FHFA Insights

Racial and Ethnic Mortgage Rate Disparities, 2000-2023

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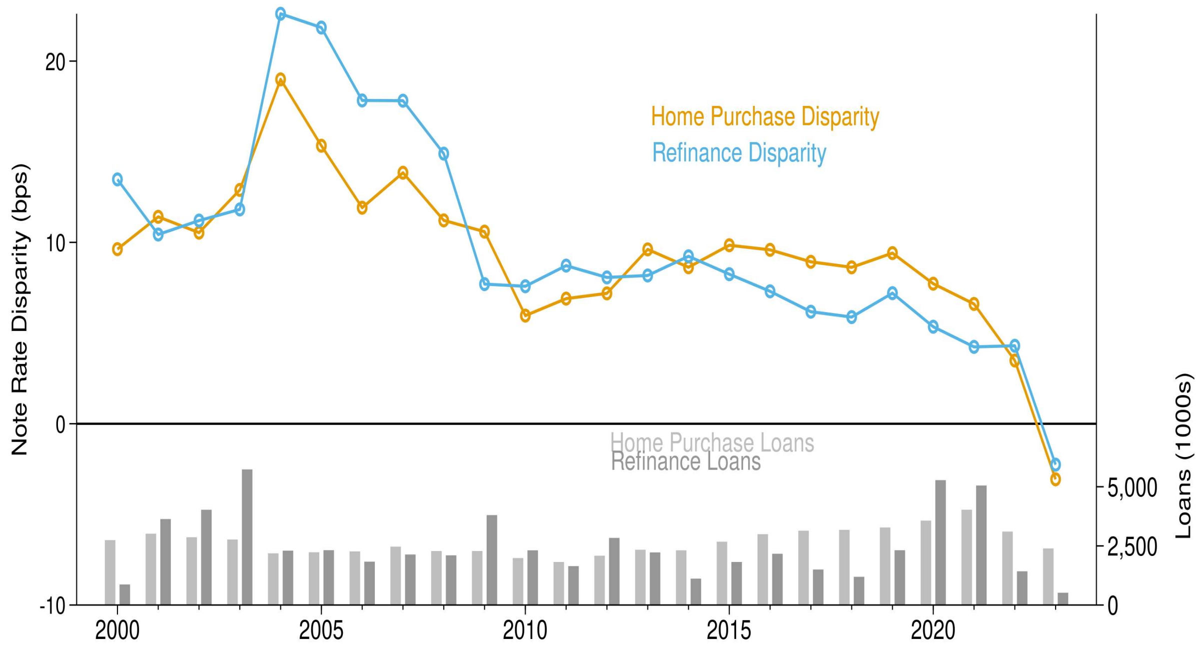
Mortgage borrowers in majority Black and Hispanic census tracts were charged higher interest rates than similarly qualified borrowers in majority white tracts in every year from 2000-2022, but this pattern broke in 2023. Potential explanations and data uncertainties are discussed.

Introduction

This blog examines trends in racial and ethnic mortgage rate disparities over a 24-year period, using the Federal Housing Finance Agency's (FHFA) National Mortgage Database (NMDB). Disparities are differences in the note rate charged to borrowers in census tracts with a combined Black and Hispanic majority, compared to the note rates charged to similarly qualified borrowers in tracts with a majority of non-Hispanic white borrowers. Regression methods enable this comparison of similarly qualified borrowers by controlling for the most important determinants of mortgage rates, such as loan-to-value (LTV) ratios and credit scores, although not every potentially relevant variable is included. Comparisons are also facilitated by restricting the sample to the most common types of mortgages. More details on the methods, as well as their limitations, are discussed below and in the Appendix. While there have been many studies of such disparities, none have examined them over nearly as long a timeframe.[1]

Figure 1: Regression-Adjusted Mortgage Rate Disparities for Similarly Qualified Borrowers in Majority Black and Hispanic Tracts Compared to Majority White Tracts



Trends in Mortgage Rate Disparities

Figure 1 shows trends in mortgage rate disparities for the home purchase and refinance markets, as well as loan volume. Two periods stand out: the height of the subprime boom, from 2004-2007, when disparities were especially high; and the most recent year of data, 2023, when disparities fell sharply, breaking their longstanding pattern.

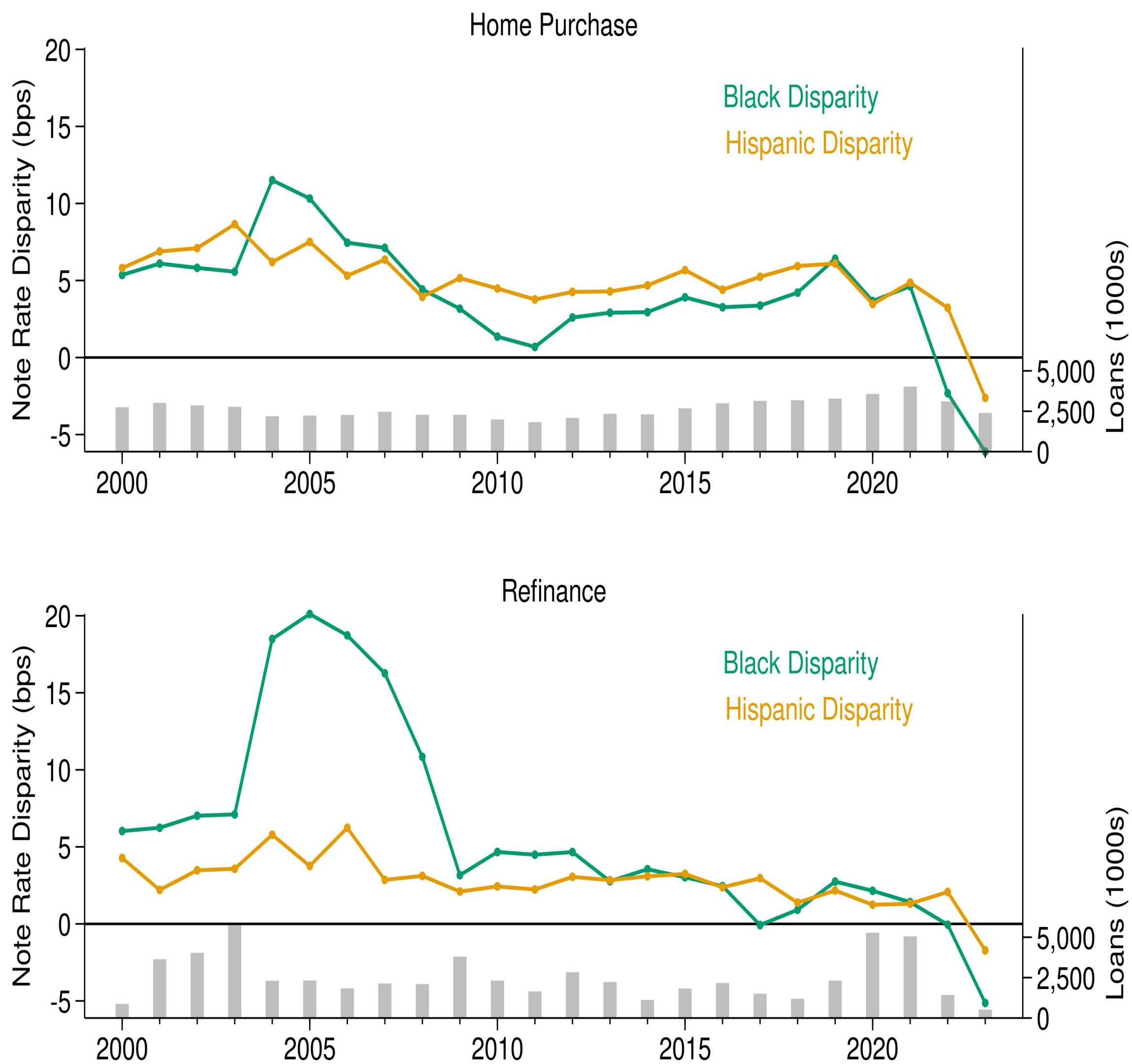
Disparities peaked in 2004 at 19 basis points (bps) in the purchase market and 23 bps in the refinance market, with home purchase disparities remaining in the double digits through 2009 and refinance disparities in the double digits through 2008.[2] While the high disparities during the subprime boom are unsurprising given the period's reputation for predatory lending practices, and have been well documented elsewhere,[3] this analysis captures the magnitude of these disparities with a long time series of consistent data that allows for comparison of disparities before and after the financial crisis.

There followed a 12-year period of relative stability from 2010-2021, with home purchase disparities averaging 8 bps and refinance disparities averaging 7 bps.

In the past two years, disparities fell sharply. In 2022, disparities fell to 3 bps in the home purchase market and 4 bps in the refinance market. In 2023, disparities actually reversed, with home purchase disparities of -3 bps in 2023 and refinance disparities of -2 bps, although only the home purchase estimate is statistically distinguishable from zero, and that only at a marginal level (p=0.03).[4]

Figure 2 displays comparable disparity estimates for Black and Hispanic borrowers compared to similarly qualified non-Hispanic white borrowers, which follow a similar pattern as the neighborhood-level estimates in Figure 1.

Figure 2: Regression-Adjusted Mortgage Rate Disparities for Black and Hispanic Borrowers Compared to Similarly Qualified White Borrowers



Recent Housing Market Trends

The last several years have seen sweeping changes in housing markets. The COVID-19 pandemic that began in early 2020 and the subsequent lockdowns and rise in remote work increased the demand for larger homes and led to migration to more affordable areas. Consequently, the eight quarters from Q3 2020 to Q2 2022 saw the fastest price growth of the 24-year period.[5] While the timing of the response to the pandemic does not correspond particularly well to the reduction in mortgage rate disparities, its impacts have continued to be felt. Falling disparities coincide with the sharp increase in mortgage rates that began in early 2022, with rates rising from an average of 3.4 percent to 7.4 percent by late 2023.[6] Rising mortgage rates led to a collapse in refinance volume to the lowest levels of the 24-year period.

These rapid changes might have impacted racial and ethnic gaps in mortgage rates in a variety of ways. Sharply rising housing costs may have made borrowers more price sensitive, reducing mortgage rate disparities. Increasing competition among lenders, as lenders and loan officers sought business from fewer customers, could have made differential pricing more costly.[7] The mix of borrowers and mortgage products were no doubt impacted by these market trends, and while the regression analysis accounts for some of these shifts, it does not capture all of them. These and many other explanations are well worth investigating, but a deeper dive is beyond the scope of this blog. Instead, we turn to a discussion of the impact of an area in which we have particular expertise: the role of mortgage market regulation.

Regulatory Action

Mortgage lending is highly regulated, and many regulators have announced their intention to focus on racial equity and civil rights enforcement in the last few years. For example, FHFA required Fannie Mae and Freddie Mac (the Enterprises) to produce Equitable Housing Finance Plans, and added requirements regarding minority census tracts to the housing goals the Enterprises are required to meet.[8] Of course, these initiatives also address equity issues related to, but beyond the scope of, this blog, such as credit access. Two of the most notable examples of direct spending to reduce pricing disparities are Special Purpose Credit Programs (SPCPs) and Department of Justice (DOJ) discrimination settlements. While these subsidies can be earmarked to reduce mortgage costs other than the note rate, they still free up funds that could potentially be used to buy down mortgage rates, and it is worth considering their upper bound impact.

SPCPs have become more widely used in the last few years after regulators issued guidance clarifying their legal status.[9] Three of the largest SPCPs are run by Fannie Mae, Freddie Mac, and Wells Fargo. In 2023, Fannie Mae provided subsidies to borrowers in certain census tracts averaging about $7,500 for 921 loans, a total of $6.9 million.[10] Freddie Mac provided smaller subsidies to 2,479 borrowers in certain counties totaling about the same expenditure as Fannie Mae.[11] Wells Fargo provided discounted refinance loans to 5,100 Black homeowners as of October 2023.[12]

DOJ has also placed strong emphasis on combatting redlining by financial institutions. From 2021-2023, DOJ obtained 10 settlement agreements in redlining cases, which included loan subsidy funds totaling roughly $20 million per year to reduce borrowing costs for borrowers in Black and Hispanic neighborhoods.[13]

Some simple calculations help clarify whether direct spending by financial institutions could be responsible for the decrease in disparities. It would have cost about $68 million to buy down interest rates by 1 bp for all 456,000 borrowers in Black and Hispanic tracts in 2023.[14] While this is a modest sum, the figures mentioned above appear far too small to account for much of the 5-10 bps fall in racial gaps of the last two years.

At the same time, regulatory actions are potentially much further reaching than their direct effects would imply. Increased enforcement of fair lending laws may have a deterrent effect and spur lenders to increase compliance efforts. Bank and other federal financial regulators have far-reaching supervisory powers, and while their actions rarely become public, some information is available. For example, the Consumer Financial Protection Bureau (CFPB) reports that it has been conducting more fair lending examinations, has uncovered illegal mortgage pricing disparities at a number of lenders in 2021 and 2023, and has required these lenders to take remedial actions.[15] In 2021, FHFA began reporting to primary regulators any lender with a statistically significant pricing disparity, considered “a preliminary finding of a pattern of disparities.”[16] Finally, self-initiated actions to address inequities taken by lenders and the mortgage industry, while difficult to quantify, are ultimately a crucial factor.

Appendix: Methods and Limitations

The analysis used the National Mortgage Database (NMDB), a nationally representative 5 percent sample of mortgage originations, based on administrative data from a credit bureau, the Enterprises, and government agencies.[17] The loan-level data used here include the most important underwriting factors. The regression analysis controls for the credit score (a restricted cubic spline of the VantageScore 3.0), debt-to-income (DTI) ratio, DTI ratio > 45%, Combined LTV ratio (9 categories), weekly national interest rates, secondary market channel, and indicators for two or more borrowers, first-time homebuyers, owner-occupied homes, and indicators for each metropolitan area or the non-metro portion of each state. To keep the mortgages analyzed consistent over time, the sample was restricted to 30-year fixed rate loans with full documentation for single-unit properties, excluding interest only loans, negative amortization loans, balloon loans, loans with prepayment penalties, and HAMP/HARP loans. A separate regression was estimated for each year and for each race/ethnicity, with non-Hispanic whites included in all regressions as the comparison group; and for majority Black and Hispanic tracts versus majority white tracts. Majority Black and Hispanic census tracts and majority white tracts are classified based on loan counts from Home Mortgage Disclosure Act (HMDA) data.

Probably the most serious potential measurement issue is that the note rate is only one aspect of pricing and is determined simultaneously with others. For example, most lenders allow upfront payments to buy down interest rates (i.e., discount points); lenders can also provide credits in exchange for a higher interest rate, and these types of upfront pricing are not captured in the NMDB. One recent study found that upfront pricing entirely explained a 3 bps disparity for Federal Housing Administration (FHA)-insured home purchase loans in 2014-15.[18] However, while

Black and Hispanic borrowers pay lower upfront pricing on average than similarly-qualified white borrowers in the FHA market, which offsets interest rate disparities, they pay more on average in the conventional market, reinforcing disparities.[19] Another recent study controlled for upfront pricing and found disparities in 2020 as high or higher than those estimated here.[20] Still, this type of measurement issue cannot be ruled out.

As in any regression analysis, omitted variables are a potential source of bias. Here, the data does not identify condominiums or subsidized loans with income restrictions such as housing finance agency (HFA) loans, and the data does not distinguish between investor properties and second homes. The credit score included in the NMDB is produced by the VantageScore 3.0 model, while during this period most lenders used the Classic FICO score in underwriting. It is also worth noting that while restricting the sample to the most common type of mortgages increases consistency over time, it also excludes mortgages with certain features, such as limited documentation and negative amortization, often associated with predatory loans.

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[1] In addition to the studies cited below, see, for example, Bartlett, R., Morse, A., Stanton, R., & Wallace, N. (2022). Consumer-lending discrimination in the FinTech era. *Journal of Financial Economics*, *143*(1), 30-56.

[2] A basis point is 0.01 percentage point. For example, in 2004, home purchase loan interest rates averaged 6.08% in majority white tracts, and 6.27% for similarly qualified borrowers in majority Black and Hispanic tracts, a difference of 0.19 percentage points or 19 basis points.

[3] For example, see Bayer, Patrick, Fernando Ferreira, and Stephen L. Ross. "What Drives Racial and Ethnic Differences in High-Cost Mortgages? The Role of High-Risk Lenders." The Review of Financial Studies 31.1 (2018): 175-205.

[4] All other disparities from 2000-2022 in Figure 1 are statistically significant at p<0.001.

[5] Nominal quarterly home prices were measured using FHFA's seasonally-adjusted purchase-only index. See https://www.fhfa.gov/data/hpi .

[6] These figures are the average values in the NMDB for the market interest rate (from Freddie Mac's Primary Mortgage Market Survey) for Q1 2022 and Q4 2023.

[7] Some recent studies of the role of competition in limiting discrimination are Dahl, Gordon B., and Matthew Knepper. "Age Discrimination across the Business Cycle," *American Economic Journal: Economic Policy* (2023) and Butler, Alexander W., Erik J. Mayer, and James P. Weston, "Racial disparities in the auto loan market." *The Review of Financial Studies* 36.1 (2023): 1-41.

[8] See 86 FR 73641, https://www.federalregister.gov/documents/2021/12/28/2021-28168/2022-2024-single-family-and-2022-multifamily-enterprise-housing-goals .

[9] SPCPs are allowed by the Equal Credit Opportunity Act (ECOA), as long as the sponsor provides evidence to establish that the "program will benefit a class of people who would otherwise be denied credit or would receive it on less favorable terms."

[10] See https://www.fanniemae.com/media/51156/display .

[11] See https://www.freddiemac.com/about/pdf/Freddie-Mac-Equitable-Housing-Finance-Plan-2023-Performance-Report.pdf .

[12] See the Covington & Burling *Report to Wells Fargo on its Efforts to Promote Racial Equity*, https://www08.wellsfargomedia.com/assets/pdf/about/corporate/racial-equity-assessment.pdf.

[13] The subsidy funds for these settlements totaled $94 million, to be spent over 5 years. See: https://www.justice.gov/opa/pr/justice-department-reaches-significant-milestone-combating-redlining-initiative-after

[14] This calculation assumes loan balances averaged $300,000, close to the average value in the NMDB for 2023, and that it costs 5 bps upfront to buy down interest rates by 1 bp, which is a typical value.

[15] See CFPB, *Supervisory Highlights*, issue 25 (2021) and issue 30 (2023); and CFPB, *Performance Plan and Report,* (2023), measure 1.2.2

[16] See, for example, FHFA, *2023 Report to Congress*. https://www.fhfa.gov/reports/annual-report-to-congress/2023.

[17] FHFA publishes aggregate statistics using the NMDB data but the loan-level data used here is not available to the public. More information on the NMDB can be found at https://www.fhfa.gov/data/national-mortgage-database-aggregate-statistics

[18] Bhutta, Neil, and Aurel Hizmo, "Do minorities pay more for mortgages?." *The Review of Financial Studies* 34.2 (2021): 763-789.

[19] These findings are for home purchase loans in 2018-19. See Zhang, David Hao, and Paul S. Willen. *Do lenders still discriminate? A robust approach for assessing differences in menus*. No. w29142. National Bureau of Economic Research, 2021.

[20] Popick, Stephen, "Did minority applicants experience worse lending outcomes in the mortgage market? A study using 2020 expanded HMDA data." *FDIC Center for Financial Research Paper* 2022-05 (2022). These findings are for home purchase loans. Findings for refinance loans are less comparable.

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