

# The Unequal Costs of Black Homeownership<sup>1</sup>

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*Mortgages reach all time low, rates now at 3.13%.<sup>2</sup>* But read the fine print. That’s for just some borrowers, typically those with at least 20% down with minimum loan size and stellar credit scores. In fact, there is significant variation in mortgage rates driven by a host of factors, all of which negatively impact African American borrowers. This section of the report quantifies how much more African Americans pay to be homeowners. It’s a lot. The overall differences in mortgage interest payments (**\$743 per year**), mortgage insurance premiums (**\$550 per year**), and property taxes (**\$390 per year**) total **\$13,464** over the life of the loan, which amounts to **\$67,320** in lost retirement savings for black homeowners. These inequities make it impossible for black households to build housing wealth at the same rate as white households.<sup>3</sup> The black-white income gap of \$25,800<sup>4</sup> is exacerbated by this “black tax” on homeownership. If we eliminate these extra costs paid by African Americans, the \$130,000 black-white gap in liquid savings at retirement<sup>5</sup> would drop by half. Our estimates do not include costs due to delinquencies and defaults that inevitably flow from higher interest, insurance, and tax payments, and hence likely understate the unequal burden placed on black homeowners.<sup>6</sup>

Although these inequities can be traced to the long history of slavery, segregation, and race discrimination, here we discuss the current policy choices that maintain the disparities and suggest a series of reforms to eliminate them. Our policy analysis focuses on disparate interest rates and mortgage insurance costs, which can be addressed at the federal level. We nonetheless point out that nearly a quarter of the disparity in homeownership costs for black homeowners is due to local property tax assessments. A fair homeownership system must reform these inequitable federal, state, and local policies.

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<sup>2</sup> Jeff Rose, “Mortgage Rates Reach Record Lows – Is Now The Right Time To Buy A House?,” *Forbes*, July 7, 2020, <https://www.forbes.com/sites/jrose/2020/07/07/mortgage-rates-reach-record-lows--is-now-the-right-time-to-buy-a-house/#6965817d3de7>.

<sup>3</sup> As used in this section, “black” and “African American” refer to the HMDA category “Black or African American” used to track loan data; “white” refers to the HMDA category “White, Not Hispanic or Latino”; Latinx refer to the HMDA category “Hispanic or Latino.” 12 CFR part 1003, Appendix B, “Form and Instructions for Data Collection on Ethnicity, Race, and Sex,” <https://www.consumerfinance.gov/policy-compliance/rulemaking/regulations/1003/B/#8>.

<sup>4</sup> Vanessa Gail Perry. “2020 State of Homeownership in Black America: Challenges Facing Black Homeowners and Homebuyers During the COVID-19 Pandemic and an Agenda for Public Policy” Figure 1.11, page 1-16. National Association of Real Estate Brokers.

<sup>5</sup> Urban Institute. *Nine Charts about Wealth Inequality in America* (Updated). Chart 7: “Black and Hispanic families have less in liquid retirement savings,” Oct. 5, 2017, <https://apps.urban.org/features/wealth-inequality-charts/chart-7>.

<sup>6</sup> See Bayer, Patrick, Fernando Ferreira, Stephen L. Ross. 2016. “What Drives Racial and Ethnic Differences in High Cost Mortgages? The Role of High Risk Lenders.” Economic Research Initiatives at Duke Working Paper Series, <https://dukespace.lib.duke.edu/dspace/bitstream/handle/10161/13241/SSRN-id2730894.pdf?sequence=1>.

## OUR CONCLUSIONS:

**Black homeowners pay higher mortgage rates at origination:** Over-pricing for perceived risk factors drives a large portion of the differential cost of homeownership for black households. Factors targeted most often are LTV, credit score, and loan size. The policy decision to risk-base price rather than pool risk drives up interest rates for black homeowners and is one reason black homeowners pay about **\$250 per year** more in interest charges for purchase loans, resulting in lost retirement savings of over **\$11,000**. With respect to all purchase loans, the average interest rate for black homeowners was 12 bps higher than for white homeowners. Note that for the subset of GSE purchase loans, where risk-based pricing is more prevalent, the difference is 20 bps. We use **12 bps**, the figure for all purchase loans, and the average loan size of **\$225,000** to compute the costs of risk-based pricing.

**Black homeowners continue to pay higher interest rates post-origination due to the lack of refinance opportunities:** In addition to risk-based pricing, black homeowners pay higher interest rates because they are locked out of refinance opportunities. When the Federal Reserve Board acts to lower interest rates, white homeowners benefit to a much greater extent than black homeowners. We estimate that the lack of refinance opportunities results in black homeowners paying approximately another **\$475 per year more than white homeowners**, which results in a loss of retirement savings of nearly **\$20,000**. To compute the \$475 differential cost, we use **21 bps** as the average interest rate differential between black and white homeowners and **\$225,000** for the average loan size.

Of note, the FHA and VA mitigate but do not eliminate these differential effects. FHA and VA account for approximately half of all home purchase mortgages originated to black homeowners. Although FHA does not engage in risk-based pricing, some of the private banks that originate FHA mortgages do. As a result, the average interest rate for black homeowners at origination of the FHA mortgage, according to 2018 and 2019 HMDA data, was about **6 bps** higher than for white homeowners. For VA mortgages, the differential was similar, at about **7 bps**.

**Black homeowners pay more in insurance premiums:** In addition to paying higher mortgage rates, black homeowners are more often required to pay insurance premiums, whether for private mortgage insurance or for FHA or VA mortgage insurance. The difference on average between what a black homeowner pays and what a white homeowner pays in mortgage insurance costs is **\$550 per year**, with a resulting loss in retirement savings of over **\$23,000**.

**Black homeowners pay higher property taxes:** In addition to the extra costs from higher mortgage interest rates and mortgage insurance premiums, recent research shows that black homeowners pay more in property taxes than similarly situated white homeowners. Avenancio-Leon and Howard (2020), relying on a national data set, find that black homeowners bear a 13% higher property tax burden than white homeowners in the same jurisdiction. By the authors' calculation, a black homeowner pays approximately **\$390 more per year**, using a median home value of **\$207,000**. The authors identify large tax assessment areas and an appeal process that tends to benefit white homeowners as the predominant factors resulting in the higher relative property tax

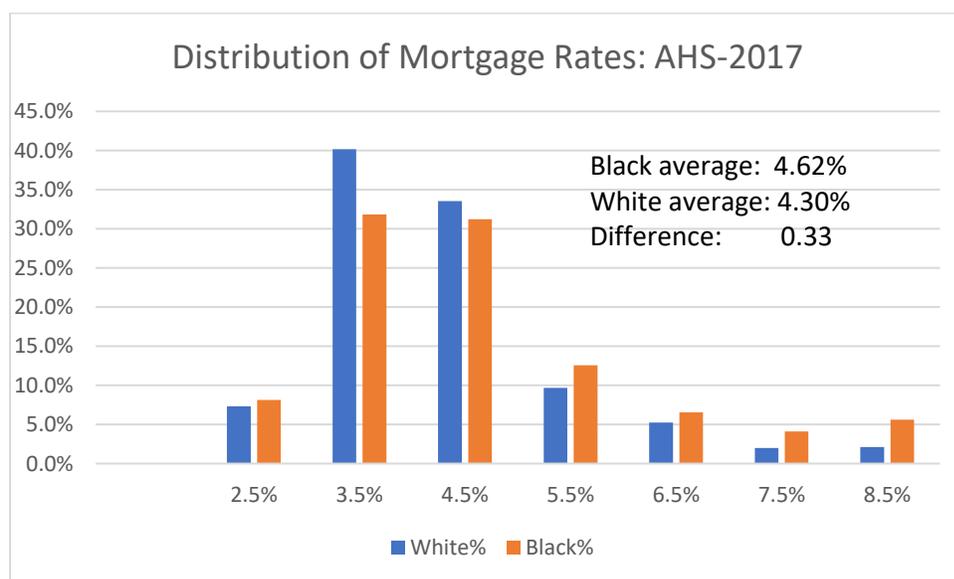
burden on black homeowners. They suggest that a smaller assessment area, one at the zip-code level, would reduce racial inequality in property tax assessments by at least 55-70%.<sup>7</sup>

## DATA ANALYSIS:

### Black-White Mortgage Rate Disparities

We first calculate the overall interest rate disparities between black and white borrowers. From there, we seek to break out and quantify the component factors that lead to inequitable pricing. Unfortunately, there is no one publicly available data set from which to calculate mortgage price by race. HMDA looks at new originations but not the overall stock, so it does not capture disparities over the life of the loan. The American Housing Survey (AFS) includes questions about mortgage rates, although it is somewhat limited in that it involves a relatively small sample size, it groups mortgage rates by buckets, and it relies on homeowners' responses. It nonetheless allows us to estimate the total distribution of mortgage rates.

Using both HMDA and AHS data, as of the 2017 Survey, we identify that black homeowners pay, on average, **33 bps** more on their mortgages compared to white homeowners.



That may not seem large, but it is. On average, the mortgage balance for black homeowners is approximately \$225,000. A 33 bps-differential means an extra **\$743 per year** for black homeowners. If a 40-year-old saved \$743 per year for 25 years at 4% interest, at retirement, the homeowner would have an extra **\$31,000** (which corresponds to \$11,600 present value).<sup>8</sup>

<sup>7</sup> Avenancio-León, Carlos, Troup Howard. 2020. "The Assessment Gap: Racial Inequalities in Property Taxation." Washington Center for Equitable Growth, <https://equitablegrowth.org/working-papers/the-assessment-gap-racial-inequalities-in-property-taxation/>.

<sup>8</sup> Although our data does not consider payment of points, research has shown that for GSE mortgages, whether points are paid only modestly impacts price discrimination for black and Latinx homeowners. See Bartlett, Robert, Adair

## **Black-White Mortgage Insurance Cost Disparities**

Black homeowners also pay more in mortgage insurance, which is part of the overall cost of the mortgage. For a conventional mortgage, if the downpayment is less than 20%, the lender typically requires the borrower to purchase private mortgage insurance. FHA and VA act as the insurer of their mortgages and, as such, collect fees and mortgage insurance premiums from the borrower. These private and government mortgage insurance costs are analogous to the risk premium embedded in risk-priced interest rates.

The black-white mortgage insurance cost differential nearly doubles the black-white interest rate disparity. Relying on HMDA data, only 12% of black homeowners do not pay for mortgage insurance, compared to 38% of white homeowners who do not carry such expense, for a gap of 26%. Private mortgage insurance averages about 75 bps per year, while FHA premiums, including upfront fee, are about 100 bps per year. VA charges a lesser amount for mortgage insurance than FHA. As a result, black homeowners pay about **\$550** per year more in private or government mortgage insurance premiums than the amount white homeowners pay for insurance. At retirement, that corresponds to about **\$23,000** in lower savings.

### **POLICY ANALYSIS:**

#### *What policies drive the disparities in mortgage rates and insurance premiums?*

##### **A. Risk-based mortgage pricing**

In today's housing finance system, risk-based pricing is the norm. Mortgage rates increase as downpayments and credit scores decrease. But how to distribute risk—pooled among all borrowers or distributed unevenly among borrowers, is a policy choice. For historical reasons, black homeowners on average have lower credit scores and lower downpayments and thus are disproportionately disadvantaged by risk-based pricing, and yet, that is the pricing system that predominates today.

In part, the risk-based pricing stems from decisions by the Government Sponsored Enterprises (Freddie Mac and Fannie Mae), at the direction of their regulator the Federal Housing Finance Agency (FHFA), to charge lenders a higher fee to guarantee these mortgages. Typically, that higher guarantee fee (g-fee) takes the form of a loan level price adjustment (LLPA), which the lender passes on to the subset of borrowers in the form of higher borrower interest rates. The GSEs charge these LLPAs to cover the perceived higher risk that the mortgage will default. The measurement of this perceived risk—the size and scope of the LLPA—is embodied in GSE models that set aside reserves or capital to cover a possible repeat of the 2008 Great Recession. For example, mortgages

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Morse, Richard Stanton, and Nancy Wallace. 2019. "Consumer-Lending Discrimination in the FinTech Era" 23-24. Haas School of Business at U.C. Berkeley, [http://faculty.haas.berkeley.edu/morse/research/papers/discrim.pdf?\\_ga=2.22372220.679975626.1594361012-57417667.1594361012](http://faculty.haas.berkeley.edu/morse/research/papers/discrim.pdf?_ga=2.22372220.679975626.1594361012-57417667.1594361012).

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with only 5% downpayment to a borrower with a 679 credit score are subject to an LLPA of 2.25%,<sup>9</sup> which corresponds to about an extra 45 bps in the mortgage interest rate.

These capital standards have the effect of placing the burden of staving off a repeat of the 2008 Great Recession on black homeowners, even though black homeowners were primarily the victims of the crisis, not its cause. Nevertheless, the financial recovery has black homeowners paying more for their mortgages because of the misdeeds of lenders and the failure of policymakers to stop bad lending and prevent unnecessary foreclosures.

Alternatively, the pre-2008 policy failures could be pooled, that is, priced uniformly into all mortgages. (Note this observation has been proposed by Mike Calhoun and Sarah Wolff of the Center for Responsible Lending.<sup>10</sup>) Steps to limit or eliminate risk-based pricing could include FHFA not imposing capital buffers on low FICO or high LTV mortgages or, at a minimum, crediting the LLPAs as capital.<sup>11</sup> The important point is that risk-based pricing is not required for safe lending but is the result of policy decisions that can be safely reversed while continuing to support a profitable mortgage industry.

In addition to the GSEs, another driver of risk-based pricing is the mortgage originator. Mortgage originators risk-base price to account for what they believe are the extra costs to them of originating and servicing these mortgages. Bartlett et al. (2019), however, surmise that because the GSEs take on the credit risk of the mortgage, the GSE process should largely eliminate the need for the originator to risk-based price.<sup>12</sup> They identify risk-based pricing by originators as a form of price discrimination.<sup>13</sup> Indeed, the authors point out that the rate differential above the GSEs' credit risk model represents 16% of lenders' profit per purchase loan and 7% of their profit per refinance loan, suggesting that GSE lenders are not insuring against risk as much as profiting from risk-based pricing.<sup>14</sup> FHA and VA, by contrast, do not risk-base price and the black-white mortgage rate differential for FHA or VA loans (7 bps) is significantly lower than for GSE loans (20 bps).

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<sup>9</sup> Fannie Mae, Loan-Level Price Adjustment (LLPA) Matrix, Table 1, Aug. 12, 2020, <https://singlefamily.fanniemae.com/media/9391/display>.

<sup>10</sup> Calhoun, Mike and Sarah Wolff. 2016. "Who Will Receive Home Loans, and How Much Will They Pay?" Urban Institute, <https://www.urban.org/policy-centers/housing-finance-policy-center/projects/housing-finance-reform-incubator/mike-calhoun-and-sarah-wolff-who-will-receive-home-loans-and-how-much-will-they-pay>.

<sup>11</sup> Goodman, Laurie, Ellen Seidman, Jim Parrott, and Jun Zhu. 2014. "Guarantee Fees - An Art, Not a Science." Urban Institute, <https://www.urban.org/research/publication/guarantee-fees-art-not-science>.

<sup>12</sup> Bartlett, Robert, Adair Morse, Richard Stanton, Nancy Wallace. 2019. "Consumer-Lending Discrimination in the FinTech Era" 30. Haas School of Business at U.C. Berkeley, [http://faculty.haas.berkeley.edu/morse/research/papers/discrim.pdf?\\_ga=2.22372220.679975626.1594361012-57417667.1594361012](http://faculty.haas.berkeley.edu/morse/research/papers/discrim.pdf?_ga=2.22372220.679975626.1594361012-57417667.1594361012).

<sup>13</sup> Bartlett, Robert, Adair Morse, Richard Stanton, Nancy Wallace. 2019. "Consumer-Lending Discrimination in the FinTech Era" 29. Haas School of Business at U.C. Berkeley, [http://faculty.haas.berkeley.edu/morse/research/papers/discrim.pdf?\\_ga=2.22372220.679975626.1594361012-57417667.1594361012](http://faculty.haas.berkeley.edu/morse/research/papers/discrim.pdf?_ga=2.22372220.679975626.1594361012-57417667.1594361012).

<sup>14</sup> Bartlett, Robert, Adair Morse, Richard Stanton, Nancy Wallace. 2019. "Consumer-Lending Discrimination in the FinTech Era" 19. Haas School of Business at U.C. Berkeley, [http://faculty.haas.berkeley.edu/morse/research/papers/discrim.pdf?\\_ga=2.22372220.679975626.1594361012-57417667.1594361012](http://faculty.haas.berkeley.edu/morse/research/papers/discrim.pdf?_ga=2.22372220.679975626.1594361012-57417667.1594361012).

## B. Prepayment differential

Another source of the interest rate disparity is the respective refinance rates of black and white homeowners. Black homeowners refinance less frequently than white homeowners. According to 2019 HMDA data, refinance activity is about 2.5% higher for white homeowners than for black homeowners. On average, when homeowners refinance, they lower their mortgage rates. In 2019, the median interest rate of purchase loans was 4.12% and the median interest rate of refinance loan was 3.88%. Accordingly, if black homeowners are not refinancing, they are paying more on their mortgages. While deserving significantly more analysis, it appears that of the 33 bp black-white difference in mortgage rates, about **21 bps** can be attributed to differential pre-payment rates. This is calculated by subtracting from the 33 bps the differential rates for recent originations (HMDA 2018 and 2019) of 12 bps.

Average Interest Rate at Origination: HMDA 2018 & HMDA 2019

	HMDA 2018			HMDA 2019		
	White	Black	Delta	White	Black	Delta
Conventional	4.78	5.03	0.25	4.29	4.44	0.15
FHA	4.83	4.9	0.07	4.32	4.38	0.06
VA	4.57	4.69	0.12	4.10	4.13	0.03
RHS/FSA	4.71	4.76	0.05	4.14	4.16	0.02
Total	4.77	4.92	0.15	4.26	4.35	0.09

As approximately two-thirds of the overall black-white interest rate differential can be attributed to differential rates of refinancing, it is important to identify both what drives these differential prepayment rates and whether they are priced into the mortgage upfront, as any fair risk pricing model would do. After all, there is no additional credit risk added to the economy when a mortgage is refinanced to a lower rate, while there is significant financial benefit to the lender when the borrower holds the mortgage at above-market rates.

Research points to a host of factors accounting for refinance rate disparities. One such factor is the higher rejection rates for black applicants. Bartlett et al. (2019) have shown that lenders reject at least 6% of creditworthy black and Latinx applicants. Between 2009 and 2015, across all lenders, this amounted to a rejection of between 0.74 to 1.3 million creditworthy black and Latinx applications. Relative to white borrowers, lenders rejected black and Latinx borrowers for purchase loans 9.6 percentage points more often, and for refinance loans, 7.3 percentage points more often.<sup>15</sup>

But disparate credit denials are not the only explanation for slower refinance rates. Other factors include the many credit policies that limit refinancing, which differentially hurt black homeowners. Many borrowers will be told upfront that they do not qualify because of debt-to-income and/or

<sup>15</sup> Bartlett, Robert, Adair Morse, Richard Stanton, Nancy Wallace. 2019. "Consumer-Lending Discrimination in the FinTech Era" 29. Haas School of Business at U.C. Berkeley, [http://faculty.haas.berkeley.edu/morse/research/papers/discrim.pdf?\\_ga=2.22372220.679975626.1594361012-57417667.1594361012](http://faculty.haas.berkeley.edu/morse/research/papers/discrim.pdf?_ga=2.22372220.679975626.1594361012-57417667.1594361012).

loan-to-value thresholds, even though they already have a mortgage and are current. Or past delinquencies will disqualify the refinance. Yet, the refinance would reduce risk and the mortgage was marketed as fully prepayable.

The question remains, why should refinancing less frequently result in higher and not lower mortgage rates? The work of Woodward (2008), for example, suggests that slower prepayment rates may more than offset higher default rates.<sup>16</sup> Nonetheless, there has been a policy decision to price credit risk but not prepayment risk. As a result, black homeowners do not benefit to the same extent as white homeowners when the Federal Reserve Board cuts interest rates to support the economy. At a minimum, to the extent risk-based pricing continues—and we strongly recommend it not—FHFA and mortgage lenders should incorporate pre-payment rate into their pricing models.

### **C. Mortgage insurance**

Mortgage insurance fees are another form of risk-pricing. For GSE loans with downpayments of at least 20% of the value of the house, no mortgage insurance is needed. Otherwise, for FHA and VA mortgages and for GSE mortgages where the downpayment is less than 20%, the borrower is required to pay mortgage insurance premiums. It is well documented that downpayments tend to come from relatives. But black homeowners typically do not have relatives who can provide significant downpayment assistance.<sup>17</sup> The layering of risk-priced mortgage rates and mortgage insurance fees overcharges black homeowners for policy failures that should be more broadly borne. These policies unfairly charge black homeowners more relative to white homebuyers and relative to risk. They should be replaced with policies that promote more equitable outcomes.

Alternative policies that would greatly reduce the disparate costs borne by black homeowners include tax credits for first time homeowners, which could be used as a downpayment to reduce the effect of risk-based pricing and the need for mortgage insurance. Another policy option is to create a government supported insurance program that makes mortgage payments in the event of unemployment or disability. Such programs exist in other countries.

### **D. Additional Factors that Unfairly Raise the Cost of Black Homeownership**

The above policy choices such as risk-based pricing, the limited availability of downpayment assistance, the questionable need for multiple layers of risk premiums, how we deal with refinancing, and how we assess property tax burdens are significant, calculable factors driving the higher cost of homeownership for African Americans. But there are more.

Below is a partial list of factors that also contribute to the higher cost of homeownership for black homeowners, all of which should be quantified and eliminated (not necessarily in that order):

- a. Lower appraisals in black communities, leading to higher LTV and thus higher interest rates (in contrast to the higher tax-assessed value for black-owned properties relative to comparable white-owned properties). Research by Perry et al. (2018) shows that “[t]he devaluation of majority-black neighborhoods is penalizing homeowners in black

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<sup>16</sup> Woodward, Susan E. 2008. “A Study of Closing Costs for FHA Mortgages.” Department of Housing and Urban Development and Urban Institute, [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1341045](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1341045).

<sup>17</sup> Dana Anderson, “Redlining’s Legacy of Inequality: \$212,000 Less Home Equity, Low Homeownership Rates For Black Families,” Redfin, June 11, 2020, <https://www.redfin.com/blog/redlining-real-estate-racial-wealth-gap/>.

- neighborhoods by an average of \$48,000 per home, amounting to \$156 billion in cumulative losses.”<sup>18</sup> And a study by Howell and Korver-Glenn (2020) reviewing 1980-2015 housing and neighborhood data finds that appraisal disparities have been increasing, not decreasing, and calls for reform of contemporary appraising practices.”<sup>19</sup>
- b. Less competition among mortgage originators in black communities, leading to higher mortgage prices in those areas.<sup>20</sup>
  - c. Steering black homeowners to higher cost products.<sup>21</sup>
  - d. Higher rejection rates, leading black homeowners not only to miss out on refinance opportunities, but to shop less for purchase and refinance mortgages and accept higher interest rates.<sup>22</sup>

Costs that flow from these and other inequitable practices drive some of the higher interest rates and mortgage insurance costs discussed above and lead to the higher cost of homeownership for black households.

## CONCLUSION

Over \$50,000 of the wealth differential at retirement can be attributed just to the fact that black homeowners pay more for homeownership due to higher mortgage rates and greater mortgage insurance costs. This amount does not account for the wealth differential due to higher residential property taxes paid by black homeowners. The policy response should not be to try to justify the differential, but to eliminate it. This paper outlines and sizes various components of the differential cost of homeownership, while suggesting policy alternatives to reduce and/or eliminate the disparities. While more research is always helpful, we know enough to make substantial improvements now.

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<sup>18</sup> Perry, Andre, Jonathan Rothwell, and David Harshbarger. 2018. “The devaluation of assets in black neighborhoods: The case of residential property.” The Metropolitan Policy Program at Brookings, [https://www.brookings.edu/wp-content/uploads/2018/11/2018.11\\_Brookings-Metro\\_Devaluation-Assets-Black-Neighborhoods\\_final.pdf](https://www.brookings.edu/wp-content/uploads/2018/11/2018.11_Brookings-Metro_Devaluation-Assets-Black-Neighborhoods_final.pdf); see also Debra Kamin, “Black Homeowners Face Discrimination in Appraisals,” *New York Times*, Aug. 25, 2020, <https://www.nytimes.com/2020/08/25/realestate/blacks-minorities-appraisals-discrimination.html>.

<sup>19</sup> Howell, Junia, Elizabeth Korver-Glenn. 2020. “The Increasing Effect of Neighborhood Racial Composition on Housing Values, 1980–2015.” *Social Problems*, <https://academic.oup.com/socpro/advance-article-abstract/doi/10.1093/socpro/spaa033/5900507?redirectedFrom=fulltext>.

<sup>20</sup> Bayer, Patrick, Fernando Ferreira, and Stephen L. Ross. 2016. “What Drives Racial and Ethnic Differences in High Cost Mortgages? The Role of High Risk Lenders.” Economic Research Initiatives at Duke Working Paper Series, <https://dukespace.lib.duke.edu/dspace/bitstream/handle/10161/13241/SSRN-id2730894.pdf?sequence=1>.

<sup>21</sup> Steil, Justin P., Len Albright, Jacob S. Rugh, and Douglas S. Massey. 2018. “The Social Structure of Mortgage Discrimination.” *Housing Studies* 33 (5): 759–76, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6084476/>; Hanson, Andrew, Zackary Hawley, and Hal Martin. 2017. “Does Differential Treatment Translate to Differential Outcomes for Minority Borrowers? Evidence from Matching a Field Experiment to Loan-Level Data.” Federal Reserve Bank of Cleveland, Working Paper no. 17-03. <https://doi.org/10.26509/frbc-wp-201703>.

<sup>22</sup> Bartlett, Robert, Adair Morse, Richard Stanton, Nancy Wallace. 2019. “Consumer-Lending Discrimination in the FinTech Era” 6. Haas School of Business at U.C. Berkeley, [http://faculty.haas.berkeley.edu/morse/research/papers/discrim.pdf?\\_ga=2.22372220.679975626.1594361012-57417667.1594361012](http://faculty.haas.berkeley.edu/morse/research/papers/discrim.pdf?_ga=2.22372220.679975626.1594361012-57417667.1594361012).