Evaluating Fairness in Mortgage Markets: Insights from the 2024 HMDA Data

Craig Rudman

Marketing and Data Science Department

Regis University

MSDS 640

Prof. Ghulam Mujtaba

August 25, 2025

Evaluating Fairness in Mortgage Markets: Insights from the 2024 HMDA Data

Introduction

This report analyzes residential mortgage lending in 2024 using data collected under the Home Mortgage Disclosure Act (HMDA), a statute enacted in 1975 to promote transparency in housing credit. HMDA data are used to evaluate whether lenders meet community needs, guide public investment, and identify potential disparities in access to credit. Covered institutions report detailed information on applications, loan characteristics, property locations, pricing, and applicant demographics. This analysis focuses on closed-end, first-lien home purchase loans secured by single-family, site-built principal residences, and examines denial rates, interest rates, and total loan costs by race and ethnicity.

Background

The Home Mortgage Disclosure Act requires financial institutions to disclose loan application and outcome data so that policymakers and the public can evaluate whether credit needs are being met in local communities ("Home Mortgage Disclosure Act," 1975). Although HMDA does not itself prohibit discrimination, it operates alongside the Fair Housing Act of 1968, which prohibits housing discrimination, and the Equal Credit Opportunity Act of 1974, which prohibits discrimination in credit transactions. Congress has expanded HMDA over time in response to concerns about racial and ethnic disparities, the savings and loan crisis, and later subprime lending practices, adding requirements to report borrower demographics and loan pricing information (Government Accountability Office, 2009). The 2010 Dodd-Frank Act transferred rulemaking authority to the Consumer Financial Protection Bureau(CFPB) and mandated additional loan-level reporting—such as age, credit score, and loan terms—to provide regulators and the public with more detailed information about mortgage market practices (CFPB, 2019).

At the same time, HMDA data have recognized limitations. They do not include all underwriting variables, such as credit scores or debt-to-income ratios, which can make it difficult to determine the extent to which observed differences in loan outcomes reflect credit risk factors or other influences (Government Accountability Office, 2009). Oversight has also been distributed across multiple agencies, leading to variation in enforcement approaches (Government Accountability Office, 2009). While data expansions in 1989 and under Dodd-Frank improved transparency, they did not always keep pace with market developments, and certain fields are withheld from public release to protect borrower privacy (CFPB, 2019).

Despite these efforts, disparities have continued. In the 1990s and 2000s, studies found that minority borrowers, particularly Black and Hispanic households, experienced higher denial rates and were more likely to obtain higher-cost mortgages than similarly situated white borrowers (U.S. Government Accountability Office, 1996). Federal Reserve analyses of 2005–2006 HMDA data reported that 55 percent of Black borrowers and 46 percent of Hispanic borrowers received higher-priced conventional loans, compared with 17 percent of non-Hispanic white borrowers (Frumkin, 2007). More recent evidence points to similar patterns: the CFPB's 2023 Mortgage Market Activity and Trends report found that Black and Hispanic borrowers continue to have higher denial rates for conventional mortgages and remain more likely to rely on FHA and VA loans, which may carry different costs and wealth implications (Consumer Financial Protection Bureau, Office of Research, 2024).

Problem Statement

The persistence of these differences, despite successive rounds of legislation, reporting requirements, and enforcement activity, illustrates the limits of existing oversight. They point to the continuing importance of public access to HMDA data and the development of analytic methods that enable regulators, researchers, and communities to better evaluate patterns in mortgage lending.

After filtering the 2024 HMDA LAR data, we are left with 5,937,941 closed-end loan applications secured by a first-lien, and intended for single-family, site-built, principal-residence homes. We will assess denial rates by race and ethnicity, and compare how this manifests across the four loan types: Conventional, FHA, VA, and RHS/FSA.

Analysis

To address our research question, we will need to understand the distribution of data by race and ethnicity and by loan type.

Race and Ethnicity

As is the practice in CFPB reporting, race and ethnicity have been combined, as per the following:

> Applications are placed in one category for race and ethnicity. The application is designated as "joint" if one applicant was reported as white and the other was reported as one or more minority races or if the application is designated as white with one Hispanic applicant and one non-Hispanic applicant. If there are two applicants and each reports a different minority race, the application is designated as two or more minority races. If an applicant reports two races and one is white, that applicant is categorized under the minority race. Otherwise, the applicant is categorized under the first race reported. "Missing" refers to applications in which the race of the applicant(s) has not been reported or is not applicable or the application is categorized as white, but ethnicity has not been reported (Consumer Financial Protection Bureau, Office of Research, 2024).

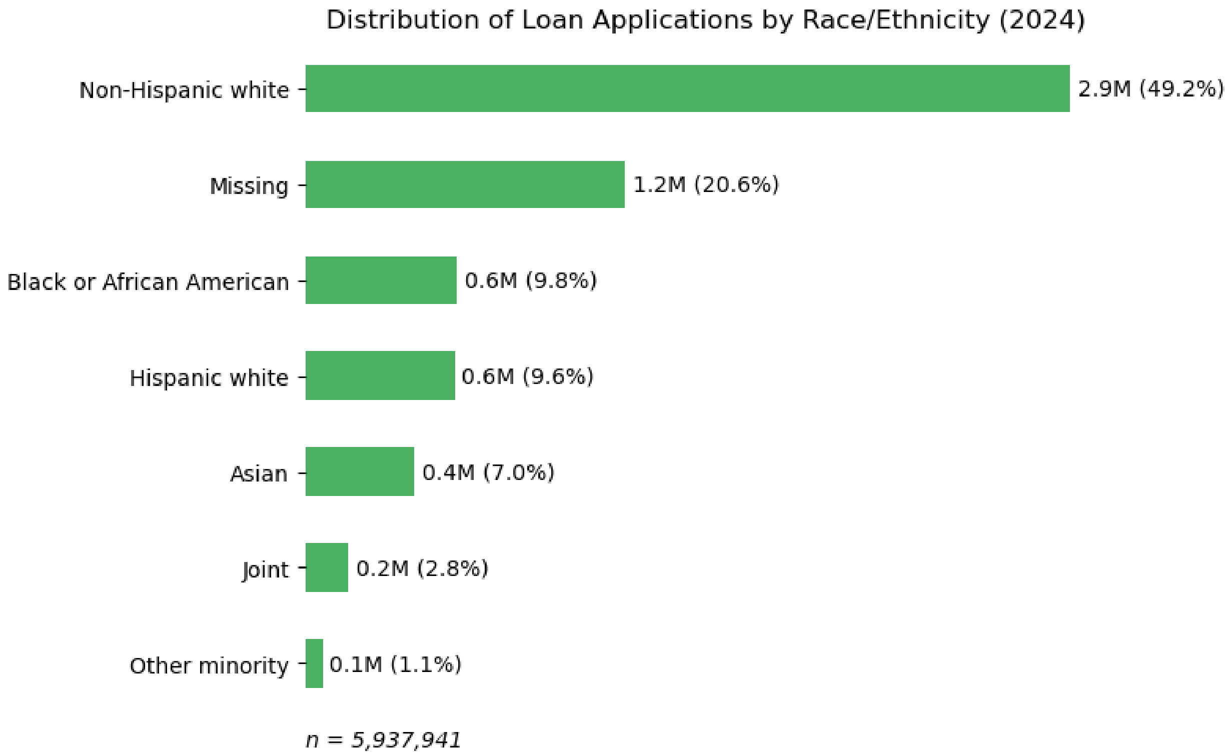

Figure 1

Distribution of Loan Applications by Race/Ethnicity (millions)

Loan Type

The data is distributed across the following loan types:

- **Conventional:** A conventional loan is any mortgage loan that is not insured or guaranteed by the government (Consumer Financial Protection Bureau, 2024a).

- **FHA:** The Federal Housing Administration (FHA) provides mortgage insurance to FHA-approved lenders to protect these lenders against losses if the homeowner defaults on the loan. The cost of the mortgage insurance is passed along to the homeowner (Consumer Financial Protection Bureau, 2025).

- **VA:** The Department of Veterans Affairs (VA) offers loan programs to help servicemembers, veterans, and their families buy homes. The VA sets the rules for loan qualification, arranges the terms under which mortgages may be offered, and guarantees any loan made under the program (Consumer Financial Protection Bureau, 2023).

- **RHS/FSA:** The Rural Housing Service (RHS) offers mortgage programs that can help low- to moderate-income rural residents purchase, construct, and repair homes.The RHS both lends directly to qualified borrowers and guarantees loans that meet RHS program requirements made by approved lenders (Consumer Financial Protection Bureau, 2024b).

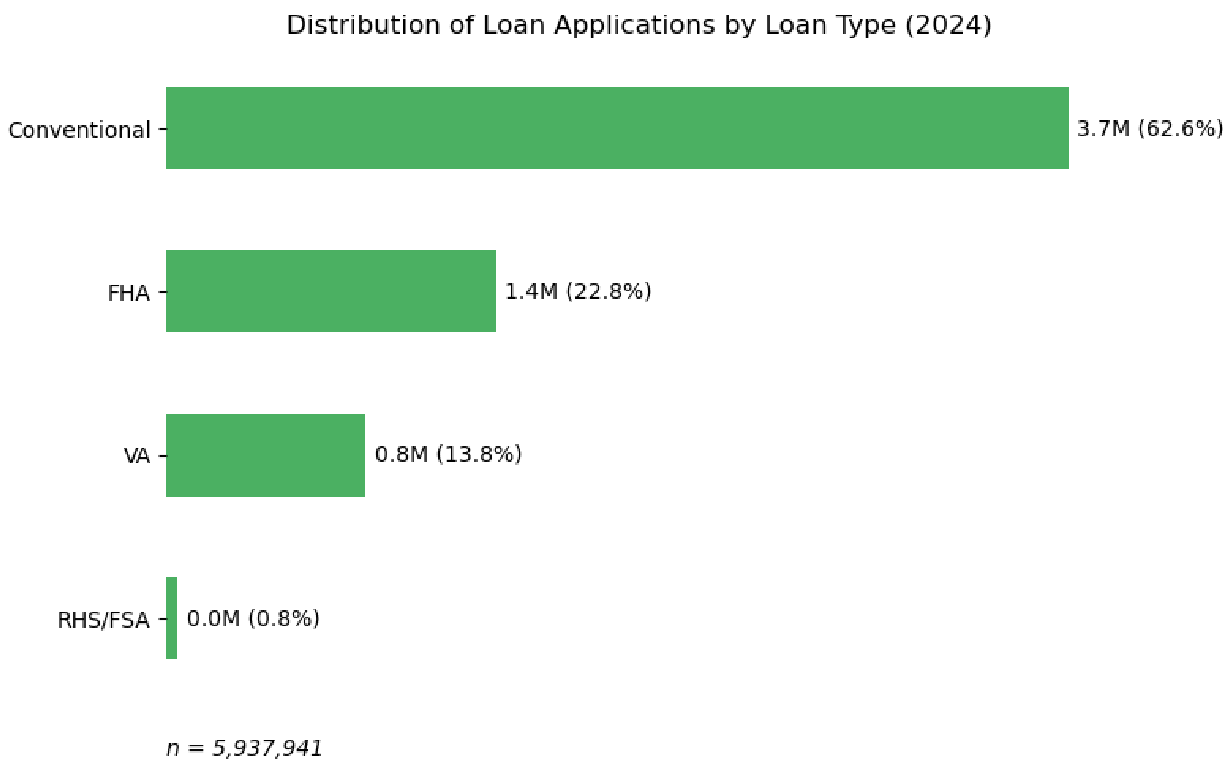

Figure 2

Distribution of Loan Applications by Loan Type (millions)

Approval Rates

The data in the HMDA dataset are identified by the action taken on the loan application. Actions are aggregated into a derived measure called "decision", with one of three possible values: "approved", "denied", or "no decision". The breakdown of decision outcomes is shown below:

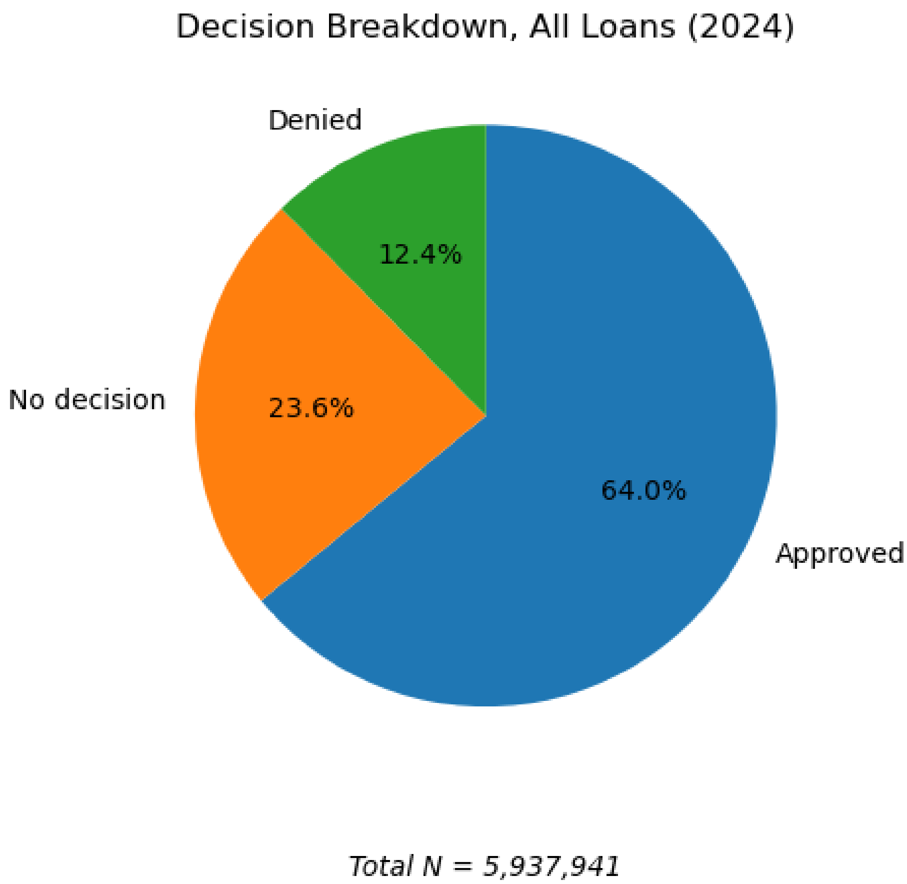

Figure 3

Outcomes of All Loan Application Decisions

The high rate of "no decision" outcomes may conceal the potential for inequities to enter the process (i.e. coding denials as incomplete or withdrawn). An inspection of this data demonstrates that there is some disparity in the no-decision rate.

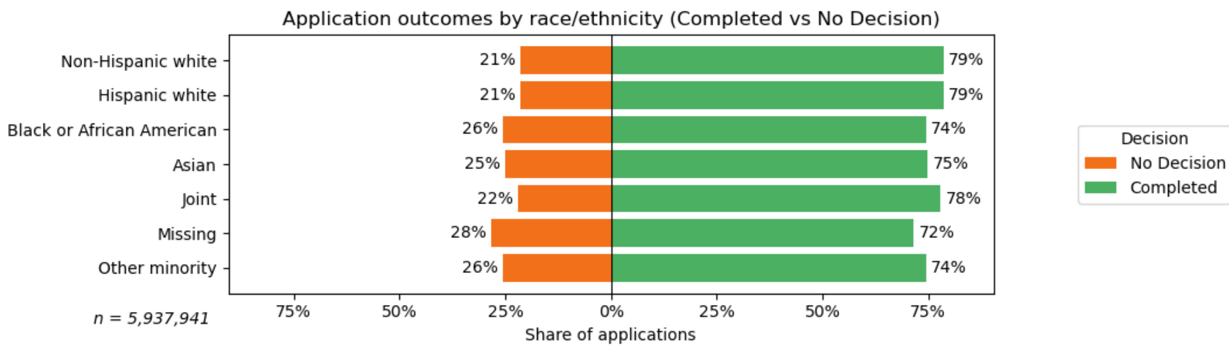

Figure 4

Decision Outcomes, All Loan Types (2024)

In order to account for this, we will consolidate "denied" and "no decision" into a "approved/not approved" measure. The rationale is that a successful outcome for a borrower is an approved, originated loan. We should therefore consider how borrowers experience loan applications with this as the key indicator of success.

Approval rates across all loan types show that there was significant disparity in outcomes across race and ethnicity categories in 2024, as in previous years.

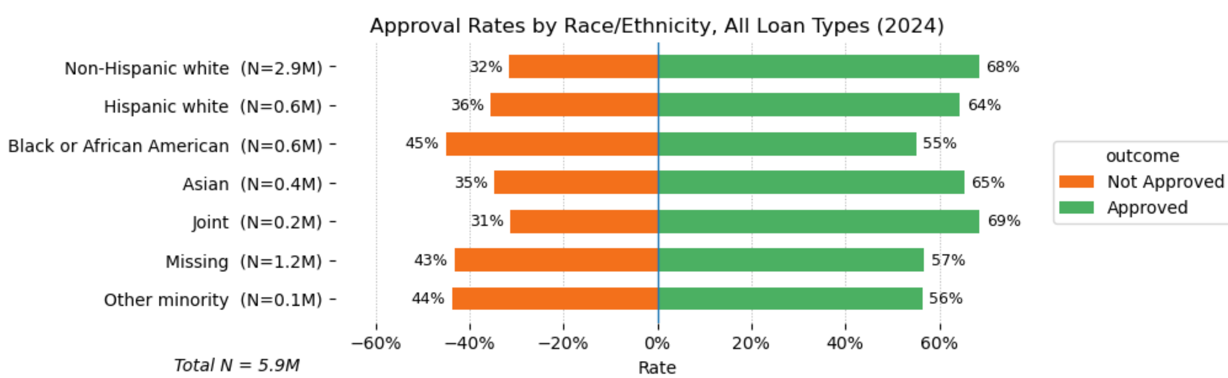

Figure 5

Approval Rates by Race/Ethnicity, All Loan Types

Loan Types

Analysis shows that disparities are not equally distributed across all loan types. The figure below shows disaggregated outcomes in approved/not approved by race/ethnicity and loan type:

loan_type	Conventional		FHA		RHS/FSA		VA	
Metric	%Not Approved	%Approved	%Not Approved	%Approved	%Not Approved	%Approved	%Not Approved	%Approved
derived_race_ethnicity								
Non-Hispanic white	29%	71%	38%	62%	27%	73%	36%	64%
Hispanic white	36%	64%	34%	66%	29%	71%	35%	65%
Black or African American	45%	55%	46%	54%	38%	62%	43%	57%
Asian	34%	66%	41%	59%	34%	66%	37%	63%
Joint	30%	70%	32%	68%	28%	72%	34%	66%
Missing	41%	59%	48%	52%	34%	66%	42%	58%
Other minority	44%	56%	44%	56%	37%	63%	42%	58%

Figure 6

Approval Rates by Race and Ethnicity, Grouped by Loan Type

We can calculate a disparity gap if we assume a reference category. We'll use "Non-Hispanic white" as the reference category to derive a Disparity Gap measure, which shows the difference in percentage points relative to the reference category as determined by the maximum minus the minimum measured gaps in that category.

Table 1

Disparity Gaps in Approval Rates (percentage points) relative to Non-Hispanic white applicants

Race/Ethnicity	Conventional	FHA	RHS/FSA	VA
Non-Hispanic white	0	0	0	0
Hispanic white	-7	+4	-2	+1
Black or African American	-16	-8	-11	-7
Asian	-5	-3	-7	-1
Joint	-1	+6	-1	+2
Missing	-12	-10	-7	-6
Other minority	-15	-6	-10	-6

We can see that the most acute disparity in lending outcomes occurs with Conventional loan applications coded Black or African American. Applications in this category are approved in 55% of samples versus 71% of Non-Hispanic white applications, a difference of 16 percentage points.

The spread of points from minimum to maximum illustrates the severity of disparity. From this data, we can determine that VA loans are the category most equitable in lending decision outcomes, with an overall spread of 9 percentage points as compared to Conventional loans (16 points), FHA loans (14 points) and RHS/FSA loans (11 points).

Conclusion

This analysis of the 2024 HMDA data underscores the persistence of disparities in mortgage lending outcomes by race and ethnicity. While overall approval rates vary by loan type, the most pronounced gaps appear in conventional lending, where Black and other minority applicants experience substantially lower approval rates compared with non-Hispanic white applicants. Conversely, government-backed programs such as VA and FHA loans show narrower gaps, suggesting that loan design and underwriting standards may mitigate—but do not eliminate—disparities.

At the same time, the treatment of "no decision" outcomes highlights the complexity of interpreting loan application data. Consolidating denials and incomplete applications into a single "not approved" measure provides a borrower-centered perspective, but also illustrates the limitations of HMDA data, which lack underwriting variables such as credit scores or debt-to-income ratios. These gaps make it difficult to fully distinguish between risk-based and potentially discriminatory outcomes.

Taken together, the findings point to the continuing importance of HMDA disclosure and the need for careful analytic methods to evaluate fairness in mortgage markets. They also suggest that public access to transparent, detailed data remains essential for regulators, researchers, and communities seeking to hold institutions accountable and to advance equitable access to credit.

References

CFPB. (2019). Home Mortgage Disclosure (Regulation C): Final Rule. Retrieved August 18, 2025, from https://www.federalregister.gov/documents/2019/10/29/2019-22561/home-mortgage-disclosure-regulation-c

Consumer Financial Protection Bureau. (2023, August). What is a VA Loan? *Consumer Financial Protection Bureau*. https://www.consumerfinance.gov/ask-cfpb/what-is-a-va-loan-en-113/

Consumer Financial Protection Bureau. (2024a, February). What is a Conventional Loan? *Consumer Financial Protection Bureau*. https://www.consumerfinance.gov/ask-cfpb/what-is-a-conventional-loan-en-117/

Consumer Financial Protection Bureau. (2024b, April). What is a USDA Rural Housing Service Loan? *Consumer Financial Protection Bureau*. https://www.consumerfinance.gov/ask-cfpb/what-is-a-usda-rural-housing-service-loan-en-114/

Consumer Financial Protection Bureau. (2025, June). What is an FHA Loan? *Consumer Financial Protection Bureau*. https://www.consumerfinance.gov/ask-cfpb/what-is-an-fha-loan-en-112/

Consumer Financial Protection Bureau, Office of Research. (2024, December). *2023 mortgage market activity and trends* (tech. rep.) (Report published December 2024). Consumer Financial Protection Bureau. https://www.consumerfinance.gov/data-research/research-reports/2023-mortgage-market-activity-and-trends/

Frumkin, S. (2007). Hmda data: Identifying and analyzing outliers. *Supervisory Insights*, *4*(2), 33–40. https://www.fdic.gov/regulations/examinations/supervisory/insights/siwin07/winter07.pdf

Government Accountability Office. (2009, July). Fair Lending: Data Limitations and the Fragmented U.S. Financial Regulatory Structure Challenge Federal Oversight and Enforcement Efforts. https://www.gao.gov/products/gao-09-704

Home Mortgage Disclosure Act [U.S.C. 12 §2801]. (1975). https://uscode.house.gov/statviewer.htm?volume=89&page=1125

U.S. Government Accountability Office. (1996). *Fair lending: Federal oversight and enforcement improved but challenges remain* (GAO/GGD-96-145) (Report to Congressional Committees). Government Accountability Office. Washington, D.C. https://www.gao.gov/products/ggd-96-145