

Government Litigation Risk and the Decline in Low-Income Mortgage Lending

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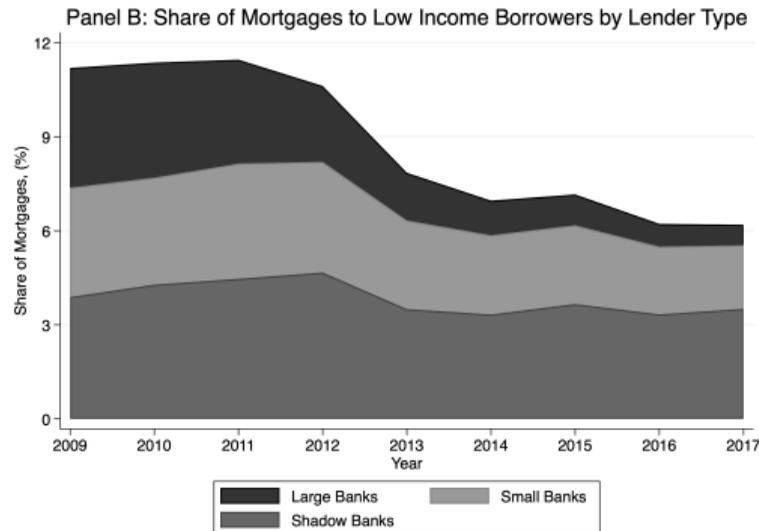
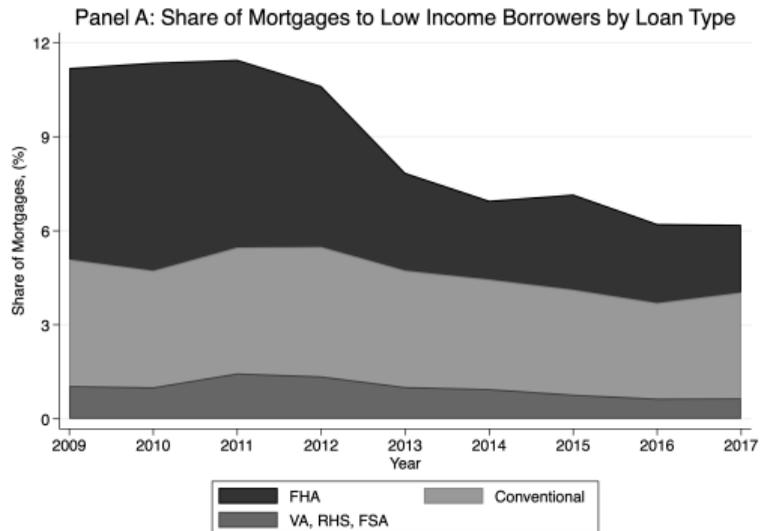
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The views expressed are those of the authors and do not necessarily reflect those of any entities within the Federal Reserve System.

Motivation

- Homeownership is important for accumulating wealth and generating upward social mobility.
 - Homeownership rates in U.S. fell from 69% prior to the 2008 Global Financial Crisis to 64% in 2017 (now 65%).
- Access to credit is crucial for new homebuyers, especially for lower-income and minority households.
 - The Federal Housing Administration (FHA) insurance program is the major government program supporting mortgage lending to marginal borrowers.
 - FHA loans make up $\approx 50\%$ of the low-income and minority (Black and Hispanic) markets. Income Shares Minority Shares
 - 80% of FHA loans go to first-time homebuyers.
- Mortgage credit tightened in the 2010s.
 - Share of home purchase loans to low-income borrowers fell from 11% in 2009 to 6% in 2017.
 - Most of the decline due to contraction in FHA lending by large banks.

Motivation



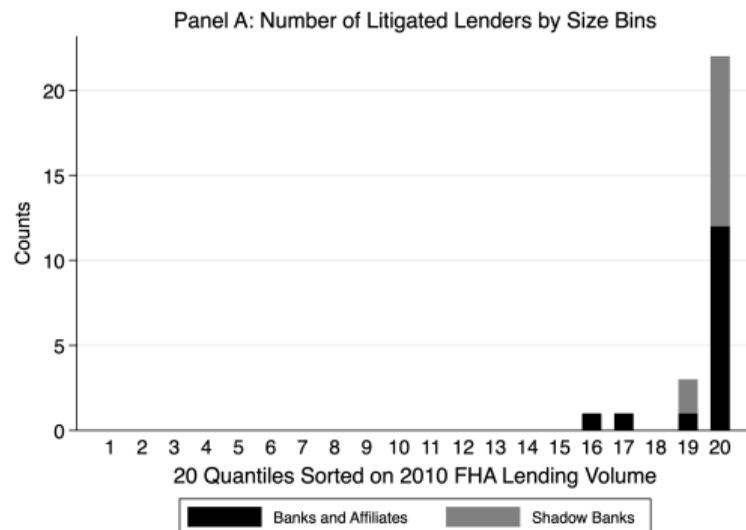
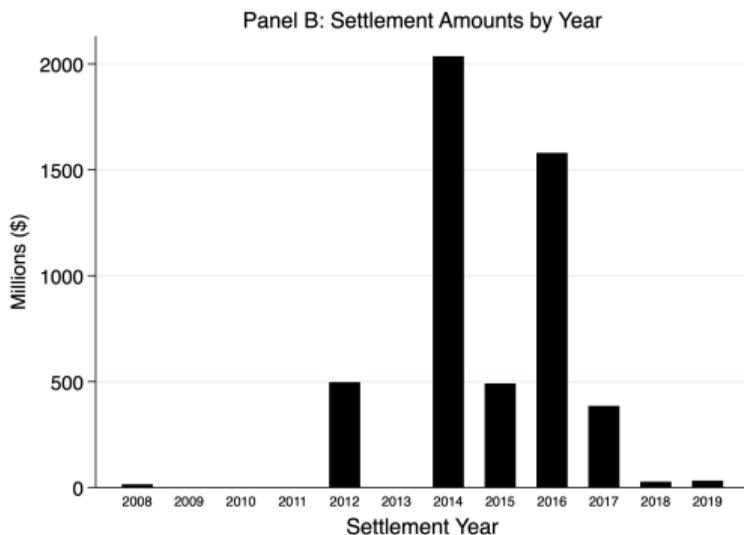
Low- to Moderate-Income

- Low income based on HUD's definition:
 - Below 50% of the FFIEC county-level median family income.
 - ⇒ bottom one-third of the household income distribution based on Census data.
- What explains these dynamics?

- The DOJ sued many of the largest FHA lenders in the early 2010s.
 - Used the False Claims Act (FCA), a federal statute enacted in 1863 (also known as the “Lincoln Law”) in response to defense contractor fraud during the Civil War..
- DOJ alleged lenders engaged in negligent/fraudulent underwriting practices that violated FHA eligibility criteria, caused excess defaults/foreclosures, and subsequently filed FHA insurance claims that cost taxpayers hundreds of millions of dollars. [FHA Criteria](#)
- 33 settlements totaling over \$5.4 billion.
 - Treble damages and large per-violation penalties (\$13,946 - \$27,894 as of 2024).
 - Fraud evidence based on extrapolations from small samples of loans in default: total liability of Deutsche Bank estimated based on a sample of 21 defaulted loans!
 - Jamie Dimon: “wiped out a decade of FHA profitability,” making FHA lending “risky and cost prohibitive for many banks.” [JP Morgan's Exit](#)

- 1 Document the wave of litigation.
- 2 Impact on lender participation in the FHA program.
- 3 Aggregate effect on FHA lending volume.
- 4 Effect on FHA lending quality
- 5 Effect on low-income households' total access to credit

1. Document the wave of litigation

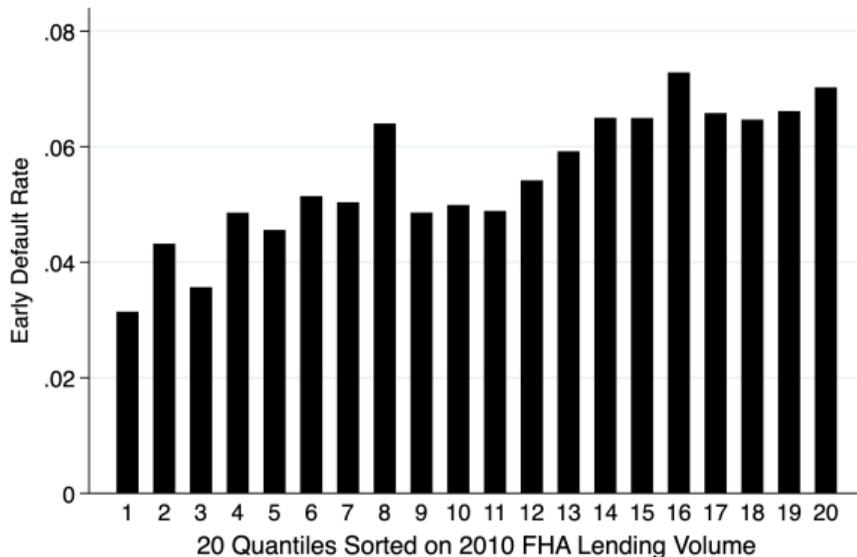


- Large settlements began in 2012.
- Settlements were almost entirely concentrated among the top 5% largest FHA Lenders. [Lender List](#)

FCA Litigation Activity

- Why did DOJ focus almost exclusively on the largest lenders?
 - Were they originating the riskiest loans?

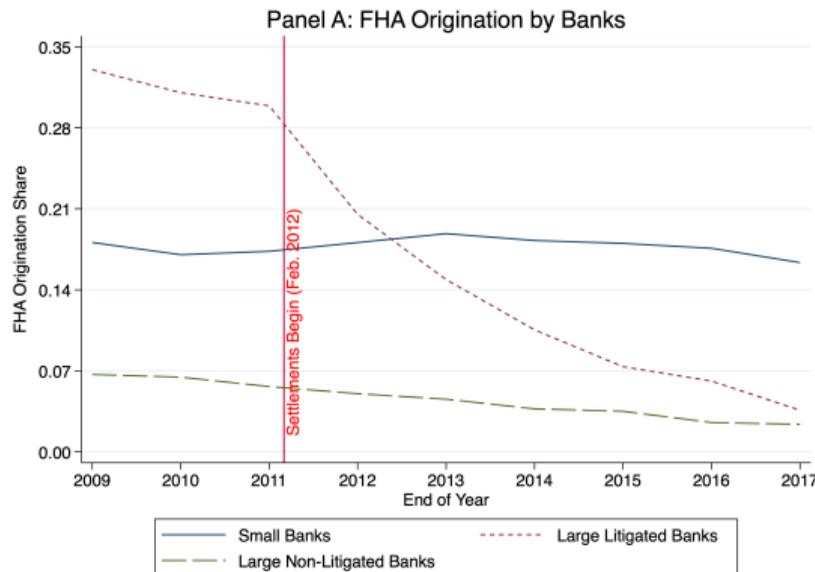
Panel B: Average Early Default Rate by Size Bins (2004-2010)



- No! Controlling for observable loan/borrower characteristics, they originated less risky loans. Regressions

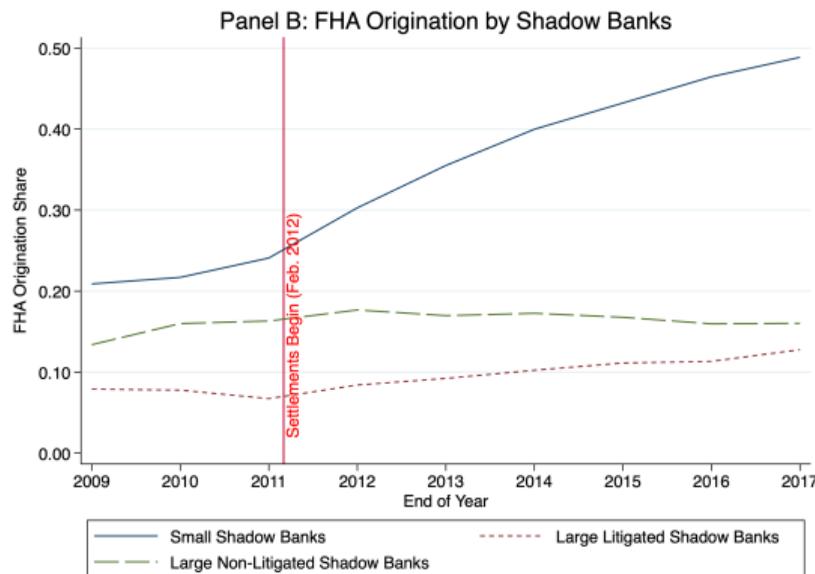
2. Impact on lender participation in the FHA program

Large Banks Abruptly Exited the FHA Market



- Origination shares are in terms of entire FHA market.
- Top 5% Banks (red + green) went from $\sim 40\%$ to $\sim 5\%$ of the FHA market.

Small Shadow Banks Gained Market Share



- Large shadow banks' market share held steady (litigated or not).
- Small shadow banks with less reputation/franchise value at risk gained market share.

- Difference-in-Differences framework.
 - Exploit the fact that the lawsuits almost exclusively focused on the very largest FHA lenders and were largely unanticipated.
 - Assume “shock” occurs in 2012, which coincides with the first public announcement of settlements with large banks (Citibank, Flagstar, Deutsche Bank). [Lawsuit List](#)
- County-lender-year panel specification:

$$Y_{i,c,t} = \beta \text{ Top 5\% Lender}_i \times \text{Post}_t + \delta_i + \gamma_{c,t} + \varepsilon_{i,c,t}$$

- $Y_{i,c,t}$ – # FHA loans originated by lender i in county c in year t .
- $\text{Post} = 1$ if $t \geq 2012$; 0 otherwise.
- Top 5\% Lender – indicator variable that equals one if the lender's FHA lending in 2010 was in the top 5% of all FHA-participating lenders.
- Lender fixed effects and county-by-year fixed effects.

Impact of Litigation on Lenders' Exit from FHA Market: DiD Results

	Number of Loans		
	All (1)	Banks (2)	Non-Banks (3)
Top 5% Lender \times Post	-3.547** (1.545)	-7.387** (2.923)	-0.624 (0.686)
Lender FE	Yes	Yes	Yes
County \times Year FE	Yes	Yes	Yes
2010 Mean of Top 5% Lenders	7.686	8.969	6.275
Adjusted R ²	0.078	0.055	0.106
# Observations	2,701,435	1,329,870	1,371,249

- Standard errors double-clustered at county and lender levels.
- Large lenders decreased FHA lending by an average of 3.5 loans per county in the post-2011 period \Rightarrow $>$ 46% of the 2010 mean of large lenders.
 - Decline is entirely driven by large banks.

Impact of Litigation on Lenders' Exit from FHA Market: Triple Diff Results

	Number of Loans		
	All (1)	Banks (2)	Non-Banks (3)
Top 5% Lender × Post × FHA	-4.978*** (1.263)	-7.079*** (2.459)	-3.924*** (0.814)
Top 5% Lender × Post	1.947** (0.981)	0.272 (1.714)	3.522*** (1.026)
Top 5% Lender × FHA	1.360*** (0.498)	0.681 (0.628)	2.044*** (0.542)
Post × FHA	-1.691*** (0.155)	-2.243*** (0.192)	-1.435*** (0.213)
FHA	-0.517*** (0.115)	-1.421*** (0.144)	0.581*** (0.179)
Lender FE	Yes	Yes	Yes
County × Year FE	Yes	Yes	Yes
2010 Mean of Top 5% Lenders	7.064	9.111	4.805
Adjusted R ²	0.069	0.057	0.095
# Observations	5,402,870	2,659,908	2,742,962

Poisson

Investigated

Staggered

3. Aggregate effect on FHA lending volume

Identification Strategy

- It is not obvious whether exit by large banks affected total FHA lending volumes.
 - Perhaps other lenders (e.g. shadow banks) filled the void.
- Shift-share design that exploits ex-ante (pre-2012) variation in counties' exposure to large banks.
 - \Rightarrow Expect counties that had more FHA lending activity by big banks before litigation shock to experience greater decline in lending.
 - **Exposure** = 2010 county market share of top 5% FHA bank lenders.

- Difference-in-Differences Approach:

$$FHA\ Volume_{c,t} = \beta_1 Exposure_c \times Post_t + \beta_2 Controls_{c,t-1} + \delta_c + \gamma_t + \varepsilon_{c,t}$$

- Triple Differences Approach:

$$Loan\ Volume_{c,t,m} = \beta_1 Exposure_c \times Post_t \times FHA_m + \beta_2 Interactions + \beta_3 Controls_{c,t-1} + \delta_c$$

- County-level controls: median income, poverty rate, unemployment rate, percent bachelor's degree or higher, minority share, HPI change, average credit score.

Effect of FCA Litigation on FHA Credit Supply: DiD Results

	In(Volume) (1)	Volume per Capita (2)	Loans per 1,000 (3)
Exposure × Post	-0.196*** (0.039)	-32.837*** (5.818)	-0.141*** (0.042)
Controls	Yes	Yes	Yes
County FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
2010 Mean	8.784	246.385	1.709
Adjusted R ²	0.960	0.881	0.861
# Observations	23,820	23,820	23,820

- $\ln(\text{Volume}) = \ln(1 + \$ \text{Volume of FHA originations in the county})$
- $\text{Volume per Capita} = \frac{\$ \text{Volume of FHA Originations}}{\text{Population}}$
- $\text{Loans per 1,000} = \frac{\# \text{ FHA Loans} * 1000}{\text{Population}}$
- Std. Dev. increase in exposure \Rightarrow 4.3% reduction in FHA lending. Staggered

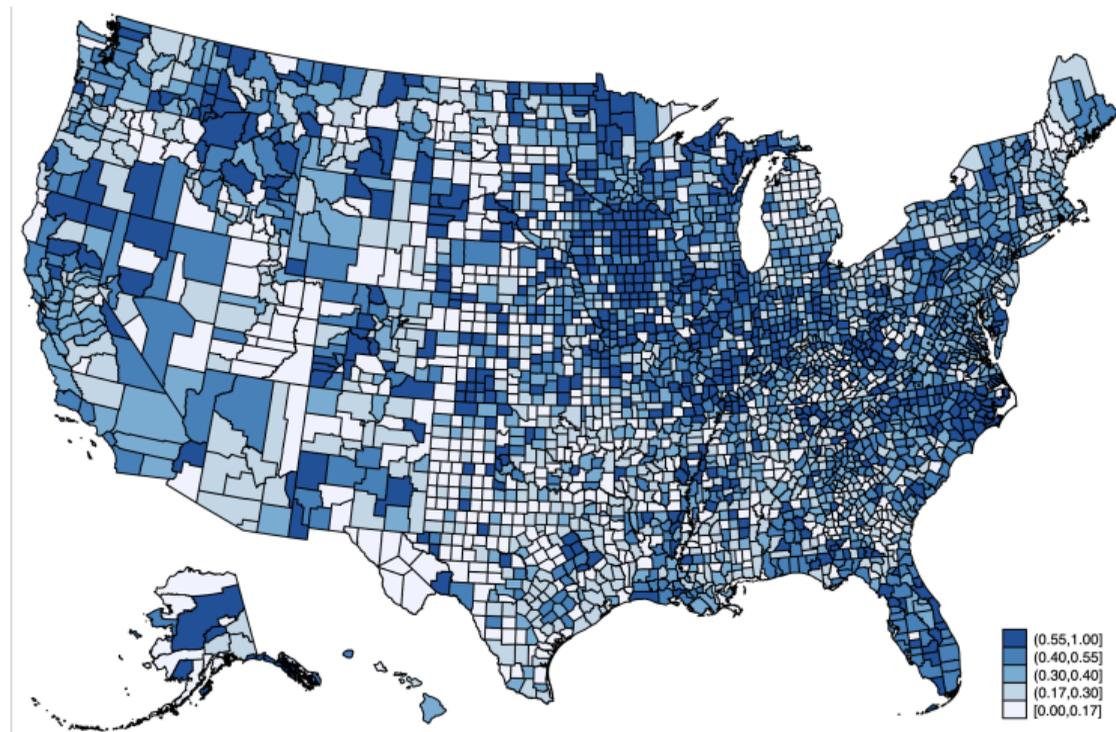
Identifying assumption:

- FHA lending in counties with high vs. low *Exposure* would have trended similarly, absent the litigation wave.

Evidence supporting the diff-in-diff:

- ① *Exposure* varies widely across the country and is not clustered in only a few areas.
- ② *Exposure* is largely uncorrelated with local economic conditions and demographics.
- ③ FHA lending trends similarly in high- and low-*Exposure* counties prior to 2012.
- ④ The triple differences results – which use conventional lending to capture any unobserved variation in local mortgage demand – look very similar.

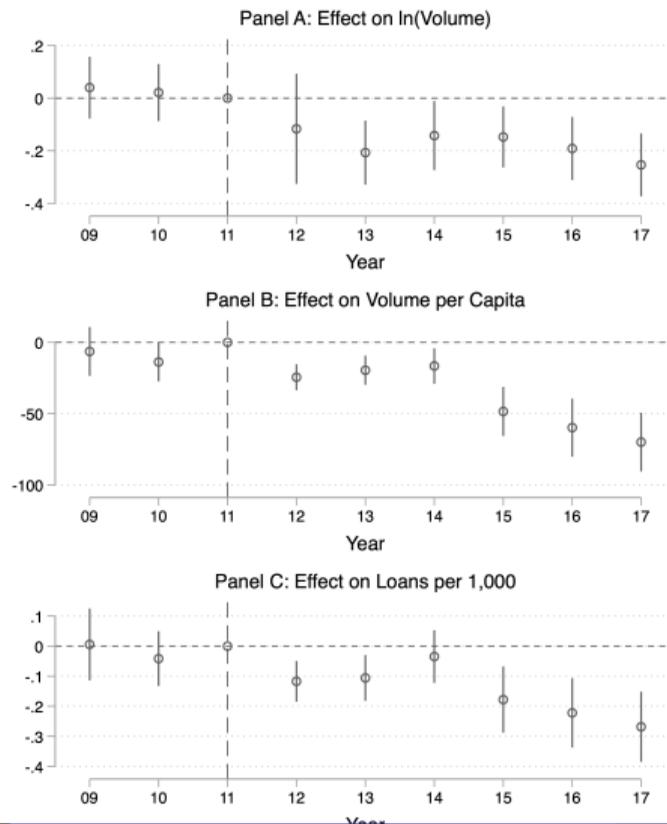
Map of County-level Exposure to Big Banks (FHA Market)



Correlation Between Exposure and County Characteristics

	Exposure (1)	Exposure (2)
Log Population	0.002 (0.005)	-0.005 (0.005)
Log Median Income	-0.056 (0.062)	0.023 (0.050)
Poverty Rate, (%)	-0.002 (0.002)	0.002 (0.002)
Unemployment Rate, (%)	0.004 (0.004)	-0.001 (0.004)
Percent Bachelor's Degree, (%)	-0.001 (0.001)	0.001 (0.001)
Percent Minority, (%)	0.001 (0.001)	0.001 (0.001)
HPI Change, (%)	0.001 (0.002)	0.001 (0.001)
Avg. Credit Score	0.002*** (0.001)	0.001* (0.000)
State FE	No	Yes
# Observations	2,647	2,647
Adjusted R^2	0.039	0.182

- Interact Exposure with year indicators, plot coefficients:



Effect of Litigation on FHA Credit Supply: Triple Diff Results

	ln(Volume) (1)	Volume per Capita (2)	Loans per 1,000 (3)
Exposure × Post × FHA	-0.194*** (0.046)	-43.351 (33.337)	-0.378*** (0.126)
Exposure × Post	0.003 (0.030)	10.109 (29.254)	0.235** (0.104)
Exposure × FHA	-0.370*** (0.064)	-123.112*** (20.201)	-0.755*** (0.099)
Post × FHA	-0.479*** (0.020)	-347.076*** (14.963)	-1.538*** (0.056)
FHA	-0.493*** (0.028)	-119.704*** (8.455)	-0.502*** (0.044)
Controls	Yes	Yes	Yes
County FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
2010 Mean	9.040	317.151	2.021
Adjusted R ²	0.950	0.678	0.732
# Observations	47,640	47,640	47,640

Staggered

4. Effect on FHA lending quality

“Quality” of FHA Lending Does Not Improve

We use the administrative FHA loan-level data and NMLS loan officer data to examine three aspects of lending quality across high- and low-exposure counties after the litigation wave:

- 1 **Underwriting standards** (FICOs, DTIs) ... do not appear to change.
- 2 **Default rates** on FHA loans ... are not affected.
 - 12-, 24-, or 36-month.
 - Conditional on borrower and loan characteristics or unconditionally.
- 3 **Consumers’ experience** ... does not appear to improve.
 - **Loan pricing** is mostly unaffected.
 - **Misconduct rates** of the representative FHA loan officer increase.

5. Effect on low-income households' total access to mortgage credit

Low-Income Borrowers

	Low Income Loan Share		
	(1)	(2)	(3)
Exposure × Post	-1.160*** (0.428)	-0.093 (0.502)	-1.092** (0.533)
Exposure × Post × Rural		-1.770** (0.780)	
Exposure × Post × Minority			-0.031 (0.881)
Controls	Yes	Yes	Yes
County FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
2010 Mean	10.380	10.380	10.380
Adjusted R ²	0.575	0.577	0.575
# Observations	23,820	23,820	23,820

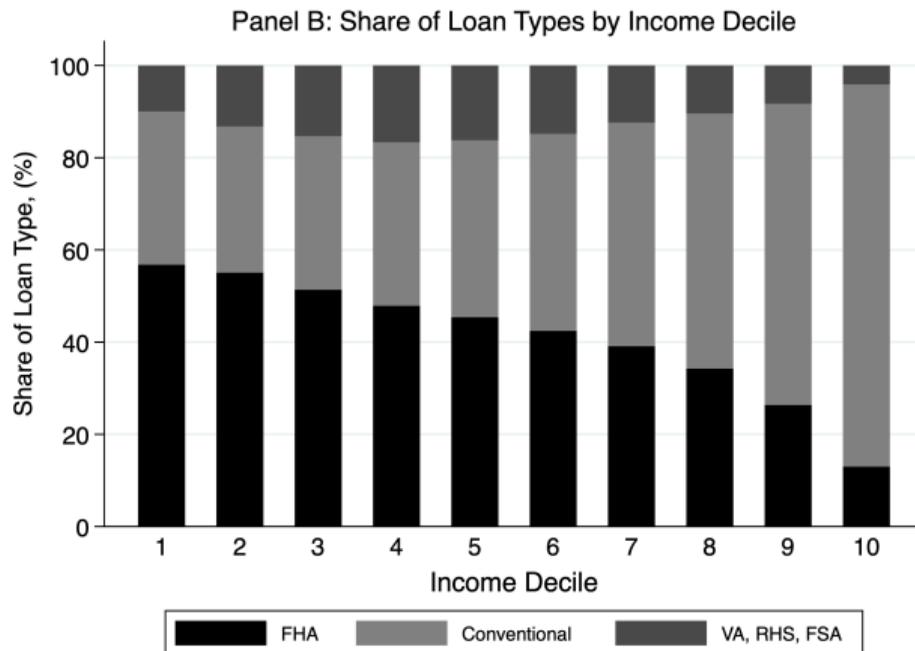
- Moving from 0% to 100% *Exposure* reduces the share of low-income loans by 11% of mean.
- Effect is nearly twice as large in rural/underserved communities.
- Effect is not stronger in areas with high minority shares.

- 1 DOJ litigation under the False Claims Act targeted large FHA lenders.
- 2 Large banks exited the FHA market in response.
- 3 Large banks' exit led to a significant reduction in aggregate FHA lending.
- 4 FHA lending quality did not improve.
- 5 The litigation wave reduced low-income households' overall access to mortgage credit.

Thank You!

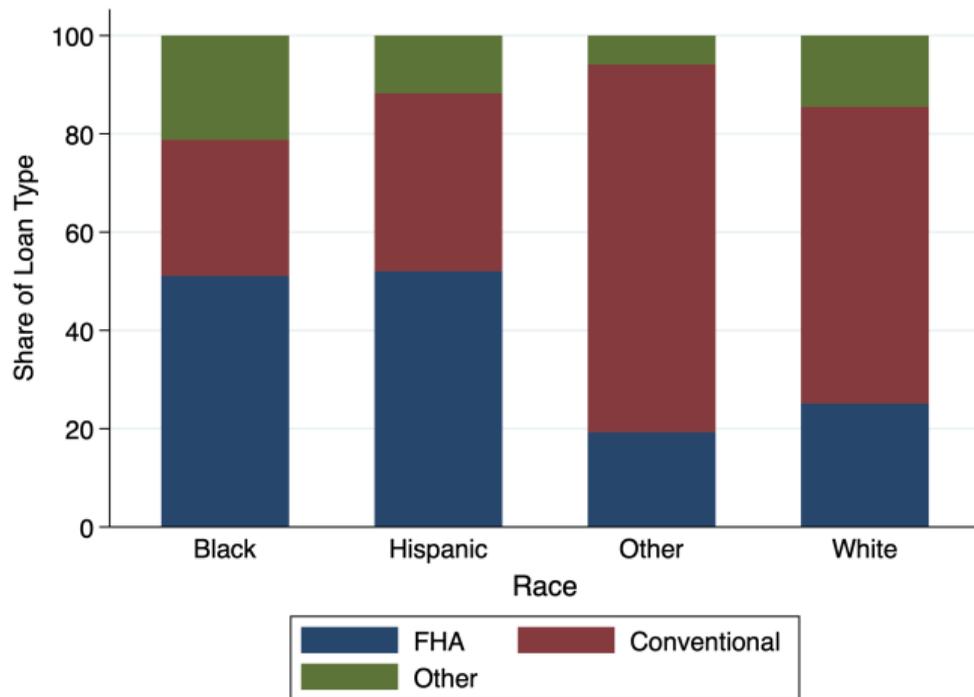
Supplemental Slides

Purchase Mortgage Origination Shares by Income Quantile (2010 Data)

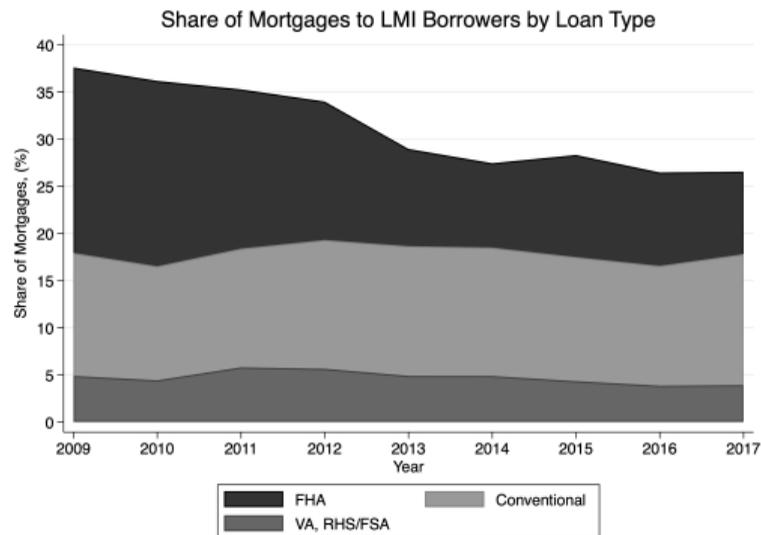
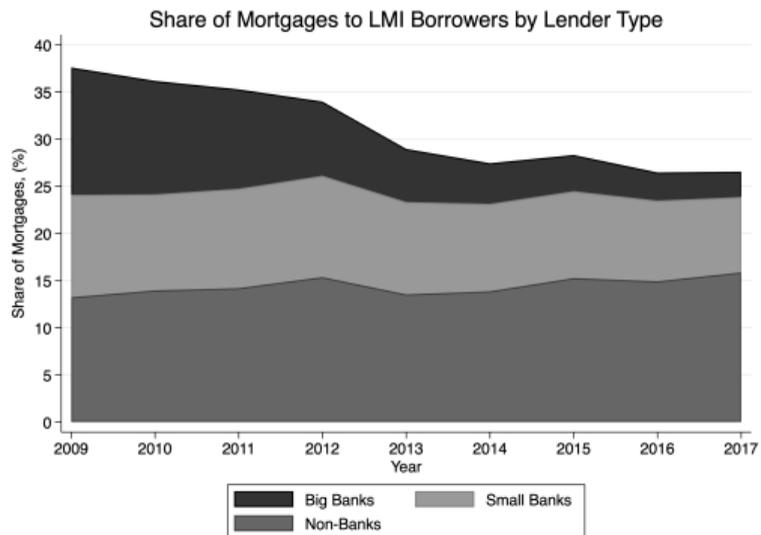


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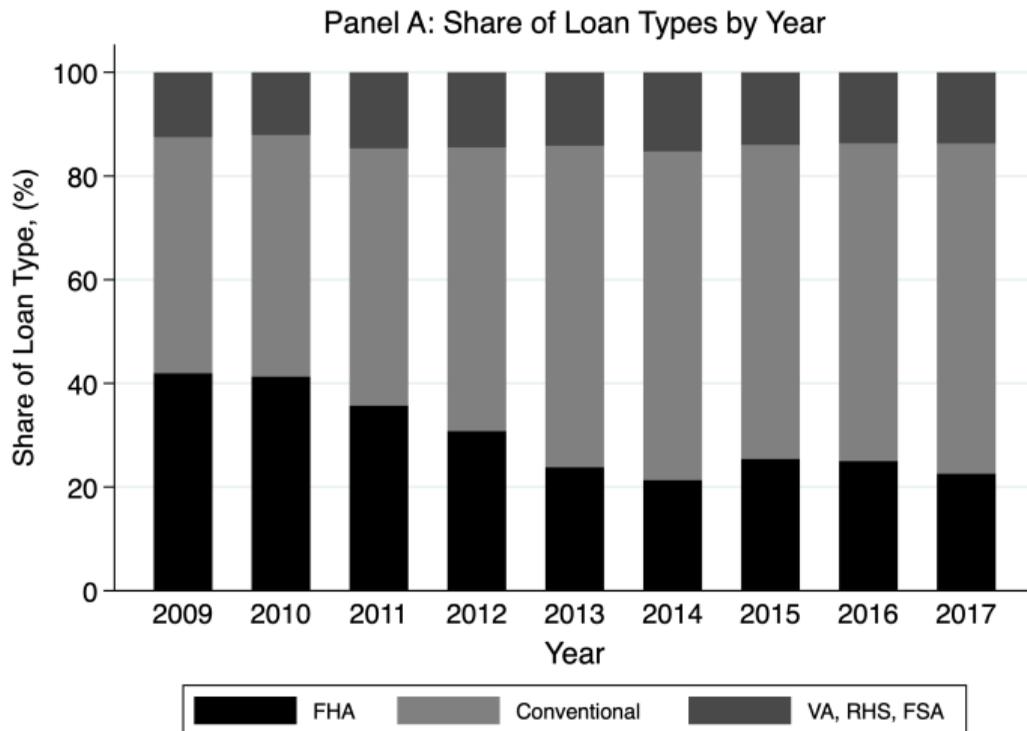
Purchase Mortgage Origination Shares by Race (2010 Data)



Low-to-Moderate-Income Purchase Loan Share

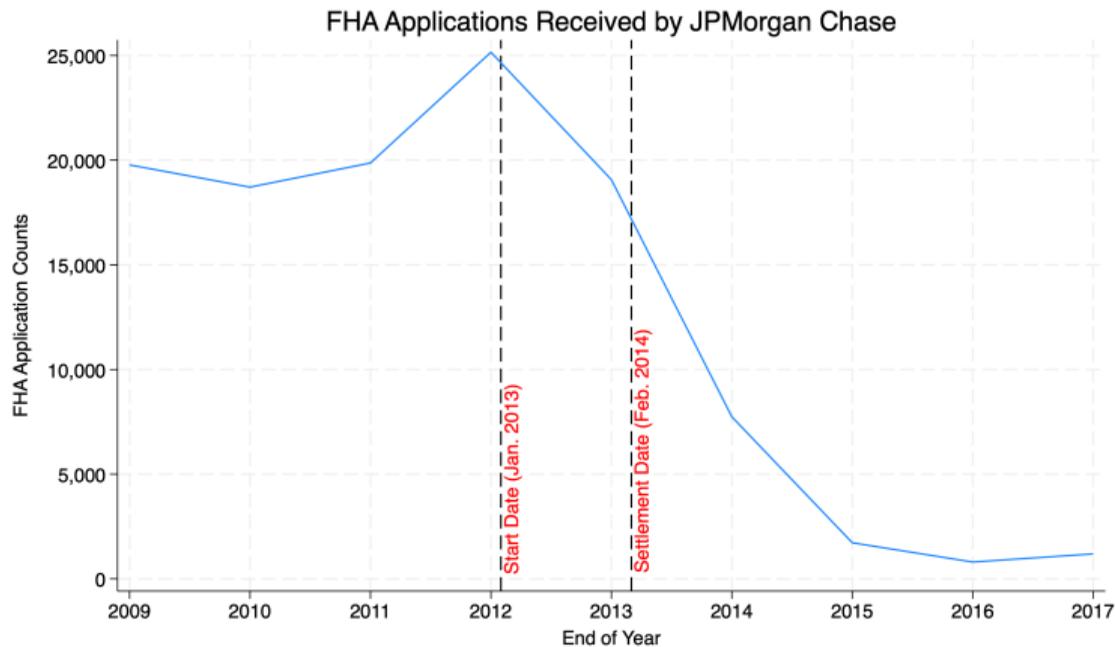


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- Loans eligible for the FHA program are originated by banks or non-bank financial institutions (i.e. independent mortgage companies).
 - Under the Direct Endorsement program, certain lenders can underwrite and close mortgage loans without prior FHA approval.
 - FHA provides credit risk insurance for eligible loans.
- FHA eligibility requirements (2023):
 - Credit score: 580 or higher – requires 3.5% down payment.
 - Credit score: 500-579 – requires 10% down payment.
 - DTI < 43% (unless there are compensating factors).
 - Primary residence – no investment or vacation properties.
 - Loan limits: \$472,030 (low-cost areas) or up to \$1,089,300 (high-cost areas).
 - Mortgage insurance required for entire loan term if down payment is less than 10%.
 - Proof of steady income and employment.

JP Morgan's Exit from the FHA Market



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Summary Statistics: County-level Panel

- HMDA data: 2009–2017:

	# Obs.	Mean	Sd	p25	p50	p75
FHA Applications	23,820	404	1,355	19	53	218
FHA Originations	23,820	286	936	12	36	158
FHA Loans per 1,000	23,820	1.6	1.2	0.7	1.2	2.1
FHA Misconduct Rate, (%)	23,820	0.33	0.31	0.14	0.28	0.44
Conventional Applications	23,820	781	2,499	51	129	432
Conventional Originations Count	23,820	573	1810	32	89	318
Conventional Loans per 1,000	23,820	3.5	2.4	1.8	2.9	4.5
Conventional Misconduct Rate (%)	23,820	0.12	0.13	0.03	0.09	0.17
Exposure to Big Banks	23,820	0.386	0.204	0.248	0.368	0.514
Unemployment Rate _{t-1} (%)	23,820	7.3	2.9	5.2	6.9	9.0
Poverty Rate _{t-1} (%)	23,820	16.1	5.8	11.7	15.4	19.5
Median Income _{t-1} (\$)	23,820	46,458	11,676	38,574	44,392	51,707
Population _{t-1}	23,820	115,952	344,589	16,130	33,156	83,115
Minority Share _{t-1} (%)	23,820	11.5	14.2	2.0	5.2	15.4
Bachelor Degree Share _{t-1} (%)	23,820	14.0	6.2	9.7	12.5	16.7
HPI Change _{t-1} (%)	23,820	0.026	5.3	-2.8	0.020	2.8
Avg. Credit Score _{t-1}	23,820	672.8	26.3	653.5	673.9	692.0

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Sample Summary Statistics

- HUD/FHA loan-level data: 2009–2017:

	Mean	Std. Dev.	p25	p50	p75
FICO	686	50	648	677	718
LTV	95.5	4.7	96.5	96.5	96.5
Mortgage Amount	178,524	90,860	114,875	158,769	223,160
Mortgage Rate	4.35	0.68	3.75	4.25	4.88
First-time Home Buyer (d)	0.804	0.397	1	1	1
Borrower Age	37.3	11.2	29	35	44
Female (d)	0.371	0.483	0	0	1
Married (d)	0.504	0.5	0	1	1
White (d)	0.828	0.377	1	1	1
Black (d)	0.125	0.331	0	0	0
Asian (d)	0.032	0.176	0	0	0
Hispanic (d)	0.184	0.388	0	0	0
Borrower Income	64,734	33,978	40,044	56,496	80,556
Borrower Assets	19,905	33,875	6,891	11,414	20,762
Underserved Area (d)	0.494	0.5	0	0	1
Urban Neighborhood (d)	0.131	0.338	0	0	0
Suburban Neighborhood (d)	0.792	0.406	1	1	1
Rural Neighborhood (d)	0.069	0.253	0	0	0
DTI (back-end)	0.41	0.091	0.348	0.418	0.479
Default Rate (2-yr)	0.072	0.029	0.057	0.072	0.08
# Loans			5,947,151		

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Summary Statistics by Lender Type

- HUD/FHA loan-level data: 2009–2017:

	Big Banks		Small Banks		Shadow Banks	
	Mean	SD	Mean	SD	Mean	SD
FICO	691	53	690	49	685	49
LTV	95.3	5.2	95.5	4.4	95.5	4.6
Mortgage Amount	165,991	91,280	158,471	77,934	182,915	90,317
Mortgage Rate	4.52	0.72	4.26	0.72	4.37	0.67
First-time Home Buyer (d)	0.782	0.413	0.797	0.402	0.811	0.391
Borrower Age	36.7	11.2	36.3	11.1	37.6	11.1
Female (d)	0.374	0.484	0.377	0.485	0.370	0.483
Married (d)	0.485	0.500	0.492	0.500	0.509	0.500
White (d)	0.821	0.383	0.837	0.369	0.830	0.376
Black (d)	0.129	0.335	0.124	0.330	0.123	0.329
Asian (d)	0.036	0.187	0.024	0.154	0.032	0.175
Hispanic (d)	0.157	0.364	0.113	0.316	0.208	0.406
Borrower Income	63,124	34,924	61,128	32,358	65,268	33,997
Borrower Assets	20,548	34,694	16,873	30,128	20,036	34,349
Underserved Area (d)	0.490	0.500	0.450	0.498	0.507	0.500
Urban Neighborhood (d)	0.144	0.351	0.201	0.401	0.112	0.315
Suburban Neighborhood (d)	0.775	0.418	0.709	0.454	0.821	0.383
Rural Neighborhood (d)	0.069	0.253	0.082	0.275	0.059	0.235
DTI (back-end)	0.398	0.092	0.398	0.092	0.414	0.090
Default Rate (2-yr)	0.068	0.020	0.061	0.042	0.075	0.031
# Loans	1,355,921		1,140,746		3,450,484	

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Summary Statistics by Lender Type

- HUD/FHA loan-level data: 2004–2010:

	Big Banks		Small Banks		Shadow Banks	
	Mean	SD	Mean	SD	Mean	SD
FICO	674	64	662	67	663	66
LTV	95.5	5.1	95.8	4.9	95.9	4.6
Mortgage Amount	158,106	83,329	139,195	66,867	161,553	80,128
Mortgage Rate	5.44	0.75	5.76	0.72	5.74	0.77
First-time Home Buyer (d)	0.782	0.413	0.792	0.406	0.799	0.400
Borrower Age	35.8	10.9	35.0	10.7	36.1	10.9
Female (d)	0.374	0.484	0.365	0.481	0.365	0.481
Married (d)	0.467	0.499	0.476	0.499	0.479	0.500
White (d)	0.804	0.397	0.809	0.393	0.797	0.402
Black (d)	0.153	0.360	0.150	0.357	0.159	0.366
Asian (d)	0.028	0.164	0.016	0.127	0.024	0.154
Hispanic (d)	0.142	0.349	0.107	0.309	0.170	0.375
Borrower Income	60,171	32,536	55,907	28,957	60,780	31,362
Borrower Assets	19,259	35,395	16,672	34,137	18,628	35,084
Underserved Area (d)	0.524	0.500	0.518	0.500	0.551	0.498
Urban Neighborhood (d)	0.160	0.367	0.227	0.419	0.140	0.347
Suburban Neighborhood (d)	0.776	0.417	0.707	0.455	0.803	0.398
Rural Neighborhood (d)	0.054	0.227	0.059	0.235	0.049	0.217
DTI (back-end)	0.402	0.090	0.394	0.089	0.409	0.088
Default Rate (2-yr)	0.125	0.036	0.123	0.069	0.142	0.064
# Loans	1,031,395		1,074,063		2,097,170	

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List of Litigated Banks and Bank-Affiliates

Lender	Settlement Date	Settlement Size (\$ Millions)
National City Mortgage Inc.	May 2008	4.6
RBC Mortgage Company	Nov. 2008	10.7
Citimortgage, Inc. (Citibank)	Feb. 2012	158.3
Flagstar Bank	Feb. 2012	132.8
Deutsche Bank (MortgageIT)	May 2012	202.3
JPMorgan Chase	Feb. 2014	614.0
U.S. Bank	Jun. 2014	200.0
SunTrust Mortgage Inc.	Jun. 2014	418.0
Bank of America (Countrywide)	Aug. 2014	800.0
First Tennessee Bank	Jun. 2015	212.5
Fifth Third Bancorp	Oct. 2015	85.0
Wells Fargo Bank	Apr. 2016	1,200.0
M&T Bank	May 2016	64.0
Regions Bank	Sep. 2016	52.4
BB&TC	Sep. 2016	83.0
IberiaBank	Dec. 2017	11.6

List of Litigated Shadow Banks

Lender	Settlement Date	Settlement Size (\$ Millions)
Capmark Financial LLC	Feb. 2012	3.9
John Adams Mortgage Company	Dec. 2014	4.2
MetLife Home Loans LLC	Feb. 2015	123.5
Reverse Mortgage Solutions	Sep. 2015	29.6
Franklin American Mort. Co.	Dec. 2015	70.0
Freedom Mortgage Corp.	Apr. 2016	113.0
Primary Residential Mortgage Inc.	Oct. 2016	5.0
SecurityNational Mort. Co.	Oct. 2016	4.3
MDR Mortgage Corp.	Nov. 2016	10.4
United Shore F.S. LLC	Dec. 2016	48.0
Financial Freedom	May 2017	89.0
Prospect Mortgage, LLC	Jul. 2017	4.2
PHH	Aug. 2017	74.0
Allied Home Mortgage	Sep. 2017	296.0
Universal American Mort. Co. LLC	Oct. 2018	13.2
Gateway Funding	Dec. 2018	14.5
Quicken Loans	Jun. 2019	32.5

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Conditional Default Rates

	I(Early Default)			
	(1)	(2)	(3)	(4)
Litigated Lender	-0.007*** (0.002)			-0.002 (0.002)
Top 5% Lender		-0.005*** (0.002)		-0.002 (0.002)
Bank			-0.011*** (0.002)	-0.010*** (0.001)
Controls	Yes	Yes	Yes	Yes
County FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Adjusted R ²	0.094	0.094	0.094	0.094
# Loans	3,171,158	3,171,158	3,171,158	3,171,158

- Banks, largest lenders, and even targeted lenders specifically, characterized by *lower* conditional default rates for 2004–2010 originations.
 - Lawsuits were perhaps motivated by political reasons as policymakers were under enormous pressure to punish lenders for dubious lending practices.

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Big Banks Exited the FHA Market, Poisson

	Number of Loans		
	All (1)	Banks (2)	Non-Banks (3)
Top 5% Lender \times Post	-0.458** (0.186)	-0.871*** (0.205)	-0.069 (0.123)
Lender FE	Yes	Yes	Yes
County \times Year FE	Yes	Yes	Yes
2010 Mean of Top 5% Lenders	7.737	9.127	6.445
Pseudo R ²	0.517	0.554	0.521
# Observations	2,543,000	1,168,251	1,340,699

- Big banks decreased FHA originations by \sim 58%.

Big Banks Exited the FHA Market, Litigated Lenders

	Number of Loans		
	All (1)	Banks (2)	Non-Banks (3)
Litigated \times Post	-4.788** (2.353)	-8.576** (3.467)	0.028 (1.165)
Lender FE	Yes	Yes	Yes
County \times Year FE	Yes	Yes	Yes
2010 Mean of Litigated Lenders	7.796	10.251	4.060
Adjusted R ²	0.079	0.055	0.106
# Observations	2,701,435	1,329,870	1,371,249

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Big Banks Exited the FHA Market, Staggered Treatments

	Number of Loans		
	All (1)	Banks (2)	Non-Banks (3)
Litigated	-4.492** (1.827)	-5.764*** (2.030)	0.001 (0.897)
Lender FE	Yes	Yes	Yes
County \times Year FE	Yes	Yes	Yes
2010 Mean of Litigated Lenders	7.796	10.251	4.060
Adjusted R ²	0.078	0.052	0.106
# Observations	2,701,435	1,329,870	1,371,249

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Effect of Litigation on FHA Credit Supply, Staggered Treatments

	ln(Volume) (1)	Volume per Capita (2)	Loans per 1,000 (3)
Exposure to Litigated Banks	-0.098** (0.044)	-36.164*** (6.687)	-0.118*** (0.040)
Controls	Yes	Yes	Yes
County FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
2010 Mean	8.784	246.385	1.709
Adjusted R ²	0.960	0.881	0.861
# Observations	23,820	23,820	23,820

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Effect of Litigation on FHA Credit Supply, Staggered Treatments

	ln(Volume) (1)	Volume per Capita (2)	Loans per 1,000 (3)
Exposure to Litigated Banks \times FHA	-0.161*** (0.049)	-114.095*** (31.850)	-0.693*** (0.117)
Exposure to Litigated Banks	0.064** (0.027)	67.052** (29.578)	0.546*** (0.108)
Controls	Yes	Yes	Yes
FHA \times County FE	Yes	Yes	Yes
FHA \times Year FE	Yes	Yes	Yes
2010 Mean	9.040	317.151	2.021
Adjusted R ²	0.972	0.883	0.889
# Observations	47,640	47,640	47,640

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- The CFPB (Reg G) mandates that mortgage lenders disclose information about certain disciplinary, enforcement, and other actions taken against them in the NMLS database.
 - Criminal convictions involving dishonesty, breach of trust, or money laundering.
 - Civil judicial actions in connection with financial services-
 - Actions/orders by a state, federal, or foreign regulatory agency based on violations of any law/regulation that prohibits fraudulent, manipulative, or deceptive conduct.
 - Revocation/suspension of an originator's authorization to act as an attorney, accountant, or state or federal contractor.
 - Customer-initiated financial services-related arbitration or civil action against the originator that resulted in judgement or settlement.
- NMLS database coverage begins in 2012.

FHA and Subprime Market Shares: 2000–2008

Chart 3
FHA, Subprime PLS Home Purchase Market Shares Inversely Correlated

