Home Appraisals in Black and White

Disparities in the Estimated Valuation of Homes by Neighborhood Racial Composition

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BY:
James H. Carr
Michela Zonta

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James H. Carr and Michela Zonta

With Message from Courtney Johnson Rose, President, National Association of Real Estate Brokers

ACKNOWLEDGEMENTS

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ABOUT THE AUTHORS

James H. Carr is a housing finance and urban policy expert. He is a former Coleman A. Young Endowed Chair and Professor of Urban Affairs at Wayne State University and Visiting Professor at Columbia University. He is also former Senior Vice President for Financial Innovation, Planning, and Research for the Fannie Mae Foundation, Chief Business Officer with the National Community Reinvestment Coalition, Assistant Director of the U.S. Senate Budget Committee, and Forbes Contributor. Jim has served as a consultant to the World Bank and International Finance Corporation and is a former U.S. representative to the Organization for Economic Cooperation and Development. He has testified before Congress on numerous occasions and has been a guest on CNN, MSNBC, NPR, Bloomberg, and other news outlets.

Michela Zonta is a housing finance and urban policy consultant. She is a former Senior Policy Analyst at the Center for American Progress (CAP). Zonta has extensive research, teaching, and consulting experience in housing and community development. She has published work on the mortgage-lending practices of ethnic-owned banks in immigrant communities, jobs-housing imbalance in minority communities, residential segregation, and poverty and housing affordability. Prior to joining CAP, Zonta taught urban and regional planning at the Wilder School of Government and Public Affairs at Virginia Commonwealth University. Zonta holds a doctorate in urban planning from the University of California, Los Angeles.

ABOUT THE NATIONAL ASSOCIATION OF REAL ESTATE BROKERS NAREB

NAREB was founded in 1947 in Tampa, Florida, as an equal opportunity and civil rights advocacy organization for African American real estate professionals, consumers, and communities in the United States. Our purpose remains the same today, but we are more focused on economic opportunity than civil rights. Although composed principally of African Americans, the REALTIST® organization embraces all qualified real estate practitioners who are committed to achieving our vision, which is "Democracy in Housing."

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Dr. Courtney Johnson Rose

President
National Association of Real
Estate Brokers, Inc.

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For decades, the undervaluing of property in African American neighborhoods has contributed to the expansive Black-White wealth gap in America, a spread so expansive that the 400 wealthiest Americans control the same wealth as all 48 million Blacks. A major contributor to this wealth disparity is appraisal bias. Home equity accounts for 65 percent of all Black wealth, but appraisal bias, along with other forms of discrimination, restricts Black homeownership and the value of the property that Blacks own.

Lower property values translate into Black homeowners being prohibited from building as much home equity as White families, even when the homes they own are of similar size and quality and located in neighborhoods with equivalent locational advantages and amenities. Undervaluing properties in Black communities further compounds the wealth gap that exists due to a lower homeownership rate among Blacks relative to Whites. Appraisal bias also limits the ability of Blacks to buy homes and greatly undermines intergenerational wealth for Black families.

Our comprehensive study, "Appraisal Bias in Black and White" found a narrowing of contract price undervaluation gaps, a reduction of appraisal disparities in Black and White neighborhoods, and progress in specific cities, offering reasons for optimism. However, the study also found that in 2021 and 2023, when considering Black neighborhoods with large shares of loan originations to Black borrowers, their homes were undervalued by 47% compared to similar homes in White neighborhoods with no Black borrowers.

Establishing the White House's Federal Interagency Task Force on Property Appraisal and Valuation Equity (PAVE) in 2021 has been pivotal to identifying and finding solutions to appraisal bias. PAVE has outlined policy measures aimed at ending appraisal bias. Further, the Federal Housing Finance Agency (FHFA) facilitated the public release of Uniform Appraisal Dataset Aggregate Statistics, which provides aggregate data on home appraisals. This data empowers housing experts to monitor appraisal practices and made this study possible, similar to the impact of the public release of Home Mortgage Disclosure Act data in 1991, which has been a cornerstone in fighting housing and lending discrimination.

A year ago, Vice President Kamala Harris, a driving force behind PAVE, cited the importance of this data. "We have released 48 million home valuation records, creating the nation's first publicly available home appraisal dataset," she said, noting the dataset is being used to help eliminate appraisal bias. "These are important steps toward a more just and equitable home valuation system. And our administration will continue to do this work to ensure everyone is treated fairly."

As real estate professionals, NAREB members, known as Realtists, have a particular interest in ending appraisal bias. Our clients, families, and neighbors are affected in our communities. When they are victims of discrimination, we feel the pain too, both emotionally and economically, as their representatives in their home sales and purchases. Also, many of our members reside in Black neighborhoods that are impacted by biased appraisal practices.

In our report, we have identified several promising steps to further eliminate appraisal bias. In particular, NAREB is advancing accountability and diversifying the appraiser community to include more people of color with support from the government and private and non-profit sectors. Ending appraisal bias is crucial in creating a more equitable society, one where, regardless of race or ethnicity, there are equal opportunities for wealth-building.

Since 1947, NAREB has strived to build Black wealth through real estate. But appraisal bias has been an obstacle, causing Blacks to lose $150 billion in equity!   Overcoming appraisal bias is critical to our wealth-building mission, a component of our enduring pursuit of Democracy in Housing. NAREB is committed to achieving our goal.

CONTENTS

Homeownership represents the most important source of wealth for the typical American family. Since 1934, the federal government has played a key role in expanding homeownership opportunities for non-Hispanic White households (White). Unfortunately, the federal role in access to homeownership has not been consistently positive for Black households. Federal law did not explicitly prohibit housing discrimination in the United States (U.S.) until the passage of the 1968 Fair Housing Act.

Federal agencies, led by the Federal Housing Administration (FHA) that spurred a homeownership boom for White families in post-WWII America, codified discriminatory practices against Black households and neighborhoods that prohibited them from benefiting from low-cost, safe, and sustainable government-insured FHA mortgages. Segregationist provisions in the operating guidelines of the FHA mandated the undervaluation of properties in Black communities and prohibited Blacks from buying in White neighborhoods and most Black communities.

Although segregation has been illegal for more than half a century, discrimination has continued in a variety of ways, both blatant and systemic.[1] The result of this unfair treatment is that Blacks have a substantially lower homeownership rate than Whites. In 2023, the homeownership rate among Black households was 45.7 percent, a stark contrast to the 74.3 percent rate among White households[2] This lower homeownership rate for Blacks contributes significantly to the Black-White racial wealth gap.

Systemic discrimination in this paper refers to unnecessary mortgage lending practices and procedures that have negative outcomes for Black households. Systemic practices, such as biased and outdated credit scoring models, remain a prominent feature of the modern housing finance system. Systemic discrimination is a significant reason the gap in homeownership rates between Blacks and Whites is wider today than it was at the time of the enactment of the Fair Housing Act.[3]

Even though the appraisal industry is subject to the Fair Housing Act, systemic and blatant discriminatory practices thrive in that profession.[4] A significant source of systemic appraisal bias in Black neighborhoods stems from the fact that historically biased underappraisals are the foundation for estimates of housing values today.

An abundance of [5]evidence reveals that homes in areas with a high concentration of Blacks or in neighborhoods undergoing racial transition are valued lower and appreciate at a slower rate compared to those in predominantly White neighborhoods, even after considering factors such as property and community amenities and location.

The undervaluation of homes in Black neighborhoods further adversely fuels the racial wealth gap. Appraisal bias contributes to a lower homeownership rate for Blacks, as well as to Blacks receiving lower returns on their investments in homeownership relative to White households. Further, although homeownership is the principal source of wealth for the average U.S. household, home equity is a larger share of wealth for the typical Black household.

In 2022, home equity comprised 65 percent of the median net worth for Black households compared to 61 percent for White homeowners.[6] As a result, housing discrimination has a disproportionately negative impact on Black versus White wealth.

Systemic home undervaluation can also have broader negative impacts on families and communities, such as reducing funding for public schools and limiting homeowners' financial opportunities to leverage their property's equity to start businesses,[7] pay college tuition, assist children with the down payment on their homes, or contribute to retirement savings.

During the home mortgage underwriting process, lenders require an appraisal of the home to be purchased to ensure that the property's value equals or exceeds the home's contract price. Valuations that are lower than contract prices can result in a series of actions, including renegotiation of the sales prices between the buyers and sellers; the buyers having to pay more upfront to cover the shortfall between the homes' appraised values and sale prices; a request for review of the initial appraisals or new appraisals; or the deals falling through.

In some instances, financial institutions, including Fannie Mae and Freddie Mac, the government-sponsored enterprises (GSEs), might accept mortgages where the valuations are lower than the prices agreed upon in the contracts. However, the GSEs might price exceptions into the mortgage terms.

Undervaluation of homes relative to contract prices impacts individual buyers and sellers and contributes to diminished housing demand leading to a further decrease in home values in negatively impacted communities.

This research identifies two types of appraisal bias, both equally important. The most discussed gap is the difference in median appraisal values of homes in Black communities relative to similar-quality homes in White neighborhoods. The extent to which appraised home prices exceed those in Black neighborhoods is measured as the "median appraised home undervaluation gap."

The second appraisal disparity is the share of appraised homes that fail to meet or exceed sellers' asking or sales contract prices. This mismatch is referred to in this research as the "contract price undervaluation" and is experienced in Black and White communities. The difference in the frequency with which homes in Black neighborhoods fail to meet or exceed their contract price relative to homes in White neighborhoods is expressed as the "contract price underestimate gap."

This report focuses on the disparities in home appraisals between majority Black and majority non-Hispanic White neighborhoods from 2013 to

2023. Unless otherwise stated, majority Black and majority non-Hispanic White neighborhoods in this report are referred to as Black neighborhoods or communities and White neighborhoods or communities.

After providing background information on racial disparities in home appraisals, the report presents findings of statistical models assessing median appraisal values and the rate of appraisals below their contract prices controlling for neighborhood housing characteristics and home price trends, socioeconomic status, and amenities.

This report's analysis builds on research by the Brookings Institution, Fannie Mae, Freddie Mac, Federal Housing Finance Agency, the Urban Institute, and researchers at the University of Illinois-Chicago and Washington University-St. Louis.[8] Research by the National Fair Housing Association was also helpful as a resource on legal prohibitions against appraisal bias and possible remedies to address appraisal disparities. However, this research is unique in the number of variables and data types used to detect biased appraisal practices.

This research, for example, combines Unified Appraisal Database Aggregate Statistics (UAD) and Home Mortgage Loan Disclosure Act (HMDA) data to provide a more in-depth examination of appraisal bias based on the volume of home purchases by race/ethnicity at a neighborhood level[9] and by racial composition of neighborhoods. This report further incorporates National Risk Index data from the Federal Emergency Management Agency (FEMA) to account for price variations controlling for areas most impacted by climate-related risks.

Understanding the correlation between home prices and climate risk is important for at least two reasons. First, the frequency and intensity of climate-related

disasters pose a significant challenge to the real estate sector, including soaring insurance premiums and potential overvaluation of appraised homes. Second, Black households disproportionately reside in areas that are at the highest risk for environmental damage. The data and statistical models this report uses are discussed in detail below.

This research is consistent with the findings of previous appraisal disparities studies and offers additional observations; after accounting for housing and neighborhood characteristics, on average homes in Black neighborhoods are valued below those in White neighborhoods and houses in Black neighborhoods are more likely to be undervalued relative to their contract price than homes for sale in White communities.

NAREB's research supports positive and promising study findings by FHFA, which observed that, on average, the contract price undervaluation gap has narrowed since the launching of the 2021 Interagency Task Force on Property Appraisal and Valuation Equity (PAVE). PAVE was established to eliminate racial and ethnic disparities in home appraisals, and the actions it has instituted are discussed below.

This research, however, found that when the volume of home purchases by Blacks in Black neighborhoods (i.e., neighborhoods where Blacks are buying rather than simply residing) is considered, in both 2021 and 2023, homes in Black neighborhoods with large shares of loan originations to Black borrowers had a median home appraised undervaluation gap of 47 percent compared to White neighborhoods with no Black borrowers.

Median appraised home values have spiked in Black neighborhoods with no loan originations to Black borrowers. In these neighborhoods, the median appraised home undervaluation gap has narrowed relative to White neighborhoods where White borrowers have received mortgage loans throughout the study period. In contrast, the median appraised home undervaluation gap has widened both in neighborhoods with some loan originations to Black borrowers and in those where the share of loan originations to Black is larger than the national average in each year.

Finally, there are significant differences in median appraised home valuations and contract price undervaluation gaps across the 20 U.S. metropolitan statistical areas (MSAs) with the largest Black populations. A better understanding of the appraisal practices in MSAs with the lowest median appraised home valuation and contract price undervaluation gaps could greatly enhance recommendations to eliminate this continuing form of housing discrimination.

The report concludes with policy recommendations to further enhance the work of the PAVE Task Force and other institutions and associations seeking to eliminate appraisal bias and suggestions for further investigations.

Summary of Findings

Median Appraised Home Undervaluation

- In 2023, after controlling for housing quality and neighborhood location, amenities, and socioeconomic characteristics, homes in Black neighborhoods experienced a median appraised home undervaluation gap of 30 percent ($131,343) relative to homes in White communities: $299,572 compared to $430,915 in Black and White neighborhoods respectively.

- The gap in adjusted median appraised home valuations increased between 2013 and 2022. From 2022 to 2023, however, the gap decreased. The median appraised home valuation gap between Black and White neighborhoods, however, varied significantly based on the share of Black borrowers in Black census tracts.

- In 2021, the median appraised home undervaluation gap in Black neighborhoods with no Black borrowers was 38 percent ($172,341) relative to White neighborhoods ($283,684 and $456,025 for Black and White neighborhoods, respectively).

- By 2023, the median appraised values of homes in Black neighborhoods with no Black borrowers rose sharply, by 26 percent. This rise in home valuations in neighborhoods with no Black borrowers contributed to the median appraised home undervaluation gap in those Black communities falling to 23 percent ($104,555), with the median appraised home values of 357,626 compared to $462,181 in Black versus White neighborhoods.

- In 2021, homes in Black neighborhoods with large shares of loan originations to Black borrowers had a median home appraised undervaluation gap of 16 percent ($46,545). Homes were valued at a median of $239,278 in Black neighborhoods compared to a median of $285,823 in White neighborhoods. The median home undervaluation gap for these neighborhoods increased to 22 percent in 2023 ($247,093 compared to $317,050 for homes in Black and White neighborhoods.

- The median appraised home undervaluation gap between Black neighborhoods with large shares of loan originations to Black borrowers and White neighborhoods with no loan originations to Blacks was 47 percent in 2021 and remained virtually unchanged in 2023.

Home Contract Price Undervaluation

From 2021 to 2023 the percentage of appraisals below contract price fell across all neighborhoods, Black and White. However, contract price undervaluation rates fell more rapidly in majority

- White neighborhoods than in Black neighborhoods.

- Between 2021 and 2023, the share of home appraisal contract undervaluation in Black communities with no Black borrowers fell from 12.1 to 11.4 percent.

- In Black neighborhoods with some Black borrowers, the decline in the percentage of contract price undervaluation was more significant, dropping from 14.3 percent to 11.2 percent in those areas.

- The greatest decline in contract price undervaluation in Black communities was in neighborhoods with the largest shares of Black borrowers (at or higher than the national average). Those communities experienced a fall in contract price undervaluation from 14.8 percent to 10.3 percent.

- Interestingly, between 2021 and 2023, White communities with large shares of Black borrowers experienced the greatest decline in the percentage of home contract undervaluation, falling from 15.3 percent in 2021 to 9.5 percent in 2023.

Regional Highlights

- This study also examined the disparities in median appraisal values and appraised contract price undervaluation in the top 20 metropolitan areas with the largest Black populations as of 2022. The selected metropolitan areas differ in levels of segregation and the number of mortgage loans obtained by Black borrowers since 2013.

Median Appraised Home Undervaluation

- Metropolitan areas in which median appraised home undervaluation gaps are larger than the national average include Baltimore, Chicago, Cleveland, Detroit, Memphis, Miami, Orlando, Richmond, St. Louis, and Tampa.

- In Houston, the Black median appraised home undervaluation gap has narrowed by 31 percentage points, falling from 41 percent in 2021 to 10 percent in 2023.

- The median appraised home undervaluation gap has narrowed by 14 percentage points in the Washington, DC metropolitan area, from 35 percent in 2021 to 21 percent in 2023.

- The median appraised home undervaluation gap has also narrowed in the Atlanta, Chicago, Dallas, Detroit, Philadelphia, Richmond, and Virginia Beach metropolitan areas.

- However, in all other metropolitan areas with large Black populations, the median undervaluation gap has widened since 2021. In Los Angeles, in particular, the Black appraised undervaluation gap has widened by 17 percentage points, from 31 percent in 2021 to 48 percent in 2023. That gap has widened by 4 percentage points in Baltimore and Miami.

- The median appraised home undervaluation gap has widened by as many as 3 percentage points in the Charlotte, Cleveland, Memphis, New York, St. Louis, and Tampa metropolitan areas.

- The percentage difference in median appraised home values remained unchanged in the Orlando metropolitan area (39 percent in 2021 and 2023).

Appraised Contract Price Undervaluation

- Contract price undervaluation gaps between Black and White neighborhoods have decreased in nearly all selected metropolitan areas from 2021 to 2023.

A real estate appraisal, also called a valuation, provides an estimated market value of a property, which is crucial when considering its sale price. Appraisals are typically carried out before a homeowner finalizes a property sale or refinances a mortgage. Lenders require an appraisal because the property being financed serves as the loan collateral. If the borrower fails to repay the loan, the lender or mortgage insurer can take the property and sell it to recover the outstanding loan amount.

Determining the value of single-family homes is more complex than assessing the worth of consumer goods with uniform characteristics. Each residential property's unique structure, amenities, and location significantly influence its value. Factors used in home appraisals include but are not limited to the number and size of rooms, quality of construction, types, and conditions of major home systems, presence of renovations or upgrades, property location, and community amenities and services.

Speculation on future price hikes can cause buyers to offer higher prices on homes in neighborhoods that are viewed as thriving and lower on properties than the listing prices in neighborhoods that are perceived to be struggling.

Listing and offer prices can be influenced by inaccurate perceptions rather than the actual conditions and locations of the housing stock. As a result, appraisals typically rely on the recent sale prices of three to five similar nearby homes, which theoretically provides more accurate valuations.

This sales comparison approach nevertheless involves significant subjectivity, as evaluators can choose which similar properties to compare to the home for sale. Moreover, evaluators can make manual price adjustments to account for differences in amenities between recent homes sold and homes being appraised.

Appraisal experts may further place different levels of importance on key home characteristics, depending on how closely those amenities or upgrades match the attributes of the appraised property.[10]

Since current home prices are informed by historic home sales, areas that were subject to decades of discriminatory redlining continue to inform and undermine the assessed housing equity for current homeowners in Black communities, even in instances where discriminatory intent is absent.

Further, housing markets are often characterized by low turnover, with homes sold in limited quantities and sporadically. This can make it hard to find recent sales data on comparable homes to inform appraisals.

Neighborhoods with predominantly Black and Latino residents tend to have fewer property sales compared to predominantly White areas, making comparatives scarce and increasing the subjectivity in the appraisal process. In those markets, appraisers may offer more cautious estimates.[11]

Since the late 1980s, Automated Valuation Models (AVMs) have been increasingly involved in setting home sales prices and are vital in determining mortgage rates and home equity loan values.[12]AVMs are tools based on algorithms designed to calculate the market value of properties based on datasets with up to billions of values. They can offer more precision and consistency than traditional human appraisals, potentially reducing racial bias in property valuations while providing speed benefits to the real estate market.

As researchers at the Urban Institute have demonstrated, however, AVMs are also not without bias.[13]They risk perpetuating historical racial imbalances in property valuations, diminishing clarity in the appraisal process, and encouraging more data collection, which poses privacy risks.

Despite the potential for AVMs to reduce discrimination, the higher error rates of AVMs in majority-minority communities remain a significant concern.

Appraisers adhere to a code of ethics and are overseen by state bodies, which are, in turn, regulated by the Appraisal Subcommittee of the Federal Financial Institutions Examinations Council (FFIEC). FFIEC further works in conjunction with federal financial services regulators, including the Federal Reserve System (Federal Reserve), Federal Deposit Insurance System (FDIC), Office of the Controller of the Currency (OCC), and National Credit Union Administration (NCUA).

Significant legislative actions, especially after the Savings and Loan crisis in the late 1980s, led to the development of federal regulations governing the appraisal industry.[14]Key milestones include:

1. Title XI of the Financial Institutions Reform, Recovery, and Enforcement Act of 1989 (FIRREA, P.L. 101-73) established a regulatory appraisal framework. The act required that lenders obtain written appraisals adhering to Title XI standards for all federally related transactions unless exempted.

   FIRREA also formed the Appraisal Foundation (AF) to set minimum appraisal standards, and the Appraisal Subcommittee (ASC) to oversee the AF's compliance with Title XI. The AF's standards aim to ensure appraiser independence and mitigate conflicts of interest, contributing to more reliable property valuations for federally backed lending institutions and ultimately protecting taxpayers.

2. The Home Valuation Code of Conduct (HVCC) was implemented in 2009 following a settlement between New York state officials and Fannie Mae and Freddie Mac. The HVCC aimed to prevent appraisal inflation by separating loan processing staff from the appraisal selection process.

3. The Dodd-Frank Wall Street Reform and Consumer Protection Act (DFA; P.L. 111-203) of 2010 built on FIRREA's regulation by separating residential and commercial appraisal oversight and strengthening appraisal independence. The CFPB was given rule-making authority for residential mortgage appraisals, while commercial appraisal oversight remained with the ASC. The DFA mandated physical property visits for certain higher-cost mortgages and necessitated new rules for appraiser independence following the HVCC's expiration.

   Furthermore, the DFA established mandatory quality control measures for mortgage originators and secondary market issuers when utilizing AVMs to assess the value of a mortgage backed by a consumer's main residence.[15]Since 2010, the OCC, Board, FDIC, and NCUA have provided supervisory guidance on the use of AVMs by the institutions they regulate[16]

4. Section 103 of the 2018 Economic Growth, Regulatory Relief, and Consumer Protection Act (Public Law 115-174) modified FIRREA. This legislation instructs the CFPB to waive appraisal mandates for certain rural, federally related real estate deals valued at $400,000 or less, an increase from the previous $250,000 limit established in 1994. This exemption is permissible if the lender documents specific challenges in securing an appraisal and satisfies various conditions.

5. On 24, 2024, the Consumer Financial Protection Bureau issued a final rule to implement the quality control standards mandated by the DFA for the use of AVMs by mortgage lenders and the secondary market in determining the collateral worth of a mortgage secured by a borrower's primary dwelling.[17]

The final rule, adopted by the CFPB, OCC, FRB, FDIC, NCUA, and FHFA, will take effect on October 1, 2025. The rule contains guidelines to foster a strong assurance in the valuation outcomes generated by AVMs. These measures are also meant to safeguard against data manipulation, prevent potential conflicts of interest, mandate periodic sample examinations and audits, and adhere to relevant laws prohibiting discrimination.

Like mortgage lenders and brokers, appraisers are governed by fair housing and lending laws. The 1968 Fair Housing Act aimed to dismantle segregation, banning discrimination based on race, color, religion, and national origin, alongside later additions of sex, disability, and family status. The Equal Credit Opportunity Act of 1974 similarly prohibits discrimination by lenders on various grounds, including race, sex, and income source. Despite these laws, evidence of systematic racial bias in property evaluation persists, as discussed in the next section of this report.

The undervaluation of properties in non-White areas is deeply rooted in historical practices, often enforced or mandated by federal law.[18] A particularly egregious example is the policy framework established by the New Deal's Home Owners Loan Corporation (HOLC), which established federal redlining guidelines to assess neighborhood quality based on the racial and ethnic compositions of their residents. HOLC's appraisal maps were color-coded to depict, assess, and denote neighborhood desirability.

Communities predominantly inhabited by Blacks and other persons of color received the lowest scores – represented by red coloring -- marking them as "hazardous" and too high-risk for securing mortgages backed by the federal government.[19] The loan programs managed by the Federal Housing Administration (FHA) and the Veterans Administration later incorporated the rating system devised by the HOLC to maintain the racial homogeneity of communities and to ensure "stability" and property values.[20]

These initiatives withheld financial backing from predominantly non-White, inner-city areas, primarily

These initiatives withheld financial backing from predominantly non-White, inner-city areas, primarily aiding white purchasers, and accelerated the migration of White populations to the suburbs. Notably, the FHA "Underwriting Manual" set forth explicit criteria for assessing properties and neighborhoods, effectively perpetuating racial segregation.[21] Real estate agents and the National Association of Realtors reinforced this ideology until 1950 through their ethics code, which discouraged the integration of neighborhoods by race or nationality under the guise of preserving property values.[22]

Until the 1970s, the American Institute of Appraisers' training materials indicated a preference for entirely White neighborhoods, showcasing long-standing racial prejudices in the appraisal process.[23] In 1976, the Department of Justice sued the American Institute of Real Estate Appraisers and three other entities for violating the

Fair Housing Act[24] They were accused of promoting practices that used race and nationality to influence property assessments and mortgage decisions negatively. Furthermore, they were criticized for not addressing previous discriminations adequately and for allowing biased appraisal and lending practices to continue.

Fair Housing Act
United States [1968]

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Also known as: Title VIII of the Civil Rights Act of 1968
Written and fact-checked by The Editors of Encyclopaedia Britannica
Article History

Fair Housing Act, U.S. federal legislation that protects individuals and families from discrimination in the sale, rental, financing, or advertising of housing. The Fair Housing Act, as amended in 1988, prohibits discrimination on the basis of race, colour, religion, sex, disability, family status, and national origin.

In a settlement agreement, the American Institute of Real Estate Appraisers agreed to adopt policies stating: 1) Property values should not be judged on the assumption of racial, ethnic, or religious homogeneity. 2) Race, religion, or ethnicity should not be used to predict property value trends or pricing differences. 3) It's wrong to base property valuations or community forecasts on stereotypes related to race, color, religion, gender, or nationality, or on unfounded assumptions about a property's condition, its future maintenance, or the stability of its neighborhood.

Appraisal bias has various causes.[25] As mentioned above, appraisers use similar property sales, known as "comps," to determine a property's value. Choosing lower-valued comps or failing to properly weigh the value of renovations and upgrades fairly can result in a reduced appraisal value.

Bias may arise if an appraiser's background differs from the property owner's, leading to misunderstanding and inaccurate valuation.[26]

Appraisers may be from neighborhoods or racial or ethnic backgrounds different from the homeowners. There is a significant underrepresentation of Black professionals within the home appraisal sector, which is predominantly White.

Black real estate experts find this lack of diversity a significant issue. Inadequate diversity within the home appraisal industry contributes to the consistent and widespread tendency to assign higher values to properties owned by White individuals, while those owned by Black individuals often receive lower valuations.

While AVMs promise to mitigate bias, their increased margin of error within predominantly minority neighborhoods is a major issue. Even if highly sophisticated and not influenced by a community's racial composition, the accuracy of AVMs in forecasting final sale prices in these communities could still reinforce and perpetuate the outcomes of historical redlining practices. This issue is built into the structure of present-day AVMs, as they determine a home's sale price based on historical sales data and incorporate geographical location as a factor.[27]

Courts have used various theories of discrimination when evaluating bias claims under civil rights laws. The principal methods to prove discriminatory behavior under the Fair Housing Act are identifying racially disparate treatment, using direct or indirect evidence, or identifying practices that unnecessarily produce racially disparate outcomes or impact.

The Fair Housing Act and the Equal Credit Opportunity Act make it illegal to discriminate specifically and intentionally, a practice known as "disparate treatment discrimination." Under this theory, proving that the appraiser had malicious intent is unnecessary for establishing a legal violation. Instead, it must be shown that their actions were partially influenced by the supposed discriminatory reason rather than another permissible factor.

On the other hand, the theory of "disparate impact" suggests that appraisal services can be discriminatory if facially neutral policies result in unjustifiably discriminatory outcomes on protected group members.[28]

The relatively small number of court decisions available regarding claims of appraisal discrimination – based on the individual borrowers' race or the neighborhood where the appraised homes are located – suggests that these cases can be challenging to prove, frequently requiring statistical analyses and expert witnesses. Nonetheless, there has been a noticeable recent increase in appraisal discrimination claims submitted to HUD and filed in courts.[29]

Increasing concerns about the potential for appraisals to undervalue homes, particularly in neighborhoods predominantly inhabited by people of color, have prompted several initiatives both at the federal and local government levels. In 2021, the Biden-Harris administration established the Federal Interagency Task Force on Property Appraisal and Valuation Equity (PAVE) to investigate the causes, scope, and effects of racial and ethnic bias in home valuations. The task force unveiled the PAVE Action Plan on March 23, 2022, which proposed policy measures to lessen the occurrence and impact of appraisal bias.

At local and state government levels, the discovery of widespread appraisal bias and a pressing need to grasp its local ramifications have led to measures

such as those adopted by the Philadelphia City Council and Maryland State Senate.[30]

The Philadelphia Home Appraisal Bias Task Force, established in 2021, provided recommendations to address the lack of transparency in home appraisals by improving data access locally and supporting federal efforts to create a national public reporting process.[31] In Maryland, state senators commissioned a study to examine racial disparities in the state's appraisals, lending, and community investments.

A consistent body of research has shown that homes in predominantly White neighborhoods are valued higher than comparable homes in predominantly Black neighborhoods, even after accounting for housing quality, location, and community amenities.[33]

The findings from previous studies on appraisal bias discussed below differ based on the types of data employed in the research, the variables used to control for home and neighborhood amenities, and the measures used to define neighborhood or community racial composition. The latter issue is particularly important since various studies account differently for the proportions of Latino and Asian populations when defining neighborhoods as majority Black or White. These differences are highlighted below where possible.

Prior to the release of FHFA data on appraisals in October 2022, only researchers at Freddie Mac and Fannie Mae had access to individual appraisals for purchase transactions submitted respectively to each GSE. These data were available through the Uniform Collateral Data Portal (UCDP), which was developed to facilitate the electronic submission of appraisal report data to the GSEs.[34]

According to data from over 12 million property appraisals submitted to Freddie Mac between January 1, 2015, and December 31, 2020, Freddie Mac researchers found that properties located in Black neighborhoods were 33 percent more likely to receive appraisals that are lower than the contract price compared to home appraisals in White neighborhoods,[35] after controlling for property and neighborhood characteristics, housing market dynamics, and fixed effects.[36]

Researchers at Fannie Mae utilized proprietary data on 1.8 million appraisals for refinances to analyze valuation disparities at the property and borrower level within Black neighborhoods.[37] The study found that White borrowers' homes are more frequently overvalued – meaning that homes are valued at least 10 percent higher than the AVM-- than those owned by Black borrowers in all neighborhoods, but particularly compared to Black borrowers in Black neighborhoods.

Other research published before October 2022 used proxies for appraised home values to examine neighborhood racial inequality in home appraisals. In 2018, researchers at the Brookings Institution used census median home values and Zillow's median list prices per square foot to analyze appraisal gaps in metropolitan areas with at least one majority Black census tract and at least one census tract with a Black population share under 1 percent.[38]

That research, covering the period from 2012 to 2016, found that homes in Black neighborhoods are valued at roughly half the price as homes in areas with no Black residents after controlling for housing quality and neighborhood characteristics, including educational attainment and crime.

Similarly, a 2021 study by Junia Howell and Elizabeth Korver-Glenn utilized self-reported home values from the Decennial Censuses and the American Community Survey (ACS) as a proxy for appraised values to investigate the changing relationship between neighborhood racial composition and home appraisals from 1980 to 2015.[39]

Howell and Korver-Glenn found significant appraisal gaps between average home values in communities of color and predominantly White communities. The study also found that neighborhood racial inequality in home appraisals was twice as large in 2015 as in 1980.

Analyses Using the Uniform Appraisal Dataset

The PAVE Action Plan, released in March 2022, outlined methods for government and industry to promote fairness in property valuation, spurring increased attention to and regulatory focus on preventing discriminatory appraisals. In addition, the Federal Housing Finance Agency (FHFA) made the Uniform Appraisal Dataset Aggregate Statistics (UAD) available to the public in October 2022.

UAD aggregate statistics provide data on home appraisals throughout the U.S. at different geographic scales. The UAD is an important tool to further the goals of the PAVE Action Plan; it provides information that better enables housing experts to monitor racial disparities in appraisal practices. UAD aggregate statistics are the most comprehensive, publicly available data appraisals since 2013. That database contains appraised home prices for millions of properties between 2013 and early 2023.

The UAD data set, which is updated quarterly, contains statistics for Fannie Mae and Freddie Mac single-family home purchase and refinance appraisals by property and neighborhood characteristics for different geographic levels, from the national aggregate data to the census tract level.[40]

The data set includes a metric that captures contract price undervaluation, measured as the percentage of homes appraised at values lower than the contract price. It also includes median and mean appraisal values for home sales and refinances. These metrics allow users to compute the differences in rates of contract price undervaluation and mean and median appraisal value gaps between census tracts of different racial compositions.[41]

A preliminary analysis of UAD aggregate statistics conducted by FHFA revealed that properties in areas predominantly inhabited by people of color more often have appraised values that fall below the agreed purchase price.[42] FHFA found that in 2021, 23.3 percent of properties in areas with more than 80 percent people of color were appraised at values lower than their contract price, compared to 13.4 percent of properties in census tracts where Whites represented up to half of the population.

Even in neighborhoods where the share of people of color was only 50 percent or more, 19 percent of homes did not meet their contract values. On average, homes in high minority areas were 74 percent more likely to experience a contract price undervaluation relative to homes in predominately White neighborhoods.

In April 2024, FHFA research found that in the period following the release of the PAVE Action Plan, appraisals gaps narrowed between majority White neighborhoods and both majority Black and majority Hispanic/Latino census tracts.[43]

Since their first publication, UAD aggregate statistics have allowed other researchers to further measure the extent to which disparities in home valuations occur across different communities, particularly those with predominantly Black populations. This report found only two additional analyses on appraisal disparities using UAD statistics. Those studies include analyses by Jonathan Rothwell and Andre M. Perry at the Brookings Institution,[44] and Junia Howell at the University of Illinois-Chicago, and Elizabeth Korver-Gless at Washington University-St. Louis.[45]

The Brookings report covered the period from 2016 to 2020 and restricted the analysis to the 113 metropolitan areas in the US with at least one majority Black neighborhood. The report investigated appraisal transactions in majority Black areas and compared them to those in non-Black neighborhoods (such as Latino, Asian, or other races or a combination of races) and, for some metrics, to those in predominantly White neighborhoods.

Brookings utilized census tracts as the unit of analysis. It combined data on the percentage of homes that are over- or under-valued relative to the contract price, using actual sales price data from Redfin.[46]

The study found that after taking home and neighborhood characteristics into account,[47] properties in Black neighborhoods were valued 21 percent to 23 percent below what their appraisal values would be in census tracts where Blacks do not represent the majority population. The collective undervaluation of homes in metropolitan areas with at least one Black census tract amounts to an estimated $162 billion.

The study further revealed that homes in majority (more than 50 percent) Black census tracts were 1.9 times more likely to appraise below the agreed selling price than those in White neighborhoods. The analysis also modeled appraisal values by including actual sales prices and controlling for home and neighborhood characteristics. It found median appraisals in neighborhoods where Black residents constituted the majority experienced a 15 percent (lower) appraisal value gap compared to areas where less than 1 percent of the population is Black.

The 2022 analysis by Howell and Korver-Gless employed a somewhat different approach in analyzing UAD aggregate statistics to examine appraisal value gaps across communities of different racial and ethnic compositions. Howell and Korver-Glass investigated mean appraisal values from 2013 to 2021 in 104 metropolitan areas with a population of at least 500,000 and at least 50,000 residents of color (or 10 percent people of color).

That analysis combined UAD data with other publicly available statistics to estimate the neighborhood racial composition, housing stock characteristics, socioeconomic status, and neighborhood amenities to be included as independent variables in OLS regression models run for each metropolitan area each year.[48]

Howell and Korver-Gless defined Black neighborhoods as census tracts with a 100 percent Black population. The exact definition is applied to neighborhoods of other races and ethnicities. National average estimates were weighted by the metropolitan-level total population. The authors found that homes in White neighborhoods are valued twice as much as those in minority communities (i.e., neighborhoods with no White residents).

Howell and Korver-Gless found that in 2021, homes in White neighborhoods were appraised at

an average value of $731,922. Homes of similar quality, in areas with equivalent socioeconomic statuses and similar amenities, but located in minority neighborhoods, were valued at an average of $361,427.

Within metropolitan areas with a Black population exceeding 50,000, the typical homes in a Black neighborhood had an appraisal value of $262,000. Meanwhile, similar homes in White neighborhoods were valued at $629,000 in those same metropolitan areas. This means that within the same metropolitan areas with relatively large Black populations, the property appraised valuation gap increased from two times as great to roughly two and a half times more relative to homes in Black neighborhoods.

The study found that the average appraised property value gap based on race has widened, and the pace has accelerated since 2013.[49]

Findings from a Howell and Korver-Gless's 2023 updated analysis, which includes 2022 data, showed that inequality in mean appraisal values has continued to increase. On average, in 2022, properties in exclusively White neighborhoods were valued at $817,499, while those in communities of color were appraised at $409,464.

Accounting for mortgage lending patterns and climate-related risks

This report builds on previous studies to investigate median appraisal values for home sales in majority Black neighborhoods compared to majority White neighborhoods. Like the Brookings study and Howell and Korver-Gless's reports, this analysis utilizes UAD statistics at the census tract level. OLS regressions are computed for each year, from 2013 to 2023, to estimate median appraised home undervaluation gaps in Black and White neighborhoods. Majority racial composition is defined as neighborhoods where Black and White residents, respectively, represent more than 50 percent of the population.[50]

The analysis also examines differences in the percentage of appraisals below contract price (the contract price undervaluation gap) between Black and White census tracts.[51]

The sample consists of appraisals for home sales in the 105 metropolitan areas with at least 50,000 Black residents every year of the study period. Census tracts represent the unit of analysis. Statistical models control for various neighborhood characteristics. The technical note in this report discusses the methodology used for this analysis in more detail.

Although similar to Howell and Korver-Gless and Brookings's work in many respects, this analysis departs from those studies using UAD statistics in two important ways:

1. Home Mortgage Disclosure Act data are included to account for the number of Black and White borrowers in the neighborhoods where appraisals

are recorded. The analysis controls for shares of loan originations to Black and White borrowers in each census tract. Controlling for mortgage loans allows this study to estimate median appraised home values in neighborhoods where Black and White borrowers have obtained mortgage loans to purchase their homes throughout the study period (as opposed to Black and White neighborhoods where Blacks and Whites may not be home purchasers).

Moreover, this study identified census tracts with shares of loan originations to Black and White borrowers above national averages for each year to investigate whether there are any disparities in median home appraisals in neighborhoods with relatively high home buying rates among Black or White borrowers.

2. Climate-related risks are controlled for at the neighborhood level using 2023 National Risk Index data from the Federal Emergency Management Agency (FEMA). Controlling for climate-related risks is important because extreme weather events such as flooding, hurricanes, and wildfires are increasing in frequency and devastation. Numerous analyses show that these events pose significant risks to the real estate sector, including soaring insurance premiums and a potential overvaluation.[52]

A 2023 research article in Nature Climate Change indicates, for example, that properties are overvalued nationally by between $121 billion and $237 billion when flood risks are considered. The types and incidence of climate-related events vary geographically and affect populations of all races and ethnicities.

Overvaluations of homes in environmentally hazardous areas may result from using average prices in areas with significant numbers of luxury properties, such as beachfront mansions or mountain resorts in areas at high risk of wildfires.

Black communities, however, face a higher vulnerability to the impacts of natural disasters due to many decades of systemic racism. This vulnerability is accounted for by including the composite Expected Annual Loss (EAL) score computed by FEMA.[53] The score measures a community's relative level of expected losses each year from all types of natural hazards compared to all other communities at the same level.[54]

The findings in this report are consistent with previous research that found significant differences in median appraised home values and contract price undervaluation between majority Black and White communities. Separate from previous research, however, this study found important additional appraisal disparities in neighborhoods with relatively high volumes of loan originations to Black and White borrowers that have not been previously explored.

After controlling for housing and neighborhood characteristics, the results show statistically significant and consistently lower median appraised home values in Black neighborhoods than in comparable White neighborhoods throughout the study period (see Appendix 1 for descriptive statistics and Appendix 2 for model results).[55]

Exhibit 1 illustrates the observed (as shown in the UAD statistics) and adjusted (the estimated price controlling for housing and neighborhood characteristics) median appraised home values and the average percentage of contract price undervaluation in Black and White neighborhoods.

EXHIBIT 1

Median appraisal values and percentage of appraisals below contract price in majority Black neighborhoods and majority White neighborhoods, 2014-2023

	Majority Black Neighborhood					Majority Black Neighborhood				
Year	Number of appraisals	Median appraisal value		Percentage below contract price		Number of appraisals	Median appraisal value		Percentage below contract price	
		Observed	Adjusted	Observed	Adjusted		Observed	Adjusted	Observed	Adjusted
2013	16,101	$215,566	$209,854	12%	11%	888,494	$306,901	$282,512	8%	8%
2014	19,788	$216,332	$209,768	10%	10%	900,437	$322,046	$292,042	6%	6%
2015	31,768	$211,255	$203,856	12%	11%	1,101,890	$328,723	$296,579	7%	7%
2016	39,242	$212,241	$207,449	12%	12%	1,185,474	$343,223	$310,835	7%	7%
2017	48,161	$217,987	$215,459	14%	13%	1,228,927	$367,891	$329,394	8%	8%
2018	55,691	$228,764	$226,687	13%	13%	1,205,484	$391,228	$342,381	7%	7%
2019	68,280	$236,098	$237,649	12%	11%	1,297,819	$398,922	$348,561	6%	6%
2020	85,283	$244,882	$245,051	15%	15%	1,445,255	$422,440	$376,066	9%	9%
2021	102,142	$262,986	$270,313	21%	21%	1,484,668	$488,133	$436,665	15%	15%
2022	79,807	$287,188	$290,433	17%	17%	992,745	$548,468	$458,702	13%	13%
2023	52,805	$297,475	$299,572	12%	12%	447,469	$522,915	$430,915	9%	9%

Source: Authors' calculations of Federal Housing Finance Agency. "Uniform Appraisal Dataset (UAD) Aggregate Statistics."
See Technical note for source of data used for statistical models.

Throughout the study period, contract price undervaluation was consistently higher in majority Black neighborhoods than in majority White neighborhoods.

In the years leading up to 2020, the contract price undervaluation gap for homes in Black versus White neighborhoods was more than 1.4. The percentage dropped in 2021 in both types of neighborhoods.

Consistent with FHFA research, this study found that while racial disparities in contract price undervaluation persist in home purchases, the gap has narrowed since the establishment of the PAVE task force.

In 2023, the contract price undervaluation gap fell to 1.32 (representing a 12 percent contract

price undervaluation in Black neighborhoods relative to a 9 percent contract price undervaluation in White neighborhoods). (Exhibit 2)

EXHIBIT 2
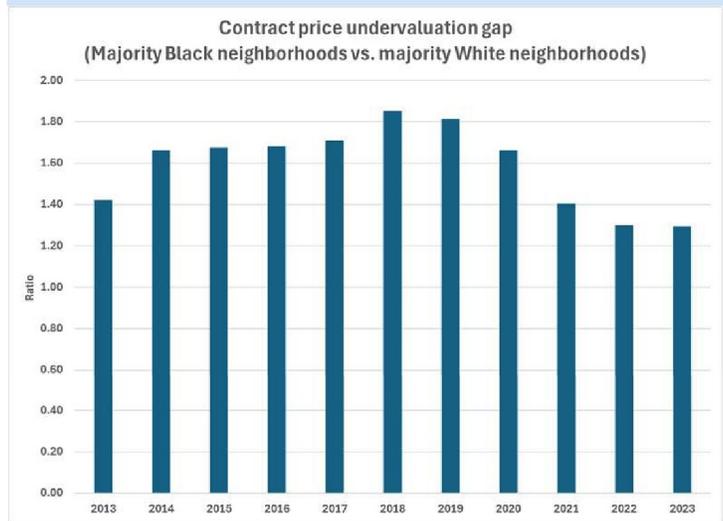
Contract price undervaluation gap
(Majority Black neighborhoods vs. majority White neighborhoods)

Source: Authors' calculations of Federal Housing Finance Agency. "Uniform Appraisal Dataset (UAD) Aggregate Statistics."
See Technical note for source of data used for statistical models.

However, this research found important variations in contract price undervaluation in 2021 and 2023 based on the share of Black borrowers in majority Black and majority White communities where there are large proportions of loan originations to White borrowers.

In general, from 2021 to 2023 the percentage of appraisals below contract price fell across all neighborhoods (Exhibits 3 and 4). However, contract price undervaluation rates fell more rapidly in White neighborhoods than in Black neighborhoods. In both 2021 and 2023, in White neighborhoods, the percentage of appraisals below contract prices was higher with increasing shares of Black borrowers. While this was also the case in Black census tracts in 2021, in 2023, the percentage of appraisals below contract price was slightly higher in census tracts with no Black borrowers than in census tracts with varying shares of loans to Blacks.

EXHIBIT 4

Percentage of appraisals below contract price in 2023
Census tracts with large shares of loan originations to White borrowers

■ Majority Black neighborhood   ■ Majority White neighborhood
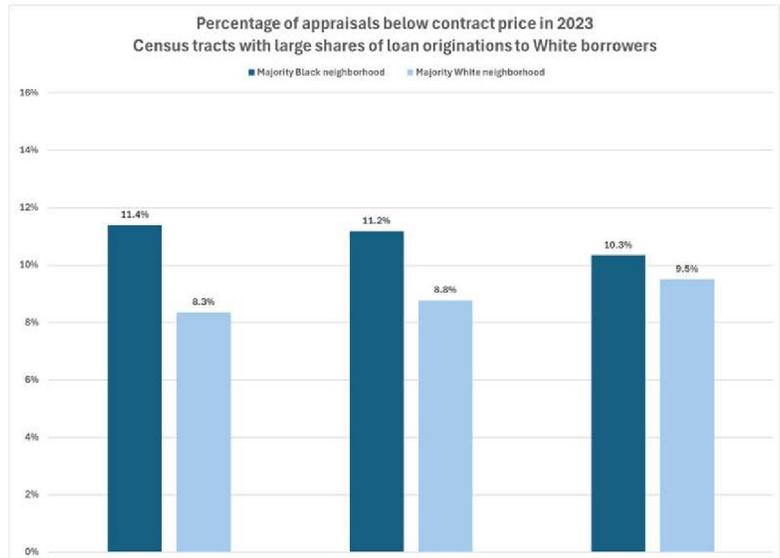
Source: Authors' calculations of Federal Housing Finance Agency. "Uniform Appraisal Dataset (UAD) Aggregate Statistics."
See Technical note for source of data used for statistical models.

As one might expect, years of discrimination against Blacks in access to employment, housing, education, financial services, health care, and other aspects of American life has resulted in lower incomes and wealth and, consequently, lower home values in Black communities compared with White neighborhoods (Exhibit 1). In 2023, for example, homes in majority White neighborhoods were valued at a median of $522,915, a full $225,441 more than homes in majority Black neighborhoods before controlling for home and neighborhood characteristics.

Yet, even after considering housing quality and neighborhood attributes, in 2023, homes in Black neighborhoods were valued at a median of $131,343 less than similar properties in White communities: $299,572 compared to $430,915 in Black and White neighborhoods, respectively. The gap in adjusted median appraised home values increased between 2013 and 2022, peaking

EXHIBIT 3

Percentage of appraisals below contract price in 2021
Census tracts with large shares of loan originations to White borrowers

■ Majority Black neighborhood   ■ Majority White neighborhood
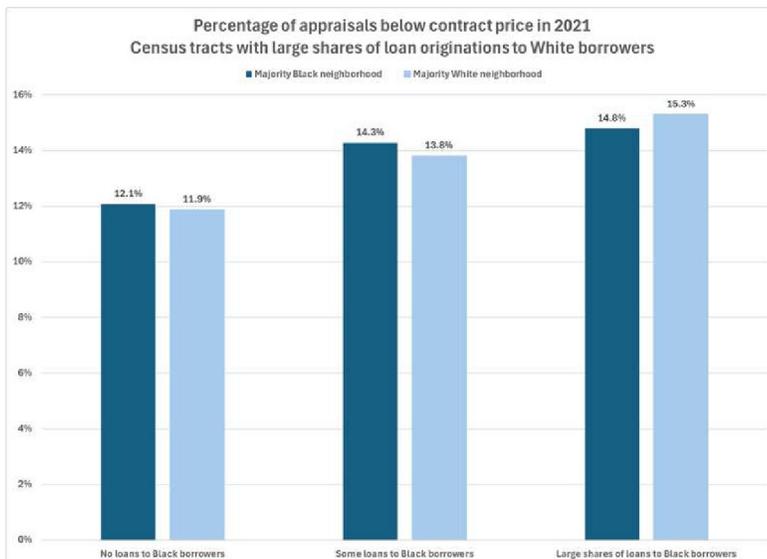
Source: Authors' calculations of Federal Housing Finance Agency. "Uniform Appraisal Dataset (UAD) Aggregate Statistics."
See Technical note for source of data used for statistical models.

in 2022. From 2022 to 2023, however, the gap decreased.

Similar to the contract price appraisal gap, median appraised home values indicate a different trend in neighborhoods when considering the volumes of loans to Black and White borrowers by neighborhood racial composition.

Exhibit 5 shows that from 2021 to 2023, median appraised home values have increased in Black neighborhoods with no loan originations to Black borrowers, leading to a narrowing of the appraisal price undervaluation gap between those Black and White neighborhoods.

In 2021, homes in Black neighborhoods with no Black borrowers were appraised at a median of $283,684 compared to $456,025 for similarly situated properties in White neighborhoods. That translated into a median appraised undervaluation difference of $172,341 in Black relative to White neighborhoods. The gap decreased between those neighborhoods from 38 percent in 2021 to 22 percent in 2023($357,626 compared to $462,181).

In contrast, the median appraised home undervaluation gap has widened from 2021 to 2023 both in neighborhoods with some loan originations to Black borrowers (Exhibit 6) and in those where the share of loan originations to Black is larger than the national average (Exhibit 7).

In 2021, homes in majority Black neighborhoods with large shares of loan originations to Black and White borrowers were appraised at a median value of $239,278 compared to $285,823 for similarly situated homes in majority White neighborhoods; a 16 percent gap. This gap increased to 22 percent in 2023 ($247,093 compared to $317,050).

Most importantly, the median appraised home undervaluation gap between Black neighborhoods with large shares of loan originations to Black borrowers and White neighborhoods with no loan originations to Blacks was a staggering 47 percent in 2021 and remained virtually unchanged in 2023.
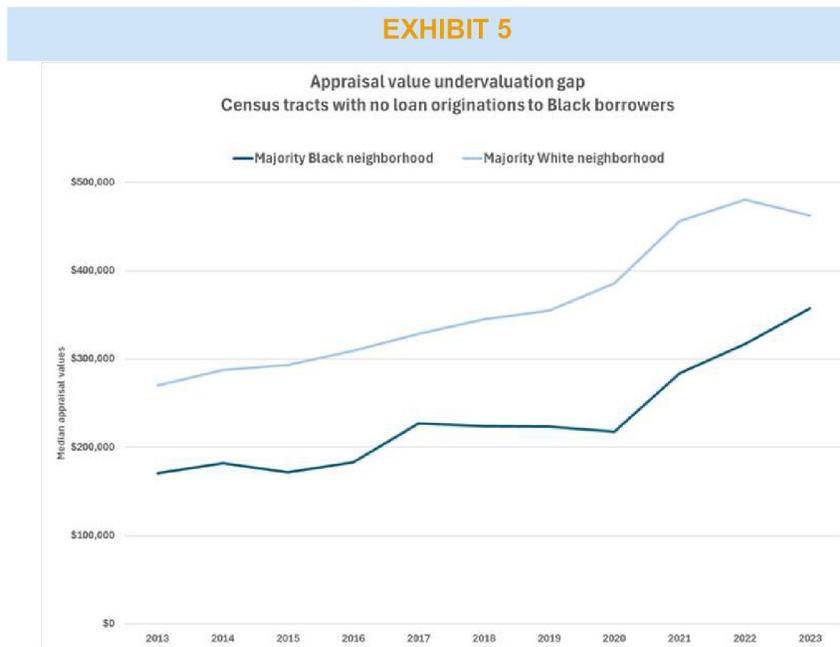
EXHIBIT 5

Appraisal value undervaluation gap
Census tracts with no loan originations to Black borrowers

— Majority Black neighborhood   — Majority White neighborhood

Source: Authors' calculations of Federal Housing Finance Agency. "Uniform Appraisal Dataset (UAD) Aggregate Statistics."
See Technical note for source of data used for statistical models.

EXHIBIT 6

Appraisal value undervaluation gap
Census tracts with some loan originations to Black borrowers

— Majority Black neighborhood   — Majority White neighborhood

Source: Authors' calculations of Federal Housing Finance Agency. "Uniform Appraisal Dataset (UAD) Aggregate Statistics."
See Technical note for source of data used for statistical models.

EXHIBIT 7

Appraisal value undervaluation gap
Census tracts with share of loan originations to Black borrowers
larger than the national average

— Majority Black neighborhood   — Majority White neighborhood

Source: Authors' calculations of Federal Housing Finance Agency. "Uniform Appraisal Dataset (UAD) Aggregate Statistics."
See Technical note for source of data used for statistical models.

GEOGRAPHIC VARIATIONS

Estimated median appraised home values vary geographically. To examine geographic variations, this study examined the disparities in median appraised home values in 2023 in the top 20 metropolitan areas with the largest Black populations as of 2022. Exhibit 8 shows that the selected metropolitan areas differ widely in terms of the share of the Black population, segregation levels, and Black and White homeownership rates.

Segregation levels – measured by the dissimilarity index – range from a minimum of 0.48 (Virginia Beach) to a maximum of 0.75 (New York). In general, in metropolitan areas with dissimilarity indexes greater than 0.65 (0.60 is considered highly segregated) Black homeownership rates tend to be the lowest.
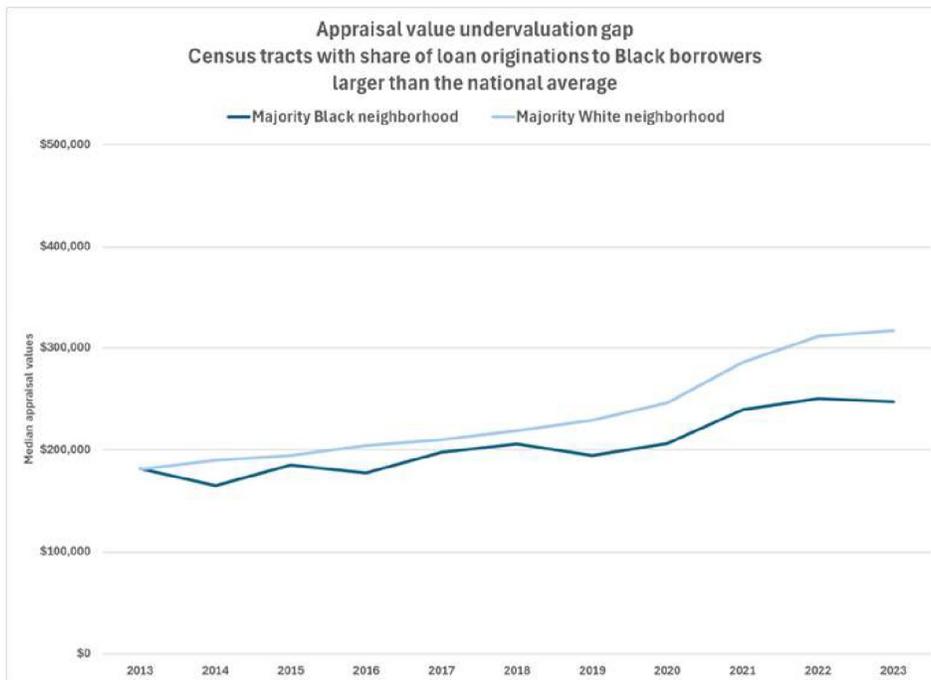
The selected metropolitan areas also differ in the number of mortgage loans obtained by Black borrowers since 2013. The Atlanta metropolitan area, where 51 percent of Black households own their homes, exhibits the largest number of loans received from Black borrowers during the study period. Furthermore, the selected metropolitan areas vary considerably in their exposure to natural hazards, with coastal areas at higher risk than others, as illustrated in Exhibit 7.

EXHIBIT 8

Selected Characteristics of top 20 metropolitan areas with the largest Black population in 2022

Metropolitan areas	Total population 2022	Black population 2022	Percentage Black Population	Dissimilarity Index	Black homeowners 2022	Black homeownership rate	White homeownership rate	Total home mortgage loans to Black borrowers from 2013 to 2023
New York	19,900,000	3,301,873	17%	0.75	397,044	33%	66%	90,726
Atlanta	6,094,752	2,090,468	34%	0.60	386,801	51%	77%	194,731
Washington	6,346,083	1,589,121	25%	0.61	316,557	52%	72%	136,313
Chicago	9,556,075	1,548,804	16%	0.74	255,191	42%	75%	90,622
Philadelphia	6,232,894	1,267,991	20%	0.67	237,300	48%	75%	71,934
Miami	6,100,891	1,252,967	21%	0.64	194,415	48%	74%	67,151
Dallas	7,673,379	1,234,128	16%	0.55	184,371	39%	69%	92,480
Houston	7,132,232	1,224,971	17%	0.60	198,627	42%	72%	90,587
Detroit	4,375,604	952,423	22%	0.72	167,882	44%	80%	42,621
Los Angeles	13,100,000	834,062	6%	0.65	107,271	32%	57%	24,411
Baltimore	2,831,639	828,679	29%	0.62	150,723	47%	78%	62,437
Memphis	1,335,804	634,467	47%	0.61	109,760	46%	77%	33,636
Charlotte	2,668,688	604,281	23%	0.53	108,227	46%	76%	51,706
Virginia Beach	1,791,420	538,153	30%	0.48	93,478	44%	73%	46,217
St. Louis	2,813,523	497,075	18%	0.70	82,205	41%	78%	27,806
Orlando	2,688,762	430,199	16%	0.52	67,310	48%	72%	31,333
New Orleans	1,261,442	426,217	34%	0.64	77,361	48%	75%	21,607
Cleveland	2,079,759	403,225	19%	0.73	64,662	37%	75%	20,120
Richmond	1,316,145	380,570	29%	0.52	74,813	51%	76%	27,038
Tampa	3,135,735	379,749	12%	0.53	61,560	44%	73%	30,873

Source: Authors' calculations of American Community Survey and Home Mortgage Disclosure Act data.
See Technical note for data sources.

The percentage of homes appraised below contract price is larger in majority Black neighborhoods than in majority White neighborhoods across the selected metropolitan areas, even after adjusting for housing stock and neighborhood characteristics. However, contract price undervaluation gaps between Black and White neighborhoods have decreased in all selected metropolitan areas from 2021 to 2023, with the exception of Houston (Exhibit 9).

EXHIBIT 9

Contract price undervaluation gap
(Majority Black neighborhoods vs. majority White neighborhoods)

Source: Authors' calculations of Federal Housing Finance Agency. "Uniform Appraisal Dataset (UAD) Aggregate Statistics."
See Technical note for source of data used for statistical models.

While in some MSAs the Black appraisal undervaluation gap is below the national average (30 percent in 2023), in other MSAs the gap is above it. The percentage difference or median Black appraisal undervaluation price gap (relative to homes in White communities) ranges from 10 percent in Houston to 48 percent in Los Angeles. In Los Angeles, the median appraised value of homes in Black neighborhoods is $618,532 compared to $1,179,640 in White neighborhoods, after controlling for home and neighborhood characteristics. This translates into an appraisal value underestimation gap of $561,108 for homes in Black neighborhoods.
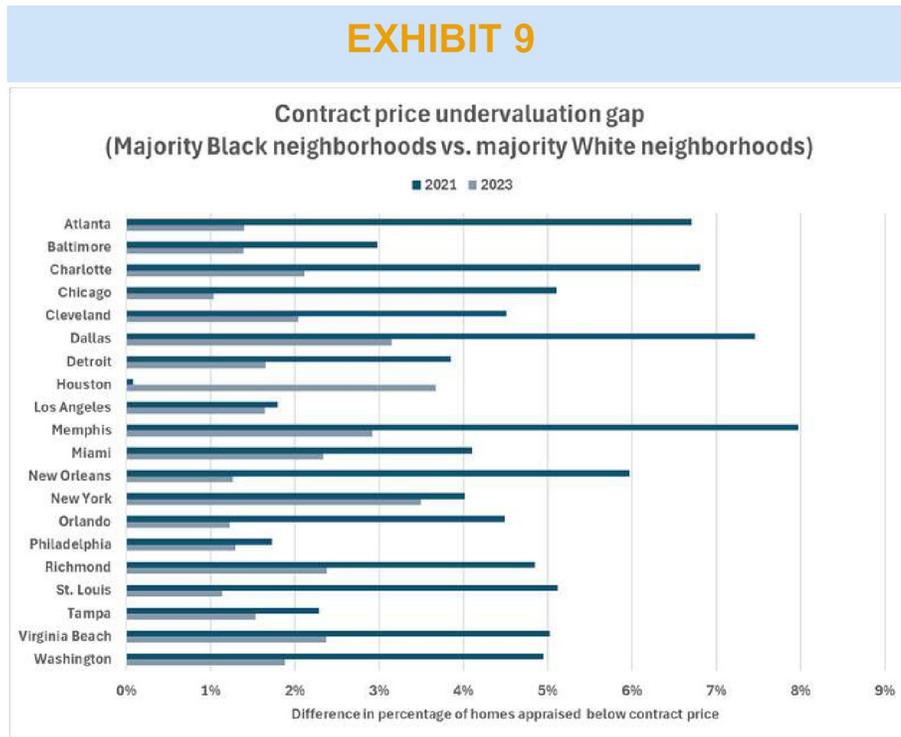
Exhibit 10 shows the disparities in median appraised home values between majority Black and majority White neighborhoods in 2023 in the selected metropolitan areas after controlling for housing and neighborhood characteristics. In all metropolitan areas, homes in Black neighborhoods are valued less than homes in White neighborhoods. However, the percentage difference in median appraised home values between majority Black and comparable White neighborhoods varies considerably across the selected areas.

EXHIBIT 10

Median appraisal values in majority Black neighborhoods and majority White neighborhoods
Top 20 metropolitan areas with the largest Black population

Metropolitan area	Majority Black Neighborhoods			Majority White Neighborhoods			Percentage difference in predicted median appraisal values (majority Black neigborhoods vs. majority White neighboorhods)
	Number of Metropolitan area appraisals, 2023	Median appraisal values, 2023 (unadjusted)	Median appraisal values 2023 (adjusted)	Number of appraisals, 2023	Median appraisal values, 2023 (unadjusted)	Median appraisall values, 2023 (adjusted)	
Atlanta	10,095	$321,132	$313,641	18,777	$501,687	$432,873	-28%
Baltimore	1,836	$264,273	$270,641	4,308	$467,382	$443,022	-39%
Charlotte	2,380	$340,106	$275,430	10,840	$456,277	$370,806	-26%
Chicago	3,568	$218,319	$275,906	15,924	$404,709	$443,804	-38%
Cleveland	947	$149,867	$178,774	5,903	$289,483	$314,243	-43%
Dallas	1,218	$319,267	$380,567	28,775	$548,474	$497,023	-23%
Detroit	2,047	$190,402	$240,518	12,573	$327,990	$355,478	-32%
Houston	1,286	$277,118	$423,612	12,401	$429,194	$472,562	-10%
Los Angeles	511	$983,396	$618,532	5,957	$1,963,634	$1,179,640	-48%
Memphis	1,690	$204,056	$215,143	2,388	$362,097	$327,291	-34%
Miami	3,268	$448,481	$379,308	6,062	$896,410	$611,620	-38%
New Orleans	501	$235,500	$264,023	1,253	$312,932	$304,659	-13%
New York	627	$536,241	$421,942	17,439	$742,568	$561,597	-25%
Orlando	717	$309,806	$269,841	6,715	$509,612	$442,487	-39%
Philadelphia	2,703	$230,253	$318,120	12,317	$428,676	$450,927	-29%
Richmond	1,335	$279,153	$228,933	3,586	$417,136	$362,762	-37%
St. Louis	1,409	$161,503	$214,617	11,821	$318,384	$354,942	-40%
Tampa	666	$327,237	$312,507	12,472	$478,546	$464,529	-33%
Virginia Beach	449	$250,587	$282,638	1,837	$430,854	$388,247	-27%
Washington	4,097	$475,748	$441,317	6,357	$734,395	$559,921	-21%

Source: Authors' calculations of Federal Housing Finance Agency. "Uniform Appraisal Dataset (UAD) Aggregate Statistics."
See Technical note for source of data used for statistical models.

The racial gap in median appraised home values has improved for some metropolitan areas since the establishment of the PAVE task force (Exhibit 11). For example, in Houston, the median appraised home undervaluation gap has narrowed by 31 percentage points, falling from 41 percent in 2021 to 10 percent in 2023. The median appraised home undervaluation gap has narrowed by 14 percentage points in the Washington metropolitan area, from 35 percent in 2021 to 21 percent in 2023.

The median appraised home undervaluation gap has also narrowed in the Atlanta, Chicago, Dallas, Detroit, Philadelphia, Richmond, and Virginia Beach metropolitan areas. However, in all other metropolitan areas with large Black populations, the gap has widened since 2021.

In Los Angeles, in particular, the median appraised home undervaluation gap has widened by 17 percentage points, from 31 percent in 2021 to 48 percent in 2023. That gap has widened by 4 percentage points in Baltimore and Miami. The median appraised home undervaluation gap has widened by as many as 3 percentage points in the Charlotte, Cleveland, Memphis, New York, St. Louis, and Tampa metropolitan areas. The percentage difference in median appraised home values remained unchanged in the Orlando metropolitan area (-39 percent in 2021 and 2023).

EXHIBIT 11

Appraisal disparities in the top 20 metropolitan areas with the largest Black population

Source: Authors' calculations of Federal Housing Finance Agency. "Uniform Appraisal Dataset (UAD) Aggregate Statistics."
See Technical note for source of data used for statistical models.

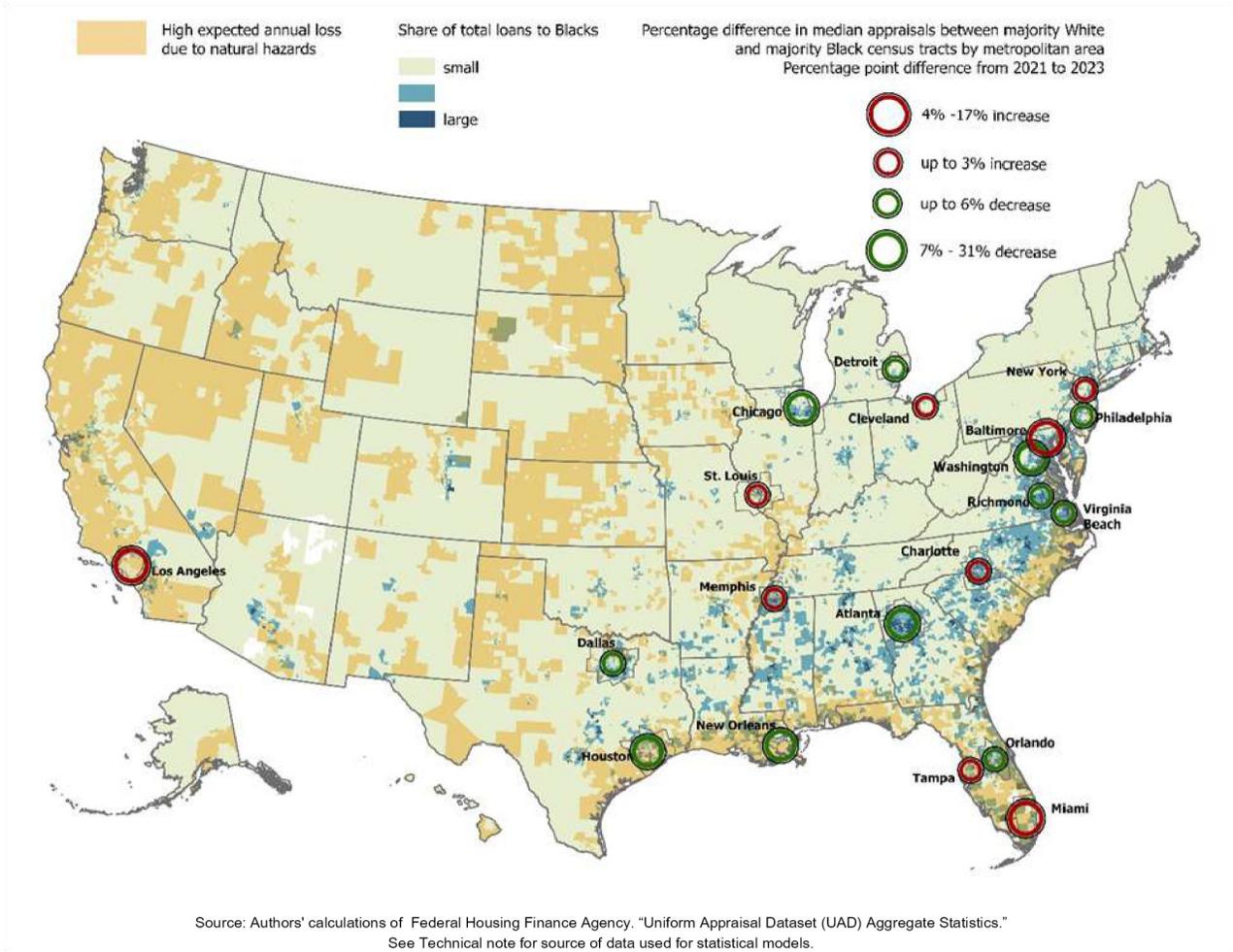As observed in previous research,[57] variations across metropolitan areas may be influenced by factors such as projected property appreciation, housing inventory, buyer demand, and other readily observable attributes. These factors call for further investigation.

CONCLUSION AND POLICY RECOMMENDATIONS

The persistent and systemic discrimination in the U.S. housing market profoundly impacts Black communities, perpetuating a significant wealth gap between Black and White Americans. Despite the Fair Housing Act's efforts to eliminate discrimination, the legacy of biased policies and practices continues to affect Black homeownership rates and the valuation of Black-owned properties. The gap in median appraised home values and the frequency of appraisals below contract prices in Black versus White communities remains significant.

Led by President Biden and Vice President Harris, federal, state, and local entities have initiated steps to eliminate appraisal bias and mitigate the damages caused by that practice. The PAVE Taskforce and the release of UAD statistics are already positively impacting and lessening unfair and illegal home appraisal practices. This report found some narrowing of the contract price undervaluation gaps and the appraisal price undervaluation gap in Black versus White neighborhoods. The racial gap in median appraised home values, however, has widened since 2021 in areas where Black borrowers have been purchasing their homes.

Given the fact that racial disparities in home appraisals persist in communities throughout the nation, there is an urgent need for further policy and programmatic interventions. The following recommendations are suggested:

1. As indicated by the PAVE task force, broadening consumer education regarding appraisal bias and the safeguards against it is important. This can be done by enhancing the procedures for consumers to challenge unfair appraisals and launching awareness campaigns to inform them of their rights. Such campaigns should be geographically targeted, particularly in neighborhoods attracting Black homebuyers and in metropolitan housing markets where racial appraisal gaps are widening. In addition, consumers must be educated about their rights. Homebuyers and homeowners can ask for a lender to reconsider a home valuation. This process is often referred to as a "reconsideration of value" or "ROV." Borrowers involved in a home purchase or refinance can point out errors as well as provide evidence that the appraisal was influenced by bias. Make the appraisal profession more accessible and diverse. Various measures are already being implemented by the Appraiser Qualifications Board (AQB), which sets appraisers' educational and certification standards. The AQB has endorsed a computer-based approach to alleviate the challenges aspiring appraisers face in completing the requisite apprenticeship hours under a licensed appraiser's supervision. In particular, the AQB has decided to make education on fair housing laws a mandatory part of the curriculum by 2026. Concurrently, the National Association of Real Estate Brokers is initiating a collaboration with HUD to provide housing counselors with training and workshops on combating appraisal bias and housing discrimination.

2. The National Society of Real Estate Appraisers (NSREA) and NAREB have formed a transformative partnership aimed at reshaping the landscape of appraisal education and training in the United States.

NSREA, established in 1956 as the oldest affiliate of NAREB, has been at the forefront of providing high-quality, inclusive appraisal education.

The NSREA-NAREB partnership has introduced the Black Appraisers Program (BAP), an initiative designed to confront and mitigate the detrimental impacts of appraisal bias in the real estate industry. The Black Appraisers program aims to increase the representation of Black professionals in the appraisal industry, advocate for fair appraisal practices, and enhance awareness of appraisal bias. The initiative will form partnerships with and seek to attract participants from the military veterans' community and Historically Black Colleges and Universities (HBCUs). Appraisal mentorships and apprenticeships will be a core aspect of recruitment and training for this initiative.

3. Appraisals should be calibrated with climate risk data, especially in areas at high risk of climate-related disasters where communities of color continue to be disproportionately disadvantaged. As this report highlights, homes tend to be overvalued in neighborhoods at high risk of climate-related disasters. Updated granular climate risk data and broader climate risk disclosure laws should assist the appraisal industry in more accurately pricing the costs of climate-related risks into home values to prevent future financial losses among already disadvantaged homeowners of color.

4. Enhance UAD aggregate statistics by including contract prices and the borrower's race/ethnicity. This study is limited by the absence of such data points. Although it is possible to estimate or approximate sales prices using third-party sources, including contract prices in the UAD aggregate statistics would allow for more robust analyses in the future. Further, as this research demonstrates, borrower race/ethnicity is critical to understanding appraisal bias. However, the UAD aggregate statistics at the census tract level do not include that information. The borrower's race and ethnicity are available in the UAD Appraisal Level Public File, which provides individual-level detailed property and borrower/seller information for a sample of appraisal records for home sales and refinances. This research, like previous studies using UAD aggregate statistics, focuses on census tracts as the unit of analysis. Therefore, this study is limited by the availability of detailed data at that geographic level. As in the case of HMDA data, borrower race/ethnicity is a crucial variable in examining racial appraisal bias. In fact, HMDA data was used in this study as a proxy for the race/ethnicity of borrowers.

Conclusion

The report offers several thoughtful solutions to further the work being implemented on appraisal bias. These include modernizing appraisal methodologies, calibrating appraisals with climate risk data, broadening consumer education, and diversifying the appraisal industry. The recommendations outlined above are necessary and reasonable to further enhance the efforts of the PAVE task force. They would also powerfully enhance the Biden-Harris goal of ending this lingering and damaging housing practice that undermines the ability of Black homeowners and Black communities.

Appraisal methods must be modernized so that past sales, built on a history of discrimination against Blacks, do not influence the current or future appraised values of properties in Black neighborhoods. This includes the need to improve technological valuation methods, so those tools also do not perpetuate racial bias.

Finally, the partnership between NAREB and NSREA offers promising hope for increasing the number of Blacks in the appraisal industry. Succeeding in this critical effort is one of the most important ways to enable Black homebuyers to benefit equitably from the American Dream of Homeownership.

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[48] See Technical note. The authors estimated values of control variables for years with no available data by conducting linear regressions for each census tract individually to estimate annual rates of change and impute missing values. Regarding parks data, the authors used constant values for all years.

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Technical Note

OLS regressions modeling median appraised values in log form and the percentage of appraisals below contract price control for neighborhood racial composition; that is, they include indicators for majority Black and majority White neighborhoods and the percentage of population of other races and ethnicity in each census tract.

Home Mortgage Disclosure Act data are included to account for the number of Black and White borrowers in the neighborhoods where appraisals are recorded. We control for shares of loan originations to Black and White borrowers in each census tract.

Climate-related risks are controlled for at the neighborhood level using 2023 National Risk Index data from the Federal Emergency Management Agency (FEMA). The composite Expected Annual Loss (EAL), with values ranging from 0 to 100, measures a community's relative level of expected losses each year from all types of natural hazards compared to all other communities at the same level.

Similar to the Howell and Korver-Gless's analyses, models control for the following variables:

- Neighborhood-level housing stock characteristics – the median number of rooms, the percentage of single-family detached homes, and the median age of housing units;

- Socioeconomic status – the percentage of owner-occupied housing units, the employment rate, and the percentage of population living in poverty; and

- Neighborhood amenities and location – retail shops, entertainment establishments, the number of services per capita, the proportion of public parks in the census tract, and the median commute time in minutes of workers who do not work from home.

This study's data on housing stock characteristics, socioeconomic status, and commute time are derived from each year of the ACS 5-year aggregate statistics from 2013 to 2022. Like in Howell and Korver-Gless's analyses, data on retail shops, entertainment establishments, and services (excluding banks) are extracted from the National Neighborhood Data Archive (NaNDA).

Unlike Howell and Korver-Gless, this study relies on annual data on the offices of depository institutions from the Federal Deposit Insurance Corporation (FDIC) to compute the number of banks per capita by census tract. Public park data are obtained from the Trust for Public Land ParkServe Database. These data are not published on an annual basis. We use the most recent database – published in 2024 – and like in Howell and Korver-Gless's analyses, we use a constant value for all years since park square footage rarely changes annually.

Like Howell and Korver-Gless' analyses, this study analyzes data for all years for which UAD statistics are available. This contrasts with the Brookings study, which examined data from 2016 to 2020. Like Brooking's study, however, this report focuses on median appraised values rather than mean values, to reduce the effect of very large median appraised values.

Unlike previous studies, this analysis includes the annual House Price Index (HPI) and the annual change in HPI by census tract published by FHFA to account for varying housing market dynamics across census tracts. The FHFA HPI tracks single-family home prices, using a weighted repeat-sales method to assess average price changes in repeat transactions of the same properties. These data, collected from properties with mortgages purchased or securitized by Fannie Mae or Freddie Mac since January 1975, offer a reliable indicator of housing price trends at various geographic levels.

The models also control for the metropolitan-level total population, the total Black population each year, and the total number of appraisals for home sales each year in each census tract. This set of control variables enables us to account for housing demand. As discussed above, predominantly Black neighborhoods tend to have fewer property sales than predominantly White neighborhoods, making subjectivity in appraisal more prevalent.

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Appendices

Descriptive Statistics

	2013	2014	2015	2016	2017	2018
Number of observations (Census tracts)	28,963	27,689	31,438	32,915	32,396	31,002
Number of appraisals for home sales (total)	1,058,119	1,088,345	1,357,182	1,480,449	1,563,629	1,564,469
Number of majority Black census tracts	718	777	1,141	1,365	1,543	1,630
Number of majority White census tracts	23,079	21,714	23,988	24,629	23,690	22,298
Number of census tracts with larger than national share of mortgage loan originations in Black borrowers	5,312	5,635	7,422	8,421	8,410	8,418
Number of census tracts with larger than national share of mortgage loan originations in White borrowers	15,979	15,152	16,711	17,268	16,642	15,297
Median appraisal value for home sales	$303,925	$318,671	$324,202	$338,445	$362,056	$383,726
Average number of appraisals by census tract	37	39	43	45	48	50
Percentage Black population	9%	10%	11%	11%	12%	12%
Percentage White population	69%	68%	66%	65%	64%	63%
Percentage population of other race and ethnicity	22%	23%	23%	24%	24%	25%
CBSA total population	5,214,163	5,220,433	5,170,493	5,162,074	5,172,487	5,173,592
CBSA Black population	775,532	779,131	782,011	783,665	780,508	779,135
Percentage mortgage loans to Blacks	5%	6%	7%	7%	8%	8%
Percentage mortgage loans to Whites	68%	66%	63%	61%	60%	56%
Median number of rooms	5	5	5	5	5	5
Mean year built	1976	1977	1976	1976	1977	1977
Proportion public parks in census tracts	5%	5%	5%	5%	5%	5%
HPI	238	262	266	280	298	319
Annual change in HPI	6%	8%	5%	6%	7%	7%
EAL score	53	54	53	53	53	54
Employment rate	92%	92%	93%	94%	94%	95%
Poverty rate	9%	9%	10%	10%	10%	10%
Percentage owner-occupied homes	73%	73%	72%	71%	71%	72%
Percentage single-family detached homes	70%	71%	70%	69%	70%	71%
Average commute time	27	27	28	28	28	28
Number of retail establishment per 1,000 residents	2.3	2.0	2.0	2.2	1.9	2.1
Number of entertainment establishments per 1,000 residents	3.6	3.4	3.6	4.0	3.5	4.1
Number of local services per 1,000 residents	0.8	0.5	0.5	0.5	0.5	0.5

APPENDIX 1

Descriptive Statistics (Cont)

	2019	2020	2021	2022	2023
Number of observations (Census tracts)	34,442	37,029	38,619	31,040	15,109
Number of appraisals for home sales (total)	1,713,038	1,928,015	2,065,918	1,416,467	661,456
Number of majority Black census tracts	1,918	2,313	2,781	2,353	1,576
Number of majority White census tracts	24,368	25,681	25,788	20,535	9,918
Number of census tracts with larger than national share of mortgage loan originations in Black borrowers	9,837	11,624	13,451	10,447	5,776
Number of census tracts with larger than national share of mortgage loan originations in White borrowers	16,929	18,022	18,118	14,505	7,003
Median appraisal value for home sales	$391,148	$411,523	$472,460	$527,567	$491,631
Average number of appraisals by census tract	50	52	53	46	44
Percentage Black population	12%	13%	14%	14%	17%
Percentage White population	62%	61%	59%	59%	59%
Percentage population of other race and ethnicity	25%	26%	27%	27%	25%
CBSA total population	5,172,001	5,061,655	5,058,910	4,893,456	4,580,957
CBSA Black population	786,734	776,582	774,072	753,162	757,565
Percentage mortgage loans to Blacks	8%	9%	10%	10%	11%
Percentage mortgage loans to Whites	55%	54%	50%	49%	47%
Median number of rooms	5	6	6	6	6
Mean year built	1977	1977	1976	1978	1981
Proportion public parks in census tracts	5%	5%	5%	5%	5%
HPI	325	326	360	425	436
Annual change in HPI	5%	4%	12%	16%	7%
EAL score	52	52	51	54	56
Employment rate	95%	95%	95%	95%	95%
Poverty rate	9%	9%	10%	9%	9%
Percentage owner-occupied homes	71%	70%	70%	73%	76%
Percentage single-family detached homes	69%	69%	68%	72%	76%
Average commute time	29	29	28	28	29
Number of retail establishment per 1,000 residents	2.2	2.2	2.1	2.0	1.8
Number of entertainment establishments per 1,000 residents	4.3	4.3	4.2	3.9	3.5
Number of local services per 1,000 residents	0.5	0.5	0.5	0.4	0.5

APPENDIX 2

Ordinary Appendix 3. Least Squares (OLS) regression results for estimating the log of median appraisal values of single family one-unit homes for purchase, 2013-2023

	2013	2014	2015	2016	2017
Neighborhood racial composition					
Majority Black census tract	0.2986**	0.2637**	0.2618**	0.2111**	0.2623**
Majority White census tract	0.0512**	0.0260*	0.0345**	0.0136	0.0073
Percentage of the population of other race and ethnicity	-0.0016**	0.0000	0.0008**	0.0009**	0.0005
Housing stock characteristics					
Median number of rooms	0.0360**	0.0405**	0.0383**	0.0380**	0.0395**
Mean year built	0.0015**	0.0019**	0.0025**	0.0027**	0.0027**
Percentage of single-family detached homes	-0.0037**	-0.0032**	-0.0034**	-0.0037**	-0.0037**
Socioeconomic status					
Employment rate	0.0205**	0.0189**	0.0157**	0.0161**	0.0135**
Percentage of population living in poverty	-0.0130**	-0.0143**	-0.0143**	-0.0145**	-0.0142**
Percentage of owner-occupied housing units	0.0002	0.0003	0.0003	0.0011**	0.0009**
Amenities					
Proportion of public parks in the census tract	0.0028**	0.0028**	0.0030**	0.0025**	0.0029**
Mean commute time (minutes)	0.0106**	0.0117**	0.0119**	0.0121**	0.0121**
Number of retail establishments per 1,000 residents	0.0008	-0.0068**	-0.0076**	-0.0072**	-0.0061**
Number of entertainment establishments per 1,000 residents	0.0119**	0.0156**	0.0163**	0.0157**	0.0164**
Number of local services per 1,000 residents	-0.0137**	0.0065	-0.0033	-0.0011	-0.0105**
Housing market dynamics					
House Price Index (HPI)	0.0014**	0.0014**	0.0014**	0.0013**	0.0012**
Annual change in HPI	0.0038**	0.0037**	-0.0015**	-0.0009*	-0.0077**
Percentage loan originations to Black borrowers	-0.0118**	-0.0097**	-0.0092**	-0.0084**	-0.0100**
Percentage loan originations to White borrowers	-0.0046**	-0.0027**	-0.0025**	-0.0021**	-0.0028**
Number of appraisals for home sales (log)	0.0284**	-0.0242**	-0.0330**	-0.0460**	-0.0246**
Climate-related risks					
Expected Annual Loss (EAL) score	0.0017**	0.0016**	0.0018**	0.0018**	0.0016**
Metropolitan-level characteristics					
Total population in the metropolitan area (log)	0.1477**	0.1516**	0.1747**	0.1928**	0.2094**
Total Black population in the metropolitan area (log)	-0.0514**	-0.0608**	-0.0819**	-0.0955**	-0.1100**
Constant	5.627**	5.021**	4.131**	3.750**	3.828**
Adjusted R2	0.544	0.569	0.588	0.599	0.625
Number of observations	20,739	19,102	21,279	22,348	21,948

** p<.01, * p<.05

APPENDIX 2

Ordinary Appendix 3. Least Squares (OLS) regression results for estimating the log of median appraisal values of single family one-unit homes for purchase, 2013-2023 (Cont)

	2018	2019	2020	2021	2022	2023
Neighborhood racial composition						
Majority Black census tract	0.2484**	0.2300**	0.1595**	0.1435**	0.1110**	0.1081**
Majority White census tract	0.0103	0.0251**	0.0260**	0.0395**	0.0306**	0.0199**
Percentage of the population of other race and ethnicity	0.0005	0.0007**	0.0007**	0.0003	0.0010**	0.0011**
Housing stock characteristics						
Median number of rooms	0.0423**	0.0426**	0.1710**	0.1644**	0.1742**	0.1701**
Mean year built	0.0032**	0.0035**	0.0026**	0.0040**	0.0051**	0.0059**
Percentage of single-family detached homes	-0.0034**	-0.0035**	-0.0054**	-0.0047**	-0.0039**	-0.0038**
Socioeconomic status						
Employment rate	0.0122**	0.0113**	0.0041**	0.0032**	0.0038**	0.0035**
Percentage of population living in poverty	-0.0140**	-0.0142**	-0.0097**	-0.0103**	-0.0094**	-0.0072**
Percentage of owner-occupied housing units	0.0011**	0.0008**	-0.0020**	-0.0026**	-0.0020**	-0.0004**
Amenities						
Proportion of public parks in the census tract	0.0024**	0.0023**	0.0021**	0.0027**	0.0021**	0.0023**
Mean commute time (minutes)	0.0116**	0.0112**	0.0094**	0.0095**	0.0085**	0.0072**
Number of retail establishments per 1,000 residents	-0.0080**	-0.0094**	-0.0063**	-0.0081**	-0.0044**	-0.0026
Number of entertainment establishments per 1,000 residents	0.0157**	0.0145**	0.0128**	0.0148**	0.0108**	0.0110**
Number of local services per 1,000 residents	-0.0108*	-0.0062	-0.0182**	-0.0236**	-0.0079	-0.0138*
Housing market dynamics						
House Price Index (HPI)	0.0011**	0.0011**	0.0011**	0.0010**	0.0009**	0.0009**
Annual change in HPI	-0.0072**	-0.0073**	-0.0122**	-0.0120**	0.0001	-0.0017**
Percentage loan originations to Black borrowers	-0.0093**	-0.0084**	-0.0079**	-0.0083**	-0.0069**	-0.0065**
Percentage loan originations to White borrowers	-0.0026**	-0.0019**	-0.0019**	-0.0029**	-0.0020**	-0.0020**
Number of appraisals for home sales (log)	-0.0449**	-0.0693**	-0.0821**	-0.0909**	-0.0985**	-0.0797**
Climate-related risks						
Expected Annual Loss (EAL) score	0.0015**	0.0014**	0.0020**	0.0022**	0.0020**	0.0017**
Metropolitan-level characteristics						
Total population in the metropolitan area (log)	0.2136**	0.1950**	0.2261**	0.2794**	0.2290**	0.1791**
Total Black population in the metropolitan area (log)	-0.1175**	-0.0987**	-0.1337**	-0.1774**	-0.1405**	-0.1084**
Constant	3.038**	2.716**	4.906**	2.188**	0.062	-1.437**
Adjusted R2	0.638	0.638	0.621	0.662	0.657	0.669
Number of observations	20,725	22,879	32,516	34,691	26,060	11,137

** $p < .01$, * $p < .05$

Home Appraisals in Black and White

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A Research Black Paper