Housing Inequities

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Abstract

This paper studies how a credit supply increase in the mortgage market disproportionately affects racial groups. The paper utilizes a quasi-exogenous credit supply shock that originated in the repo market in 2005 and was transmitted to the housing market. Using a triple difference research design, the paper establishes that although the shock led to an overall increase in credit, a 10% increase in exposure to the shock led counties with higher percent Black inhabitants to receive 17% fewer mortgages in the post-period. Counties with higher percent Hispanic inhabitants received 14% more mortgages and counties with higher percent White inhabitants experienced no statistically significant change in mortgage originations in the post-period. The effects hold after controlling for mortgage contract characteristics. This paper furthers our understanding of the factors that drive the racial homeownership gap by estimating the elasticity of mortgage supply to race following a credit supply increase.

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1   Introduction

The aughts were marked by significant increases in home ownership in the U.S. While the housing boom saw an increase in home buying among racial and ethnic minorities, it was Latinos whose home-ownership rates rose to nearly 50 percent during the housing boom and hovered thereabouts until the onset of the 2008 recession (U.S. Census Bureau 2021).

Lewis (2020) shows that the Bankruptcy Abuse Prevention and Consumer Protection Act of 2005 (BAPCPA) resulted in an expansion of credit for private-label mortgage collateral, or risky mortgage collateral, in capital funding markets. Utilizing a difference-in-differences research design, the paper estimates that in response to the policy change, non-deposit taking institutions called Independent Mortgage Companies (IMCs) increased their overall mortgage lending volume by 9% during 2005-2006. The IMCs also increased the fraction of balloon, negative amortizing, interest only, non-owner occupied mortgages. Counties with a higher market share of IMCs experienced a significant increase in their mortgage originations relative to counties with a lower share of IMCs.

To provide a more nuanced picture of the relationship between the demographic makeup of counties and shifts in credit supply, we examine the demographic makeup of mortgage borrowers. This paper merges race variables from the American Community Survey (ACS) 5-year estimates for race from IPUMS National Historical Geographic Information System NHGIS data to the CoreLogic mortgage origination data by 5 digit zip code. The paper then aggregates zip codes to the county level. The null hypothesis is that both high percent Black and non-Black counties should be equally likely to experience the same change in credit supply expansion post, relative to pre, policy change after controlling for the housing market they are in. The evidence suggests that counties with a higher percent of Hispanic borrowers experienced a greater expansion in supply of credit relative to counties with a higher percentage of Black borrowers. This analysis controls for counties that had the same market share of IMCs in 2004, the year prior to the shock. Market share is calculated as the percent of mortgages originated in a county in 2004 by IMCs relative to the total number of mortgages originated in that year. Holding constant IMC market share this paper finds that mortgage originations fall in higher percent Black counties relative to high percent non-Black counties post policy change. In other words lending post policy change increased disproportionately more for high percent non-Black counties than it did for high percent Black counties.

This has potential implications for the assessment gap analyzed by Avenancio-León and Howard (2019) which finds racial differences in appraisal values among Black, Hispanic, and White homeowners. Black and Hispanic borrowers face higher effective tax rates relative to

White borrowers due to lower home sale prices and higher tax assessment values than non-Black borrowers. Inequities in lending practices would contribute to this assessment gap. If financial institutions offer systematically lower loan values to minority borrowers, their only option would be to buy lower priced homes.

2   Review of the Literature

To understand how BAPCPA came to impact predominantly Black, Hispanic, and White communities differently, we bring together the literature on residential segregation, credit markets, and home ownership to illuminate how these processes converge to fortify, if not exacerbate, the existing racialized residential landscape.

Residential segregation renders the outcomes of seemingly race-neutral policies, such as BAPCPA, highly racialized in their outcomes.

Despite the centrality of homeownership to wealth-generation, the myriad advantages accrued through homeownership have eluded Black and Hispanic households. Moreover, since homes are often financed through mortgage contracts,structural differences in the form that these mortgage contracts take by race have important racialized implications for borrowers.

Goodman and Mayer (2018) finds that homeownership is a valuable institution. Research has found disparities in mortgage approval rates, appraisals,[1] and tax assessments for Black versus non-Black home buyers,[2] Avenancio-León and Howard (2019). There are several census tracts that have over 60% black and many census tracts that have none - race clumps. There would be areas that are more densely populated by Black people or non-Black people. We know that lower housing values are racialized, so this is why a neutral policy would not roll out neutrally.

Red-lined had less access to credit for longer periods of time. This will have persistent and building effects on the people living there. People cannot get loans for home maintenance projects so homes deteriorate, home prices fall. Credit scores have also been racialized, if racial groups clump in space then credit scores also clump in space. FICO scores will be lower in these areas because FICO score ratings are extremely high dimensional algorithms that essentially multiply many variables marked as risk factors together to calculate a person's credit score. There may be several factors that make Black people more likely to have lower scores mechanically such as geography being one of the variables considered. If red-lining

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[1]Troy McMullen, "For Black homeowners, a common conundrum with appraisals," Washington Post, Jan. 21, 2021. Available: https://www.washingtonpost.com/realestate/for-black-homeowners-a-common-conundrum-with-appraisals/2021/01/20/80fbfb50-543c-11eb-a817-e5e7f8a406d6_story.html

[2]Martin, Joti K., Katie Rukes, and Abbey Chambers, "Home Lending Inequities in Marion County," Indiana University Public Policy Institute, ISSUE 20-C29, September 2020.

was part of an area's history, then people could not get home improvement loans (lower access to credit) this would drive down home repairs, driving down home prices, making an area have higher geographical risk rating on credit score. Then other people living in this neighborhood may be likely to have lower credit scores, and races clump together, then more Black people would live in this area, all with similar effects compounding in the background of their credit scores. This would have an effect of lowering average credit scores for Blacks.

Haughwout, Lee, Scally, Van der Klaauw et al. (2020) finds that higher percent black zipcodes experience higher rates of default. Blacks could be more exposed to a bankruptcy crisis because we know from the corporate literature that firms need access to credit to avoid bankruptcy. Similarly people need access to credit to avoid bankruptcy. If Blacks all living in the same area have similar effects on their credit scores, and have similar trouble accessing credit, then we may see more bankruptcies happening in these areas, further making the area appear as a risk factor based on its geography in a FICO score calculation.

Black home buyers are also more likely to be underwater faster. These areas would be the most sensitive to home price declines. Therefore even if Blacks had less of the interest only and Balloon mortgages than non-Blacks, their mortgages would be the "canary in the mine" so to speak. They would be the most vulnerable to home price declines and the borrowers themselves would have the odds stacked against them as they tried to refinance or negotiate both bankruptcy court and financial institutions simultaneously.

While Steil, Albright, Rugh and Massey (2018) finds that Black and Hispanic borrowers were disproportionately targeted by predatory mortgages, this paper conducts a systematic analysis that shows Black borrowers were actually not able to tap into the credit supply expansion enjoyed by other applicants. Haughwout, Lee, Scally, Van der Klaauw et al. (2020) find that Black and Hispanic zip codes have lower rates of home ownership yet face higher rates of default. There are a number of reasons why Black borrowers are more likely to have precarious financial situations. Literature on the racial wealth gap points out a number of racial gaps in financial situations, so black people would be more likely to default. Lack of home ownership has been inter-generational. Many generations of families have had less access to resources associated with home ownership. Indarte (2019) finds that people will rally all financial resources at their disposal to avoid bankruptcy. For Black borrowers, however there are often less financial resources available. Black people have only been able to own property since 1865, 100 years later than white people. Audit studies show that when Paycheck Protection Program (PPP) funding is not available, Black PPP applicants are less likely to be told about other options than their white counterparts. Navigating mortgage defaults, foreclosure, and bankruptcy requires navigating bureaucracy across legacy, financial, and government institutions, if Black filers are less likely to be

told about resources available to help them, then they would suffer higher levels of default, foreclosure and bankruptcy.

Maps of redlining in 30s, 40s, 50s were areas deemed as risky, do not make investment. The primary distinguishing factor about these areas was that a higher percent of Black inhabitants lived there. These areas were not able to receive home insurance, which precluded many applicants from buying a home, or to receive home improvement loans, which would weaken home values over time as housing quality deteriorated. The general lack of credit in these areas would decrease the ability to roll-over debt for homeowners close to default. Melzer (2017) shows that homeowners who are at higher risk of default cut back substantially on home investment. The maps of areas demolished during urban renewal were highly correlated with areas previously red-lined. Areas designated for urban renewal featured "curb appraisals." Where appraisers drove thorough the area and appraised properties from their cars, leading to lower appraisal values in beginning in the 1940's. These low appraisal values would have persistent effects as the value of a property is typically anchored to its historical values.

New home buyers would optimally choose not to situate in red-lined areas, lowering demand and further driving down prices. People hoping to buy homes in these areas would face difficulties receiving a loan because the area is red-lined, and the housing stock would be deteriorating due to previous owners' inability to receive home improvement loans. Black people are also more likely to buy a home from another Black person, further leading to persistence in low home prices as the literature has documented that Black people face additional barriers to borrowing (Giacoletti et al. (2021)).

3   Data

To establish the effect of BAPCPA on IMCs' lending to households, I study the effect of a county's independent mortgage company market share on mortgage originations and characteristics in that county pre and post BAPCPA. I leverage "Home Mortgage Disclosure Act" (HMDA) data and "CoreLogic Loan Performance Data" (LLMA).

HMDA Data The HMDA data are loan application-level data constructed from disclosure reports submitted by mortgage lenders.[3] In order to supervise and enforce fair lending practices nationwide, the U.S. Congress mandates that all loan applications related to home purchase, refinancing, and home improvement be reported to the federal government. These data provide information on the flow of new mortgage and home equity loans being originated. The loan application information is publicly available through HMDA from 1990.

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[3]https://www.ffiec.gov/hmda/hmdaproducts.htm

HMDA reports millions of loan applications every year and is one of the best sources for understanding loan origination patterns. The public version of the data reports only the year that a loan is created. The main variables that I leverage from this dataset are whether a mortgage was originated, who the originator was, whether the originator was an IMC, the year, and county in which it was originated.

I use these data to construct the county level market share of independent mortgage companies in 2004, the year prior to the shock. To identify the IMCs, I use the crosswalk maintained by Robert Avery to match subsidiaries belonging to the same parent company[4] to identify the originator of a given mortgage loan. This allows me to aggregate all mortgages originated by subsidiaries of the same parent company. I define a mortgage company as an IMC if it underwrites and funds a loan in its own name, following the HMDA definition of IMCs.[5]

CoreLogic Data I use the CoreLogic Loan Level Market Analytics (LLMA) data to study mortgage characteristics and originations by IMCs pre and post BAPCPA. In the ideal scenario I would test mortgage characteristics of mortgages originated directly by my treated and control IMCs pre vs post the policy change. Due to data restrictions however, I am not able to link mortgage originator name to mortgage performance characteristics. Therefore I study county level mortgage characteristics and performance outcomes in counties with higher versus low market share of independent mortgage companies. The LLMA contain detailed information on mortgage characteristics at origination as well as monthly performance data for a large sample of anonymized borrowers. CoreLogic collects these data from 25 of the largest mortgage servicers in the United States. The LLMA data track approximately 5.7 million mortgages each year and in a typical year include 45% of mortgages originated in the US over the sample period (2003-2008). The main variables that I utilize in the LLMA origination data record a mortgages' initial interest rate, occupancy status, mortgage product (balloon, negative amortizing, adjustable rate mortgage (ARM)), and prime versus subprime status.

I use the mortgage monthly performance data over the life of a loan in order to study the effect of BAPCPA on likelihood of default. I use the variable "mba_delinquency_status" which records the status of a borrower's payments on the loan and provides indicators for foreclosure, bankruptcy, and Real Estate Owned properties (REO). REO properties are home properties that have been seized by banks or other lenders from borrowers who are unable to pay their mortgages. CoreLogic records these indicators in accordance with the Mortgage

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[4]Available upon request at Robert.Avery@fhfa.gov.

[5]I merge the public HMDA data with the subset of confidential HMDA data that I have in order to identify IMCs using the TYPE variable in the confidential data. I merge the TYPE variable onto the public HMDA data using the mortgage originator identifiers (HM5RID and CODE).

Bankers' Association (MBA) standards. I aggregate these statistics to the county level and merge with the IMC county market share. This allows me to analyze the effect of 2004 IMC county market share on changes in loan characteristics in response to BAPCPA 2005.

4   Mortgage Company Lending

The evidence in Lewis (2020) establishes that following BAPCPA dealers increased credit lines to the mortgage companies that they funded. This increased lending to mortgage companies need not have any effect on real outcomes if the mortgage companies do not lend the money out to home buyers. In this section, I study whether IMCs pass the credit supply increase on to households.

I conduct a county level analysis where I create the variable, $IMCMarketShare_{c,2004}$, which captures the exposure of a county to the IMCs in 2004, the year prior to the shock. I calculate this variable using the number of mortgage originations in the HMDA data as follows.[6]

$$IMCMarketShare_{c,2004} = \frac{Number \ of \ originations \ by \ IMCs_{c,2004}}{Total \ number \ of \ all \ originations_{c,2004}}$$

Figure 1 depicts the county level market share of independent mortgage companies in the United States in 2004, the year prior to BAPCPA. The states with the highest county level market shares are California, Nevada, Florida, parts of Texas and parts of Colorado. The variation in IMC market share is likely due to the Fannie Mae and Freddie Mac scandals in 2003 and 2004 which decreased barriers to entry for independent mortgage companies to enter the mortgage market. ? and ? show that events in 2003 led to a sudden surge in the PLS market. Consistently I find that the market share of IMCs was rising during 2000 to 2003 and there was a steep decline in all other mortgage originations in 2003, increasing the relative share of IMC (and therefore PLS) originations.

The market share of IMCs however was relatively stable throughout 2004.[7] The fact that market share of IMCs had stabilized by 2004 alleviates the concern that the results in this paper are driven by a pre-existing increasing trend in IMC expansion. In the Online Appendix, I provide evidence that percent of respondents reporting an increase in mortgage

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[6]I also construct the IMC county level market share in 2004 based on value of mortgage originations and find that the distribution of county market share is very similar to the measure based on number of mortgage originations.

[7]I analyze the market share of IMCs, dealers, and all other originators from 2000 to 2004 using the confidential HMDA data aggregated at the month originator level. For brevity, I do not include the results in the paper, however they are available upon request.
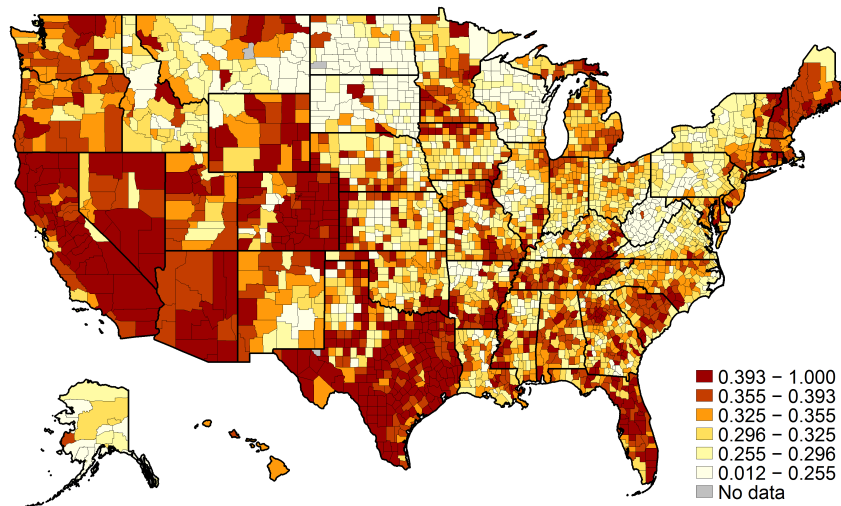
(b) All IMCs

Notes: The figure depicts the county level market share of the all IMCs reported in 2004. The market shares are calculated using the 2004 HMDA data.

demand in the Federal Reserve's Senior Loan Officer Survey had been declining prior to BAPCPA. I find no statistically significant difference in 1999 per capita income reported by the census in counties with high versus low IMC market share after controlling for state fixed effects. This helps to alleviate the concern that demand for mortgages would be significantly different in ways that would vary with BAPCPA in treated counties after controlling for $state \times month$ fixed effects.

I investigate how $IMCMarketShare_{c,2004}$ affects county level mortgage characteristics and home prices. I use the HMDA and CoreLogic LLMA data to capture mortgage contract variables and performance and the ZHVI to study home prices.[8] I run the following dynamic regression.

$$Y_{c,t} = \gamma_c + \eta_{s,t} + \sum_T \beta_T IMCMarketShare_{c,2004} \times \mathbb{1}_{t=T} + \epsilon_{c,t} \qquad (1)$$

Where $Y_{c,t}$ is the variable of interest in county, c at month t. γ_c represents county level fixed effects, $\eta_{s,t}$ represents $state \times month$ fixed effects. $IMCMarketShare_{c,2004} \times \mathbb{1}_{t=T}$ is the interaction term between the county level market share of IMCs in county c in 2004,

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[8]I limit the data to the top 5,000 counties captured in the county month HMDA dataset published by Neil Bhutta. I aggregate all variables of interest in the CoreLogic data to the county month level and merge on $IMCMarketShare_{c,2004}$ for each county.

and an indicator variable for month of origination or of the characteristic of interest. I set the reference month to March 2005, the month prior to the passage of BAPCPA.[9] Standard errors are clustered at the county level. I report the regression results with *county* fixed effects alone and with both *county* and *state × month* fixed effects. The regression with both *county* and *state × month* fixed effects is my preferred specification as this regression compares mortgage characteristics in counties with high versus low IMC market shares within the same state and month, absorbing state month housing market effects. For all of the mortgage characteristic regressions, I study a narrow window around BAPCPA. The narrow window, fixed effects, and stable pre-period IMC market share help to ensure that the pre period is a valid counterfactual for the post period.

The analysis also shows the the fraction of balloon, negative amortizing mortgages increased and the introductory interest rate on adjustable rate mortgages decreased directly following the policy change.

5   Effect on Mortgage Lending by Race

This paper utilizes a triple difference empirical specification to study the effect of the credit expansion by race. The econometric design studies counties pre versus post BAPCPA, the first difference, across high versus low IMC market share counties, the second difference, and across high versus low percent Race counties, the third difference. The specification includes $state \times month$ fixed effects and *county* fixed effects to compare county-level mortgage originations across counties within the same state and month.

$\%Race_c$ is defined as the total number of inhabitants of a certain race in all zip codes across a county divided by the total population of the county. I define the percent race of a county to be

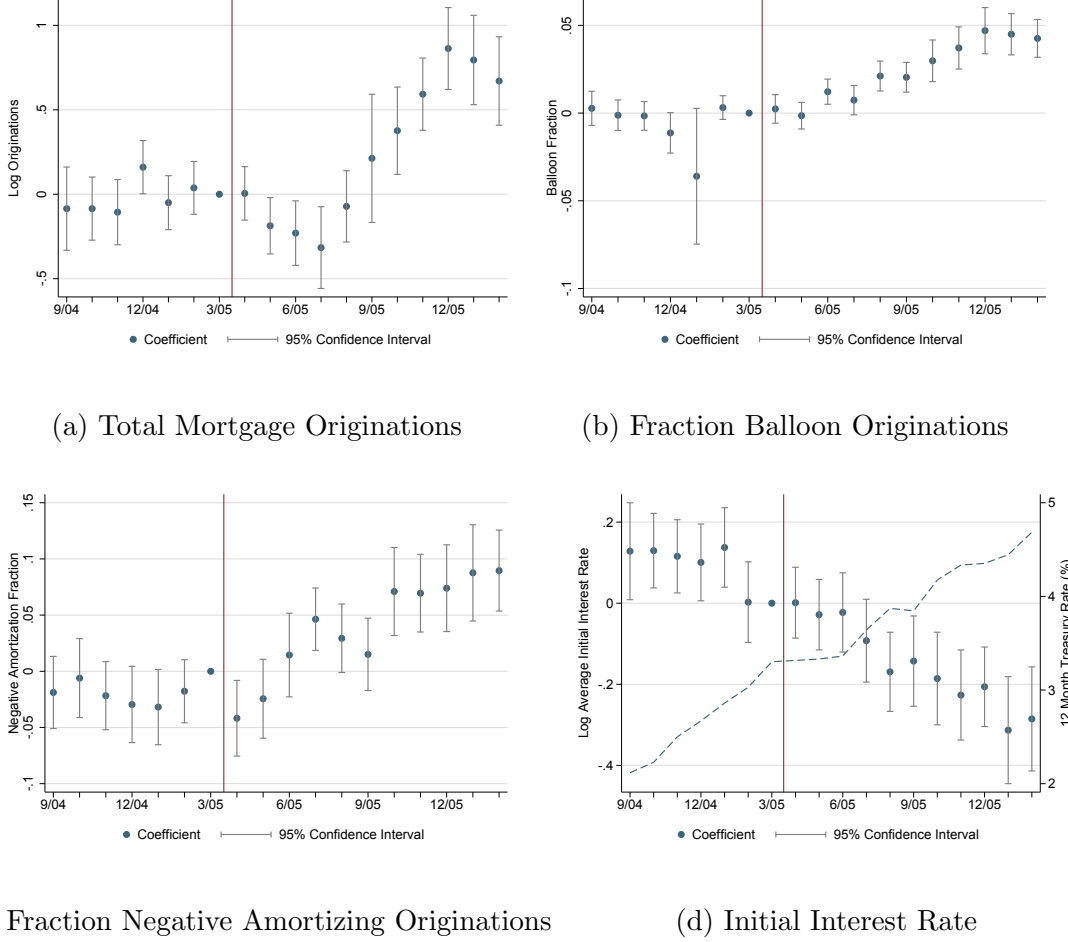$$\%Race_c = \frac{Number \ of \ RACE \ inhabitants_c}{Total \ number \ of \ inhabitants_c} \tag{3}$$

The specification in Equation 4 compares counties with high versus low market share of IMCs in 2004 interacted with the percent of Black inhabitants in a county at a fixed point in time. The paper then runs the same regression specification interacting the IMC market

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[9]I run the equivalent regression to Equation 1, however with a single pre-period and a single post-period in order to estimate the cumulative effect of the shock in the post period.

$$Y_{c,t} \quad = \quad \gamma_c + \eta_{s,t} + \beta \ Post_t \times IMCMarketShare_{c,2004} + \epsilon_{c,t} \tag{2}$$

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(a) Total Mortgage Originations

(b) Fraction Balloon Originations

(c) Fraction Negative Amortizing Originations


(d) Initial Interest Rate

Notes: Figure plots the dynamic response of total mortgage originations in a given county to the 2004 market share of independent mortgage companies (IMCs) in that county. I estimate Equation 1. β_T is the coefficient of interest. It is the coefficient on the indicator variable that interacts $IMCMarketShare_{c,2004}$ with an indicator for each month pre and post the shock. I use the public HMDA data to compute the 2004 county level IMC market share and the county month HMDA data to study originations.[a] The figure indicates that following BAPCPA counties more exposed to policy change significantly increased the number of mortgages that they originated and shifted toward alternative mortgage products relative to less exposed counties.

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[a]Neil Bhutta publishes the HMDA data reported at the county month level on his personal website: https://sites.google.com/site/neilbhutta/data.
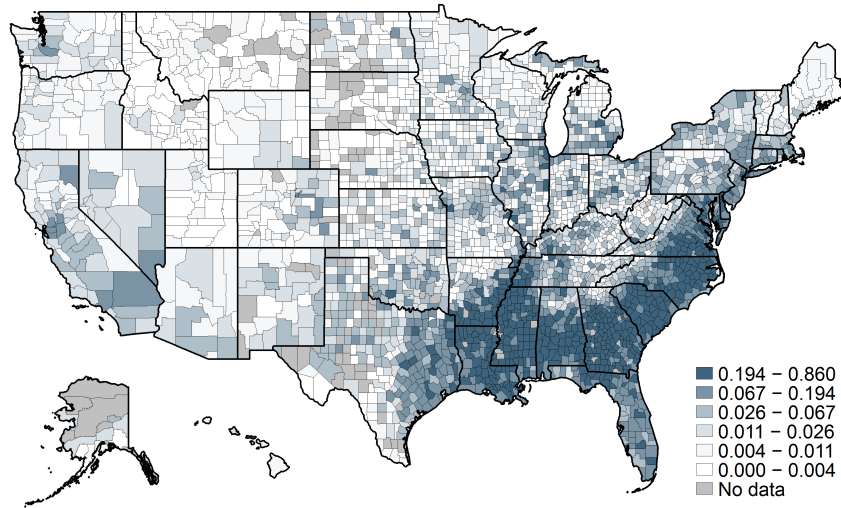
(a) Population of Black Inhabitants
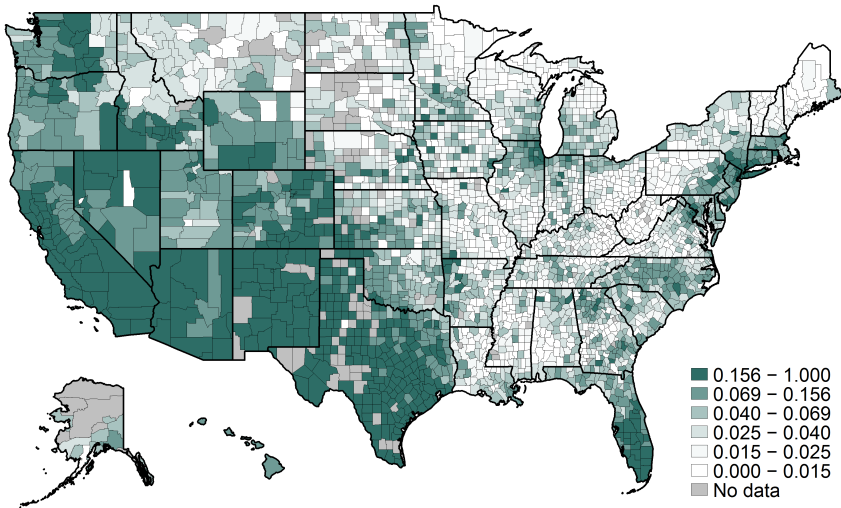
(b) Population of Hispanic Inhabitants

Notes: The figure depicts the county level population of inhabitants by race. The calculation utilizes the American Community Survey (ACS) 5-year estimates for race from IPUMS National Historical Geographic Information System NHGIS.

share with the percent of White inhabitants in a county as well as the percent of non-White Hispanic inhabitants in a county. We run the following regression between January 1, 2004 and December 31, 2006 to exploit a narrow window around the BAPCPA policy change. The narrow window helps to ensure that the pre-period is a valid counter factual for the post period. Standard errors are clustered at the county level.

$$\log(Originations_{c,t}) = \alpha \log(AvgCLTV_{c,t}) + \delta \log(AvgIntRate_{c,t}) + \lambda \log(AvgDTI_{c,t}) \quad (4)$$

$$+ \rho \log(AvgFICO_{c,t}) + \zeta IMCMarketShare_{c,2004} + \xi \%Race_{c,2016} \quad (5)$$

$$+ \mu IMCMarketShare_{2004} \times Post_t + \nu \%Race_{c,2016} \times Post_t \quad (6)$$

$$+ \tau IMCMarketShare_{2004} \times \%Race_{c,2016} \quad (7)$$

$$+ \beta IMCMarketShare_{2004} \times \%Race_{c,2016} \times Post_t \quad (8)$$

$$+ \gamma_c + \eta_{s,t} + \epsilon_{c,t} \quad (9)$$

Where β is the coefficient of interest. We conduct a county level analysis where We create a variable, $IMCMarketShare_{c,2004}$, that captures the exposure of a county to the IMCs in 2004, the year prior to the shock. We calculate this variable using the number of mortgage originations in the HMDA data as follows.[10]

The identification from the regression specification comes from identifying counties more exposed to the IMCs as those more exposed to the credit supply shock that BAPCPA generated in the repo market. By interacting the exposure of a credit supply shock with the racial makeup of a county, this paper studies how a credit supply increase targeted at increasing credit for mortgage originations affects racial groups differently and analyzes the factors determining differential effects on racial groups.

The second difference between $Post_t \times IMCMarketShare_{c,2004}$ suggests that areas with higher $IMCMarketShare_{c,2004}$ were more likely to receive credit than areas with low IMC market share. However, using the policy change as a natural experiment to shock credit supply, we find that counties with higher percent Black borrowers do not benefit from the increase in credit supply. The results suggest that holding constant $IMCMarketShare_{c,2004}$ in areas with higher percent Black inhabitants, total mortgage originations, including both purchase and refinance mortgages, decreased significantly relative to areas with higher percent Hispanic borrowers. They increased significantly in counties with higher percent non-White Hispanic inhabitants and there was no change for counties with higher percent White

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[10]We also construct the IMC county level market share in 2004 based on value of mortgage originations and find that the distribution of county market share is very similar to the measure based on number of mortgage originations.

borrowers.

The BAPCPA policy change loosened credit standards (Lewis (2020)). This increased the amount of mortgages that IMCs could originate and enabled them to originate mortgage products such as balloon mortgages, two-step, hybrid and adjustable rate mortgages, non-owner occupied, interest-only mortgages, etc. The results are consistent with counties with more non-Black inhabitants receiving disproportionately more mortgages post policy change controlling for average combined-loan-to-value ratio (CLTV), average interest rate, and debt-to-income ratio. The results could be consistent with racial profiling, since post-BAPCPA credit terms were looser, but IMCs issued more mortgages to counties with higher Hispanic populations rather than to those with higher Black populations. Number of mortgage originations overall, purchase originations, refinance originations, conforming/non-conforming, and prime/subprime mortgages originations all decrease following the credit supply expansion relative to counties with the same exposure to the policy change but higher percentage of non-Black population.

Controlling for average CLTV, interest rate, and DTI, we find that counties with higher percent Black population post shock have a higher average FICO score. This is consistent with black borrowers being required to have a higher FICO score than was needed by their non-black counterparts to tap into riskier mortgage products. This is consistent with a cream skimming hypothesis.

Agarwal, Chomsisengphet, Mahoney and Stroebel (2018) find that a reduction in cost of bank funds increases banks' marginal propensity to lend. However, banks' marginal propensity to lend is much higher for high FICO score borrowers. A one percentage point decrease in bank cost of funds increases borrower credit limits by \$127 for borrowers with a FICO score below 660, and by \$2,203 for borrowers with FICO scores above 740. Haughwout, Lee, Scally, Van der Klaauw et al. (2020) find that higher percent Black zipcodes have lower FICO scores on average. In line with this literature, our results find that counties with higher percent Black inhabitants experience a decline in mortgage originations relative to counties with low percent Black inhabitants post BAPCPA holding constant exposure to IMCs in 2004, the year prior to the policy change. This suggests that when BAPCPA lowered IMCs' cost of funds, IMCs expanded their lending to counties with lower percent Back inhabitants. This is consistent with IMCs increasing lending to borrowers with higher FICO scores.
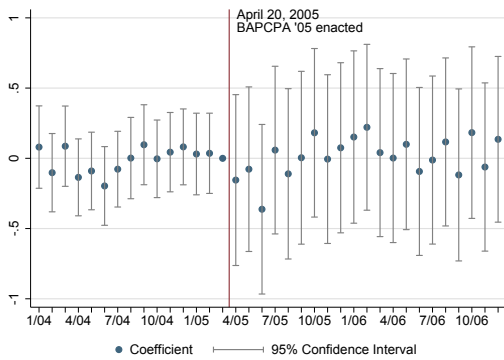
FIGURE 4: TRIPLE DIFFERENCE COEFFICIENT ON MORTGAGE ORIGINATIONS BY RACE
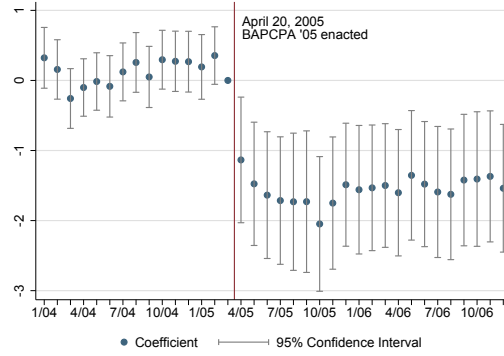
(a) Mortgage Originations in High % Black Counties
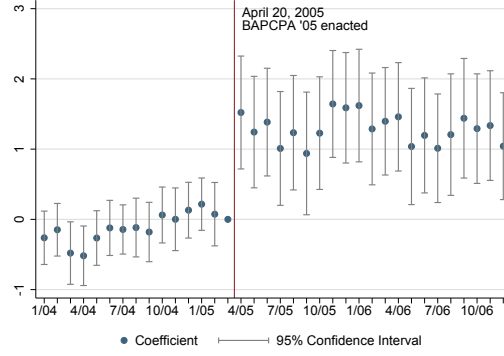
(b) Mortgage Originations in High % Hispanic Counties

(c) Mortgage Originations in High % White Counties

Notes: Figure plots the dynamic response of the coefficient of interest β from Equation 4 on the triple difference interaction term $IMCMarketShare_{2004} \times \%Race_c \times Post_t$.

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6   Conclusion

This paper draws on the credit supply expansion to independent mortgage companies shown in Lewis (2020) to study the differential effect of the expansion by Race of borrowers. The paper utilizes a triple difference empirical specification to isolate the effect of increased credit supplied for risky mortgage products such as balloon mortgages etc to Hispanic and Black borrowers relative to White borrowers. Within a narrow window around the policy change, the triple difference allows the paper to isolate the effect of lenders marginal propensity to lend rather than a change in borrower demand. This is consistent with steering of minority borrowers into high risk mortgage products.

Despite the overall increase in credit, and despite BAPCPA loosening credit standards (Lewis (2020)), a 10% increase in percent of inhabitants identifying as a given race has divergent effects on the number of mortgage originations in a county. Counties with higher percent Black inhabitants received 17% fewer mortgages in the post-period relative to other borrowers, while counties with higher percent Hispanic borrowers received a 14% increase in mortgage originations. Counties with higher percent White inhabitants experienced no statistically significant change in mortgage originations in the post-period.

The results of the experiment have multiple implications, the largest being it establishes there is a statistically significant disparity in credit availability for individuals on the basis of racial makeup of their county. A race-neutral policy aimed at increasing home ownership would not roll out neutrally. Policy decisions aimed at decreasing the wealth gap through home ownership could yield inefficient, or even damaging effects for minority communities if they implemented broadly with little consumer protection. The results of this paper suggests that credit policies should carefully consider racial disparities and include an element of consumer protection.

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