

Explaining Racial Disparities in Personal Bankruptcy Outcomes

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Motivation

- Bankruptcy is a major source of debt relief in the US
 - ▶ 1 in 10 Americans have filed at some point in their life (Keys, 2018)
 - ▶ Average \$149k per filer \Leftrightarrow \$832/adult/year discharged annually (US Courts, 2019)
- There are significant racial disparities in financial outcomes in the US
 - ▶ Median wealth of white households is 10x Black and Hispanic wealth: (\$171k vs. \$17k) (2016 SCF)
 - ▶ Minorities pay higher interest rates than whites with the same credit score (Ghent Hernández-Murillo Owyang, 2014; Bayer Ferreira Ross, 2017, Butler Mayer Weston 2021)
 - ▶ Black household consumption falls 50% more in response to the same income shock (Ganong Jones Noel Farrell Greig Wheat, 2020)

This Paper

- **Question:** What racial disparities exist in personal bankruptcy? And why?
- **Approach:**
 - ▶ What observable **filer** characteristics explain disparities in bankruptcy outcomes?
 - ▶ Quantify **racial homophily** between filers and judges/**trustees**
 - ▶ Random assignment of judges/trustees \Rightarrow detect & partially identify **racial bias**
- **Main findings:**
 - ▶ Black filers' cases are more likely to be **dismissed** (without debt discharge) on average
 - Chapter 7: **4 pps** more often (118% higher) than non-black filers
 - Chapter 13: **28 pps** more often (55% higher) than non-black filers
 - ▶ Observable variables reduce disparities to **0.6 and 12.5 pps** for Chapters 7 and 13
 - ▶ Random assignment to white trustees \Rightarrow Ch 13 dismissal rate \uparrow **13-20 pps** for black filers

Contributions to Related Literature

- **Racial disparities in household finance:** Munnell, Browne, McEneaney, and Tootel (1996); Braucher et al. (2012); Reid Bocian, Li, and Quercia (2017); Bayer et al. (2018); Begley and Purnanandam (2020); Barlett, Morse, Wallace, and Stanton (2019); Fuster, Goldsmith-Pinkham, Ramadorai, and Walther (2020); Morse and Pence (2020); Blattner and Nelson (2021); **Goldsmith-Pinkham, Scott, and Wang (2021)**
 - ▶ **New focus on racial disparities in bankruptcy and drivers**
- **Impact of legal decision-makers:** Anwar et al. (2012, 2019a, 2019b); Arnold, Dobbie, and Yang (2018); Arnold, Dobbie, and Hull (2020); Iverson (2020); Iverson, Madsen, Wang, and Xu (2020)
 - ▶ **Highlight role of bias and importance of bankruptcy trustees**
- **Methods for detecting and quantifying bias:** Becker (1957, 1993); Knowles, Persico, and Todd (2001); Anwar and Fang (2006); Arnold, Dobbie, and Yang (2018); Arnold, Dobbie, and Hull (2020); Canay, Mogstad, and Mountjoy (2020).
 - ▶ **Formalize link between homophily and bias, and partially identify bias**

1. Background and Data
2. Racial Disparities in Bankruptcy Dismissals
3. Detecting and Quantifying Racial Bias
4. Conclusion

Background and Data

What is Personal Bankruptcy?

- Discharge unsec. debt (credit card, medical, etc.); make partial payments to creditors
- Households file under one of two Chapters:
 - ▶ **Chapter 7:** discharge received upon initial legal ruling (~3 month process)
 - ▶ **Chapter 13:** discharge received **after** completing 3-5 year repayment plan
- Three important legal **decision makers (DMs):**
 - ▶ **Judge:** ultimately decides case outcomes (e.g., dismissal)
 - ▶ **Trustee:** evaluates filer's accuracy and honesty; facilitates payments to creditors
 - ▶ **Attorney:** advises filer on Chapter choice and reporting

- **Lexis Nexis and Federal Judicial Center** bankruptcy case data
 - ▶ Docket header info: filer name, address, chapter, case outcomes, **DM names**
 - ▶ Detailed schedule data: assets, debts, income, expenses
 - ▶ Today: FL and MN (*full US in progress*)
- Imputing **race** (*today's results*)
 - ▶ Bayesian prediction of race using location and surname (Imai and Khanna, 2015)
 - ▶ Uses Census Surname List (and Spanish Surname List) and 2010 block-level data on race
- Self-reported race from public records (*in progress*)
- Hand-coding of judge and trustee race (*in progress*)

The Bankruptcy Process

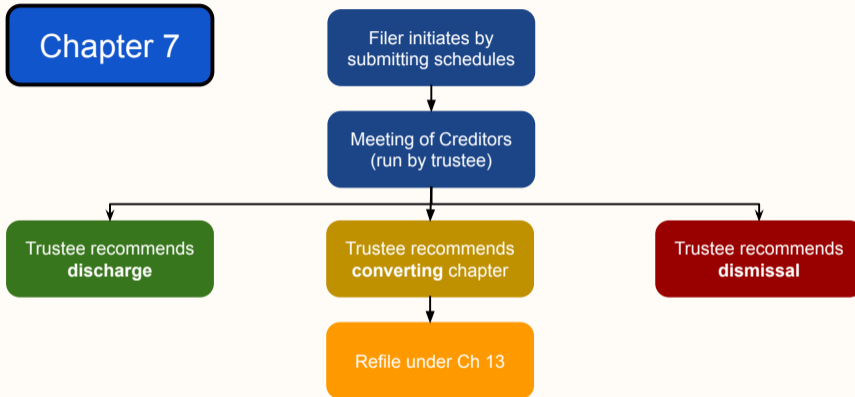
Chapter 7

Filer initiates by
submitting schedules

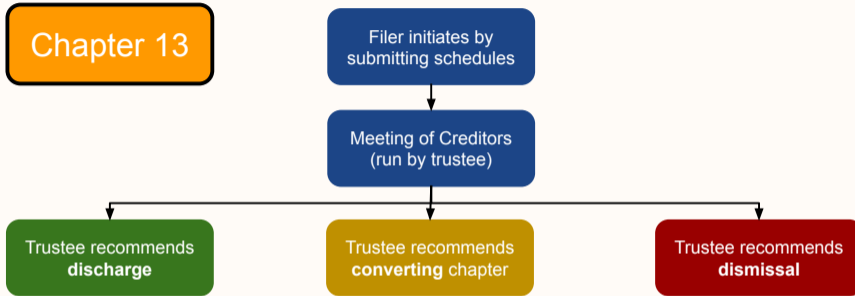


Meeting of Creditors
(run by trustee)

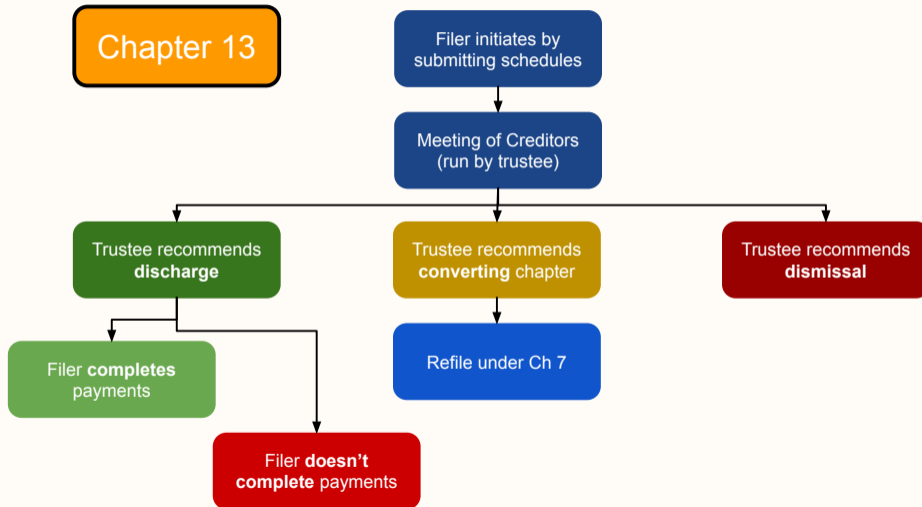
The Bankruptcy Process



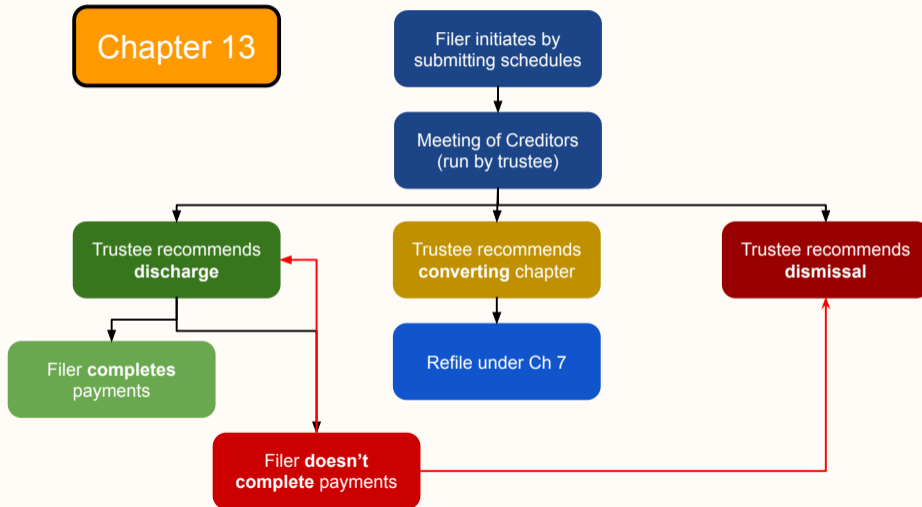
The Bankruptcy Process



The Bankruptcy Process



The Bankruptcy Process



Bankruptcy Outcomes

- Possible case outcomes: **discharge**, **conversion** of chapter, and **dismissal**
- What are the main reasons for **dismissal**?
 - ▶ Fraudulent reporting by filer (e.g., concealing property)
 - ▶ Failure to make promised payments in Chapter 13 over 5-year period
- **Trustees** and **judges** make **subjective** evaluations of filers
 - ▶ Procedural **error** vs. intentional **fraud**?
 - ▶ Did Chapter 13 payments stop due to **severe** hardship **beyond filer's control**?
 - ▶ Assessment of reasonableness of filer's Chapter 13 repayment plan

Racial Disparities in Bankruptcy Dismissals

Disparities and Decisions Makers (Outcome = 1[Dismissal])

	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: Chapter 7 ($\mu = 0.04$)						
Black Filer	0.04*** (0.005)	0.04*** (0.003)	0.03*** (0.003)	0.03*** (0.003)	0.03*** (0.003)	0.03*** (0.003)
N	987,577	987,576	987,571	987,569	987,559	986,927
R2	0.02	0.03	0.04	0.04	0.05	0.06
Panel B: Chapter 13 ($\mu = 0.53$)						
Black Filer	0.28*** (0.011)	0.23*** (0.008)	0.19*** (0.006)	0.18*** (0.006)	0.17*** (0.006)	0.17*** (0.006)
N	319,413	319,413	319,334	319,331	319,293	318,885
R2	0.06	0.10	0.11	0.16	0.20	0.21
Year FE	✓	✓	✓	✓	✓	✓
County FE		✓	✓	✓	✓	✓
ZIP FE			✓	✓	✓	✓
Judge FE				✓	✓	✓
Trustee FE					✓	✓
Attorney FE						✓

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Attorney FE						✓

Racial Disparities in Dismissal Rates

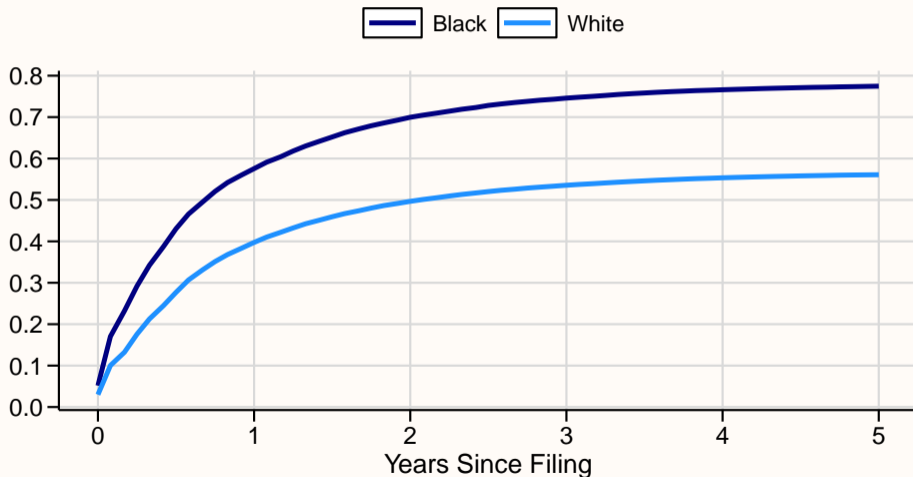
Sample	(1) FJC	(2) FJC	(3) FJC	(4) FJC (Ch 7)	(5) FJC (Ch 13)
Black Filer	0.072*** (0.003)	0.060*** (0.003)	0.056*** (0.003)	0.006*** (0.002)	0.125*** (0.008)
Chapter 7		-0.401*** (0.010)	-0.386*** (0.009)		
Pro Se		0.128*** (0.003)	0.191*** (0.004)	0.047*** (0.002)	0.534*** (0.008)
N	575,467	575,467	575,467	443,661	131,632
R2	0.61	0.65	0.63	0.51	0.61
Case Controls			✓	✓	✓

Case controls: 1[filing fee paid in full], 1[repeat filer], debt/assets, % secured debt, 1[joint filing], 1[nonexempt assets], 1[homeowner], ln(monthly income), ln/assets), income - expense gap

Fixed Effects: Year, ZIP, Judge, Trustee

Clustering: ZIP and Trustee (two-way)

Ch. 13 Dismissal Hazard Rate (cumulative)



Detecting and Quantifying Racial Bias

Partially Identifying Bias from Homophily

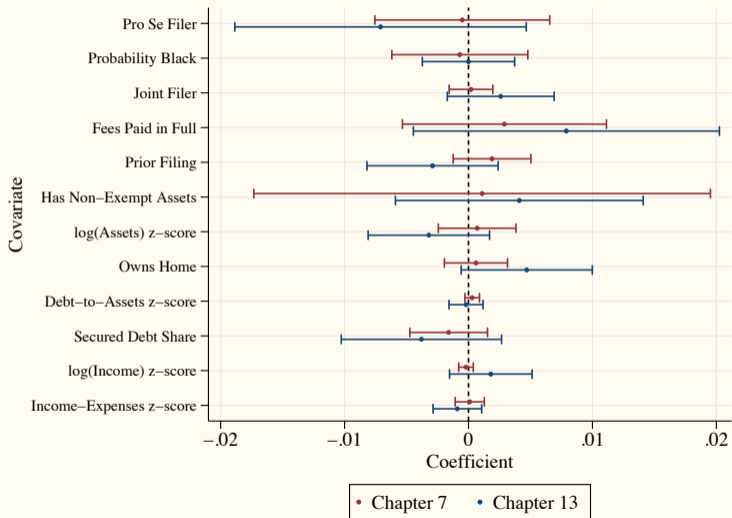
- Random assignment of **DMs** \Rightarrow identify **difference in bias** between **DMs**
- Difference in black/non-black bias is a lower bound for average bias
 - ▶ Requires assumption that black **DMs** are weakly biased against black filers
 - ▶ Psychology research documents pro-white implicit bias among US minorities
Nosek et al. (2002); Livingston (2002); Ashburn-Nardo et al. (2005)
- Econometric specification:

$$Dismissed_{ijktz} = \beta_0 BlackFiler_i + \Delta\beta BlackFiler_i \times WhiteTrustee_k + \alpha_t + \gamma_z + \delta_j + \mu_k + \varepsilon_{ijktz}$$

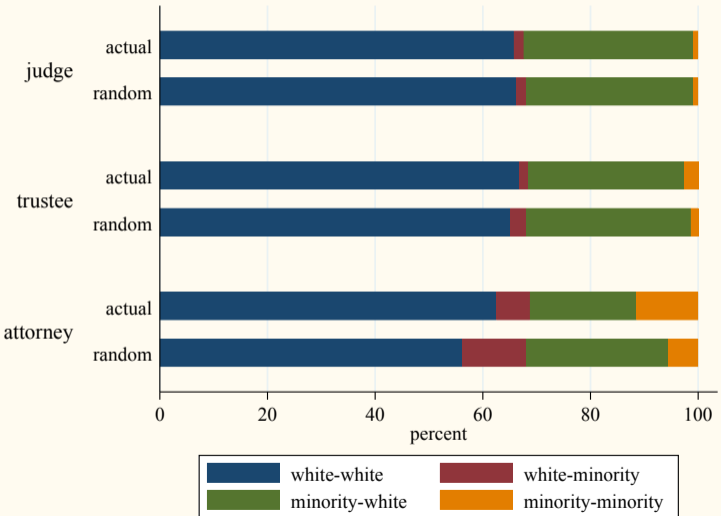
Identification: Random and Quasi-Random Assignment of Trustees

- Chapter 7 trustees are assigned to cases via a blind rotation system (random ✓)
- Chapter 13 Standing Trustees hired by local U.S. Trustees Office
 - ▶ Each court has at most *several* Ch. 13 trustees at a given time; seem rotated
 - ▶ Variation in regimes of local trustee race distribution ⇒ quasi-random to given borrower
 - ▶ e.g., assume Florida is not more likely to have a black Chapter 13 trustee at times when unobs. factors make black households are less likely to have their case dismissed
- Balance tests do not find systematic correlations in filer characteristics w/ trustee race
- Pairing of filer-trustee by race consistent with random assignment

Filer Characteristics Are Balanced by Trustee Race



Trustee-Filer Race Matching Consistent with Random Assignment



Homophily Results

Sample	(1) FJC	(2) FJC Ch 7	(3) FJC Ch 13	(4) Full	(5) Full	(6) Full
Black Filer	-0.029 (0.0253)	0.015** (0.007)	0.020 (0.096)	-0.027 (0.027)	0.017 (0.084)	-0.004 (0.079)
Black Filer x White Trustee	0.083** (0.037)	-0.012 (0.009)	0.132 (0.101)	0.091** (0.037)	0.193* (0.098)	0.194** (0.094)
Black Filer x White Trustee x Ch 7					-0.194* (0.099)	-0.197** (0.094)
N	510,953	430,873	79,811	1,184,855	1,184,855	1,184,855
R2	0.61	0.51	0.61	0.65	0.65	0.65
Case Controls	✓	✓	✓			
Interact Pro Se & Ch w/ Race						✓

Case controls: 1[filing fee paid in full], 1[repeat filer], debt/assets, % secured debt, 1[Pro Se], 1[joint filing], 1[nonexempt assets], 1[homeowner], ln(monthly income), ln/assets), income - expense gap

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Conclusion

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- Black filers' experience significantly higher bankruptcy dismissal rates
- Observables explain most Ch 7 disparities, but only ~50% for Ch 13
- Black filers assigned to white trustees see significantly higher dismissal rates
- Implicit(?) bias among bankruptcy DMs can limit black households' access to debt relief
- Next steps: expanding data and examining events surrounding Ch 13 dismissal

Thanks!

Defining Racial Bias

- Let $B^F = 1$ indicate that a filer is black
- Bankruptcy outcome Y ($= 1 \Rightarrow$ dismissal) is chosen by a DM $j \in J$ with race B^{DM}
- Let Y_1 denote the potential outcome when black and Y_0 when not
- Econometrician observes $Y = Y_0 + (Y_1 - Y_0)B^F$

Definition: Racial Bias

A DM $j \in J$ exhibits **racial bias** if $Y_1 \neq Y_0$.

- Let $Y_{11} = Y$ when $B^F = 1$ and $B^{DM} = 1$
- Let $Y_{10} = Y$ when $B^F = 1$ and $B^{DM} = 0$
- Define Y_{00} and Y_{01} similarly

Estimand: Average Racial Bias

The average amount of bias against black filers is an ATT (avg. treatment on the treated):

$$ATT = \mathbb{E}(Y_1|B^F = 1) - E(Y_0|B^F = 1) = \beta_0 - p(\beta_0 - \beta_1)$$

where $\beta_0 = Y_{10} - Y_{00}$, $\beta_1 = Y_{11} - Y_{01}$, and $p = P(B^{DM} = 1)$. Let $\Delta\beta \equiv \beta_0 - \beta_1$.

Proposition 1: The difference in bias $\Delta\beta$ partially identifies average bias.

If $\beta_1 \geq 0$, then $ATT \in [(1-p)\Delta\beta, 1-p\Delta\beta]$.

Identifying the Difference in Bias $\Delta\beta$

We can rewrite the model:

$$Y = \alpha + \gamma B^{DM} + \beta_0 B^F + (\beta_1 - \beta_0) B^F B^{DM} + \varepsilon \quad (1)$$

where $\alpha = \mathbb{E}(Y_{00})$, $\gamma = Y_{01} - Y_{00}$, and $\varepsilon = Y_{00} - \mathbb{E}(Y_{00})$.

Proposition 2: Consistent estimation of $\Delta\beta$.

When the DM is randomly assigned, OLS yields consistent estimates of γ and $(\beta_1 - \beta_0) = -\Delta\beta$.