The Financial Restitution Gap in Consumer Finance: Insights from Complaints Filed with the CFPB*

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Abstract

Consumers seek restitution for disputed financial services by filing complaints with the Consumer Financial Protection Bureau (CFPB). We find that filings from low-socioeconomic (i.e., low-income and African American) zip codes were 30% less likely to be resolved with the consumer receiving financial restitution. At the same time, low- and high-socioeconomic zip codes submitted an equal share of the CFPB complaints. The socioeconomic gap in financial restitution was scarcely present under the Obama administration, but grew substantially under the Trump administration. We attribute the change in financial restitution under different political regimes to companies *anticipating* a more industry-friendly CFPB, as well as to the more industry-friendly leadership of the CFPB achieving less financial restitution for low-socioeconomic filers. The financial restitution gap cannot be explained by differences in product usage nor the quality of complaints, which we measure using textual analysis.

Keywords: Consumer Finance, Financial Regulation, Financial Disputes, Discrimination, Textual Analysis

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1 Introduction

A robust economic literature studies differences in financial outcomes across socioeconomic groups. Some of this literature specifically focuses on differences in the supply of financial services (e.g., differences in the supply of mortgage credit; Munnell et al., 1996). Another segment of the literature studies differences in the decision-making of individuals (e.g., low-socioeconomic status individuals have more pessimistic beliefs; Das et al., 2020). In response to these socioeconomic differences, policy-makers have proposed and implemented a wide-ranging set of rules and regulations. Regulatory agencies have been formed with the task of enforcing regulations and addressing issues with consumer financial products. Despite such interest, the literature has yet to study whether there are disparities in the outcomes of consumers' efforts, aided by regulators, to seek financial restitution in disputes with financial services companies.

The importance of consumers' efforts to seek financial restitution goes far beyond the wealth transfer between consumers and financial service firms. More broadly, there are crucial questions about the growth over the past several decades in the financial services sector and the share of economic surplus captured by financial firms (Greenwood and Scharfstein, 2013). Some research has argued that the growth of the financial services sector has not been matched with gains in efficiency (Zingales, 2015; Philippon, 2015; Heimer and Simsek, 2019). As such, understanding consumers' efforts to seek financial restitution provides insight into the economic bargaining power of consumers relative to suppliers of financial services, with a particular emphasis on the variation across consumer demographics.

To shed light on these questions, this paper studies the distribution of outcomes that result from consumer complaints submitted to the Consumer Financial Protection Bureau (CFPB). Since near its founding in 2011, the CFPB provides services for consumers to file disputes against financial service providers. The CFPB makes available to the public an anonymized and limited version of the filing in what it calls its database of consumer complaints. As of this writing, there

were approximately 1.5 million complaints directed at companies that provide financial services on products ranging from mortgages, to students loans, to credit reporting. The database includes limited demographic information on the filers. Most important for our purposes, the database contains the zip code of the filer which we then match to geographic demographic information from the U.S. Census.

We find striking differences in the propensity to receive financial restitution from complaints submitted to the CFPB. On average, consumers receive financial restitution on approximately 5% of the filings. We are unable to say whether the 5% baseline is a large or small number, because consumer filings contain a mix of complaints that would merit financial restitution and ones that would not. However, taking the 5% as a baseline, we find that consumers from low-socioeconomic areas are significantly less likely to receive financial restitution. Complaints from the lowest quintile of household incomes and highest quintile of African American population are approximately 30% less likely to receive financial restitution than complaints from high-income and low-African American share zip codes. At the same time, consumer demographics have no effect on the number of complaints filed. We find that high-socioeconomic and low-socioeconomic zip codes have filed an equal fraction of the complaints submitted to the CFPB, which makes the differences in their propensity to receive financial restitution considerably surprising.

Next, we study several explanations for the socioeconomic differences in financial restitution. Though the limited nature of the data prevents us from definitive conclusions, we study the most plausible explanations. Among these explanations, we find the strongest support for the hypothesis that the political preferences of the Executive Branch affect how conciliatory financial service providers are towards consumers that file complaints.

We find evidence that the socioeconomic differences in financial restitution can be attributed to how financial service providers respond to the preferences of different political regimes. Because the CFPB is a federal regulatory agency, it is influenced by the preferences of elected officials, most crucially of the Executive Branch. The CFPB began under the Obama administration and the Trump administration took control thereafter. We find that complaints filed after during Trump administration are 30% less likely to result in financial restitution. The reduced propensity to receive financial restitution is significantly larger for low-socioeconomic areas. In fact, the differences across socioeconomic status are hardly present under the Obama administration.

The reduction in overall financial restitution under the Trump administration is not surprising, but the disproportionate effects on low-socioeconomic groups is more difficult to explain. Though we cannot provide direct evidence of the following theory, an intuitive explanation is that high-socioeconomic status filers have more bargaining power with financial service providers because they make up a larger share of revenues. For example, depository banks often offer tiers of service that depend on the amount of money the client has with the bank. In support of this explanation, we observe that the reduction in financial restitution begins around the time of Trump's election, as opposed to when the Trump administration changed the leadership of the CFPB to Mick Mulvaney from Obama appointee Richard Cordray. This suggests that financial service providers *anticipated* that the Trump administration would be more industry-friendly and responded to his election by becoming less accommodating of consumers, even though the CFPB had not yet changed its leadership.

We consider other explanations as well. The differences in financial restitution are unlikely to be caused by differences in the quality of the filings. We use textual analysis to assign readability scores to the text of the filing. We do not find large differences in the 'quality' of the writing of the complaints across socioeconomic status, nor do we find changes in the written text during the Trump administration. We also do not find differences in the propensity for filers to make references to seeking reimbursements for services. The results are also unlikely to be caused by socioeconomic differences in the types of financial products that consumers file complaints about. We find that socioeconomic differences in financial restitution after the Trump administration across the majority of products.

Furthermore, we use event study analysis to test for differential effects during large settlements that involved the CFPB. In particular, we study a large settlement with Navient, a private provider of student loans, and with Wells Fargo, a large commercial bank that was found to have signed up their customers to fraudulent accounts. We find that these instances of financial misconduct increased the rate of complaints filed with the CFPB against these companies, consistent with the CFPB enforcement actions increasing the rate of attention. High- and low-socioeconomic consumers are similarly affected by the events, both in the rate of new filings and propensity to receive financial restitution. These results imply that consumers from all backgrounds benefit when the CFPB has an active presence in resolving disputes.

Our paper contributes to a growing literature on disparities 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 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., 2017), to modern-day gaps in credit access. Another literature studies broader differences in access to financial services (see e.g., Brown et al., 2019). To the best of our knowledge, Begley and Purnanandam (2020) is the only other paper to 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

¹The 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., 2017; Buchak et al., 2018; Bartlett et al., 2019). Giacoletti et al. (2020) examines the effects of performance incentives on lending discrimination.

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 large differences in financial restitution across socioeconomic groups.

Second, our paper segues with the literature in political economy that studies the malleability of the federal regulatory agencies and political influence on the federal bureaucracy. Akey et al. (2020) shows that banks that have connections to powerful politicians reduce efforts to comply with regulations that encourage lending to low socioeconomic communities. Related papers show federal agencies in the U.S. and in other countries can give preferential treatment to politically connected firms (see e.g., Fisman and Wang, 2015; Mehta and Zhao, 2020; Mehta et al., 2020)

Finally, our paper relates to the literature on financial misconduct with a particular focus on dubious and fraudulent business practices targeted toward households. This literature can be traced to research on payday lenders. Several papers suggest that payday lenders take advantage of unsophisticated borrowers.² More recently, an emerging literature studies the financial misconduct of financial advisers (Gurun et al., 2018; Dimmock et al., 2018; Egan et al., 2019a), while other papers study the sale of worthless financial products to susceptible individuals (Rantala, 2019; Li et al., 2019). To the best of our knowledge, there are just three papers that directly study financial disputes between individuals and financial firms. Egan et al. (2019b) 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 (2019) study court judgments on debt collection cases in Missouri. LaVoice and Vamossy (2019) specifically documents racial disparities 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

²The literature on payday lending is lengthy. It includes the following papers listed in chronological order: Melzer, 2011; Morse, 2011; Bertrand and Morse, 2011; Dobbie and Skiba, 2013; Carrell and Zinman, 2014; Bhutta, 2011; Baugh, 2016; Carter and Skimmyhorn, 2017; Skiba and Tobacman, 2019; Fedaseyeu, 2020. Our apologies to other papers that we may have overlooked.

of financial outcomes and focuses on the role that regulators have in resolving disputes between consumers and firms.

The paper proceeds as follows. Section 2 describes the CFPB data. Section 3 documents socioeconomic differences among financial restitution recipients. Section 4 explores explanations for these socioeconomic differences. Section 5 describes evidence from two high-profile settlements with the CFPB. Section 6 concludes and discusses policy recommendations.

2 Consumer Complaints Data from the CFPB

The data come from the website for the Consumer Financial Protection Bureau (CFPB). 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 and submits their contact information. The CFPB then submits the complaint to the company and works to get a response to the consumer within 15 days.

The CFPB public database contains all complaints submitted via any means, but presumably to protect the anonymity of the consumer, it includes limited information on the demographics of filers. The 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. Because of the limited demographic information, we use the U.S. Census to match demographics to zip codes. Specifically, to estimate the socioeconomic status of the filer, we match the zip code of the filer to the zip code's corresponding county median

household incomes and share of residents that are African American.³ We match complaints data at zip code level to census data at county level to overcome the lack of a standard correspondence between the U.S. Census' ZIP Code Tabulation Areas (the only level of public U.S. Census data more granular than county) and the complaints' U.S. Postal Service ZIP Code.

Our analysis includes all complaints filed between January 2014 and March 2020.⁴ Furthermore, for the early years of our sample, we reconcile the initial product and subproduct categorization to the one the CFPB has changed to in April 2017 and used ever since.

Figure 1 shows the ways in which complaints filed to the CFPB are resolved. Complaints can be resolved in the following ways: *Closed, Closed with explanation, Closed with monetary relief, Closed with non-monetary relief,* and *Untimely response*. The majority of complaints, 80.34%, 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 5.06% of all complaints. Unfortunately, we do not know the size of the financial restitution paid to the consumer.

Complaints are filed on a range of products. Table 1 shows how complaints are distributed across the range of products. The largest categories of complaints are *Credit reporting, credit repair services, or other reports, Mortgage*, and *Debt collection*. These categories constitute 36.25%, 15.35%, and 20.30% of all complaints, respectively. The other categories include issues with bank accounts and credit cards, as well as consumer loans such as student, auto, and payday loans.

Notably, 39% of complaints contain a narrative written by the filer. Narratives are publicly disclosed, with the consent of the filer, only for complaints filed since March 2015. The following

³When the CFPB reports a three-digit zip code, we average the demographics of the potential corresponding counties by their population size. When a zip code spans more than one county, we average the counties' demographics by their corresponding zip code's residential ratio values.

⁴Our analysis excludes consumer complaints filed before 2014. We make this sample restriction for two reasons. First, these observations are more likely to have missing information in the complaint. Second, these observations contained several discontinunities that give us cause to think that the publication of data during the nascent years of the CFPB was not random. This sample restriction removes approximately 180,000 complaints from our analysis. Nonetheless, all of the conclusions we draw from the data are robust to this sample restriction though we think the restricted sample gives a more accurate assessment of the magnitudes of the results.

analysis uses the text of these complaints in a few ways (the remaining 61% of filings are likely to also contain a written narrative that has not been disclosed). First, we analyze the text to create measures of the "quality" of the complaint. Such measures are based on the quality of the written narrative. They proxy for how capable the consumer would be at describing the dispute with the financial service provider. Second, we use the text to conduct word searches for important subject matters within the complaint. In particular, we search for words that relate to "refund" to indicate that a filer expects to receive financial restitution from the company. We search for words that relate to "fraud" because the CFPB has been tasked with resolving instances of fraud.

In light of prior work using the CFPB data (Begley and Purnanandam, 2020), we augment the data with a measure of credit access. We proxy for credit access in local areas by using data on mortgage applications from the Home Mortgage Disclosure Act (HMDA). Specifically, we use HMDA data to calculate the average approval rate of mortgage applications in a given zip code.

3 The Financial Restitution Gap

In the section, we study the propensity to receive financial restitution as a result of filing complaints to the CFPB. We find stark differences in the propensity to receive financial restitution across the socioeconomic status of the filer.

3.1 Graphical evidence

Figure 2 sorts complaints into quintiles based on the demographics of the filer. Panel A sorts the data into quintiles based on the median household income of the zip code of the filer. We find that the propensity to receive financial restitution is positively related to the income of the filer. Filers in the lowest quintile of incomes have 4.21% of their complaints resolved with financial restitution. The propensity to receive financial relief increases monotonically with increase in incomes. Filers in the top quintile of incomes have 6.26% of their complaints resolved with financial restitution.

Therefore, taking 6.26% as a baseline, low income filers are 2 percentage points or 33% less likely to have their complaints resolved with financial restitution.

We find similar differences in financial restitution across races. Panel B sorts complaints into quintiles of the share of African American population in the zip code. The share of complaints met with financial restitution decreases monotonically in the share of African American population. Financial restitution is granted for 3.95% of complaints filed by zip codes with the largest share of African Americans. On the other hand, 5.92% of complaints filed in zip codes with the lowest share of African Americans result in financial restitution. As such, filers from zip codes with the largest share of African American population are 33% less likely to receive financial restitution from their complaints.

For both measures of socioeconomic status, incomes and the share of African American population, we find that low-socioeconomic zip codes are significantly less likely to receive financial restitution from their complaints to the CFPB. In light of these findings, we evaluate whether the differences can be explained by the propensity across zip codes to file complaints. In particular, it could be that high-socioeconomic zip codes file significantly fewer complaints because they have the means to directly seek recourse against financial service firms.

We find that low- and high-socioeconomic zip codes file approximately the same share of complaints to the CFPB. Figure 3 shows the share of complaints filed by each quintile of household incomes (Panel A) and African American share (Panel B). For both measures, the share of filings is roughly 20% in each of the five quintiles.

3.2 Regression evidence

We augment the graphical analysis using a regression framework. We estimate the following regression model using OLS:

$$financial\ restitution = \gamma_t + \beta_1 \times SES + \beta_2 \times controls + \varepsilon_i$$
 (1)

where the dependent variable, *financial restitution*, is an indicator variable that equals one if complaint i was resolved with financial restitution. The independent variable of interest, SES, is the demographics of the filer. In some tests, we define SES as the zip code's household median income, and in other tests, we define SES as the fraction of the zip code's population that is African American. In all tests, we normalize SES so that a one unit increase equals a one standard deviation increase. The regression includes a vector of control variables for the characteristics of the complaint and of the filer. It also includes a time fixed effect, γ_i .

The coefficient of interest in equation 1 is β_1 . Each standard deviation increase in socioeconomic status, SES, increases the propensity to receive financial restitution by an amount equal to β_1 . For example, consider a regression that sets SES equal to the share of African American population in the zip code, normalized so that every unit increase is equal to a standard deviation increase. In this regression, β_1 is an estimate of how much the propensity to receive financial restitution increases as the share of the zip code's population that is African American *decreases* by one standard deviation. For a regression that sets SES to be based on the median income in the zip code instead, β_1 is an estimate of how much the propensity to receive financial restitution *increases* as the zip code's household median income increases by one standard deviation.

In the following regression tables, we include different sets of controls to account for differences across filings in terms of local area credit conditions, filer demographics, product type, and firms. In particular, column (1) starts by including year fixed effects, which are included in all subsequent specifications. Column (2) then adds our proxy for local area credit supply – the ap-

proval rate on mortgages in HMDA. Column (3) controls for whether the filer is old age. Column (4) includes fixed effects for the nine types of financial products available in the database. Column (5) includes fixed effects for the financial services company that is the subject of the complaint. Column (6) includes all of the aforementioned controls and fixed effects. Across all specification, we cluster standard errors by the state of the filer.

We start by estimating the propensity to receive financial restitution across different household incomes. Table 2, Panel A, sets SES equal to the median income in the filer's zip code. Across all specifications, we find large reductions in the propensity to receive financial restitution in low-income zip codes. The estimate of β_1 is between 0.001 and 0.006 and is statistically significant at the one percent in all specifications. The estimated coefficient implies that each standard deviation increase in the zip code's median income increases the propensity to receive financial restitution by between 0.1 and 0.6 percentage points, which is sizable given that the average propensity to receive financial restitution is 5%. The coefficient estimates imply large differences between the lowest and the highest socioeconomic zip codes, which supports the graphical difference in Figure 2. For example, suppose that low-SES zip codes are two standard deviations below the mean of zip codes incomes and that that high-SES zip codes are two standard deviations above. Then, the coefficients imply that there is a 0.4 to 2.4 percentage point greater propensity to receive financial restitution in high-SES zip codes.

Next, we estimate the propensity to receive financial restitution across races. Table 2, Panel B, sets the independent variable of interest equal to the fraction of the population in the filer's zip code that is African American. Similar to our findings using household incomes to proxy for so-cioeconomic status, we find that the propensity to receive financial restitution is negatively related to filer race. The estimate of β_1 is also between 0.001 and 0.006 and is statistically significant at the one percent error level in all six specifications.

Though we find statistically significant and economically large estimates across all specifications, the range of coefficient estimates on *SES* is large. Most notably, the coefficients in both

panels tend to be close to 0.006 in columns (1) through (3) when we only have time fixed effects and controls for credit supply and the filer's age. The coefficients fall to between 0.001 and 0.002 when we include either company or financial product fixed effects (columns 4 through 6). Both fixed effects increase the explanatory power of the regression, as captured by large increases in the R-squared. At the same time, the reduction in the coefficient estimates when adding these variables is to be expected because low- and high-SES populations use different financial products, and accordingly, different firms supply different financial services. Nonetheless, the differences in financial restitution across SES status hold up to controlling for such differences in financial services. Yet, the estimates merit further robustness tests, which we explore in the next section.

3.3 Robustness of differences in financial restitution

We evaluate the robustness of the regression estimates using "specification curve" analysis (see Simonsohn et al., 2015 for the original application and Akey et al., 2020 for an application in a finance publication). The specification curve is a way to visualize how changing the assumptions about the correct specification of the regression affects the coefficient of interest. Our specification curves include 180 different estimates of equation 1 that use different combinations of (i) threshold for inclusion in the low-socioeconomic indicator, (ii) the sample period for the filing, (iii) the choice of demographic controls, and (iv) the characteristics of the complaint. To read the specification curve, its top panel contains the coefficient estimate ordered from largest to smallest (and an indicator for whether the estimate is statistically significant at the five percent error level). The bottom panel contains the combination of assumption (i) through (iv) contained in each specification. Note that the specification curve analysis is slightly different from the estimates of equation 1 in that we use categorical variables to define SES rather than continuous variables. We do so to illustrate the monotonic effects of SES on the propensity to receive financial restitution and to draw comparison to our motivating graphical evidence in Figure 2.

We gain several insights from the specification curve analysis (Figure 4). First, the negative relation between socioeconomic status and the propensity to receive financial restitution is extremely robust. The estimate on SES is negative and statistically significant in the vast majority of specifications (SES is measured using incomes in Panel A and percent African American in Panel B). Second, increasing the threshold for inclusion in the SES indicator tends to make the coefficient estimate more negative. This further confirms that the propensity to resolve complaints with financial relief declines as the filer's zip code contains more individuals with low-socioeconomic status. Third, we use the specification curve to examine the effects of different sample periods by dividing the data into complaints resolved during the Obama and during the Trump presidencies. The results clearly show that the negative effect is larger during the Trump administration. We explore this result in more detail in the following section. Fourth, controlling for the demographics of the filer does not have a large effect on the coefficient estimates. However, including state fixed effects shrinks the coefficients, presumably because many of the filings only contain the state or the first three digits of the zip code. Fifth, including fixed effects for the characteristics (company, product, or issue) of the complaint reduces the magnitude of the coefficient relative to not including these fixed effects. However, none of the three complaint characteristics is significantly more important than the others.

4 Explaining the Financial Restitution Gap

4.1 Political Influence on the CFPB

Regulatory agencies are malleable. Political leadership can influence the focus and operations of federal agencies (see e.g., Akey et al., 2020). The CFPB was founded under the Obama administration and it was designed to be consumer-friendly. The objectives of the agency changed when President Trump took office in January 2017. The Trump administration is widely thought to have

negative views of regulations that are directed at firms. In this section, we examine whether the different political regimes affected the socioeconomic gaps in financial restitution.

We find that socioeconomic differences in financial restitution are significantly larger under the Trump administration, and for the most part, were barely present under the Obama administration. Figure 5 sorts the percentage of complaints that receive financial restitution by socioeconomic status and by political administration. Panel A sorts complaints by household incomes. During the Obama administration, 6.9% of complaints in the top quintile of incomes and 5.47% of complaints in the bottom quintile receive financial restitution. Under the Trump administration, 5.78% of complaints in the top quintile and just 3.48% of complaints in the bottom quintile receive financial restitution. As such, the socioeconomic gap of 1.12 ppt grows to 1.99 ppt from the Obama to Trump administration.

The political effects on the socioeconomic gap are even more stark when we examine differences across races. Figure 5, Panel B sorts by the share of population that is African American. During the Obama administration, 6.41% of complaints in zip codes with the fewest African Americans and 5.77% of complaints in zip codes with the largest share of African American population receive financial restitution. During the Trump administration, 5.54% (3.04%) of complaints in the quintile with the fewest (largest) share of African Americans receive financial restitution. Therefore, a financial restitution gap of 0.64 percentage points under the Obama administration grows to 2.73 percent points under the Trump administration.

Table 3 uses regression analysis to explore the effects of different political regimes on the socioeconomic differences in financial restitution. Panel A uses median income to measure low-socioeconomic status and Panel B uses the share of African American population. Columns (1) and (2) estimate the regression specification in equation 1 on the sample of complaints resolved during the Obama administration and during the Trump administration, respectively. Columns (3)

and (4) use the following difference-in-differences regressions:

financial restitution_{i,t} =
$$\gamma_t + \beta_1 \times SES_i + \beta_2 \times post\ Trump_t + ...$$

... + $\beta_3 \times SES_i \times post\ Trump_t + \beta_4 \times controls + \varepsilon_{i,t}$ (1)

where *post Trump* is an indicator for resolving the complaint after January 20, 2017. The independent variable of interest is the interaction between *SES* and *post Trump*. The coefficient estimate β_3 captures the marginal effect of the Trump administration on the relation between socioeconomic status and the propensity to receive financial restitution.

The regression analysis supports our graphical evidence that the socioeconomic difference in the propensity to receive financial restitution emerges primarily under the Trump administration. In the split sample tests in columns (1) and (2), the coefficient estimates on *SES* is larger during the Trump administration sample than for the Obama administration sample. When *SES* is defined as median income (Panel A), the coefficient is 0.0044 under the Obama administration and 0.0074 under the Trump administration. The difference between administrations is larger when *SES* is defined as the percentage African American (Panel B). The coefficient estimate is 0.0023 under Obama and 0.0084 under the Trump administration. All of the coefficient estimates are statistically significant.

Moving to the difference-in-differences estimates of β_3 , they also support the conclusion that the socioeconomic gap widens under the Trump administration. These coefficients capture the difference between Presidential administrations in how socioeconomic status affects the propensity to receive financial restitution. The coefficient estimates are all positive, suggesting that high-socioeconomic status filer are relatively more likely to receive financial restitution under the Trump administration. However, including granular fixed effects for the company reduces the size of the estimates and they lose statistical significance when *SES* is measured by zip code median incomes.

This could be caused by a change across administrations in the composition of companies that were the subject of complaints, a prospect we later explore.

Given the change in preferences between the Obama and Trump administrations, it is not surprising that the overall propensity for consumers to receive financial restitution declines under the Trump administration. Less clear, however, is why low-socioeconomic filers experienced a larger decline under the Trump administration than did high-socioeconomic filers.

First, we use event-study regressions around the change in presidential administrations to shed light on how the socioeconomic differences in financial restitution took hold. Figure 6 plots distributed lagged coefficients for each quarter relative to the first quarter of 2014. Panel A plots the propensity to receive financial restitution in a given quarter for *all filers* relative to the first quarter of 2014. Panels B and C compare how the difference between low- and high-SES filers changes over time. Panel B sets SES equal to the zip code's median income and Panel C sets SES equal to the share of the zip code's population that is African American. These panels use coefficient estimates to show how the socioeconomic differences in financial restitution change over time. Negative coefficient values indicate that low-SES filers are less likely than high-SES filers to receive financial restitution.

We start with Panel A, where the coefficient estimates indicate the change in propensity to receive financial restitution for filers from all zip codes. There is a sharp drop of approximately two percentage points in the propensity to receive financial restitution starting in the quarter after Trump is inaugurated. Prior to Trump's inauguration, the coefficient estimates are not statistically different from zero, which indicates that there are no pre-trends in the dependent variable. Notably, the decrease in financial restitution occurs after the Trump inauguration and before the Trump administration changed the leadership of the CFPB (from Obama administration holdover, Richard Cordray, to acting director, Mick Mulvaney, in the last quarter of 2017). This suggests that, though leadership of the CFPB had not yet changed, the propensity for companies to give financial restitution declined significantly. This result is consistent with the explanation that financial service

companies expected the CFPB to be less consumer-oriented under the Trump administration and became less willing to provide financial restitution as a result. Panels B and C confirm that the so-cioeconomic differences in financial restitution are mostly stable under the Obama administration. The difference emerge under the Trump administration, although they also develop at the peak of the 2016 election cycle, before Trump was elected. Thus, the heightened political uncertainty during this period may have encouraged companies that have low-socioeconomic clientele to bet that the CFPB would reduce their enforcement of complaints.

Next, we study the mechanism through which the CFPB would have changed its enforcement of complaints between the Obama and Trump administrations. We consider two possibilities: (1) the CFPB became favorable toward the types of financial products that are more likely to be used by low-socioeconomic consumers and (2) we consider whether the CFPB became more favorable to certain companies or whether the reduction in enforcement was broadly applied.

We address both possibilities by examining the propensity for firms to grant financial restitution across the two political regimes. Figure 7 presents a bar graph of the percentage of firms that resolve at least one complaint with monetary relief. The bar graph is sorted by the product each firm has received the most complaints about and into complaints filed during the two presidencies. The key feature of the data in this graph is that we keep only the set of firms that have received at least one complaint during both presidencies.

We find that the reduction in the propensity to grant financial restitution during the Trump administration is broadly applied across all financial product categories. Across all nine of the categories, except for *money transfers*, we find reductions in the propensity for firms to grant financial restitution under the Trump administration. The second largest reduction in the propensity for firms to grant financial relief is in the student loan category, a finding that is broadly consistent with the lenience toward private student loan providers demonstrated by the Department of Education un-

der the Trump administration.⁵ We interpret this result as evidence that financial service providers broadly expected less enforcement under the Trump administration and as a result, adjusted their propensity to award financial restitution to customers.

Next, we explore how the within-category change in the propensity to grant financial restitution relates to the financial products used by low-socioeconomic individuals. First, we show that there are differences in the types of financial products used by different socioeconomic groups. Figure 8 shows that low-socioeconomic groups make up a larger share of complaints to the CFPB on products like credit reporting, debt collection, and vehicle loans/leases. On the other hand, high-socioeconomic groups constitute a relatively larger share of complaints about mortgages, money transfers, and credit cards. However, these differences in product usage are moderately sized. For example, zip codes with the highest quintile of African Americans make up 23% of complaints about credit reporting and 15% of the complaints about credit cards (relative to a 20% baseline if complaints were randomly assigned across demographic groups).

Despite these differences in product usage across socioeconomic status, they cannot explain the differences in financial restitution across presidential administrations. In Figure 9, each data point corresponds to one of the nine categories of complaints. The *x*-axis is the share of complaints filed by low-socioeconomic zip codes. The *y*-axis is the change from the Obama to the Trump administration in the propensity to resolve complaints with financial restitution. If the Trump administration was primarily targeting low-socioeconomic consumers, then we would expect to see the CFPB weaken its enforcement efforts on targets that are primarily used by low-socioeconomic consumers. For example, the CFPB would allocate resources away from debt collection and vehicle loans/leases toward resolving disputes in mortgage and credit card products. However, these graphs show that there is no relation between the change in the propensity to give financial restitution and the share of low-socioeconomic filers (measured by incomes in Panel A and by race in Panel B).

⁵For example, "With veto, Trump backs DeVos in battle over relief for scammed student-loan borrowers" Marketwatch, Published: May 30, 2020 at 2:47 p.m. ET, By Jillian Berman.

This result further suggests that financial service firms broadly expected the CFPB to be weaker in resolving disputes, rather than the CFPB making targeted efforts to reduce its assistance to low-socioeconomic filers.

Finally, we provide further evidence that financial service providers broadly changed their propensity to grant financial restitution when the presidential administration changed from the relatively consumer-friendly Obama administration to the relatively industry-friendly Trump administration. Table 4 presents estimates of the interaction coefficient on socioeconomic status and *post Trump* from equation 1. In these regressions, we sort the data into sub-samples for the size of the company and the company's propensity to grant financial restitution during the Obama administration. We sort companies into those that had fewer than 25 complaints, between 25 and 100, between 100 and 1,000, and greater than 1,000 during the Obama administration. We also sort companies by whether they gave no financial restitution under the Obama administration, and whether they had above or below the median fraction of complaints resolved with financial restitution. This sorting is intended to capture whether some firms are more or less forthcoming towards consumers during the Obama administration.

We find that companies, regardless of whether they were more or less conciliatory towards consumers under the Obama administration, contribute to the financial restitution gap under Trump. We find positive estimates of the interaction coefficients in the majority of the sub-samples. Most strikingly, mid- to large-size firms are the most responsible for the effect. Companies with between 100 and 1,000 complaints have the largest and most consistent effects on the financial restitution gap. One surprising finding from these sub-sample results is that even companies that gave *no* financial restitution at all under the Obama administration contribute to the socioeconomic gap that emerges under the Trump administration (see the first column of the table). This suggests that some of the no-financial-restitution companies under Obama began to provide financial restitution under Trump, but did so disproportionately to high-socioeconomic filers.

4.2 The Quality of Complaints to the CFPB

One possible difference across socioeconomic groups in the propensity to receive financial restitution could be that complaints have different quality. For example, it could be that socioeconomic status correlates with financial sophistication and that less financially sophisticated individuals file complaints that have less grounds for restitution. Unfortunately, the data does not give clear guidance for which complaints have a legitimate reason to expect financial restitution. However, we use the data that is available to us: we estimate the quality of complaints using the textual descriptions of the complaints. An important caveat is that we cannot directly use textual analysis to quantify which complaints are more or less deserving of financial restitution. We can only use textual analysis to determine whether there are differences across socioeconomic groups in the content of complaint. To preview the results of the following analysis, we find that high- and low-socioeconomic groups write similar texts in their complaints.

We first focus on the length of the complaints to assess whether there are fundamental differences in how filers are voicing their discontent across demographics. The length of the complaint is a simple count of the words contained in the narrative. Table 5, Panel A uses regression analysis where the dependent variable is the number of words in the text of the complaint and the independent variable of interest is SES. We find that complaints from low socioeconomic status zip codes average the same number of words as those from high socioeconomic status zip codes. Furthermore, we use interactions between SES and post Trump to test if there are changes to the text of the complaints across socioeconomic status for those filed after the Trump administration. The regressions show that complaints from from zip codes with a lower share of African American population contain more words during the Trump administration. However, the size of the coefficient is small compared to the average narrative length in the sample. Overall, the results suggest that the content of the complaints do not change significantly between presidential administrations. As such, the

socioeconomic differences in financial restitution that emerge under the Trump administration are unlikely to be explained by changes to the complaints submitted by consumers.

To further investigate the quality of the complaints, we look at their complexity. We use two measures that were developed in the linguistic literature and have been used in the finance literature as well.⁶ The first measure is the Flesch reading ease score, which ranges from 0 to 100, with 100 being the highest readability/lowest complexity score. For reference, scoring between 60 to 70 is equivalent to writing complexity of school grade level 12 to 10. The Flesch reading ease score is computed as follows:

$$Flesch_score = 206.835 - 1.015 \times \left(\frac{number_of_words}{number_of_sentences}\right) - 84.6 \times \left(\frac{number_of_syllables}{number_of_words}\right)$$

The second measure is the Gunning fog index, which ranges from 0 to 20, with 20 being the lowest readability/highest complexity score. For reference, scoring between 10 and 12 is equivalent to writing complexity of school grade level 10 to 12. The Gunning for index is computed as follows:

$$Gunning_Fog_index = 0.4 \left[\left(\frac{nomber_of_words}{number_of_sentences} \right) + 100 \times \left(\frac{number_of_complex_words}{number_of_words} \right) \right]$$

where complex words are words with at least three syllables.

To facilitate comparability across measures, the Flesch reading ease score enters regressions with a negative sign. Hence, higher values in both indexes proxy for lower readability/higher complexity of the narratives.

⁶For a review of the finance literature using the two measures, refer to Loughran and McDonald (2016).

The regression results are presented in Table 5, Panels B and C. The findings on the quality of the complaints using these writing complexity measures as proxies are similar to the results using the simple word count. We find limited evidence that the complexity of the complaint is declining in the socioeconomic status of the filer when socioeconomic status is defined as household income. However, we do not find differences using the share of African American population to measure socioeconomic status. We also do not find evidence of changes to the narrative complexity of the complaint before and after the Trump administration. We find no effects when socioeconomic status is based on African American population percentage and the effects are very small in magnitude when socioeconomic status is based on median income. Overall, the evidence suggests that there is not much difference in the narratives of the complaints across socioeconomic groups nor before and after the Trump administration took control of the CFPB.

4.3 The Content of Complaints

In this section, we inspect the content of the complaints. First, we inspect whether there are differences across socioeconomic groups in the expectations of receiving financial restitution. We flag complaints that mention the word "refund" or other related words or concepts. Table 6, Panel A presents regression analysis where the dependent variable is an indicator for mentioning "refund" or other related words or concepts. The independent variable of interest is the indicator for low socioeconomic status. We find a slightly higher propensity to employ broad mentions of the "refund" concept in complaints originating from zip codes with higher socioeconomic status during the Trump administrations. However, the magnitude is small and is unlikely to explain the differences in financial restitution across socioeconomic status. Generally, high- and low-

⁷Related concepts for "refund": "refunding", "refunded", "refunds", "repay", "reimburse", "reimbursement", "reimbursement", "repayments", "repayments", "repaying", "pay back", "paying back", "paid back", "make good", "making good", "made good", "compensate", "compensation", "compensation", "compensation", "recoupe", "recouped", "remunerate", "remuneration", "remunerations", "remuneration", "remunerated", "squaring accounts with", "squared accounts with", "square accounts with".

socioeconomic groups appear to expect similar levels of financial restitution from their filings to the CFPB.

Next, we assess whether the complaints relate to fraudulent activities by the financial service firm. We search the text of the complaint for the word "fraud" and fraud-related concepts. Using the same regression analysis as before, Table 6, Panel B shows that lower income filers are less likely to have complaints that relate to fraud. However, mentioning fraud becomes more likely during the Trump administration, which contrasts with our result that the socioeconomic gap in financial restitution becomes large after Trump became president. Also, filers from zip codes that have a higher share of African American population are not more likely to mention fraud. Combined, these results are unable to say that low-socioeconomic filers are less likely to be the target of outright fraud relative to high-socioeconomic filers.

5 High-profile CFPB Cases

In this section, we examine the resolution of two large cases brought by the CFPB against financial service providers. We study how the resolution of the cases and the filings to the CFPB vary by socioeconomic status. This sheds light on how consumers respond to news about high-profile cases and the financial restitution that results from the cases.

The first case we study involved Navient, one of the largest private providers of student loans. In January, 2017, the CFPB filed a lawsuit against Navient accusing the company of engaging in a multitude of deceptive practices that were not in the best interest of its customers. The case played out slowly over the subsequent three years, but ultimately, Navient was not made to issue financial restitution to any of its clients.

⁸Related concepts for "fraud": "deceit", "deception", "trickery", "rip-off", "fake", "con", "impostor", "fraudster", "deceive", "deceived", "defraudd", "cheat", "cheating", "cheated", "trick", "tricked", "tricking", "mislead", "misleading", "misleading", "misguided", "misguiding".

Figure 10 plots complaints against Navient and the complaints resolved with financial restitution over the course of time. The graph sorts complaints into those coming from zip codes with median incomes greater than or less than 50,000 (Panel A) and into zip codes with at least or less than 25% of the population African American (Panel B). In these graphs, we plot the cumulative density of the complaints, but we set the month prior to the initial lawsuit against Navient as being equal to 100%. All other data points are percentages relative to this month. The graph shows that there is a large spike in complaints in the month of the lawsuit – the number of complaints rose by 30% relative to the total number of complaints filed up to December 2016. The CFPB received a steady increase in complaints in the months that followed. Because Navient claimed to have done nothing wrong, and eventually settled without issuing financial restitution, the number of complaints resolved with financial restitution is essentially constant around the time of the lawsuit.

Noticeably, there is scant difference across socioeconomic groups in the number of complaints filed against Navient or in the propensity for Navient to issue financial restitution. We interpret this result as showing that Navient did not give favorable treatment to either high- or low-socioeconomic groups. The result also suggests that high- and low-socioeconomic groups had similar responses to the news about the Navient lawsuit. It is consistent with there not being a gap in awareness across filer demographics.

The second case study we consider involved Wells Fargo, a large commercial bank. In September 2016, the CFPB fined Wells Fargo \$100 million for the widespread practice of opening unauthorized banking accounts on behalf of unknowing consumers. Wells Fargo was required to pay full refunds to consumers. The refunds would cover the costs of all monthly maintenance fees, insufficient fund fees, overdraft charges, and other fees they paid because of the creation of the unauthorized accounts. The CFPB expected the refunds to total at least \$2.5 million.⁹

⁹https://www.consumerfinance.gov/about-us/newsroom/consumer-financial-protection-bureau-fines-wells-fargo-100-million-widespread-illegal-practice-secretly-opening-unauthorized-accounts/

Figure 11 plots complaints against Wells Fargo and the complaints resolved with financial restitution over the course of time. The structure of the graph is the same as for the Navient figure, Figure 10. The key difference between the Wells Fargo and the Navient case studies is that Wells Fargo's "cross-selling" sales tactics were well-known to the public before the CFPB took action. As a result, there is a steady increase in the number of complaints filed against Wells Fargo before September 2016. The rate of cases that are resolved with financial restitution is also rising at the same rate as the number of filings. The CFPB actions against Wells Fargo leads to increases in the rate of new complaints, but the increase is not nearly as sharp as it was for Navient. However, like in the Navient case, we observe scant differences between high- and low-socioeconomic groups. This provides evidence of similar rates of attention by consumers from different socioeconomic status, as well as similar levels of treatment of complaints across socioeconomic status.

6 Conclusions

We study disputes between consumers and financial service providers. To do so, we use a database of complaints filed with the Consumer Financial Protection Bureau. We find that there are large differences across socioeconomic groups in the propensity to receive financial restitution from a complaint despite no differences in the rate of filing a complaint. Complaints filed from the low-income zip codes or zip codes that have a larger share of African American population are approximately 30% less likely to be resolved with financial restitution. We explore various explanations for these findings. We find no differences across socioeconomic groups in the attention paid to prominent actions against firms instigated by the CFPB, no differences in the measurable "quality" of the complaint, and no differences in the expectations of financial restitution in the text of the complaints. The most striking difference we observe is the change in the propensity to receive financial restitution under different political regimes. The CFPB gets companies to deliver financial restitution significantly more frequently under the Obama administration relative to under

the Trump administration, and the reduction in financial restitution is especially prevalent for low-socioeconomic filers. We provide evidence that financial service firms expect the CFPB to reduce its enforcement of filings under the Trump administration.

There is a lengthy literature in economics and finance that documents disparate outcomes across socioeconomic groups, and across different races and genders. This literature often searches for evidence of discrimination by economic decision-makers against minority groups. Our paper is notable in that we study a setting in which there is no *a priori* reason to expect disparate treatment. We study consumers that file complaints against financial service providers and these complaints are filed through a federal regulatory agency, the CFPB. We would have expected the federal agency to have leveled the playing field for low-socioeconomic filers. Instead, we find that high-socioeconomic filers are more likely to receive financial restitution from complaints they file to the CFPB. As such, we view our findings as a puzzle that should motivate future efforts to understand why financial regulators can have heterogeneous effects on consumer financial outcomes.

Our findings have important implications for the regulation of consumer financial products. Low-socioeconomic groups naturally have less means to instigate recourse in disputes with firms. As such, low-socioeconomic groups would be more reliant on the services of government agencies to handle any such disputes. However, federal agencies only provide such assistance when they have the support of elected officials. As such, the policy preferences of the federal government shape the distribution of outcomes via their influence on regulatory agencies. Firms change their behavior depending on their expectations of regulatory enforcement.

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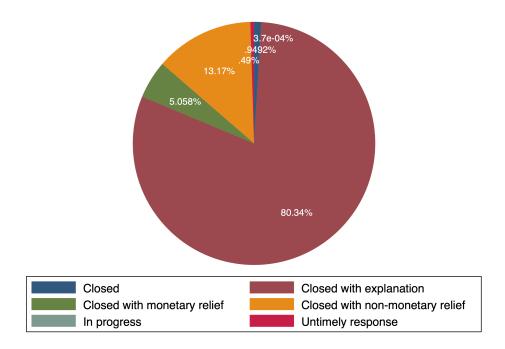
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Figure 1: Financial restitution of Complaints at the CFPB

This Figure shows the main features of complaints' resolution. Panel A shows how complaints are resolved. Panel B shows how monetary relief is distributed across complaints related to different product categories.

Panel A: Resolution Across Complaints



Panel B: Financial Restitution Across Categories

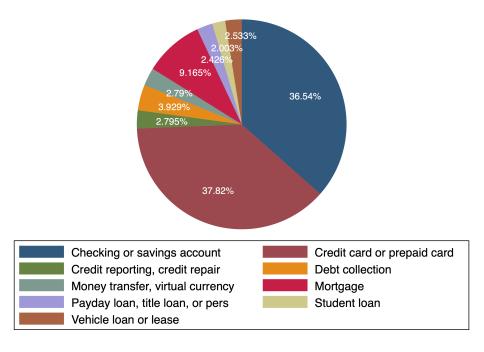
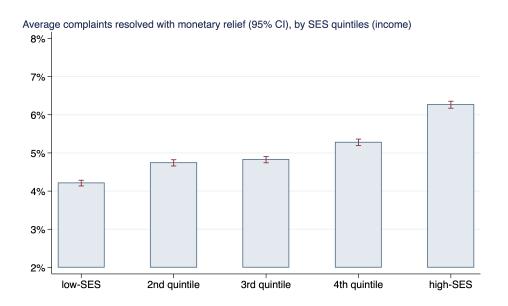


Figure 2: The Distribution of Financial restitution

The Figure shows how financial restitution is distributed across different demographic characteristics. Panel A shows monetary relief across socioeconomic status quintiles based on complaint's zip code household median income. Panel B shows monetary relief across socioeconomic status quintiles based on complaint's zip code percentage of African American population.

Panel A: Financial Restitution Across Consumer Incomes



Panel B: Financial Restitution Across Consumer Races

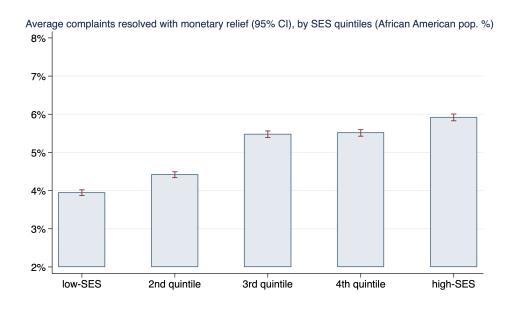
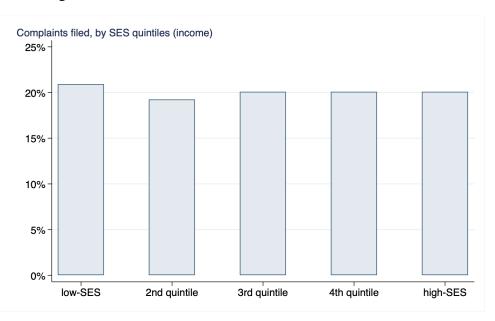


Figure 3: Distribution of Filings of Consumer Complaints

The Figure shows how many complaints are filed across different demographic characteristics. Panel A shows filed complaints across socioeconomic status quintiles based on complaint's zip code household median income. Panel B shows filed complaints across socioeconomic status quintiles based on complaint's zip code percentage of African American population.

Panel A: CFPB Filings Across Consumer Incomes



Panel B: CFPB Filings Across Consumer Races

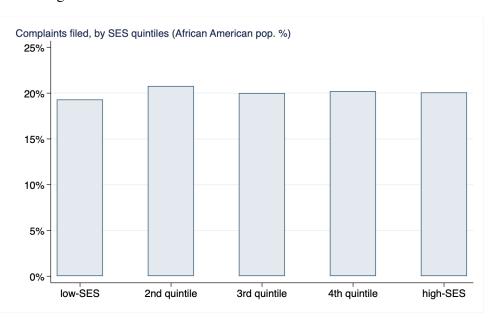
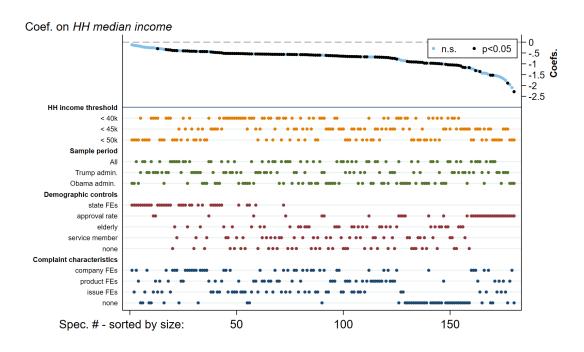


Figure 4: Robustness of the Financial Restitution Gap

The Figure shows specification curve analysis outputs for regressions with dependent variable a dummy equal to 1 when the complaint has been solved with monetary relief, 0 otherwise. Panel A focuses on household median income effects on the likelihood of monetary relief. Panel B focuses on African American population percentage effects on the likelihood of monetary relief.

Panel A: Financial Restitution Across Consumer Incomes



Panel B: Financial Restitution Across Consumer Races

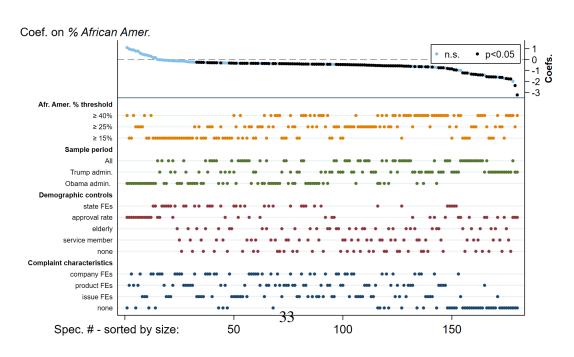
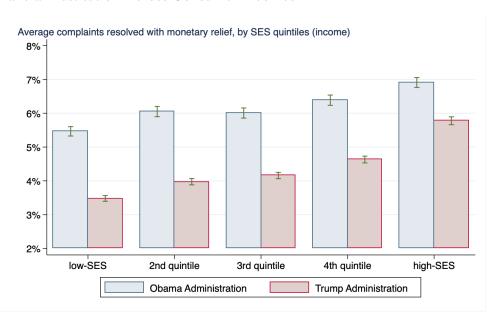


Figure 5: Financial Restitution Under Different Political Regimes

The Figure shows differences in financial restitution between the Obama and the Trump administrations. Panel A focuses on socioeconomic status quintiles based on complaint's zip code household median income. Panel B focuses on socioeconomic status quintiles based on complaint's zip code percentage of African American population.

Panel A: Financial Restitution Across Consumer Incomes



Panel B: Financial Restitution Across Consumer Races

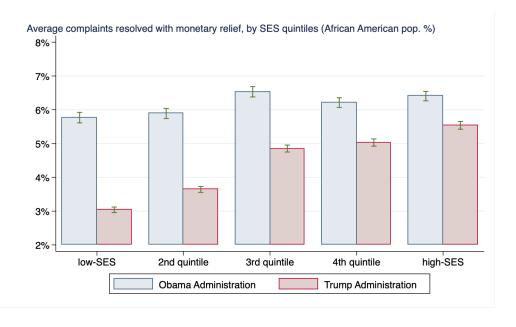
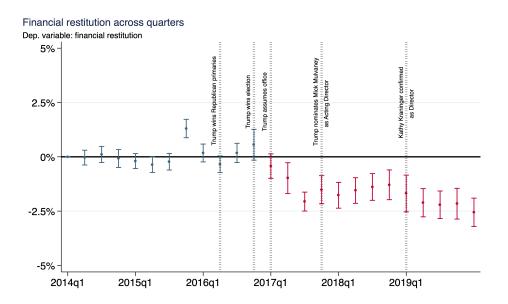


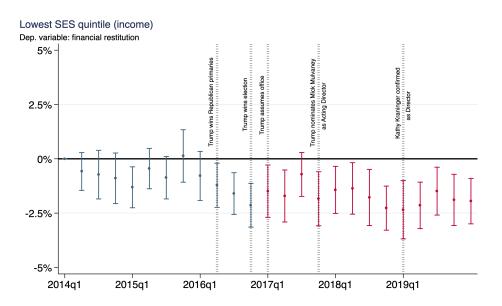
Figure 6: Financial Restitution Under Different Political Regimes - Event Study

The Figure shows the evolution of financial restitution over time between the Obama and the Trump administrations. Panel A reports the coefficients of a regression of financial restitution over quarter dummies. Panel B focuses on financial restitution over the lowest socioeconomic status quintile based on complaint's zip code household median income. Panel C focuses on financial restitution over the lowest socioeconomic status quintile based on complaint's zip code percentage of African American population. Across panels, the vertical dotted lines flag relevant Administration/CFPB-related events. Namely, Trump winning the Republican primaries (2016q2), Trump winning the election (2016q4), Trump assuming office (2017q1), Trump appointing Mick Mulvaney as CFPB's Acting Director (2017q4), Trump's nominee Kathy Kraninger being confirmed as CFPB's Director and assuming office (late 2018q4/2019q1).

Panel A: Financial Restitution Over Time



Panel B: Financial Restitution Across Consumer Incomes



Panel C: Financial Restitution Across Consumer Races

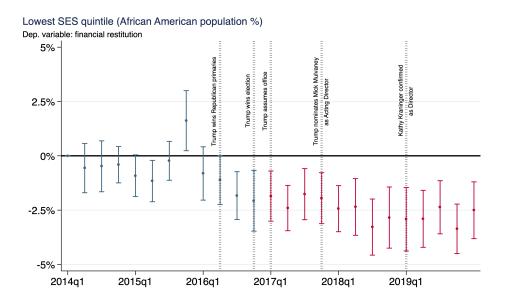


Figure 7: Financial Restitution Under Different Political Regimes For Different Categories

The Figure shows how financial restitution patterns have changed across firms from the Obama to the Trump administration. The sample the Figure is based on is a subset of the "Main analysis sample" (Table 1, Panel A) representing all complaints filed between January 2014 and March 2020 and filed with firms that have received at least one complaint during each administration. Firms are categorized by the product they have been complained about the most and the bars represent the percentage of them that have resolved at least one complaint with financial restitution in each administration. Categories are sorted from the highest negative change across administrations to the highest positive change.

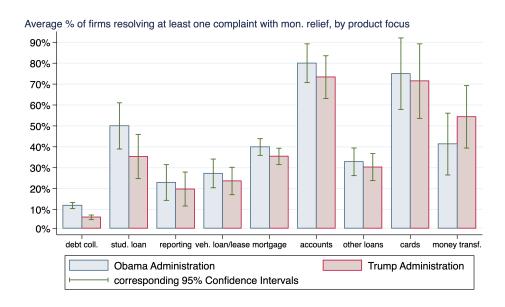
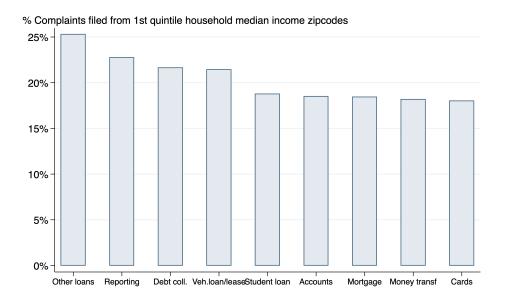


Figure 8: Low Socioeconomic Status Complaints For Different Categories

The Figure shows the percentage of complaints originating from zip codes in the lowest socioeconomic status quintile. Panel A focuses on the lowest socioeconomic status quintile based on complaint's zip code household median income. Panel B focuses on the lowest socioeconomic status quintile based on complaint's zip code percentage of African American population.

Panel A: Complaints from low-SES (income)



Panel B: Complaints from low-SES (African American population %)

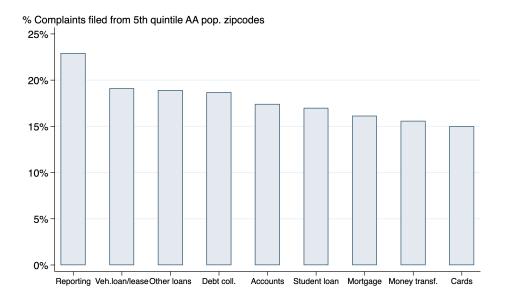
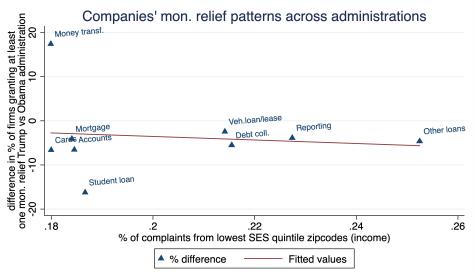


Figure 9: Financial Restitution Across Categories Under Different Political Regimes

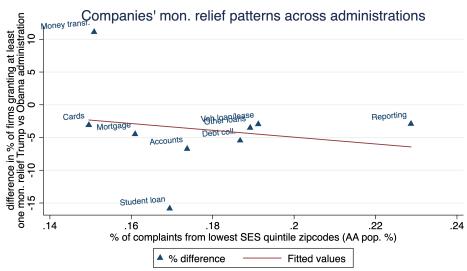
The Figure shows on the y axis the difference in percentages of firms granting at least one monetary relief during the Trump with respect to the Obama administration. Firms are categorized by the product they have been complained about the most. In Panel A, products are further ranked on the x axis according to the percentage of complaints coming from the zip codes with the lowest socioeconomic status based on household median income. In Panel B, products are further ranked on the x axis according to the percentage of complaints coming from the zip codes with the lowest socioeconomic status based on African American population percentage.

Panel A: Financial Restitution Across Consumer Incomes



Source: Complaints directed to companies with at least one complaint before and during Trump administration.

Panel B: Financial Restitution Across Consumer Races

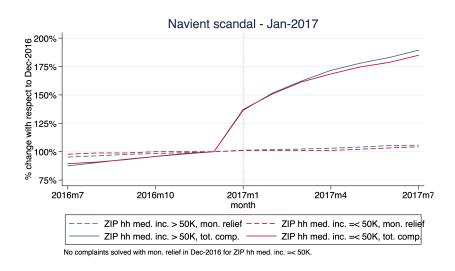


Source: Complaints directed to companies with at least one complaint before and during Trump administration.

Figure 10: Financial Restitution and Filings During the Navient Case

The Figure shows financial restitution and filings patterns during the Navient case of January 2017. The case involved the CFPB in a large settlement. Across panels, solid lines represent percentage differences in complaints filed with respect to complaints filed in December 2016 (one month before the case) and dotted lines represent percentage differences in complaints solved with financial restitution with respect to the complaints solved with financial restitution in December 2016. In Panel A, red lines refer to complaints from zip codes with household median income below \$50,000, blue lines to complaints from zip codes with household median income above \$50,000. In panel B, red lines refer to complaints from zip codes with African American population percentage above 25%, blue lines refer to complaints from zip codes with African American population percentage below 25%.

Panel A: Low income zip codes



Panel B: African American zip codes

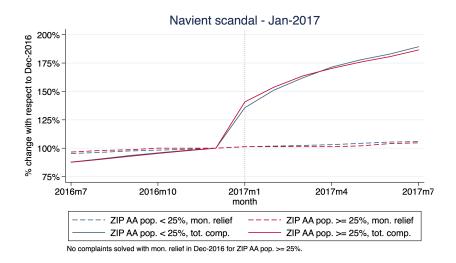
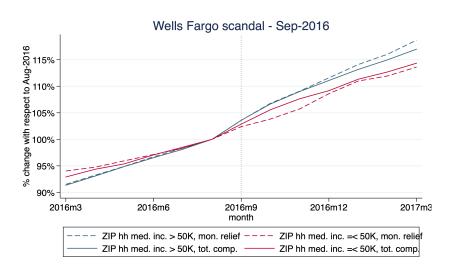


Figure 11: Financial Restitution and Filings During the Wells Fargo Case

The Figure shows financial restitution and filings patterns during the Wells Fargo case of September 2016. The case involved the CFPB in a large settlement. Across panels, solid lines represent percentage differences in complaints filed with respect to complaints filed in August 2016 (one month before the case) and dotted lines represent percentage differences in complaints solved with financial restitution with respect to the complaints solved with financial restitution in August 2016. In Panel A, red lines refer to complaints from zip codes with household median income below \$50,000, blue lines to complaints from zip codes with household median income above \$50,000. In panel B, red lines refer to complaints from zip codes with African American population percentage above 25%, blue lines refer to complaints from zip codes with African American population percentage below 25%.

Panel A: Low income zip codes



Panel B: African American zip codes

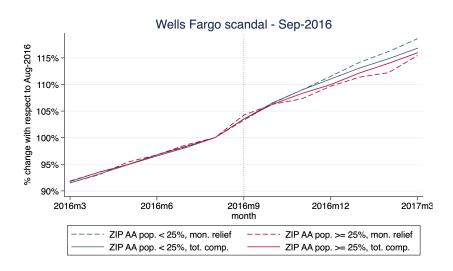


Table 1: Summary Statistics

Description: The table presents summary statistics for the samples employed in the analysis. Panel A shows the two different samples. "Main analysis" refers to analysis not involving textual features and its relative sample comprehends the entirety of complaints in the public CFPB database from January 2014 until March 2020 (namely 1,345,485 complaints). "Text analysis" refers to the remainder of the analysis, involving textual features, and its relative sample comprehends the complaints in the public CFPB database with a machine-readable narrative from March 2015 (when the narratives have first been made public) until March 2020. Panel B shows summary statistics for the main continuous variables in the analysis, Demographics drawing from the "Main analysis sample" and Textuals drawing from the "Text analysis sample". Panel C shows "Main analysis sample" splits across different dimensions.

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	% of CFPB database	# complaints
Main analysis sample	100	1,345,485
Text analysis sample	36.63	492,852

Panel B

variable	mean	std dev	25 th %tile	median	75 th %tile
Demographics					
AA population %	16.05	12.46	6.63	13.23	21.96
household med. income (thous.)	65.17	15.71	54.92	62.10	72.32
Textuals					
narrative length	148	110	61	116	211
Flesch reading ease score	63.31	41.44	55.22	65.39	74.16
Gunning Fog index	11.31	3.31	9.18	11.13	13.16

Panel C

	% of sample
Complaint resolution	
Closed	0.95
Closed with explanation	80.34
Closed with monetary relief	5.06
Closed with non-monetary relief	13.17
In progress	0.00037
Untimely response	0.49
Products	
Checking or savings account	8.62
Credit card or prepaid card	9.83
Credit reporting, credit repair services, or other reports	36.25
Debt collection	20.30
Money transfer, virtual currency, or money service	1.46
Mortgage	15.35
Payday loan, title loan, or personal loan	2.03
Student loan	3.76
Vehicle loan or lease	2.41
Complaints from zipcodes	
with AA population > 10%	60.32
with AA population $> 25\%$	18.73
with AA population > 50%	2.61
with income $=$ < 65,000	62.94
with income $= < 50,000$	12.43
with income $=$ < 45,000	4.32
Complaint narrative	
available	38.95
not available	61.05

Table 2: Baseline regressions on financial restitution

Description: The table presents whether complaints from higher socioeconomic status zip codes have a different likelihood of receiving financial restitution. It is based on the "Main analysis sample" illustrated in Table 1 (Panel A). Panel A focuses on higher socioeconomic status based on higher complaint's zip code household median income. Panel B focuses on higher socioeconomic status based on complaint's zip code lower percentage of African American population. The dependent variable *financial restitution* is a dummy variable equal to 1 if the complaint received financial restitution, 0 otherwise. In panel A, *SES* (*income*), (*Z*) is the standardized household median income of the zip code where the complaint originated. In panel B, *SES* (*AA pop.* %) (*Z*) is the standardized percentage of African American population in the zip code where the complaint originated, entering regressions with a negative sign. Across panels, *approval rate* is the % of mortgages approved in the zip code according to HMDA data. *filer's age* > 61 is a dummy variable equal to 1 if the filer has reported being of age 62 or older, 0 otherwise. All standard errors (reported in parenthesis) are clustered at the state level.

Panel	Α

	financial restitution							
	(1)	(2)	(3)	(4)	(5)	(6)		
SES (income) (Z)	0.00613***	0.00575***	0.00633***	0.00164***	0.00209***	0.00113***		
	(0.00098)	(0.00091)	(0.00098)	(0.00042)	(0.00044)	(0.00025)		
approval rate		0.0340				0.0266***		
		(0.035)				(0.0093)		
filer's age > 61			0.0221***			0.00371***		
			(0.0016)			(0.00079)		
Fixed effects								
year	X	X	X	X	X	X		
product				X		X		
company					X	X		
observations	1,345,478	1,345,478	1,230,494	1,345,478	1,344,313	1,229,356		
R-squared	0.0026	0.0027	0.0033	0.12	0.11	0.15		

Panel B

	financial restitution					
	(1)	(2)	(3)	(4)	(5)	(6)
SES (AA pop. %) (Z)	0.00602***	0.00585***	0.00597***	0.00217***	0.00187***	0.00113***
	(0.00099)	(0.0010)	(0.0010)	(0.00032)	(0.00045)	(0.00035)
approval rate		0.00930				0.0222**
		(0.045)				(0.011)
filer's age > 61			0.0211***			0.00352***
			(0.0016)			(0.00080)
Fixed effects						
year	X	X	X	X	X	X
product				X		X
company					X	X
observations	1,345,478	1,345,478	1,230,494	1,345,478	1,344,313	1,229,356
R-squared	0.0026	0.0026	0.0032	0.12	0.11	0.15

Table 3: Financial restitution across different political regimes

Description: The table presents whether complaints from higher socioeconomic status zip codes have a different likelihood of receiving financial restitution across administrations. It is based on the "Main analysis sample" illustrated in Table 1 (Panel A). Panel A focuses on higher socioeconomic status based on higher complaint's zip code household median income. Panel B focuses on higher socioeconomic status based on complaint's zip code lower percentage of African American population. The dependent variable *financial restitution* is a dummy variable equal to 1 if the complaint received financial restitution, 0 otherwise. In panel A, *SES (income) (Z)* is the standardized household median income of the zip code where the complaint originated. In panel B, *SES (AA pop. %) (Z)* is the standardized percentage of African American population in the zip code where the complaint originated, entering regressions with a negative sign. Across panels, *approval rate* is the % of mortgages approved in the zip code according to HMDA data. *filer's age* > 61 is a dummy variable equal to 1 if the filer has reported being of age 62 or older, 0 otherwise. *Trump adm.* is a dummy variable equal to 1 if the date the CFPB received the complaint is greater than or equal to the 20th of January 2017 (the start of the Trump administration). Across panels, Column 1 is based on complaints submitted during the Obama administration only, Column 2 is based on complaints submitted during the Trump administration only, Column 3 and 4 span the entire sample. All standard errors (reported in parenthesis) are clustered at the state level.

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		financial re	stitution	
	(1)	(2)	(3)	(4)
	Obama adm.	Trump adm.	both	both
SES (income) (Z)	0.00442***	0.00736***	0.00438***	0.00151**
	(0.00094)	(0.0012)	(0.00085)	(0.00066)
Trump adm.			-0.0150***	-0.00423**
			(0.0034)	(0.0019)
SES (income) x Trump adm.			0.00276**	0.00101
			(0.0011)	(0.00085)
approval rate			0.0342	
			(0.035)	
filer's age > 61			0.0219***	
			(0.0016)	
Fixed effects				
year	X	X	X	X
company				X
observations	520,226	825,252	1,230,494	1,344,313
R-squared	0.00038	0.0016	0.0035	0.11

Panel B

		financial re	stitution	
	(1)	(2)	(3)	(4)
	Obama adm.	Trump adm.	both	both
SES (AA pop. %) (Z)	0.00227**	0.00840***	0.00197*	0.00108
	(0.0011)	(0.0011)	(0.0011)	(0.00077)
Trump adm.			-0.0149***	-0.00424**
			(0.0036)	(0.0019)
SES (AA pop. %) x Trump adm.			0.00623***	0.00129^*
			(0.0012)	(0.00074)
approval rate			0.0128	
			(0.047)	
filer's age > 61			0.0210***	
			(0.0016)	
Fixed effects				
year	X	X	X	X
company				X
observations	520,226	825,252	1,230,494	1,344,313
R-squared	0.00010	0.0020	0.0035	0.11

Table 4: Firms' Monetary Relief Patterns across administrations

Description: This table presents coefficients β_3 of regression equation (1) for sub-samples of the "Main analysis sample" (illustrated in Table 1, Panel A) based on firm size and firm monetary relief patterns during the Obama administration. Firm size is proxied by the overall number of complaints received during the Obama administration (different rows). Firm monetary relief patterns include no monetary relief pattern granted during the Obama administration, monetary relief below median and monetary relief above median during the Obama administration (different columns). Coefficients are normalized by the corresponding sub-sample mean of monetary relief percentage. P-values are reported in square brackets. In panel A's regressions, *SES* (*income*) (*Z*) is the standardized household median income of the zip code where the complaint originated. In panel B's regressions, *SES* (*AA pop.* %) (*Z*) is the standardized percentage of African American population in the zip code where the complaint originated, entering regressions with a negative sign. Across tables, the number next each coefficient represents the number of firms entering the corresponding sub-sample. All standard errors (reported in parenthesis) are clustered at the state level.

Panel A - Interaction coefficients for SES (Z) (income) x Trump adm.

	no mon. rel. under Obama		below med. mon under Obama		above med. mon. rel. under Obama	
(complaints Obama adm.)	β(SES xpost Trump) mon.rel. subsample mean [p-value]	# firms	β(SES xpost Trump) mon.rel. subsample mean [p-value]	# firms	$\frac{\beta(SES xpost Trump)}{mon.rel. subsample mean}$ [p-value]	# firms
\leq 25 complaints	0.3144***	2,593	0.0717	216	0.1352	206
	[0.0016]		[0.96]		[0.14]	
$> 25 \& \le 100 $ complaints	0.4313	415	-0.2136 [0.12]	92	-0.0949 [0.31]	92
$> 100 \& \le 1,000 $ complaints	0.2585	148	0.1864*	74	0.0650*	74
	[0.48]		[0.095]		[0.083]	
> 1,000 complaints	-0.4963	8	-0.0544	25	0.0309**	24
	[0.50]		[0.35]		[0.049]	
all complaints #	0.3105***	3,164	0.0745**	402	0.0273**	401
	[0.0027]		[0.023]		[0.027]	

Panel B - Interaction coefficients for SES (Z) (AA pop. %) x Trump adm.

	no mon. rel. under Obama		below med. mon under Obama		above med. mon. rel. under Obama	
(complaints Obama adm.)	β(SES xpost Trump) mon.rel. subsample mean [p-value]	# firms	β(SES xpost Trump) mon.rel. subsample mean [p-value]	# firms	β(SES xpost Trump) mon.rel. subsample mean [p-value]	# firms
≤ 25 complaints	0.1990**	2,593	0.0045	216	0.0101	206
	[0.029]		[0.96]		[0.90]	
$> 25 \& \le 100 $ complaints	-0.1615	415	0.0560	92	-0.0686	92
			[0.67]		[0.32]	
$> 100 \& \le 1,000 \text{ complaints}$	0.7016***	148	0.1092	74	0.1251***	74
	[0.0087]		[0.13]		[0.00014]	
> 1,000 complaints	0.5448	8	0.0518	25	0.0492***	24
	[0.19]		[0.34]		[0.0029]	
all complaints #	0.2722***	3,164	0.1340***	402	0.0087**	401
	[0.0012]		[0.0000038]		[0.022]	

Table 5: Quality of Complaints Narratives

Description: The table presents whether complaints from higher socioeconomic status zip codes have different quality. It is based on the "Text analysis sample" illustrated in Table 1 (Panel A). Across panels, the first two columns report results where *SES* (*Z*) is the standardized household median income of the zip code where the complaint originated. Columns 3 and 4 report results where *SES* (*Z*) is the standardized percentage of African American population in the zip code where the complaint originated, entering regressions with a negative sign. Higher values of *SES* (*Z*) thus stand for higher socioeconomic status of the zip code where the complaint originated. *Trump adm.* is a dummy variable equal to 1 if the date the CFPB received the complaint is greater than or equal to the 20th of January 2017 (the start of the Trump administration). Panel A reports results for the dependent variable *narrative length*, capturing the number of words used in each complaint. Panel B reports results for the dependent variable *Flesch reading ease score* and Panel C for *Gunning Fox index*. The latter enters regressions with a negative sign to ensure that higher values of both indexes capture an easier to read complaint. Please refer to Section 4.2 for a detailed explanation of the indexes' computation. All standard errors (reported in parenthesis) are clustered at the state level.

		Panel A		
	(1)	(2)	(3)	(4)
	SES (income)	SES (income)	SES (AA pop. %)	SES (AA pop. %)
		narı	rative length	
SES (Z)	0.340	0.384	0.568	-0.446
	(0.80)	(0.53)	(0.55)	(0.66)
Trump adm.		10.51***		10.45***
		(1.55)		(1.60)
SES x Trump adm.		-0.0586		1.344**
		(0.84)		(0.63)
constant	148.0***	140.3***	148.0***	140.4***
	(1.12)	(1.56)	(1.12)	(1.55)
Fixed effects				
year	X	X	X	X
product	X	X	X	X
issue	X	X	X	X
observations	492,849	492,849	492,849	492,849
R-squared	0.078	0.078	0.078	0.078

Panel B

		Panel D		
	(1)	(2)	(3)	(4)
	SES (income)	SES (income)	SES (AA pop. %)	SES (AA pop. %)
		Flesch re	eading ease score	
SES (Z)	-0.251*	-0.411***	0.458**	0.303*
	(0.15)	(0.10)	(0.18)	(0.17)
Trump adm.		0.628		0.619
		(0.47)		(0.48)
SES x Trump adm.		0.221*		0.207
		(0.12)		(0.22)
constant	63.31***	62.85***	63.31***	62.86***
	(0.19)	(0.39)	(0.21)	(0.39)
		Gunn	ing Fog index	
SES (Z)	-0.0409	-0.0675***	0.0541*	0.0521
	(0.025)	(0.020)	(0.031)	(0.034)
Trump adm.		0.0381		0.0381
		(0.078)		(0.079)
SES x Trump adm.		0.0368**		0.00267
		(0.016)		(0.031)
constant	-11.31***	-11.34***	-11.31***	-11.34***
	(0.039)	(0.069)	(0.041)	(0.070)
Fixed effects				
year	X	X	X	X
product	X	X	X	X
issue	X	X	X	X
observations	492,849	492,849	492,849	492,849
R-squared	0.078	0.078	0.078	0.078

Table 6: Content of Complaints Narratives

Description: The table presents whether complaints from higher socioeconomic status zip codes claim refund or fraud more often. It is based on the "Text analysis sample" illustrated in Table 1 (Panel A). Across panels, the first two columns report results where SES (Z) is the standardized household median income of the zip code where the complaint originated. Columns 3 and 4 report results where SES (Z) is the standardized percentage of African American population in the zip code where the complaint originated, entering regressions with a negative sign. Higher values of SES (Z) thus standing for higher socioeconomic status of the zip code where the complaint originated. Trump adm. is a dummy variable equal to 1 if the date the CFPB received the complaint is greater than or equal to the 20th of January 2017 (the start of the Trump administration). Panel A reports results for the dependent variables "refund" mentions and broad mentions of refund. The former is a dummy equal to 1 if the word "refund" is mentioned at least once in the complaint, 0 otherwise. The latter is a dummy equal to 1 if the complaint explicitly mentions at least one of the following words: "refund", "refunding", "refunded", "refundes", "refundes", "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". Panel B reports results for the dependent variables "fraud" mentions and broad mentions of fraud. The former is a dummy equal to 1 if the word "fraud" is mentioned at least once in the complaint, 0 otherwise. The latter is a dummy equal to 1 if the complaint explicitly mentions at least one of the following words: "fraud", "deceit", "deception", "trickery", "rip-off", "fake", "con", "impostor", "fraudster", "deceive", "deceiving", "deceived", "defraud", "cheat", "cheating", "cheated", "trick", "tricked", "tricking", "mislead", "misled", "misleading", "misguide", "misguided", "misguiding". All standard errors (reported in parenthesis) are clustered at the state level.

Panel A

		1 and A		
	(1)	(2)	(3)	(4)
	SES (income)	SES (income)	SES (AA pop. %)	SES (AA pop. %)
	"refund" mentions			
SES (Z)	0.00127***	0.000591	0.000556	-0.000279
	(0.00042)	(0.00060)	(0.00042)	(0.00058)
Trump adm.		0.000535		0.000480
		(0.0028)		(0.0028)
SES x Trump adm.		0.000944		0.00111**
		(0.00070)		(0.00051)
constant	0.0357***	0.0353***	0.0357***	0.0354***
	(0.00044)	(0.0019)	(0.00048)	(0.0018)
		broad m	entions of refund	
SES (Z)	0.00213***	0.000284	0.00124	0.000232
	(0.00039)	(0.00064)	(0.00076)	(0.00094)
Trump adm.		-0.00233		-0.00240
		(0.0038)		(0.0038)
SES x Trump adm.		0.00256***		0.00134*
		(0.00085)		(0.00071)
constant	0.0692***	0.0710***	0.0692***	0.0710***
	(0.00068)	(0.0028)	(0.00074)	(0.0027)
Fixed effects				
year	X	X	X	Х
product	X	X	X	X
issue	X	X	X	X
observations	492,849	492,849	492,849	492,849
R-squared	0.078	0.078	0.078	0.078

Panel B

	(1)	(2)	(3)	(4)
	SES (income)	SES (income)	SES (AA pop. %)	SES (AA pop. %)
	"fraud" mentions			
SES (Z)	0.000249	0.000280	-0.00137	-0.00143
	(0.00077)	(0.00094)	(0.0011)	(0.0011)
Trump adm.		0.00597**		0.00600**
		(0.0030)		(0.0029)
SES x Trump adm.		-0.0000409		0.0000810
		(0.00100)		(0.00096)
constant	0.0700***	0.0656***	0.0700***	0.0656***
	(0.0012)	(0.0027)	(0.0013)	(0.0027)
		broad m	entions of fraud	
SES (Z)	0.00217	0.00750**	-0.00434	-0.00403
	(0.0031)	(0.0029)	(0.0028)	(0.0030)
Trump adm.		0.0210^{*}		0.0209*
		(0.011)		(0.011)
SES x Trump adm.		-0.00738**		-0.000411
		(0.0033)		(0.0029)
constant	0.573***	0.558***	0.573***	0.558***
	(0.0040)	(0.0095)	(0.0039)	(0.0086)
Fixed effects				
year	X	X	X	X
product	X	X	X	X
issue	X	X	X	X
observations	492,849	492,849	492,849	492,849
R-squared	0.078	0.078	0.078	0.078

Appendix to:

The Financial Restitution Gap in Consumer Finance: Lessons from Filings to the CFPB

(intended for online publication)

Figure A.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

There are five steps to submit your complaint:

Step 1: What is this complaint about?

Step 2: What type of problem are you having?

Step 3: What happened?

Step 4: What company is this complaint about?

Step 5: Who are the people involved?

Before you get started

You'll need the dates, amounts, and other details about your complaint. If you have documents you want to include, such as billing statements or letters from the company, you'll be able to attach them in Step 3.

Make sure to include all the information you can, because you generally can't submit a second complaint about the same problem.

We'll forward your complaint and any documents you provide to the company and work to get you a response - generally within 15 days.

Start your complaint

Submit a complaint

What is this complaint about?

Choose the product or service that best matches your complaint.

O Debt collection	Vehicle loan or lease
 Credit reporting, credit repair services, or other personal consumer reports 	Student loan
○ Mortgage	Payday loan, title loan, or personal loan (installment loan or personal line of credit)
Credit card or prepaid card	Money transfer, virtual currency, or money service
Checking or savings account	(check cashing service, currency exchange, cashier's/traveler's check, debt settlement)
✓ Previous St	ep 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	Problem caused by your funds being low
Managing an account (deposits, withdrawals, using ATM card, making or receiving payments, cashing a check, fees)	Problem with a lender or other company charging your account
Closing an account	Problem with credit report or credit score
く │ Previous Ste	p 2 of 5 Next >

What happened?

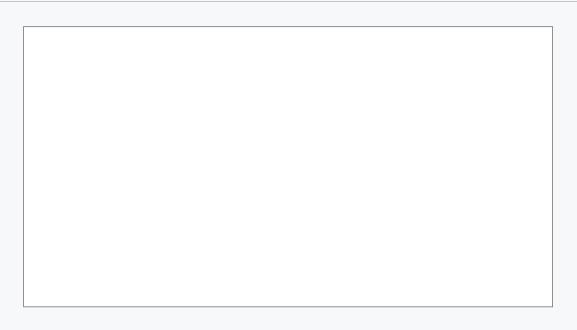
Describe what happened, and we'll send your comments to the companies involved.

-	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.



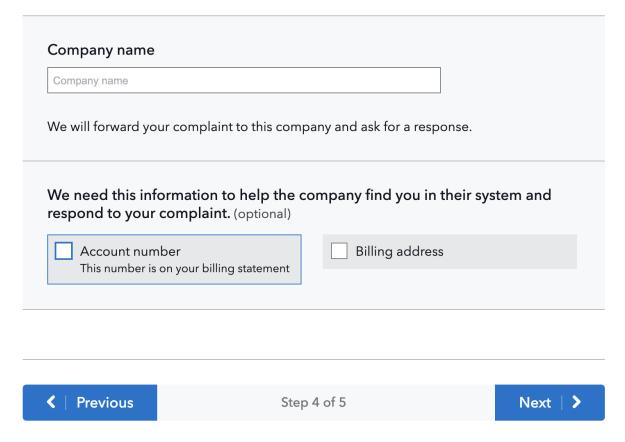
We accept all file formats, except .dll, .dmg, .exe and .msi, up to 10 MB per file. All uploaded files will be scanned for viruses and will be immediately deleted if one is detected.

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



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 els	se
O Someone else			
く │ Previous	Step	5 of 5	Review >

Figure A.2: Complaints' content

The Figure shows a wordcloud based on a randomly sampled 10% of the complaint narratives available.



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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Complaint information

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 (XXXX XXXX) 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.