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 ⇔ $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)

- **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

Outline

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., dimissal)
  - **Trustee:** evaluates filer's accuracy and honesty; facilitates payments to creditors
  - **Attorney:** advises filer on Chapter choice and reporting

Data

- **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)*
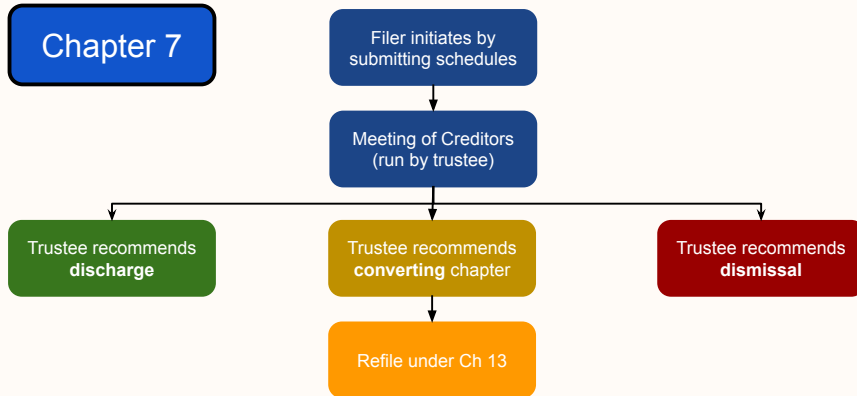- Hand-coding of judge and trustee race *(in progress)*
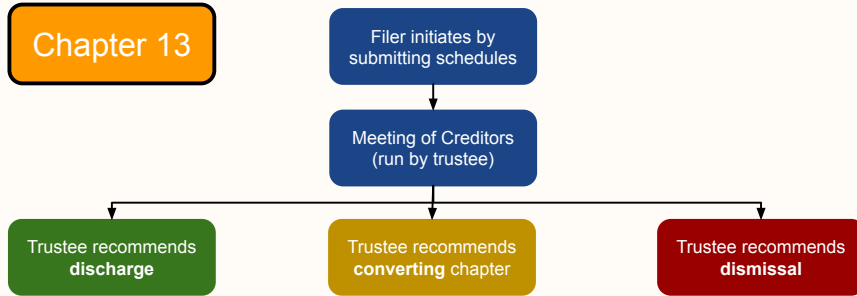
Chapter 7

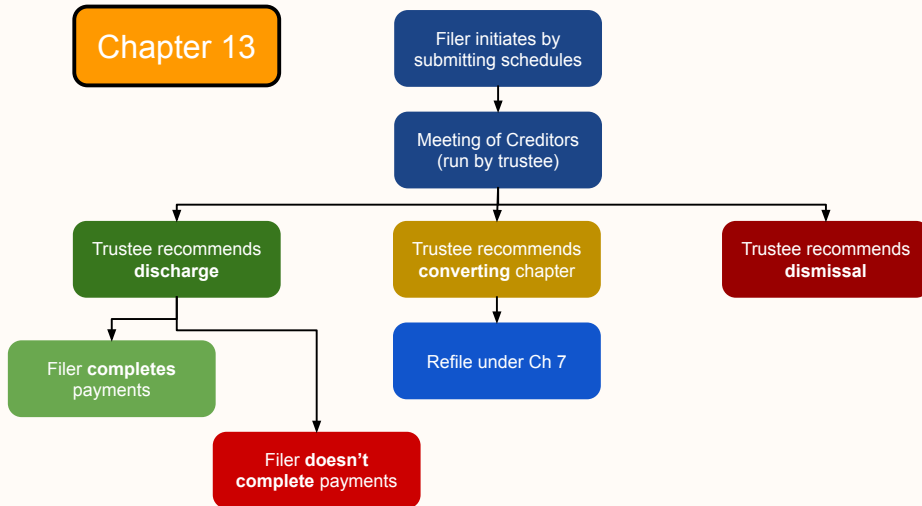Filer initiates by submitting schedules
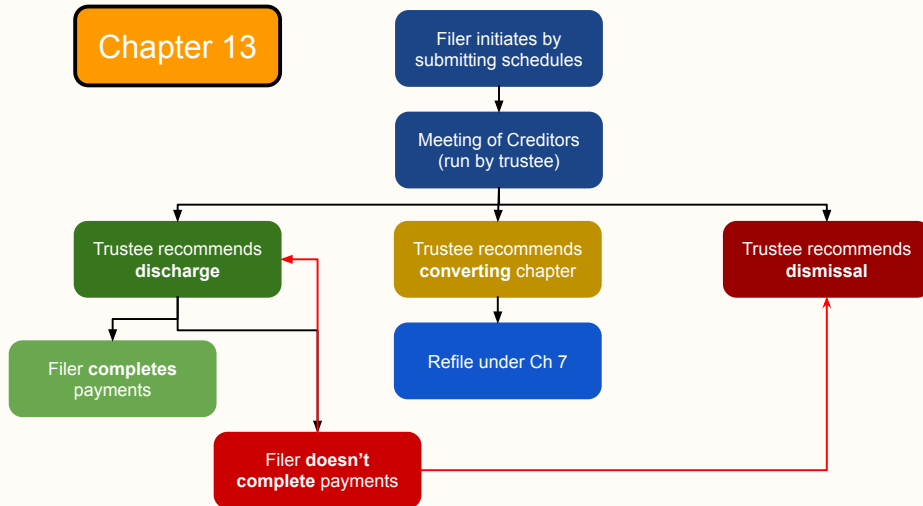
Meeting of Creditors (run by trustee)

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***	0.04***	0.03***	0.03***	0.03***	0.03***
	(0.005)	(0.003)	(0.003)	(0.003)	(0.003)	(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***	0.23***	0.19***	0.18***	0.17***	0.17***
	(0.011)	(0.008)	(0.006)	(0.006)	(0.006)	(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)
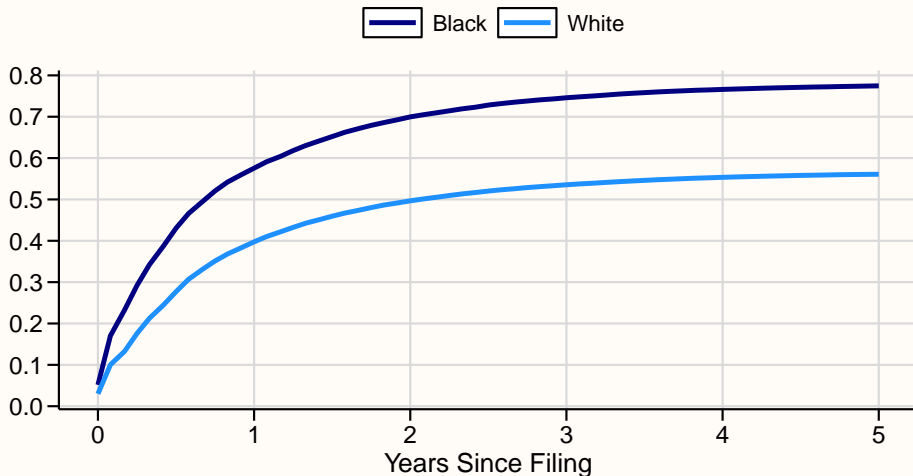
Detecting and Quantifying Racial Bias
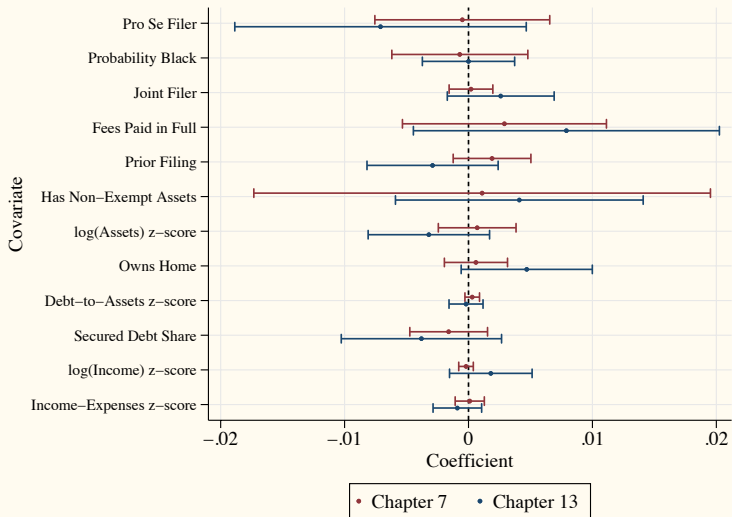
Partially Identifying Bias from Homophily

- 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:

$Dismissed_{ijktz} = \beta_0 BlackFiler_i + \Delta\beta \, BlackFiler_i \times WhiteTrustee_k + \alpha_t + \gamma_z + \delta_j + \mu_k + \varepsilon_{ijktz}$
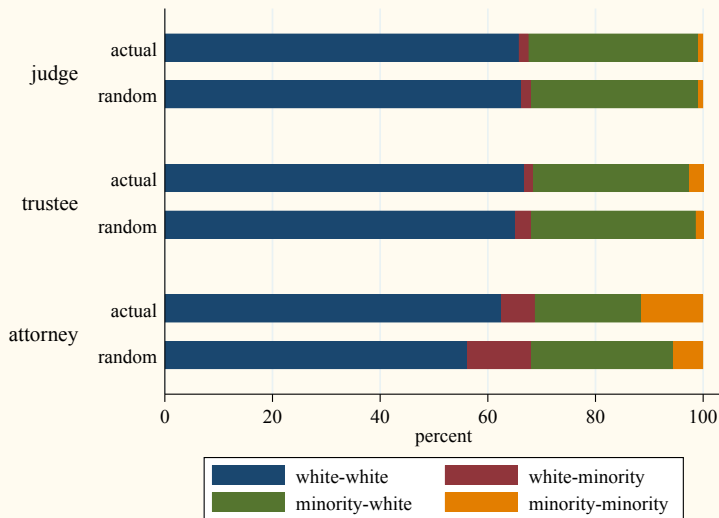
Identification: Random and Quasi-Random Assignment of Trustees

- 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

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

Identifying the Difference in Bias $\Delta\beta$

We can rewrite the model:

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

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 $(\beta_1 - \beta_0) = -\Delta\beta$.