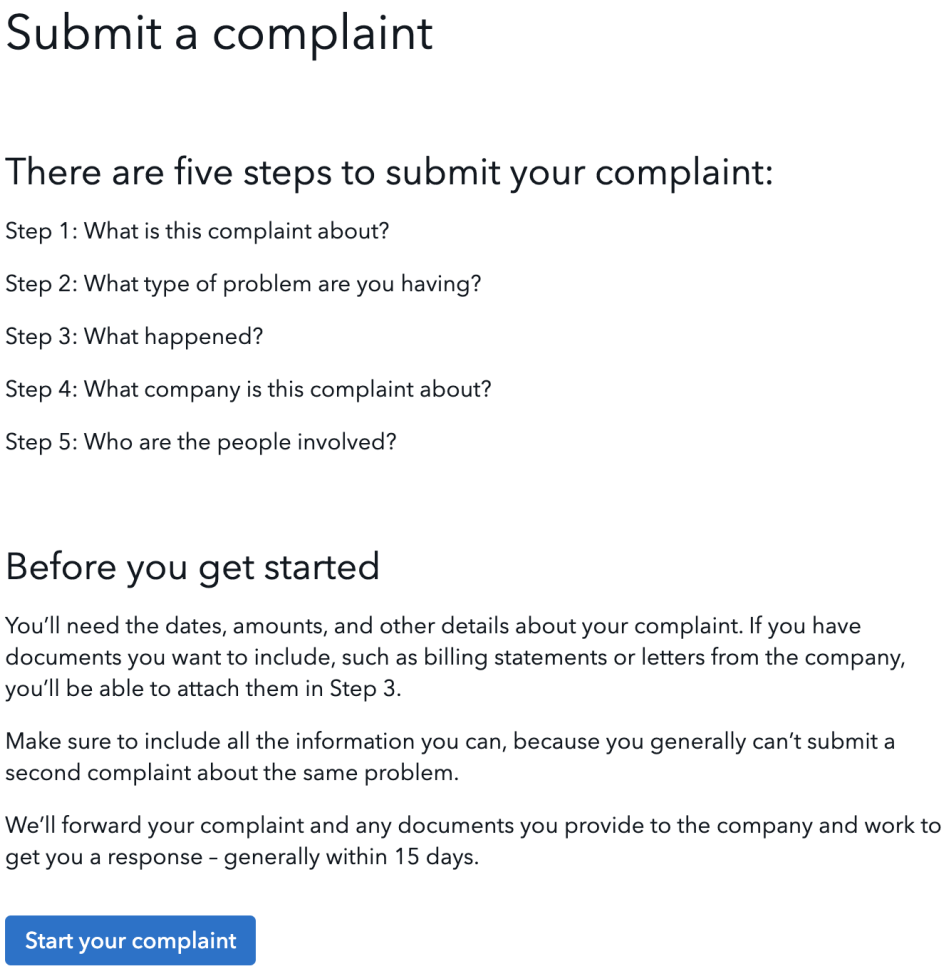
The Hidden Costs of Financial Services: Consumer Disputes and Financial Restitution

(intended for online publication)

A.I Submitting a Complaint on the CFPB Website

Figure A.I.1: **Filing a complaint on the CFPB website**

The Figure shows the different steps for filing a complaint regarding a checking account.



Submit a complaint

What is this complaint about?

Choose the product or service that best matches your complaint.

- ○ Debt collection
- ○ Credit reporting, credit repair services, or other personal consumer reports
- ○ Mortgage
- ○ Credit card or prepaid card
- ○ Checking or savings account
- ○ Vehicle loan or lease
- ○ Student loan
- ○ Payday loan, title loan, or personal loan (installment loan or personal line of credit)
- ○ Money transfer, virtual currency, or money service (check cashing service, currency exchange, cashier's/traveler's check, debt settlement)

< Previous | Step 1 of 5 | Next >

What type of problem are you having?

Most of the **checking account** complaints we get are about one of the following topics. Select the one that best describes your complaint. You will have the chance to explain your complaint in detail in the next step.

- ○ Opening an account
- ○ Managing an account (deposits, withdrawals, using ATM card, making or receiving payments, cashing a check, fees)
- ○ Closing an account
- ○ Problem caused by your funds being low
- ○ Problem with a lender or other company charging your account
- ○ Problem with credit report or credit score

‹ Previous | Step 2 of 5 | Next ›

What happened?

Describe what happened, and we'll send your comments to the companies involved.

- Include dates, amounts, and actions that were taken by you or the company.
- Do not include personal information, such as your name, account number, address, Social Security number, etc. We may ask for some of this information later, to help the company identify you and your account.

☐ I want the CFPB to publish this description on consumerfinance.gov so that others can learn from my experience. The CFPB will take steps to remove my personal information from this description but someone may still be able to identify me. Learn how it works. I consent to publishing this description after the CFPB has taken these steps.

Publishing this description will not affect how the CFPB handles your complaint.

What would be a fair resolution to this issue?

We'll forward this to the companies involved. Be specific so they know what resolution you are looking for. The company may or may not offer to resolve your complaint.

Attach documents (optional)

Include copies or photos of documents related to your issue, such as contracts, letters, and receipts, and we will forward all materials to the company for review.

Select a file to attach

We accept all file formats, except .dll, .dmg, .exe and .msi, up to 10 MB per file. All uploaded files will be scanned for viruses and will be immediately deleted if one is detected.

Select a file to upload

What company is this complaint about?

We'll forward your entire complaint to the company and request they respond within 15 days of receiving it.

Bank or credit union

Company name

Company name

We will forward your complaint to this company and ask for a response.

We need this information to help the company find you in their system and respond to your complaint. (optional)

- [ ] Account number
  This number is on your billing statement
- [ ] Billing address

Previous | Step 4 of 5 | Next

Who are the people involved?

Identify who is involved in this complaint. This could include:

- "Just you" if you are the account holder or borrower
- "You and someone else" if you are submitting for yourself and want to include another account holder or co-borrower
- "Someone else" if you are submitting for someone else as an authorized third party, such as a lawyer, advocate, or power of attorney

◯ Just you	◯ You and someone else
◯ Someone else	

Previous | Step 5 of 5 | Review

Table A.1: **Example of Complaint**

Description: The table presents a complaint from the CFPB database, available at the CFPB database webpage. For an explanation of the information attached to each complaint, refer to the CFPB database fields webpage

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Date received	1/17/19
Product	Mortgage
Subproduct	Conventional home mortgage
Issue	Trouble during payment process
Subissue	[blank]
Company	Ditech Financial LLC
State	TX
Zip code	781XX
Company response	Closed with explanation
Complaint narrative	I have been trying to get my Private Mortgage Insurance Removed from my mortgage since XX/XX/XXXX when my mortgage dropped below 80 % loan to value. Last year my mortgage was sold from XXXX XXXX (Under mortgage XXXX) to Ditech Mortgage (account XXXX). I reached out to Ditech via a email (after being told to do so via phone representative) request to remove my PMI on mortgage on XX/XX/XXXX and received no response at all from them, I even checked my junk box and nothing was there. My mortgage papers that I signed state an "Automatic Termination of PMI" that states once my loan is below 78 % loan to value PMI will automatically terminate (I have attached this document). I reached out again today on XX/XX/XXXX to make this request via phone and was told initially to send the request that I already sent it too. I asked to speak with a supervisor and after being put on hold for about 30 minutes, I finally spoke to one. They told me that my loan to value must be under 70 % loan to value and that was their policy. After reading this document to the supervisor, I was told that "they don't have that document on file". She sent me a link to send her the form I have. I did so and just told me that I'll be hearing from them in 7-10 business days. Given their past history, I highly doubt that I will hear from them. I did mention to the supervisor and ask her why they weren't staying compliant to the homeowners protection act and she said nothing. From my understand this act requires mortgage companies to drop off PMI once loans are below 78 % LTV and the loan is current. I qualify for both of those items and don't understand why this is such a difficult task.

B.I CFPB Investigation Difference-in-Differences, Robustness

Table B.1: **CFPB Investigations - Difference in Differences, Testing Complaints Composition**

Description: These table presents difference-in-differences estimates around the first time a company receives an investigation report (negative feedback from the CFPB). The sample comprehends all treated companies and as controls those companies that were also investigated but did not receive a report and have at least 100 complaints in 2018 (pre-investigations). In columns 1 to 3, the outcome variable is $I(low\text{-}income\ complaint)_{q,tr}$, a dummy equal to one if complaint i against company c filed has been filed in quarter q by filer f from a tract tr that is in the bottom quartile of tracts by household median income, zero otherwise. In columns 4 to 6, the outcome variable is $I(low\text{-}education\ complaint)_{q,tr}$, a dummy equal to one if complaint i against company c has been filed in quarter q by filer f from a tract tr that is in the bottom quartile of tracts by % of population above 25 with a bachelor's degree, zero otherwise. In columns 7 to 9, the outcome variable is $I(minority\ complaint)_{i,f,c,r,q,tr}$, a dummy variable equal to one if complaint i was filed against company c in quarter q by filer f who is either Asian, Black or Hispanic according to BISG algorithms. Across columns, $I(post\text{-}report)_{i,c,q}$ is a dummy variable equal to one if complaint i was filed against company c in quarter q, which is after company c has received an investigation report (negative feedback from the CFPB). Standard errors are clustered at the company level; ***, **, and * denote 1%, 5%, and 10% statistical significance, respectively.

	I(low-income complaint)$_{q,tr}$			I(low-ed. complaint)$_{q,tr}$			I(minority complaint)$_{i,f,c,r,q,tr}$		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
I(post-report)$_{i,c,q}$	0.00523	0.00244	0.00591*	0.00427	0.00314	0.00537**	0.0307***	0.0249***	0.0181***
	(0.0040)	(0.0040)	(0.0031)	(0.0035)	(0.0034)	(0.0022)	(0.0090)	(0.0086)	(0.0064)
quarter FE	x	x	x	x	x	x	x	x	x
company FE	x			x			x		
company x product FE		x	x		x	x		x	x
county FE			x			x			x
observations	1,003,708	1,003,541	1,003,388	1,003,708	1,003,541	1,003,388	1,003,708	1,003,541	1,003,388
R-squared	0.0228	0.0274	0.208	0.0199	0.0243	0.206	0.0178	0.0218	0.188

Table B.2: **CFPB Investigations - Difference in Differences, Matched Sample**

Description: These table presents difference-in-differences estimates around the first time a company receives an investigation report (negative feedback from the CFPB). The sample comprehends all treated companies and, as controls for each treated company, the three closest companies in terms of overall number of complaints, share of complaints from loan-related products, and share of complaints with filer attachments in 2018 (pre-investigations). Across panels, the outcome variable is $solved\ w/MR_{i,f,c,r,q,tr}$, a dummy equal to one if filer i's complaint c from Census tract tr against company c filed in quarter q has been solved with monetary relief, zero otherwise. $I(post\text{-}report)_{i,c,q}$ is a dummy variable equal to one if complaint i was filed against company c in quarter q, which is after company c has received an investigation report (negative feedback from the CFPB). The tables regress $solved\ w/MR_{i,f,c,r,q,tr}$ on the interaction of $I(post\text{-}report)_{i,c,q}$ with the filer's census tract income being above median ($I(above\ med.\ household\ med.\ income)_{q,tr}$, Panel A), or the filer's census tract education being above median ($I(above\ med.\ \%\ pop.\ w/higher\ ed.)_{q,tr}$, Panel B), or the filer's ethnicity according to BISG algorithms (dummies for non-white, Asian, Black, or Hispanic filer, Panel C). Standard errors are clustered at the company level; ***, **, and * denote 1%, 5%, and 10% statistical significance, respectively.

Panel A: Income

	solved w/MR$_{i,f,c,r,q,tr}$		
	(1)	(2)	(3)
I(post-report)$_{i,c,q}$	0.00514	0.00713	0.00737
	(0.0068)	(0.0064)	(0.0064)
I(above med. household med. income)$_{q,tr}$	0.0116***	0.0123***	0.0105***
	(0.0026)	(0.0028)	(0.0025)
I(post-report)$_{i,c,q}$ × I(above med. household med. income)$_{q,tr}$	0.0166***	0.0130***	0.0128***
	(0.0040)	(0.0043)	(0.0044)
quarter FE	x	x	x
company FE	x		
company x product FE		x	x
county FE			x
observations	561,018	560,953	560,741
R-squared	0.0593	0.0860	0.0916

Panel B: Education

	solved w/MR$_{i,f,c,r,q,tr}$		
	(1)	(2)	(3)
I(post-report)$_{i,c,q}$	0.00535	0.00684	0.00695
	(0.0071)	(0.0066)	(0.0065)
I(above med. % pop. w/higher ed.)$_{q,tr}$	0.0133***	0.0114***	0.00948***
	(0.0028)	(0.0028)	(0.0026)
I(post-report)$_{i,c,q}$ × I(above med. % pop. w/higher ed.)$_{q,tr}$	0.0162***	0.0136***	0.0135***
	(0.0050)	(0.0047)	(0.0048)
quarter FE	x	x	x
company FE	x		
company x product FE		x	x
county FE			x
observations	561,018	560,953	560,741
R-squared	0.0595	0.0859	0.0916

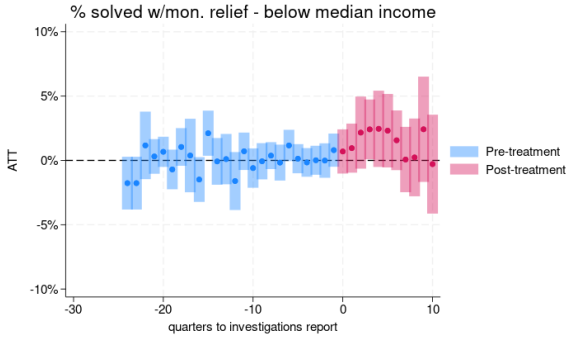
Panel C: Ethnicity

	solved w/MR$_{i,f,c,r,q,tr}$			
	(1)	(2)	(3)	(4)
I(post-report)$_{i,c,q}$	0.0154**	0.0153**	0.0156**	0.0163**
	(0.0072)	(0.0069)	(0.0069)	(0.0068)
I(minority filer)$_{i,f,c,r,q,tr}$	-0.000568	-0.000476	0.00105	
	(0.0026)	(0.0023)	(0.0021)	
I(post-report)$_{i,c,q}$ × I(minority filer)$_{i,f,c,r,q,tr}$	-0.00687**	-0.00561*	-0.00603*	
	(0.0033)	(0.0034)	(0.0034)	
I(Asian filer)$_{i,f,c,r,q,tr}$				0.0146**
				(0.0058)
I(post-report)$_{i,c,q}$ × I(Asian filer)$_{i,f,c,r,q,tr}$				0.0148**
				(0.0067)
I(Black filer)$_{i,f,c,r,q,tr}$				-0.0104**
				(0.0041)
I(post-report)$_{i,c,q}$ × I(Black filer)$_{i,f,c,r,q,tr}$				-0.0217***
				(0.0074)
I(Hispanic filer)$_{i,f,c,r,q,tr}$				0.00100
				(0.0035)
I(post-report)$_{i,c,q}$ × I(Hispanic filer)$_{i,f,c,r,q,tr}$				-0.0105**
				(0.0050)
quarter FE	x	x	x	x
company FE	x			
company x product FE		x	x	x
county FE			x	x
observations	561,018	560,953	560,741	560,741
R-squared	0.0583	0.0851	0.0910	0.0918

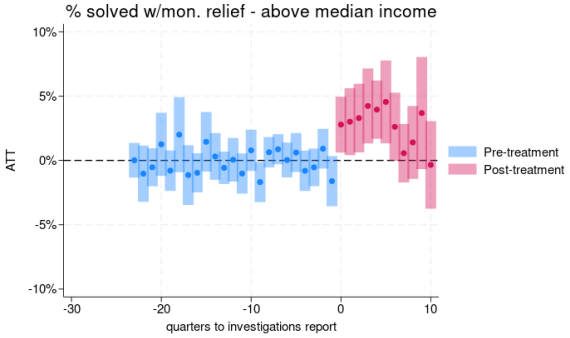
Figure B.1: **CFPB Investigations - Dynamic Difference in Differences, Matched Sample**

This figure reports the dynamic difference-in-differences Callaway and Sant'Anna estimators of the percentage of complaints solved with monetary relief each quarter by each company around receiving an investigation report. The subsamples distinguish between high and low household median income (Panel A), high and low education (% of population above 18yo with a bachelor degree, Panel B), minority and white population (% of non-white population, Panel C). The sample is restricted to companies that were investigated and received and investigation report (negative feedback from CFPB, treatment) and investigated companies that did not receive a report but were similar to treated firms in terms of overall number of complaints, share of loan-related complaints, and share of complaints with filer attachments prior the start of the investigations period (controls).

Panel A: CFPB reports by low and high income

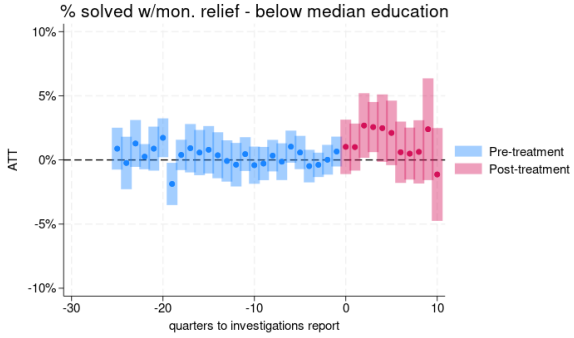


Low-income complaints

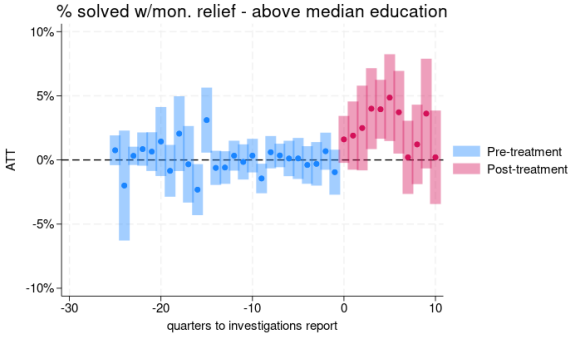


High-income complaints

Panel B: CFPB reports by low and high education

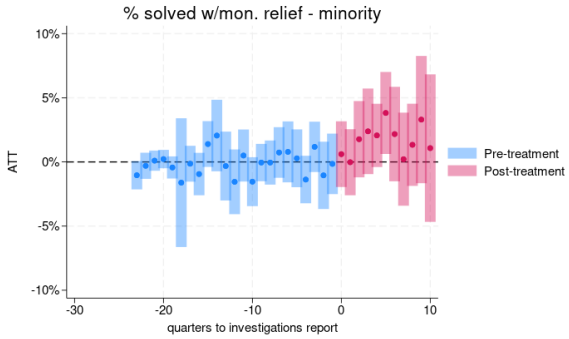


Low-education complaints

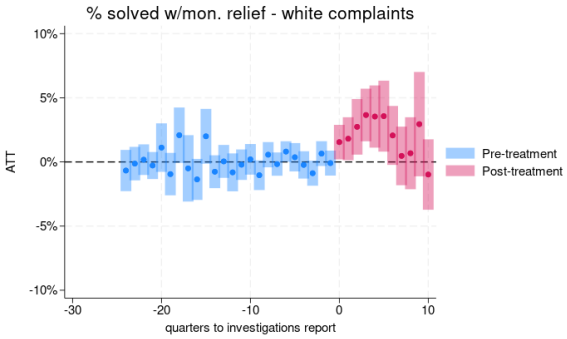


High-education complaints

Panel C: CFPB reports by minority and white filer



Minority complaints



White complaints