Barriers to Reentry: Initial Borrowing Frictions, Refinancing, and Wealth Redistribution

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Motivation

- Mortgage refinancing is critical for household wealth accumulation and monetary policy transmission
- Racial and income disparities in refinancing rates often attributed to borrower-side behavioral biases (e.g., Agarwal et al., 2016)
- But what about supply-side factors?
  - Lender advertising practices (Grundl and Kim, 2019)
  - Operational bottlenecks & labor market frictions (Frazier and Goodstein, 2023; Fuster et al., 2024)

Research Question

How do frictions during initial mortgage borrowing shape future refinancing behavior?

- Some borrowers complete the process smoothly; others face significant obstacles arising from lender-side issues—e.g., delays, excessive documentation requests, etc.
- Prior personal experiences shape expectations and financial choices, even among sophisticated individuals (Carvalho et al., 2023; Dittmar and Duchin, 2016; Malmendier et al., 2011)
- **Hypothesis**: Borrowers who encounter frictions during the initial loan process are less likely to refinance later

Data and Empirical Strategy

- **Data**: CoreLogic matched with MBS Loan-Level Dataset from FNMA, FHLMC, and GNMA (2014–2021)
- **Key Variable**: *Time-To-Close* (i.e., # days taken to secure a mortgage) as a proxy for frictions in the initial borrowing process
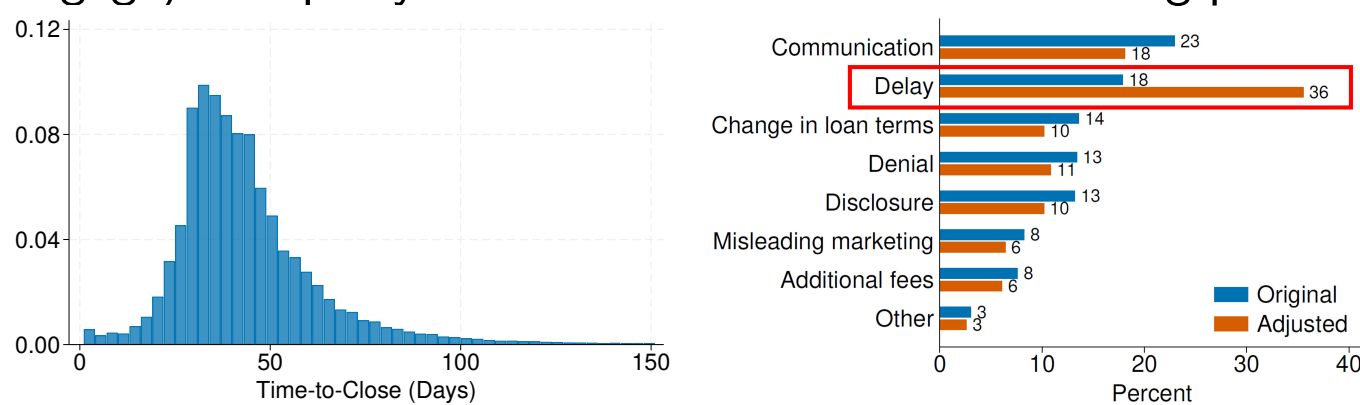
- **Endogeneity Issue**: (i) omitted variable bias: financial literacy
  (ii) measurement error: non-lender-side delay
- **IV Strategy**: Instrument delays with ***loan officer workload*** at time of application
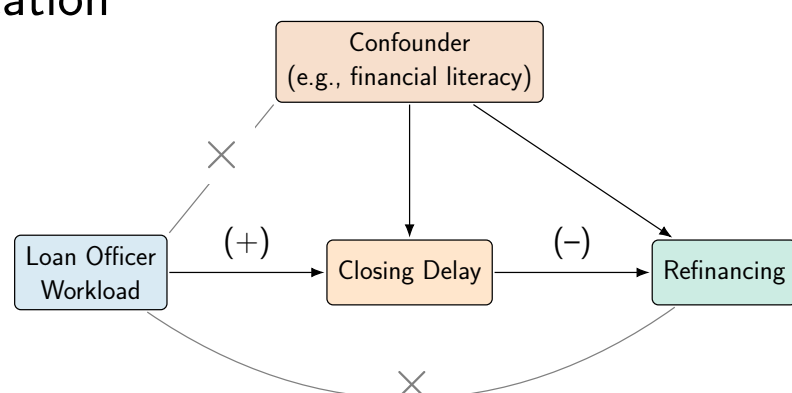
(First Stage)

$$\text{I}(\textit{Time-To-Close} > 60 \text{ Days})_i = \alpha + \beta \cdot \textit{Workload}_i + \delta \cdot X_{i,t} + \eta_{\text{age group}}$$
$$+ \eta_{\text{tract} \times \text{origin year}} + \eta_{\text{year-quarter}} + \eta_{\text{loan officer}} + \epsilon_{i,t},$$

(Second Stage)

$$\textit{Refinance}_{i,t} = \alpha + \beta \cdot \text{I}(\widehat{\textit{Time-To-Close} > 60 \text{ Days}})_i + \delta \cdot X_{i,t} + \eta_{\text{age group}}$$
$$+ \eta_{\text{tract} \times \text{origin year}} + \eta_{\text{year-quarter}} + \eta_{\text{loan officer}} + \epsilon_{i,t}.$$

Main Findings

- 2SLS regression results using a panel of quarterly loan-level data

	Refinance		
	Full Sample	GSE Sample	FHA Sample
I(*Time-To-Close* > 60 Days)	−**0.73*****	−0.98**	−0.83***
	(−3.61)	(−2.08)	(−4.05)
Loan- & Borrower Controls	Yes	Yes	Yes
Tract × Origin. Year FE	Yes	Yes	Yes
Quarter FE, Loan Officer FE	Yes	Yes	Yes
Dep. Var. Mean	**3.02**	3.41	2.03
R-Squared	0.01	0.02	0.01
Obs.	5,883,876	2,230,044	3,653,804

$$\Rightarrow -0.73/3.02 \approx 24\% \text{ decline in refinancing rates}$$
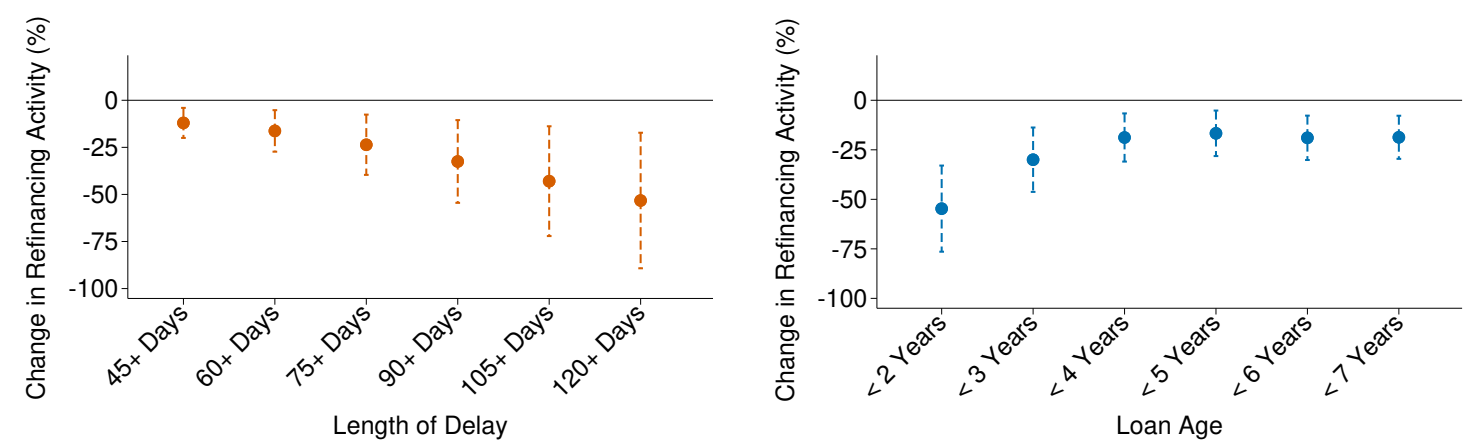
Who Is More Exposed to Initial Borrowing Frictions?

- OLS results using a cross-section of loan-level data

	I(*Time-To-Close* > 60 Days)		
Minority	0.02***	0.01***	0.01**
	(10.09)	(4.10)	(2.40)
Minority × High Race Animus		0.02***	
		(4.95)	
Minority × Low Competition			0.004*
			(1.73)
ln(Income)	−0.01***	−0.01**	−0.01***
	(−2.95)	(−2.43)	(−2.96)
FICO	−0.02***	−0.02***	−0.02***
	(−12.08)	(−11.19)	(−12.09)
Loan- & Borrower Controls	Yes	Yes	Yes
Tract × Origin. Year FE	Yes	Yes	Yes
LO FE	Yes	Yes	Yes
Dep. Var. Mean	0.10	0.10	0.10
R-Squared	0.284	0.284	0.284
Obs.	435,288	405,347	435,288

Financial Consequence of Delays

- Per-Borrower Annual Overpayment

$$\underbrace{87 \text{ bp}}_{\text{avg. realized savings}} \times \underbrace{\frac{0.73}{3.02}}_{\text{drop in refi rate}} \times \underbrace{\$279,288}_{\text{avg. loan size}} = \mathbf{\$586.5}.$$

- Aggregate Burden

$$\underbrace{4,308,256}_{\text{purchase originations/year}} \times \underbrace{10\%}_{\text{delay prob.}} \times \underbrace{\$586.5}_{\text{per-borrower cost}} \approx \mathbf{\$250M} \text{ annually}.$$

- Distributional Impact
  - Minority borrowers represent **16.7%** of originations, but bear **20.1%** of the overpayment burden arising from origination delays

Contact Information

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