Explaining Racial Disparities in Personal Bankruptcy Outcomes*

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Abstract

We document substantial racial disparities in consumer bankruptcy outcomes and investigate the role of racial bias in contributing to these disparities. Using data on the universe of US bankruptcy cases and deep-learning imputed measures of race, we show that Black filers are more likely to have their bankruptcy cases dismissed without any debt relief. Large disparities persist for Chapter 13 bankruptcy after controlling for a wide array of individual characteristics. We uncover strong evidence for racial bias driven by homophily; Black filer outcomes in Chapter 13 are less favorable when randomly assigned to a white bankruptcy trustee. To interpret our findings, we develop new identification results that characterize when and how homophily can partially identify the share of observable disparities due to bias.

Keywords: personal bankruptcy, racial disparities, racial bias, homophily

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1 Introduction

Each year, close to one million US households enter consumer bankruptcy, receiving debt relief worth more than the resources given through all state unemployment insurance programs combined (Lefgren, McIntyre, and Miller, 2010).[1] Given its scale, a first-order policy concern is understanding whether and why the bankruptcy system works less well for different households. For example, Lefgren and McIntyre (2009) show that bankruptcy rates in Black zip codes are nearly twice as large as white zip codes, and Kiel and Fresques (2017) find that personal bankruptcy filers from Black zip codes are more than twice as likely to have their cases dismissed (without any debt relief) than observationally similar filers from white zip codes.

Racial disparities in financial outcomes are widespread and staggering. For example, the median wealth of white households is more than ten times that of Black and Hispanic households ($171,000 versus $17,000, SCF, 2016). Minorities also pay higher interest rates than whites with similar observable characteristics (Ghent, Hernández-Murillo, Owyang, 2014; Bayer, Ferreira, Ross, 2017; Butler, Mayer, Weston 2021). Racial disparities in consumer bankruptcy, a key part of the social safety net, may further compound existing economic and financial disparities by limiting access to this major source of debt relief.

This paper presents new evidence on racial disparities in consumer bankruptcy and sheds new light on the role of racial *bias* in contributing to these disparities. Our analysis uses a new dataset containing the universe of US bankruptcy cases over the past two decades, containing detailed data on tens of millions of bankruptcy cases. To investigate the role of bias, we develop new identification results that formalize when and how *homophily* between bankruptcy filers and their legal counterparts (judges and trustees) can both signal the presence of racial bias and quantify the share of observed disparities due to racial bias. By homophily, we mean differences in filer racial disparities across legal decision-makers with different races. Although the role of bankruptcy trustees is underexplored in both the economics and law literatures, we find bankruptcy trustees play an important role in determining case outcomes. We test for both judge and trustee bias.

Understanding what drives disparities across groups of filers, particularly with regard to race, is important for assessing the efficacy of bankruptcy policy and has important implications for other economic outcomes. Bankruptcy is a frequently used form of social insurance—over 10% of US households have filed for bankruptcy at least once (Stavins, 2000 and Keys, 2018). If in practice the institution of bankruptcy works poorly for cer-

[1] Bankruptcy-system leniency is positively related to debtor wages, credit access, homeownership, and longevity (Dobbie and Song, 2015; Dobbie, Goldsmith-Pinkham, and Yang, 2017; Dobbie, Mahoney, Goldsmith-Pinkham, and Song, 2020).

tain disadvantaged groups, it could exacerbate wealth and welfare gaps caused by racial bias in financial and labor markets. For example, Ganong, Jones, Noel, Farrell, Greig and Wheat (2020) show that Black households cut consumption 50 percent more than white households in response to a similar-sized income shock. If Black households on average lack access to liquidity to smooth consumption—potentially due to fewer labor market opportunities or less access to savings and credit—the insurance provided through the bankruptcy system could be particularly valuable for these households. However, if racial bias diminishes the benefits that these groups receive in bankruptcy, the system is potentially providing less relief to those individuals that need it most. If the primary mechanism for individual debt relief in the US exhibits racial bias, such biases could amplify the effects of other racial disparities in financial markets and ultimately have important differential effects on wealth and wellbeing across groups.

To test for racial bias in the personal bankruptcy system, we assemble a nationwide dataset of detailed bankruptcy outcomes where meaningful demographic characteristics of the judge, trustee, and filer can be observed or more confidently imputed than in previous work. We impute race by training a deep learning model, based on that of Kotova (2022), on voter registration data from Florida, which contains names, addresses, and self-reported race. We then test for and analyze the role of bias in explaining disparities in many types of bankruptcy outcomes, many of which have not been studied before because of data limitations. Traditional bankruptcy outcomes include dismissal (when the judge rejects the filing), chapter selection (Chapter 13 is less generous), bankruptcy refiling rates, and discharged debts. Richer outcomes not usually available to bankruptcy researchers include conversion (when the judge forces a conversion from Chapter 7 to Chapter 13), net debt forgiveness (defined as discharged assets minus payments out of seizable assets), home valuation, which debts are discharged, and whether the court made filing eligibility exceptions to time-since-filing, income means-testing thresholds, or asset holding thresholds.

Our first finding is that Black filers are 21 percentage points more likely to have their personal bankruptcy petitions dismissed in court without any debt relief in Chapter 13. This rate is 41% higher than the average Chapter 13 dismissal rate for white filers. In Chapter 7, Black filer's cases are dismissed 3 percentage points more often, which is 167% higher than the Chapter 7 dismissal rate among white filers. Conditional on a rich array of fixed effects and case-level controls, these gaps drops to 11 and 0.6 percentage points (for Chapters 13 and 7, respectively).

Next, we examine how the racial disparity in dismissal rate varies with trustee race (homophily). For Chapter 13, we find that when Black filers are randomly assigned to

a white trustee, their dismissal rate rises by 10 percentage points. When assigned to a non-white trustee, the Chapter 13 dismissal rate gap falls to one percentage point (and is statistically insignificant). For Chapter 7, we find no impact of trustee race on the racial disparity in dismissal rates. Our econometric framework highlights two implications of the substantial homophily found in Chapter 13. First, it implies that at least one trustee exhibits some form of bias. Second, if non-white trustees are either unbiased or biased against Black filers on average, then *at least* 40% of the 21 percentage point dismissal disparity is due to bias.

Related Literature In this section, we briefly contextualize our findings in related literatures on personal bankruptcy, racial bias in credit markets and institutions, and law and economics.

First, we build on a growing literature on racial disparities in household financial outcomes through a new focus on disparities and bias in personal bankruptcy. Prior work documents disparities in lending outcomes, such as minorities experiencing lower loan approval rates, higher interest rates, and higher rates of CFPB complaints (Munnell, Browne, McEneaney, and Tootel, 1996; Reid, Bocian, Li, and Quercia, 2017; Bayer, Ferreira, and Ross, 2018; Begley and Purnanandam, 2020). More recently, a growing literature documents the challenges faced by algorithmic advances in underwriting struggle to eliminate racial disparities and bias in credit outcomes (Bartlett, Morse, Wallace, and Stanton, 2019; Fuster, Goldsmith-Pinkham, Ramadorai, and Walther, 2020; Morse and Pence, 2020; Blattner and Nelson, 2020).

Studying bankruptcy in particular, Braucher, Cohen, and Lawless (2012) find that Black households files for Chapter 13 at a much higher rate.[2] Furthermore, the experimental evidence in Braucher, Cohen, and Lawless (2012) suggests attorney steering plays a role in explaining this disparity, with attorneys are more likely to recommend that clients with Black-sounding names file under Chapter 13 than otherwise identical filers with white-sounding names. In this paper, we contribute new evidence on disparities across a range of bankruptcy outcomes, document the role of judges and trustees in shaping these disparities, and quantify the role of racial bias.

Second, we build on a law and economics literature exploring the importance of decision-maker characteristics in legal outcomes. In the context of bankruptcy, court congestion

[2]This is generally a worse outcome for several reasons. First, Chapter 13 can require filers to make larger repayments to creditors (statute requires it be no less in Chapter 13 than what creditors would receive in Chapter 7). Second, Chapter 13 filers are less likely to receive a discharge at the conclusion of their case. Third, the Chapter 13 discharge is not received until completion of the payment plan, which is most often five years after filing. See Section 2 for background on the personal bankruptcy system.

and inexperienced judges lead to worse bankruptcy outcomes, such as lower creditor recovery rates (Iverson, 2020; Iverson, Madsen, Wang, and Xu, 2020). Other work on bias in the legal system finds evidence of racial bias in bail decisions (Arnold, Dobbie, Yang, 2018; Arnold, Dobbie, Hull, 2020). Additionally, juror race, gender, and political ideology impact conviction rates (Anwar, Bayer, and Hjalmarsson, 2012; Anwar, Bayer, and Hjalmarsson, 2019a and 2019b). We contribute by highlighting the role of trustee bias in shaping disparities in personal bankruptcy outcomes. Bankruptcy trustees have received little attention in prior work, and our findings suggest that they have a significant influence on bankruptcy outcomes similar to that of judges.

Third, this paper makes a methodological contribution to the literature on detecting and quantifying racial bias. Our approach uses homophily in decision-making to partially identify bias. We first show that under *parallel disparities*—an assumption that the difference in Black and non-Black filer outcomes due to factors other than their race (but possibly correlated with race) is the same within the population assigned to white DMs and non-white DMs—homophily can identify the difference in average bias between decision-makers. The parallel disparities assumption states that the difference in Black and non-Black filer outcomes due to factors other than their race (but possibly correlated with race) is the same within the population assigned to white and non-white decision-makers. Importantly, this assumption is weaker than random assignment of decision-makers. The parallel disparities assumption allows decision-maker race to be correlated with variables that affect the level of both filer groups.[3] We then show that when non-white decision-makers are weakly biased against Black filers on average, homophily identifies a lower bound on the share of disparities due to bias.

The key advantage of our approach compared to those based on a Becker outcome test is that we do not require observing the outcome over which the decision maker is optimizing (Becker, 1957, 1993; Knowles, Persico, and Todd, 2001; Anwar and Fang, 2006; Arnold, Dobbie, and Yang, 2018).[4] In contrast to bail decisions, where judges have a clear objective to minimize pre-trial misconduct, bankruptcy decisions are more subjective. For example, when evaluating whether dismissal is appropriate, bankruptcy judges and trustees consider whether misreporting of assets is due to intentional fraud or procedural error, proposed payment plans are feasible, or if filer hardship is "beyond their

[3]For example, this assumption would allow white decision-makers to have a systematically higher propensity to dismiss cases.

[4]In the context of bail decisions as in Arnold, Dobbie, and Yang (2018), our approach would not require the econometrician observes pre-trial misconduct, only the bail decisions themselves (along with judge and defendant race).

control."[5] Our approach offers a way to quantify bias in decision-making in other more abstract settings where the decision-maker's objective is complex or difficult to measure.

Additionally, we build on prior work by formalizing the assumptions under which the relative bias identified by homophily can partially identify absolute bias. Notably, Anwar and Fang (2006) and Anwar, Bayer, and Hjalmarsson (2012) measure homophily in police stops/searches and jury convictions, respectively. Anwar and Fang (2006) develop a test for the presence of bias using homophily, relative bias, and a model police stops and searches. Our approach further differs in that we quantify bias rather than only test for its presence. Under the assumption that on average Black judges are either unbiased against Black petitioners or less biased than non-Black judges towards Black petitioners, we show the average difference in bias yields a lower bound for absolute bias. Alternative approaches to quantifying bias also require assumptions on the decision-making process. For example, for outcome tests in the style of Arnold, Dobbie, and Yang (2018), identification requires a monotonicity condition that implies uniformity in how judges treat defendants of a given race (Canay, Mogstad, and Mountjoy, 2020). More recently, Arnold, Dobbie, and Hull (2020) introduce an approach that does not require this monotonicity condition. Instead, their method relies on extrapolating treatment effects (in their setting, mean misconduct risk) to a hypothetical judge that treats defendants uniformly (is maximally lenient and releases everyone).[6]

The rest of the paper proceeds as follows. Section 2 presents relevant institutional background on personal bankruptcy in the US. We describe our data and present descriptive facts on personal bankruptcy outcomes by groups in Section 3. Sections 4 and 5 detail our identification strategy and present our results, respectively. We conclude in Section 6.

[5]In bankruptcy cases, judges and trustees evaluate the accuracy and completeness of a petitioner's reported assets, liabilities, income sources, and expenses—and whether the petitioner has strategically manipulated any of these variables. Perceived manipulation can warrant modifying the calculations using these variables that determine the amount petitioners must pay their creditors to successfully discharge their debt, making it harder to avoid dismissal due to missed payments. Perceptions of egregious manipulation can trigger immediate dismissal without debt relief. Additionally, Chapter 13 filers that encounter financial hardships during their (three to five year) repayment plan can request a hardship discharge, which requires a subjective evaluation by a court over the extent to which the petitioner's hardship was "out of their control" and makes repayment infeasible. These abstract criteria are not as readily measurable as pre-trial misconduct.

[6]The approach of Arnold, Dobbie, and Hull (2020) also requires data on both the decision (to release or not, in their setting) and the outcome of interest to the decision maker (pre-trial misconduct).

2 Background: Personal Bankruptcy in the US

2.1 The Costs and Benefits of Personal Bankruptcy

Nearly one million households every year seek to discharge consumer debts by filing for Chapter 7 or Chapter 13 Bankruptcy. Bankruptcy can help households cope with financial distress—for example, stemming from job loss or medical expenses—by reducing required debt payments and preventing wage garnishment. In doing so, bankruptcy offers households an implicit form of insurance that can help them better smooth consumption across states of the world (for evidence on the insurance value of bankruptcy see Livshits, MacGee, and Tertilt, 2007; Chatterjee, Corbae, Nakajima, and Rios-Rull, 2007; Indarte, 2020; Davila, 2020). The scale of the debt relief offered under Chapters 7 and 13 is substantial, totaling $187 billion in a typical year.[7] During the Great Recession, the annual debt write-downs provided by bankruptcy were similar in size to the annual transfers from unemployment insurance and larger than those of measures like the Home Affordable Modification Program (Auclert, Dobbie, and Goldsmith-Pinkham, 2019).

Receiving a debt discharge through bankruptcy can benefit filers in many dimensions. Financially, filers typically see better credit scores and credit access in the years after filing compared to insolvent non-filers (Albanesi and Nosal, 2020). Filers that receive a discharge (versus those whose case is dismissed) also experience higher earnings, lower foreclosure rates, higher homeownership rates, and lower mortality rates (Dobbie and Song, 2015; Dobbie, Goldsmith-Pinkham, and Yang, 2017). Consistent with smoothing and stabilizing consumption, Auclert, Dobbie, and Goldsmith-Pinkham (2019) find that access to bankruptcy increased employment by nearly 2% during the Great Recession.

Filing for bankruptcy also entails a number of costs. Court, attorney, and mandatory debt counseling fees average $1,400 in Chapter 7 and $3,400 in Chapter 13 (GAO, 2008). Additionally, filers can be required to make payments to creditors out of assets (Chapter 7 bankruptcy) or out of disposable income (Chapter 13 bankruptcy). Non-monetary costs like stigma may also be an important deterrent to filing (Indarte, 2020). In the long-term, the "bankruptcy flag" that appears on a filer's credit report for seven to ten years can depress credit access (Musto, 2004; Dobbie, Keys, Mahoney, and Song, 2017; Herkenhoff, Phillips, and Cohen-Cole, 2019; Gross, Notowidigdo, and Wang, 2020). Filing today also costs filers the option to file in the near future, as discharges can only be granted every two to eight years.[8] If a filer's petition is dismissed, not only do they not receive the debt

[7] Source: Annual BAPCPA report (Tables 1A and 1D).

[8] Chapter 7 filers must wait eight years to file again under Chapter 7 and four years to file under Chapter 13. Chapter 13 filers must wait two years to file again under Chapter 13 and six years to file under Chapter

discharge, but they will still bear many of the costs of bankruptcy—including receiving a "bankruptcy flag" on their credit report.

2.2 The Bankruptcy Process

Below we describe the bankruptcy process, highlighting the role played by trustees and judges as well as the relevant differences between Chapter 7 and Chapter 13 bankruptcy. To initiate bankruptcy proceedings, a filer/petitioner first must complete schedules thoroughly detailing their assets, liabilities, income sources, and expenses. Within 15 days of submitting this paperwork, the file must also provide proof of completing a credit counseling course. The course helps filers prepare a budget and explore options for repaying their debts. The course also offers an assessment of the feasibility of repaying debt, which judges can take into account when ruling in bankruptcy cases.

After completing these two steps, filers then participate in a Meeting of Creditors (341 Hearing). This meeting is run by the bankruptcy trustee. If the filer fails to attend their case may be dismissed; if the filer has hired a lawyer, they will also attend. Creditors may attend but rarely do so (Elias and Bayer, 2017). This meeting is an important step for the trustee to form a recommendation to the judge and detect fraud.

The trustee compares the paperwork detailing the filer's financial data to financial documents (tax returns, bank statements, auto titles, etc.) to ensure its accuracy and to detect fraud. The trustee must verify that the filer qualifies to file under the Chapter that they've chosen (to file for Chapter 7, the filer's income must be below the state's median). Additionally, the trustee may question the filer about the reasonability of asset valuations and expenses, the ability of the filer to sustain a high enough income to afford monthly payments under a proposed Chapter 13 repayment plan, and whether misreported values reflect fraud or innocent mistakes. In Chapter 7 bankruptcy, the trustee gains the power to sell the filer's assets with value in excess state-specific exemption limits.[9] Other forms of fraud the trustee will look for are transfers of assets that were intended to reduce the value of nonexempt assets and credit-financed purchases where the filer had no intention of repaying the debt. Within 60 days after the Meeting of Creditors, the filer must complete a debtor education course, which emphasizes budgeting and rebuilding credit after bankruptcy.

Bankruptcy cases terminate in one of three ways: discharge, conversion, or dismissal.

7.

[9]The filer can purchase nonexempt assets in order to retain them. For example, if the filer's home equity exceeded its exemption limit by $15,000 but their retirement savings were fully exempt, they could use their retirement savings to pay the $15,000 to keep their home.

If the filer succeeds in receiving a discharge at the conclusion of their case, their debts are wiped out after making required payments to creditors. The main differences between Chapters 7 and 13 are the timing and amounts of payments to creditors. In Chapter 7, the filer pays the value of assets in excess of their state's exemption limits. This occurs soon after the Meeting of Creditors if the trustee and creditors have no objections.

In Chapter 13, the filer attends a court hearing, with both the judge and trustee present, to confirm their proposed repayment plan. Statute requires that the sum of Chapter 13 payments are at least as high as what the creditor would have received under Chapter 7 (the value of non-exempt assets). The payments can be higher, in which case they equal the filer's disposable income (income minus "necessary" expenses). Chapter 13 filers make monthly payments for three to five years, and the discharge is not received until after the completion of payments.

Chapter 13 filers may also receive an early discharge of their debt if they encounter financial hardship that makes their initial payment plan infeasible. When the filer experiences a major income loss or rise in expenses – for example, due to the closing of a plant or illness – the judge and trustee may determine that the filer qualifies for a hardship discharge. If the hardship is not seen as beyond the control of the filer or insufficiently severe, missed payments may instead result in a dismissal (Elias and Bayer, 2017). However, the judge and trustee may also approve of a modified Chapter 13 plan.

When cases end in conversion, the filer is forced to file under a different Chapter. A conversion from Chapter 7 to 13 typically happens if the filer's income is above the state's median, which disqualifies them from Chapter 7. It may also happen if the judge and trustee believe that the filer can feasibly repay more of their debt under Chapter 13. Conversions from Chapter 13 to 7 typically occur when the judge and trustee believe the proposed Chapter 13 repayment plan is infeasible. After a case is converted, the filer still has the chance to successfully obtain a debt discharge in a new case under a different Chapter.

An unsuccessful outcome for the filer is a dismissal, in which case the filer does not receive a debt discharge. If the case is dismissed without prejudice they can refile again immediately. If dismissed with prejudice, the filer typically has to wait one year to file again, but the exact timing is at the discretion of the judge (Elias and Bayer, 2017). Cases are commonly dismissed for several reasons: fraud, failure to complete mandatory educational classes, failure to file forms or submit documents, failure to pay court fees, missing the Meeting of Creditors, perceived infeasibility of the Chapter 13 payment plan, and missed Chapter 13 payments. When filers simply make a procedural mistake, they are more likely to receive a dismissal without prejudice.

Scope for Bias. Bankruptcy trustees and judges face several subjective evaluations. If racial bias can affect their perceptions of honesty and hardship, trustees may suggest – and judges may opt – to dismiss cases at different frequencies for otherwise similar filers of different races. Race may be made especially salient to trustees, who meet face-to-face with filers (of all chapters) during the Meeting of Creditors and any court hearings. In Chapter 7, filers rarely need to attend a court hearing with the judge. But race may be more salient to a judge in Chapter 13 cases, which require a confirmation hearing to approve the Chapter 13 plan.

The trustee plays a central role in evaluating whether a filer's actions constitute *intentional* fraud as opposed to *procedural error*. This includes assessing whether a transfer of property was intended to reduce the value of nonexempt assets, the filer intended to repay a recent credit-financed purchase, misreported income was an oversight or a mistake, or an event merits a hardship discharge. Additionally, the trustee may disagree over the reasonableness in counting some expenses as necessary and forecasts for future income. If bias leads to more expensive Chapter 13 plans for Black filers, they may be more likely to have their case dismissed due to perceived infeasibility or actual difficulties in making payments. Trustees make recommendations for discharges and dismissals based on their evaluations, but ultimately a judge must form their own opinions to decide the outcome of a case.

3 Data and Descriptive Facts

The backbone of our dataset is court docket header information from the universe of personal bankruptcy filers in the Lexis Nexis Public Records database from 1990-2022. The filing header data includes the identity of the filer, trustee, and bankruptcy judge for a given bankruptcy proceeding. This data allows us to merge our bankruptcy cases with a dataset from the Federal Judicial Center (FJC) Integrated Data Base of all bankruptcy cases filed since Fiscal Year 2008. The FJC data has detailed information sourced from bankruptcy filings beyond the simple header information we observe for the universe of filings.

Panel A of Table 1 reports summary statistics for bankruptcy outcomes and characteristics. Dismissal and chapter status are observed for all 63 million cases in the Lexis Nexis data, while the other characteristics are observed only for the approximately 21 million cases that merge with the FJC data. The main reason for the drop off in the number of observations is the more limited time period covered by the FJC data.

Overall, 16% of bankruptcy cases are dismissed, meaning that the court terminated

the case without allowing any debt relief. However, dismissal is virtually nonexistent for Chapter 7 (2% of cases) and prevalent for Chapter 13 cases (56% of cases). As discussed above, Chapter 13 cases involve payment plans; when debtors fail to adhere to the agreed upon settlement plans, their cases are dismissed. Figure 2 plots cumulative dismissal hazards by for Black and white Chapter 13 filers separately. For both races, the high dismissal rate for Chapter 13 cases represents a gradual increase in dismissals over time as debtors' repayment plans fail.

Turning to other characteristics of bankruptcy filers, 6% of petitioners file pro se, meaning they represent themselves instead being represented by an attorney. About 14% of filers have filed before, especially among Chapter 13 filers (32%). Very few Chapter 7 filers report holding non-exempt assets, whereas almost all Chapter 13 filers report non-exempt assets (indeed, being able to retain possession of non-exempt assets is a common motivation for filing for Chatper 13). Roughly half of filers own a home, and roughly half are filing jointly with a co-petitioner (usually a spouse). The average petitioner has $3,750 in monthly income, $400,0000 in assets and 7 times as much debt as assets, with about half of their debt being secured. Chapter 7 petitioners anticipate still having $300 more in monthly expenses than income post-bankruptcy in contrast to Chapter 13 petitioners, who anticipate making $600 more in income each month than their expenses.

3.1 Imputing Race

We impute the race of various parties (e.g., filers, trustees, judges, and attorneys) using a deep-learning model based on Kotova (2022). Our race imputation model predicts race using full names and addresses (aggregated to the census tract level), the algorithm employs both natural language processing (NLP) and recurrent neural network analysis (RNN).

We train our model using two datasets. The first is a large dataset containing names, addresses, and self-reported race for millions of Americans: the universe of registered voters in Florida as of 2021. An advantage of using data from Florida is that is has both a relatively large Black and Hispanic population, which should lead to more accurate and precise race imputation for minorities. The second dataset is US Census data on tract-level racial composition. We split full names into bi-grams and then apply RNN (using softmax activation) to the bi-grams and census tract racial composition, training the model on the voter data to predict race using self-reported race.

To impute filer race, we input the filer's full name and census tract into the race imputation model. The model returns a predicted probability for the likelihood that the filer is

Asian, Black, Hispanic, other, or white. Note that we therefore have a continuous measure for race. We generally use this continuous measure in our analysis (unless otherwise specified). On one hand, our measure of race will generally be subject to measurement error, which would at worst attenuate our estimates if it is independent. However, a continuous measure may do a better job "measuring" race for bi-racial individuals.

Panel B of Table 1 reports imputed race shares for our sample. We estimate that 74% of US bankruptcy filers are white, 14% are black, and roughly equal shares of the remaining 12% are Asian, Hispanic, or Other. Comparing across chapters, Chapter 13 filers are twice as likely to be Black (23%) than Chapter 7 filers (11%).

For non-filers, such as judges, trustees, or attorneys, we do not observe their residential address in the bankruptcy court records. For now, we assume that their home residence is within the same MSA as their office address (for trustees and attorneys) or the same MSA as one of the division office (for judges). Judges often serve in more than one court division (e.g., the Alaska bankruptcy district has divisions in Anchorage, Fairbanks, Juneau, and Ketchikan). We treat all of the MSAs of the district's divisions as a geographical block within which we assume the judge resides somewhere. For example, the Honorable Arthur B. Briskman served for a time in the Florida Middle district. Within the Florida Middle District, there are four division offices (Ft. Myers, Jacksonville, Orlando, and Tampa). We assume that this judge resides somewhere in the union of the MSAs spanned by these four division offices. With this information, we can apply a less granular version of the algorithm described above. We are currently working to supplement addresses data for non-filers using data from Whitepages.com.[10]

Panel C of Table 1 reports the results of imputing trustee race. We estimate that 84% of US bankruptcy trustees are white, 8% are black, and the remainder are roughly evenly split between Asians, Hispanics, and the other category. Although Chapter 13 trustees are slightly more likely to be Black than Chapter 7 trustees (10.4% vs. 7.6%), the distribution of trustee race is fairly similar across chapters.

4 Econometric Framework: Homophily and Racial Bias

This section develops identification results to formalize the relationship between observable racial disparities and racial bias. We first formalize our notion of racial of bias and then show how differences in filer racial disparities across decision-makers with different races (homophily) can partially identify the share of observed racial disparities that

[10]For judges, given their relatively low number, we also double-check these ethnicities by hand using internet searches.

are due to racial bias. Homophily is widely-studied phenomenon in a variety of settings, often interpreted to be informative about bias.[11] Despite the attention directed towards homophily, there is limited prior work formalizing how homophily relates to bias. We present sufficient conditions under which homophily is a signal of bias and introduce a variety of assumptions that lead to stronger tests for the presence of bias and sharper lower bounds on the share of observed disparities attributable to bias. We formalize our identification results in the context of bankruptcy, but they can be readily adapted to other settings, including those where decision-makers have an abstract objective (as does bankruptcy). Our results also apply to settings where a decision-maker has a specified objective (e.g., bail bonds, Arnold, Dobbie, and Yang, 2018), and can therefore complement the existing tools used to study bias in such settings.[12]

4.1 Notation and Setup

Denote our outcome of interest $Y_{i,j}$, which is a binary variable indicating whether a bankruptcy case is dismissed ($Y_{i,j} = 1$) or not ($Y_{i,j} = 0$). Filer i's bankruptcy outcome $Y_{i,j}$ is assigned to them by a decision-maker (DM) j, which in our context is either a judge or trustee.[13] Bankruptcy filers are characterized by their race and a characteristic $X \in \mathbb{R}$, which may be correlated with the filer's race. The non-race characteristic X is not observed by the econometrician but is observed by the DM. In contrast, the filer's race is observed by both the econometrician and DM. We denote the filer's race by $R_i^F \in \{B, NB\}$, which indicates whether the filer is Black ($R_i^F = B$) or non-Black ($R_i^F = NB$).

Let $Y_{i,j}(B, X)$ and $Y_{i,j}(NB, X)$ denote the potential outcomes if the filer is Black and non-Black (respectively) for a given characteristic X. The econometrician observes

$$Y_{i,j} = Y_{i,j}(NB, X) + \left[Y_{i,j}(B, X) - Y_{i,j}(NB, X)\right] 1\left[R_i^F = B\right].$$

Definition 4.1 *Filer i's outcome is* due to racial bias *on the part of DM j if* $Y_{i,j}(B, X) \neq Y_{i,j}(NB, X)$.

[11] For example: police stops/searches (Anwar and Fang, 2006), jury convictions (Anwar, Bayer, and Hjalmarsson, 2012), and mortgage lending (Frame, Huang, Mayer, and Sunderam, 2022.)

[12] E.g., methods based on Becker-style outcome tests (Becker, 1957; Arnold, Dobbie, and Yang, 2018; Bohren, Hull, and Imas, 2022).

[13] In reality, trustees make recommendations to a judge that may influence the outcome, but it is judges rather than trustees who directly choose the outcome of a case. To capture the trustee's decision more accurately we could modify out setup to allow for the trustee's decision to be their *recommendation,* which can increase the probability of dismissal. We abstract away from modeling this explicitly to simplify the exposition.

This definition characterizes what it means for a filer's outcome to be *attributable* to racial bias. We are careful with our wording here in order to allow for our setting to be consistent with definitions of *bias* used in related work.[14] These definitions of bias generally describe the *process* by which a DM makes a decision. Our definition focuses on whether bias affects the *outcome* of the DM's decision. Stated differently, the above definition means that if the causal effect of race on the DM's decision is non-zero, the outcome is attributable to bias. That is, a decision features bias if changing the filer's race alters the decision while holding constant non-race characteristics. We describe the direction of bias as follows

Definition 4.2 *DM j* exhibits bias against *a Black filer (or,* in favor of *a white filer) if* $Y_{i,j}(B, X) > Y_{i,j}(NB, X)$.

Definition 4.3 *DM j* exhibits bias in favor *of a Black filer (or,* against *a white filer) if* $Y_{i,j}(B, X) < Y(NB, X)$.

The above definitions do not differentiate between bias against Black filers and in favor of white filers (and vice versa). In the context of bankruptcy, there is not an objective notion of whether a DM's decision is "correct." When a DM dismisses Black filers' cases at a higher rate, the econometrician cannot objectively verify if that filer's case was "incorrectly" dismissed. In this sense, it is not clear whether a DM exhibiting bias is "incorrectly" dismissing Black filers or "incorrectly" failing to dismiss white filers. In other settings with clear objectives for the DM (e.g. bail or the setting of Bohren, Hull, and Imas, 2022), such a distinction is possible.

4.2 Identifying Racial Bias

We are interested in both the amount racial bias exhibited against Black filers and what share of racial disparities are due to bias. To minimize on notation, going forward we will suppress the dependence of potential outcomes on the non-race characteristic and omit indexes, writing $Y(R^F)$ instead of $Y_{i,j}(R^F, X)$. Additionally, we will now use subscripts to denote conditioning on the filer's race: $E[Y(R)|R^F = B] = E[Y_B(R)]$ for some $R \in \{B, NB\}$ (with Y_{NB} defined similarly). The average amount of bias exhibited against Black filers is

$$\beta \equiv E[Y_B(B) - Y_B(NB)],$$

[14] E.g., Arnold, Dobbie, and Yang (2018); Canay, Mogstad, and Mountjoy (2020); and Bohren, Hull, and Imas (2022).

which corresponds to the average treatment effect on the treated (ATT). A positive ATT implies that Black filers' cases are dismissed at a higher frequency than they otherwise would be if the DM hadn't exhibited bias. In general it is not possible to directly identify this ATT from *observed* disparities alone. The average observed disparity in bankruptcy outcomes across Black and non-Black filers equals the sum of this ATT and a selection effect:

$$E[Y_B(B) - Y_{NB}(NB)] = \underbrace{E[Y_B(B) - Y_B(NB)]}_{\text{ATT (average amount of bias)}} + \underbrace{E[Y_B(NB) - Y_{NB}(NB)]}_{\text{selection effect}}$$

If the selection effect is positive, this means that on average Black filers would be dismissed at higher rates even if they weren't Black. This could arise if race is correlated with non-race characteristics (e.g., income) that also affect the DM's decision. Denote the share of observed disparities due to bias by

$$\theta \equiv \frac{E[Y_B(B) - Y_B(NB)]}{E[Y_B(B) - Y_B(NB)] + E[Y_B(NB) - Y_{NB}(NB)]}$$

Without knowing the ATT (the numerator) or making further assumptions, the identified set for θ is $[-1, 1]$.

We next show how variation in the race of the DM can help us say more about the role of bias in shaping racial disparities. Denote the race of the DM by $R^{DM} \in \{W, NW\}$ where the DM is either white ($R^{DM} = W$) or non-white ($R^{DM} = NW$). We consider homophily, which here we define to be the difference in filers' racial disparities when assigned to white versus non-white DMs:

$$\tau = E[Y_B - Y_{NB}|R^{DM} = W] - E[Y_B - Y_{NB}|R^{DM} = NW].$$

When homophily is positive ($\tau > 0$), this indicates that Black filers have a larger dismissal rate than white filers when assigned to a white DM. The key assumption for homophily (τ) to help partially identify bias (β) is a *parallel disparities* assumption. To characterize the assumption, we expand our potential outcomes notation: let $Y_B(R^F, R^{DM})$ denote the potential outcome for Black filers when the filer has race R^F and the DM has race R^{DM}.

Assumption 1: Parallel Disparities

$$E[Y_B(NB, W) - Y_{NB}(NB, W)|DM = W] = E[Y_B(NB, NW) - Y_{NB}(NB, NW)|DM = NW].$$

The assumption is so-named because it resembles the parallel trends assumption of difference-in-difference estimation. Rather than making an assumption about differences over time, parallel disparities is an assumption about differences across filer race. Intuitively, the assumption states that the difference in Black and non-Black filer outcomes due to factors other than their race (but possibly correlated with race) is the same within the population assigned to white DMs and non-white DMs. Parallel disparities is a weaker assumption than random assignments of DMs. But random assignment of DMs is sufficient to imply parallel disparities. The parallel disparities assumption allows DM race to be correlated with variables that affect the level of both outcomes (e.g., white DMs could have a systematically higher propensity to dismiss cases). Rather, it requires that differences across filer race are mean-independent of DM race. In other words, it allows for selection bias related to DM race, but this selection bias must be equal across across filer race. Under the assumption of parallel disparities, the homophily estimand identifies the difference in average bias between white and non-white DMs (formalized below).

Proposition 1: Identification of Difference in Average Bias. If parallel disparities (Assumption 1) holds, the homophily estimand identifies the average difference in bias. That is,

$$\tau = \beta^{W} - \beta^{NW}$$

where

$$\beta^{W} = E[Y_B(B, W) - Y_B(NB, W)|DM = W]$$

$$\beta^{NW} = E[Y_B(B, NW) - Y_B(NB, NW)|DM = NW].$$

Proof. First, rewrite the estimand in terms of potential outcomes:

$$\tau = E[Y_B - Y_{NB}|R^{DM} = W] - E[Y_B - Y_{NB}|R^{DM} = NW]$$

$$\tau = E[Y_B(B, W) - Y_{NB}(NB, W)|DM = W] - E[Y_B(B, NW) - Y_{NB}(NB, NW)|DM = NW].$$

Note that we can add and subtract additional potential outcome terms to rewrite the two terms in brackets, respectively, as

$$\underbrace{E[Y_B(B,W) - Y_B(NB,W)|DM = W]}_{=\beta^W} + E[Y_B(NB,W) - Y_{NB}(NB,W)|DM = W]$$

$$\underbrace{E[Y_B(B,NW) - Y_B(NB,NW)|DM = NW]}_{\equiv\beta^{NW}} + E[Y_B(NB,NW) - Y_{NB}(NB,NW)|DM = NW].$$

With the above, we can apply the parallel disparities assumption to rewrite the homophily estimand as simply:

$$\tau = \beta^W - \beta^{NW}. \quad \square$$

Without further assumptions, it is still possible to draw inferences about average bias from the average difference in bias. We summarize key conclusions in Remark 1 below.

Remark 1 *Under parallel disparities (Assumption 1), the following are true.*

1. *Non-zero homophily ($\tau \neq 0$) implies that at least one DM exhibits bias.*
2. *Positive homophily ($\tau > 0$), does not imply that there is only bias against Black filers (nor does $\tau < 0$ rule out some DMs exhibiting bias against Black filers).*
3. *Zero homophily ($\tau = 0$) does not imply that there is no bias exhibited among DMs, as this scenario could arise if there are DMs with opposing biases that cancel out average.*

With an estimate of homophily τ, we can partially identify average bias β. And under additional assumptions, it becomes possible to more sharply characterize the lower bound of average bias. The two additional assumptions we consider are given below.

Assumption 2 *On average, white DMs weakly exhibit bias against Black filers/in favor of non-Black filers: $\beta^W \geq 0$.*

Assumption 3 *On average, non-white DMs weakly exhibit bias against Black filers/in favor of non-Black filers: $\beta^{NW} \geq 0$.*

Note that for $\tau > 0$, Assumption 3 implies Assumption 2 (while the reverse is not true). Let $p = P(R^{DM} = NW)$, which corresponds to the non-white share of DMs. With

this notation we can write $\beta = p\beta^{NW} + (1-p)\beta^{W}$. The following proposition summarizes our partial identification results under Assumptions 1-3.

Proposition 2: Partial Identification of Average Bias *Suppose that homophily is positive ($\tau > 0$) and that parallel disparities (Assumption 1) holds, then the statements below follow:*

1. *With no further assumptions, τ partially identifies β as follows: $\beta \in [-1 + (1-p)\tau, 1 - \tau p]$.*

2. *Under Assumption 2 ($\beta^{W} \geq 0$), τ implies a higher lower bound, partially identifying β as follows: $\beta \in [-p\tau, 1 - \tau p]$.*

3. *Under Assumption 3 ($\beta^{NW} \geq 0$), τ implies a higher lower bound, partially identifying β as follows: $\beta \in [(1-p)\tau, 1 - \tau p]$.*

Another way to characterize the magnitude of bias is to divide average bias β by the observed disparity $E[Y_B - Y_{NB}]$. This corresponds to the share of the observed disparities that is due to racial bias. Using homophily τ, which partially identifies average bias β as described above, we can similarly partially identify the share of the observed disparity that is due to racial bias.

In the next section, we turn to estimating racial disparities in bankruptcy outcomes and homophily. Guided by the theory above, we can bound average racial bias under Assumptions 1-3.

5 Results

5.1 Disparities in Personal Bankruptcy

Before testing for racial bias, we first document disparities across the race of the bankruptcy filer. In Tables 2 and 3, we test whether bankruptcy cases are more likely to be dismissed for Black filers.[15] As discussed above, dismissal is equivalent to denying bankruptcy protection for these individuals and, as shown in Dobbie and Song (2015), case dismissal has severe negative consequences for the consumer including reducing earnings and increasing the likelihood of foreclosure and mortality. Table 2 focuses on Chapter 7 filers. Depending on the fixed effect structure, we estimate that Black filers are between 0.6 and

[15]Results for all racial groups are provided in Appendix Table **??**. We only find significant differences between Black filers and all other races.

3 percentage points more likely to be dismissed than other races. Relative to the average Chapter 7 dismissal probability of 1.8%, Black filers are about twice as likely to be dismissed, even when controlling for year, zip code, judge, and trustee fixed effects. The attenuation of the Black-white dismissal gap in Column (7) using controls in the FJC data is mostly driven by the necessary restriction of the Column (7) sample to 2009-2022—this change in sample dates also explains the drop in R-squared from 0.29 in Column (6) to 0.06 in Column (7).

In Table 3, we examine dismissal for Chapter 13 filers. When only controlling for year fixed effects, Black filers are 20 percentage points more likely to be dismissed relative to other filers. This estimate falls to 17 percentage points when including court-district fixed effects in Column (3), suggesting that some of the disparity between races is related to factors associated with where they live. Additional fixed effects continue to attenuate the coefficient estimates only slightly. Even in Column (6) with the full set we still estimate that Black filers are 16.8 percentage points more likely to be dismissed from Chapter 13 after including all fixed effects. This is a 30% increase from the mean dismissal rate of 56% for these cases. Again, using the FJC controls in Column (7) attenuates the conditional Black-white dismissal gap, but this is mostly driven by the change in time period rather than an uneven distribution of the observable control variables across races. However, the coefficients on the controls in Column (7) help benchmark the economic magnitude of the racial disparity coefficient. The 11 percentage point effect is almost half of the large pro se effect of filing without professional legal counsel and the same order of magnitude as being a repeat filer.

Taken together, Tables 2 and 3 show that Black filers are significantly more likely to be dismissed from both Chapter 7 and Chapter 13 bankruptcy, but the absolute size of the effect is an order of magnitude larger in Chapter 13.In the sections that follow, we more finely test how racial biases may be driving these outcomes.

5.2 How Much Does Bias Contribute to Disparities?

Table 4 tests whether filer-trustee homophily affects bankruptcy dismissal using specifications of the form

$$Dismissed_i = \beta_0 BlackFiler_i + \Delta\beta BlackFiler_i * WhiteTrustee_i + \alpha_t + \gamma_z + \delta_j + \mu_k + \varepsilon_i$$

where α_t, γ_z, δ_j, and μ_k are fixed effects for year, geography (county or zip code), judge, and trustee. Similar to Tables 2 and 3, the dependent variable is a dummy indicating the bankruptcy case was dismissed. Judge and trustee fixed effects are important in these

regressions to control for any fixed biases towards dismissal of the judge or the trustee.[16] Further, these fixed effects subsume the race of the judge and trustee, so we do not control separately for their race. As outlined in Section 4 above, we are interested in $\Delta\beta$, which corresponds to the homophily estimand τ introduced in Section 4. Recall that that homophily estimand captures how the difference in Black and non-Black filers changes when cases are assigned to a white trustee. Meanwhile, β_0 tests for differences in outcomes between Black and non-Black filers who are assigned to non-white trustees.

For the full Lexis Nexis-FJC merged sample in Column (1) of Table 4, the coefficient on *Black filer* (β_0) is small and statistically insignificant, while the interaction term *Black filer* * *White trustee* is positive and statistically significant. Thus, Black filers have similar dismissal rates to non-Black filers when assigned to non-white trustees but are significantly less likely to receive full bankruptcy protection when assigned to a white trustee. As laid out in Section 4, since $\Delta\beta \neq 0$, we conclude that there is bias present in how trustees treat bankrupt consumers. Further, as long as we assume that trustees are as lenient towards filers of their own race as they are towards those of a different race, Table 4 is strong evidence of homophily effects among bankruptcy trustee, and this homophily effect is quite large.

Column (1) also includes the triple interaction *Black filer* * *White trustee* * *Ch. 7* to separately test for homophily in Chapter 7 and Chapter 13. The results show that there is essentially no homophily in Chapter 7 bankruptcy filings since the sum of the two coefficients is almost exactly zero. Unconditionally, Black filers are 21 percentage points more likely to be dismissed from Chapter 13 than non-Black filers (Column (1) of Table 3). Thus, we estimate that about two-thirds of the overall disparity in Chapter 13 outcomes is due to racial bias among bankruptcy trustees. Importantly, Black filers are 77% more likely to use Chapter 13 bankruptcy—precisely the chapter of bankruptcy where bias is likely to work against them.

Finally, Columns (2) and (3) limit the sample to only Chapter 7 or 13 cases to fully allow all fixed effects to be estimated separately for each bankruptcy type. Consistent with previous results, we find that Black filers are statistically significantly more likely to be dismissed only when assigned to a white trustee.

[16] See Change and Schoar (2013), Dobbie and Song (2015), Bernstein, Colonnelli, and Iverson (2019) for evidence of fixed judge leniency tendencies. While we presume that trustees also exhibit biases, we are unaware of systematic evidence on this front.

6 Conclusion

In this paper, we provide direct evidence of racial disparities in bankruptcy outcomes. Comparing the dismissal rates for filers imputed to be Black against the dismissal rates of filers from all other races, our most conservative estimate is a 33% (10 percentage point) higher dismissal rate for Black filers than non-Black Chapter 13 filers. We further find that Black filers are most likely to have their cases dismissed when filing Chapter 13 with a white trustee.

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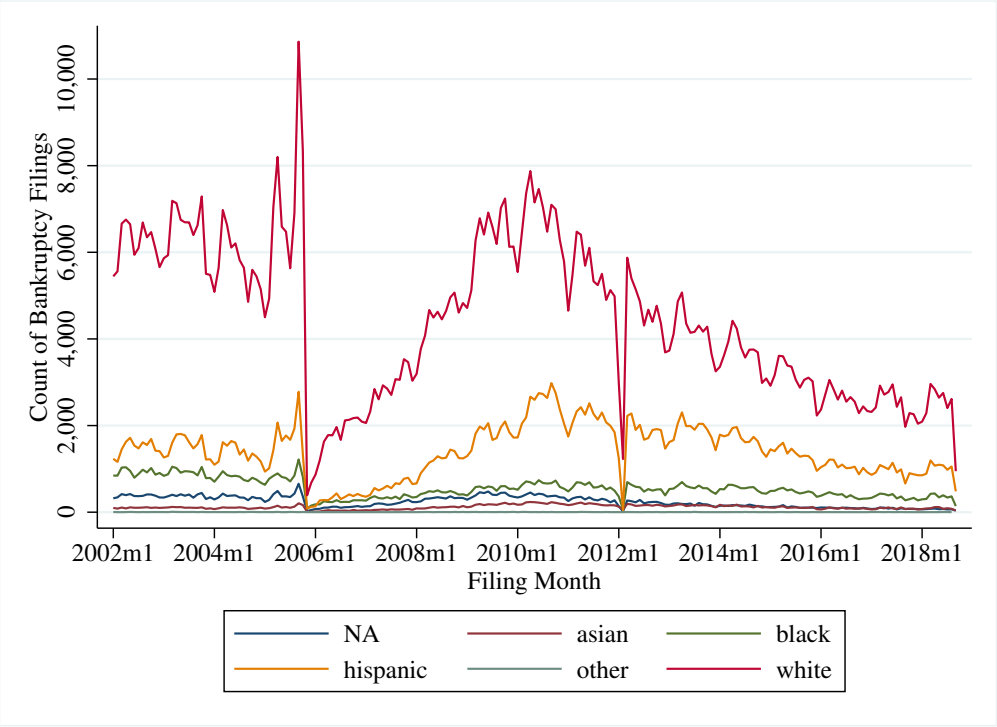
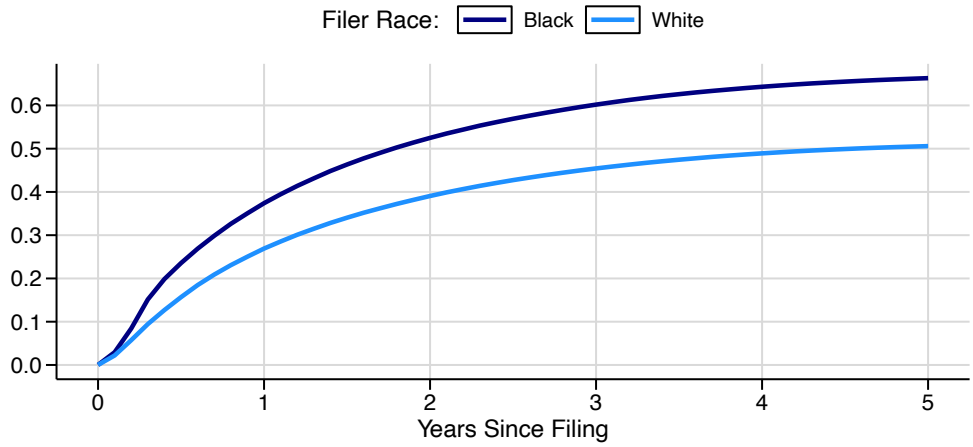
Figure 1: Bankruptcy Filings by Petitioner Race



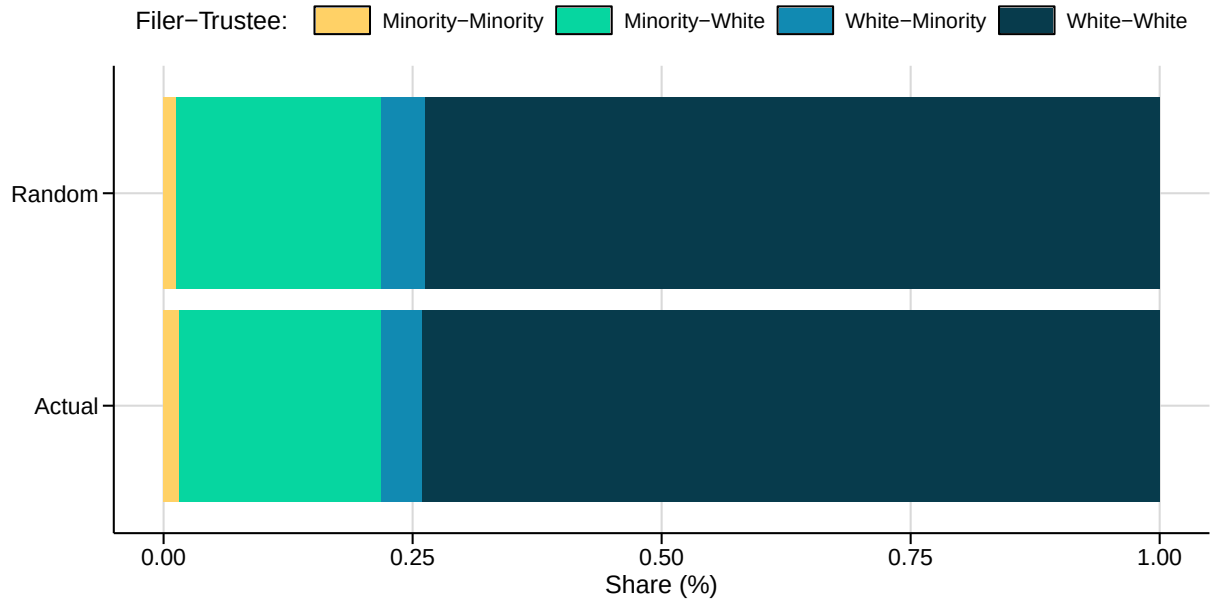
Notes: Figure plots bankruptcy counts in our sample of Florida, Minnesota, and Utah filings by month and race.

Figure 2: Chapter 13 Bankruptcy Dismissal Survival Curves by Petitioner Race



Notes: Figure plots cumulative dismissal hazard curves by race for Chapter 13 filers. The dark and light blue lines show the total fraction of Black and white Chapter 13 filers, respectively, that have had their cases dismissed within the indicated number of years since their initial filing.

Figure 3: Personal Bankruptcy Filings by Match with Petitioner Race



Notes: Figure plots share of cases where the bankruptcy petitioner's race matches with the race of each type of other participant in the bankruptcy proceeding. Bars labeled random report the share of matches that would belong to each race pair category if matching were random nationwide.

Table 1: Descriptive Statistics on Personal Bankruptcy Petitioners

	Chapters 7 and 13		Chapter 7		Chapter 13	
	Mean	N	Mean	N	Mean	N
Panel A: Bankruptcy Outcomes						
Dismissal	0.16	63,210,223	0.02	46,559,929	0.56	16,650,294
Filed Ch. 7	0.74	63,210,223	1	46,559,929	0	16,650,294
Pro Se	0.06	20,502,247	0.05	14,549,435	0.07	5,952,812
Prior Filer	0.14	20,248,920	0.07	14,491,525	0.32	5,757,395
Has Nonex. Assets	0.35	20,478,568	0.08	14,532,686	0.99	5,945,882
Owns Home	0.55	20,643,958	0.52	14,320,242	0.60	6,323,716
Joint Filing	0.45	21,554,305	0.44	14,702,321	0.48	6,851,984
Assets ($000s)	400.02	21,554,295	423.60	14,702,314	349.41	6,851,981
Debt/Assets	7.25	19,464,969	8.40	14,157,684	4.18	5,307,285
Secured Debt (%)	0.48	19,384,807	0.43	14,106,056	0.63	5,278,751
Monthly Inc. ($000s)	3.76	20,673,915	3.82	14,335,967	3.62	6,337,948
Monthly Inc. - Exp.	-1.78	20,661,108	-265.94	14,326,987	595.73	6,334,121
Panel B: Filer Race						
Asian	0.020	53,125,258	0.021	39,002,506	0.016	14,122,752
Black	0.142	53,125,258	0.112	39,002,506	0.227	14,122,752
Hispanic	0.056	53,125,258	0.058	39,002,506	0.052	14,122,752
White	0.742	53,125,258	0.769	39,002,506	0.665	14,122,752
Other	0.040	53,125,258	0.040	39,002,506	0.041	14,122,752
Panel C: Trustee Race						
Asian	0.010	58,566,649	0.011	43,058,405	0.005	15,508,244
Black	0.083	58,566,649	0.076	43,058,405	0.104	15,508,244
Hispanic	0.024	58,566,649	0.025	43,058,405	0.021	15,508,244
White	0.839	58,566,649	0.843	43,058,405	0.829	15,508,244
Other	0.044	58,566,649	0.045	43,058,405	0.042	15,508,244
Panel D: Judge Race						
White	0.81	1,247,291	0.82	922,948	0.79	324,343
Black	0.10	1,247,291	0.10	922,948	0.11	324,343
Hispanic	0.04	1,247,291	0.04	922,948	0.05	324,343
Asian	0.02	1,247,291	0.02	922,948	0.02	324,343
Other	0.02	1,247,291	0.02	922,948	0.02	324,343
Panel E: Attorney Race						
White	0.70	112,933	0.69	87,291	0.70	25,642
Black	0.09	112,933	0.09	87,291	0.08	25,642
Hispanic	0.17	112,933	0.17	87,291	0.17	25,642
Asian	0.02	112,933	0.02	87,291	0.03	25,642
Other	0.02	112,933	0.02	87,291	0.02	25,642

Notes: Table reports summary statistics for bankruptcy outcomes (panel A) and imputed race measures for filers, trustees, judges, and attorneys in panels B-E, respectively.

Table 2: Dismissal Effects by Petitioner Race: Chapter 7

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Black Filer	0.030***	0.028***	0.029***	0.024***	0.024***	0.023***	0.006***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.000)
Pro Se							0.094***
							(0.001)
Prior Filer							0.032***
							(0.001)
Nonex. Assets							0.006***
							(0.000)
Owns Home							-0.000
							(0.000)
Joint Filing							-0.001***
							(0.000)
ln(Assets)							-0.003***
							(0.001)
Debt/Assets							0.004***
							(0.000)
Secured Debt (%)							0.004***
							(0.000)
ln(Monthly Inc.)							-0.006***
							(0.000)
Monthly Inc. - Exp.							0.001***
							(0.000)
Intercept	0.018***						
	(0.000)						
N	39,002,506	38,985,463	38,985,463	38,985,463	38,985,463	38,985,463	11,977,436
R^2	0.002	0.004	0.008	0.280	0.283	0.289	0.055
Year FE		✓	✓	✓	✓	✓	✓
District FE			✓	✓	✓	✓	✓
Filer ZIP FE				✓	✓	✓	✓
Judge FE					✓	✓	✓
Trustee FE						✓	✓

Notes: Table reports regressions of an indicator for whether a Chapter 7 bankruptcy petition was dismissed in court onto an indicator equal to one if filer race is imputed to be Black. Control variables include indicator variables for whether filing was conducted without an attorney (*Pro Se)*, if the individual has filed a bankruptcy case in the previous 8 years (*Prior Filer*), if the filing has non-exempt assets that can be distributed to creditors (*Nonex. Assets*), if the individual is a homeowner (Owns Home), and if the filing was a joint filing with a spouse or domestic partner (*Joint Filing*). Continuous control variables are the log of total assets (*ln(Asset*s)), the total debt-to-asset ratio — winsorized at the 1% level (*Debt/Assets*), the share of total debt that is secured (*Secured Debt (%)*), the log of monthly income (*ln(Monthly Income)*), and the difference between a filers monthly income and expenses — winsorized at the 1% level (*Monthly Inc. - Exp.*). Robust standard errors are clustered at the ZIP level and are displayed in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table 3: Dismissal Effects by Petitioner Race: Chapter 13

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Black Filer	0.209***	0.204***	0.173***	0.174***	0.169***	0.168***	0.106***
	(0.003)	(0.004)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Pro Se							0.223***
							(0.003)
Prior Filer							0.151***
							(0.001)
Nonex. Assets							-0.015***
							(0.006)
Owns Home							-0.070***
							(0.002)
Joint Filing							-0.102***
							(0.001)
ln(Assets)							-0.073***
							(0.003)
Debt/Assets							-0.012***
							(0.001)
Secured Debt (%)							0.045***
							(0.001)
ln(Monthly Inc.)							-0.074***
							(0.002)
Monthly Inc. - Exp.							0.055***
							(0.001)
Intercept	0.506***						
	(0.001)						
N	14,122,752	14,114,534	14,114,534	14,114,534	14,114,534	14,114,534	4,487,022
R^2	0.019	0.064	0.097	0.406	0.417	0.424	0.305
Year FE		✓	✓	✓	✓	✓	✓
District FE			✓	✓	✓	✓	✓
Filer ZIP FE				✓	✓	✓	✓
Judge FE					✓	✓	✓
Trustee FE						✓	✓

Notes: Table reports regressions of an indicator for whether a Chapter 13 bankruptcy petition was dismissed in court onto an indicator equal to one if filer race is imputed to be Black. Control variables include indicator variables for whether filing was conducted without an attorney (*Pro Se)*, if the individual has filed a bankruptcy case in the previous 8 years (*Prior Filer*), if the filing has non-exempt assets that can be distributed to creditors (*Nonex. Assets*), if the individual is a homeowner (Owns Home), and if the filing was a joint filing with a spouse or domestic partner (*Joint Filing*). Continuous control variables are the log of total assets (*ln(Asset*s)), the total debt-to-asset ratio — winsorized at the 1% level (*Debt/Assets*), the share of total debt that is secured (*Secured Debt (%)*), the log of monthly income (*ln(Monthly Income)*), and the difference between a filers monthly income and expenses — winsorized at the 1% level (*Monthly Inc. - Exp.*). Robust standard errors are clustered at the ZIP code and trustee level and are displayed in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table 4: Dismissal Effects by Trustee and Petitioner Race

	(1)	(2)	(3)
Sample	Full Sample	Chapter 7	Chapter 13
Black Filer	0.04	0.01***	0.01
	(0.04)	(0.00)	(0.03)
Filed Ch. 7	-0.56***		
	(0.07)		
Black Filer × White Trustee	0.13***	0.00	0.10***
	(0.05)	(0.00)	(0.04)
Black Filer × Filed Ch. 7	-0.04		
	(0.04)		
White Trustee × Filed Ch. 7	0.11		
	(0.08)		
Black Filer × White Trustee × Filed Ch. 7	-0.13***		
	(0.05)		
N	13,373,013	9,815,556	3,557,457
R^2	0.460	0.052	0.306
Controls	✓	✓	✓
Disposition Year FE	✓	✓	✓
District FE	✓	✓	✓
Filer ZIP FE	✓	✓	✓
Judge FE	✓	✓	✓
Trustee FE	✓	✓	✓

Notes: Table reports effects of filer and trustee race on an indicator for whether the bankruptcy petition was dismissed in court. Black filer is an indicator for whether the race of the petitioner is imputed to be Black. White trustee is an indictor for whether the court-appointed trustee's race is imputed to be white. *Filed Ch. 7* is an indicator for Chapter 7 filing. Controls include all variables discussed in Table 2. Robust standard errors are two-way clustered at the ZIP code and trustee levels and are displayed in parentheses. *** p<0.01, ** p<0.05, * p<0.1.