

# PAYING TOO MUCH? PRICE DISPERSION IN THE US MORTGAGE MARKET

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*The analysis and conclusions set forth are those of the author and do not indicate concurrence by  
the Federal Reserve or the Swiss National Bank*

# Introduction

- Many mortgage lenders to choose from
  - Over 100 lenders making loans per market/day
  - Most mortgages are homogenous products guaranteed by government
- National Survey of Mortgage Originations:
  - Half of the mortgage borrowers only consider one lender
  - Two-thirds say most lenders would offer same rate and fees
  - 96% satisfied they received lowest interest rate for which they qualify

# Research Questions

Are mortgage borrowers really getting the best rate?

- Do a lot of borrowers “overpay”?
- By how much?
- Who overpays the most and why?

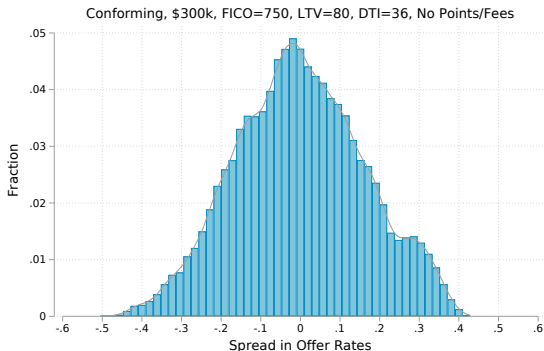
# Mortgage pricing data from Optimal Blue

Online platform used by lenders to manage pricing and lock rates (covers about 25% of market)

- **Lenders' best (recorded) offers**
  - By day, MSA, and loan/borrower type
- **Locked mortgages**
  - Includes rate lock date and terms, lender ID, loan/borrower characteristics
- **“Lock-Offer Gap”**: Spread between locked rates and the median offer for that specific type of loan and borrower, on the same day in the same MSA

## Dispersion in offer rates: An example

- Within-day dispersion in offers for specific loan/borrower in Los Angeles (2016-present)



## Dispersion in offer rates: 20 MSAs and all types of borrowers/loans

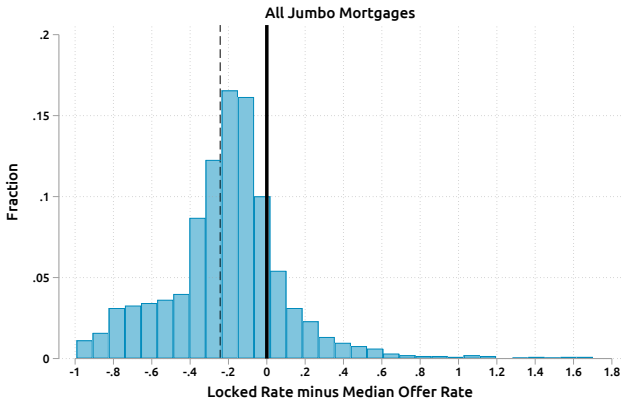
- Within day/MSA/loan/borrower dispersion in offers (2016-present)



- Difference between 90<sup>th</sup> to 10<sup>th</sup> percentile lender is about 45bp
  - Similar to finding in Alexandrov and Koulayev (2017)

## Lock-Offer Gap: “Jumbo” Borrowers

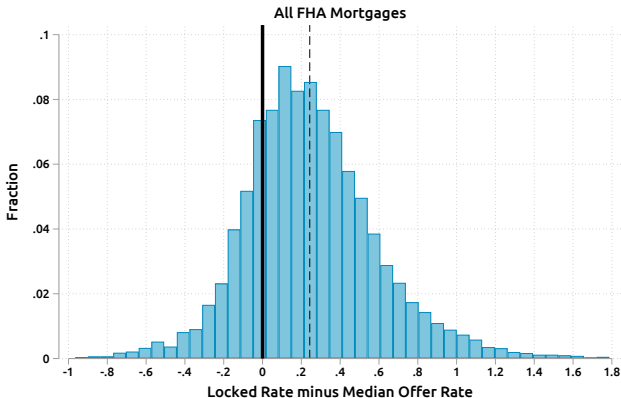
gap = locked rate minus median offer for same loan/borrower/MSA/day



- Average jumbo borrower pays 25bp less than median offer for same mortgage (like saving  $\geq 1$  “point” at closing)

## Lock-Offer Gap: FHA Borrowers

gap = locked rate minus median offer for same loan/borrower/MSA/day

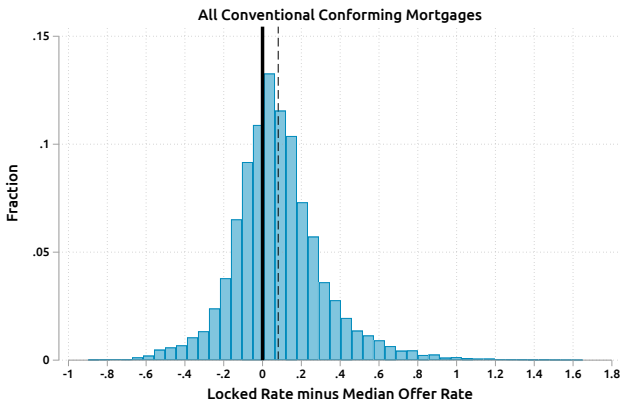


- Average FHA borrower pays 25bp more than median offer for same mortgage (like **paying**  $\geq 1$  point extra at closing)



## Lock-Offer Gap: GSE Borrowers

gap = locked rate minus median offer for same loan/borrower/MSA/day



- Average GSE borrower pays 8bp more than the median best offer

## Lock-Offer Rate Gaps by FICO and LTV

	Mean	Dollars for \$200k loan	75th	Dollars for \$200k loan
All Mortgages (N=66,719)	0.11	\$880	0.25	\$2000
<b>FICO</b>				
640 - 679	0.22	\$1760	0.42	\$3360
740+	0.04	\$320	0.16	\$1280
<b>LTV</b>				
>95	0.25	\$2000	0.43	\$3440
61 - 80	0.01	\$80	0.14	\$1120

- We find similar differences across FICO and LTV groups within lender

## Recapping results from Optimal Blue data

- Many mortgage borrowers overpay (relative to median offer)
- Low-FICO, high-LTV, FHA borrowers get the worst deals
  - May reflect less financial knowledge/shopping
- Turn to survey data for direct evidence on connection between knowledge/shopping and rates...

# National Survey of Mortgage Originations (NSMO)

- Joint project of FHFA and CFPB
- Nationally representative survey of new mortgage borrowers
  - Quarterly, ongoing since 2013
  - Over 24,000 completed surveys covering mortgages originated through 2016
- Objective: Learn about borrowers' experiences getting mortgage, shopping behavior, and mortgage knowledge
- Unique feature: Survey data matched to individual credit records and administrative loan-level data

## NSMO: Knowledge, Shopping, and Mortgage Rates

- Outcome: Mortgage rate (spread over prime, censored at  $\pm 1.5\%$ )

	(1)	(2)	(3)	(4)
Seriously considered 2 lenders	-0.039*** (0.009)			
Seriously considered 3+ lenders	-0.078*** (0.012)			
Used web to get info? A little		-0.042*** (0.010)		
Used web to get info? A lot		-0.065*** (0.011)		
Used friends/relatives to get info? A little			-0.001 (0.010)	
Used friends/relatives to get info? A lot			0.010 (0.013)	
Familiar with mortgage rates? Somewhat				-0.075*** (0.024)
Familiar with mortgage rates? Very				-0.159*** (0.024)
Adj. R2	0.18	0.18	0.17	0.18
Obs.	19906	19906	19906	19906

- Controls: FICO, LTV, income, race/ethnicity, loan amount, etc.

# NSMO: Knowledge, Shopping, and Mortgage Rates

What is the overall effect of knowledge and shopping on mortgage rates?

- Regress rate spread on 8 knowledge/shopping variables
  - controlling for “everything”
- Generate predicted rate spreads using just the knowledge/shopping coefficients

# NSMO: Knowledge, Shopping, and Mortgage Rates

## Reduction in mortgage rate due to knowledge/shopping

	Observations	10th	Mean	90th
All borrowers	19,906	-0.16	-0.27	-0.37
<b>FICO</b>				
601-640	1,089	-0.14	-0.25	-0.35
681-740	4,784	-0.16	-0.26	-0.36
> 740	11,427	-0.18	-0.28	-0.37
<b>LTV</b>				
96-97	1,805	-0.12	-0.24	-0.35
≤ 75	8,216	-0.18	-0.28	-0.37
<b>Income</b>				
<35k	1,189	-0.11	-0.23	-0.34
≥ 175k	2,951	-0.21	-0.30	-0.38

# Survey of Consumer Finances (SCF)

- Triennial survey of about 6,000 households on debts, assets, income, expectations, attitudes, etc.
- In 2016, added Lusardi/Mitchell “big three” questions on financial literacy
- We test whether greater financial literacy associated with lower mortgage rates
  - Focus on households that own home and recently got a mortgage (2012-2016)
  - 56% got all 3 literacy questions correct; 31% got 2; 11% got 1; 2% got 0



## SCF: Financial literacy, shopping and mortgage rates

- outcome: mortgage rate (spread over prime)

	(1)	(2)	(3)	(4)	(5)
Financial Literacy (Fraction Correct)	-0.247 *	-0.245 *			-0.243 *
	(0.110)	(0.096)			(0.099)
Shops Around for Credit			-0.262 **	-0.236 **	-0.228 *
			(0.090)	(0.086)	(0.089)
Loan Characteristics		Yes		Yes	Yes
Borrower Characteristics		Yes		Yes	Yes
State Fixed Effects		Yes		Yes	Yes
Observations	820	816	821	817	816
R-squared	0.011	0.225	0.009	0.222	0.229

## Conclusions and policy implications

- Many mortgage borrowers appear to be overpaying by thousands of dollars
  - Especially low-FICO and high-LTV borrowers
  - Seems to reflect less financial knowledge and savviness
- Low-FICO and high-LTV borrowers usually get FHA loans
  - Lenders and loan officers are capturing a chunk of the FHA subsidy
  - FHA and GSEs could do more to promote transparency and reduce “excessive” markups

Thank you!