



Evolution of Boston's Home Financing: Analyzing Changes in Mortgage Applicants

Home Mortgage Disclosure Act Data



**boston planning &
development agency**

Affordability and Accessibility of Mortgages

1 HMDA Data, Motivations, and Objectives

2 Overview of Mortgage Data in Boston

3 Affordability of Home Purchase Loans

4 Disparities in Mortgage Accessibility

5 Summary

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What is the Home Mortgage Disclosure Act?

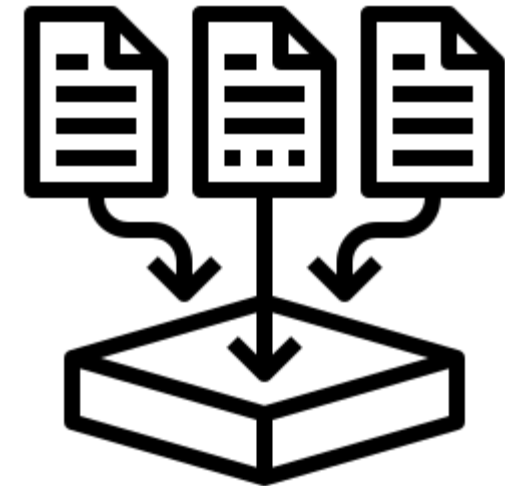
“HMDA is a federal law that requires mortgage lenders to keep records of key pieces of information regarding their lending practices”

- **Enacted in 1975 by Congress**
- **Requires public disclosure of applicant-level information about mortgages**
- **Aim to help:**
 - Evaluate the role of lenders in “serving housing needs of their communities”
 - Supply public officials with policy influencing information
 - Shed “light on lending patterns that could be discriminatory”



About the Data

- **National level dataset**
 - Millions of observations on mortgage applications in the US
- **2007-2017 and 2018-2022**
- **Key Variable of interest: Action Taken by Institution**
- **Other variables of interest:**
 - Applicant demographic information
 - Applicant financial information: Income, Debt
 - Mortgage application information: Type, Purpose, Loan Amount
- **Limitations**
 - Missing key variables: Credit score, Occupation etc.



Motivations and Objectives



Why?

- Importance of home ownership
 - Generational Wealth
 - Societal Inequality
- Ultimately dependent on loan approval

Objectives

- Exploring affordability and accessibility of home purchase loans
 - Understanding financial requirements
 - Uncovering potential discriminatory practices

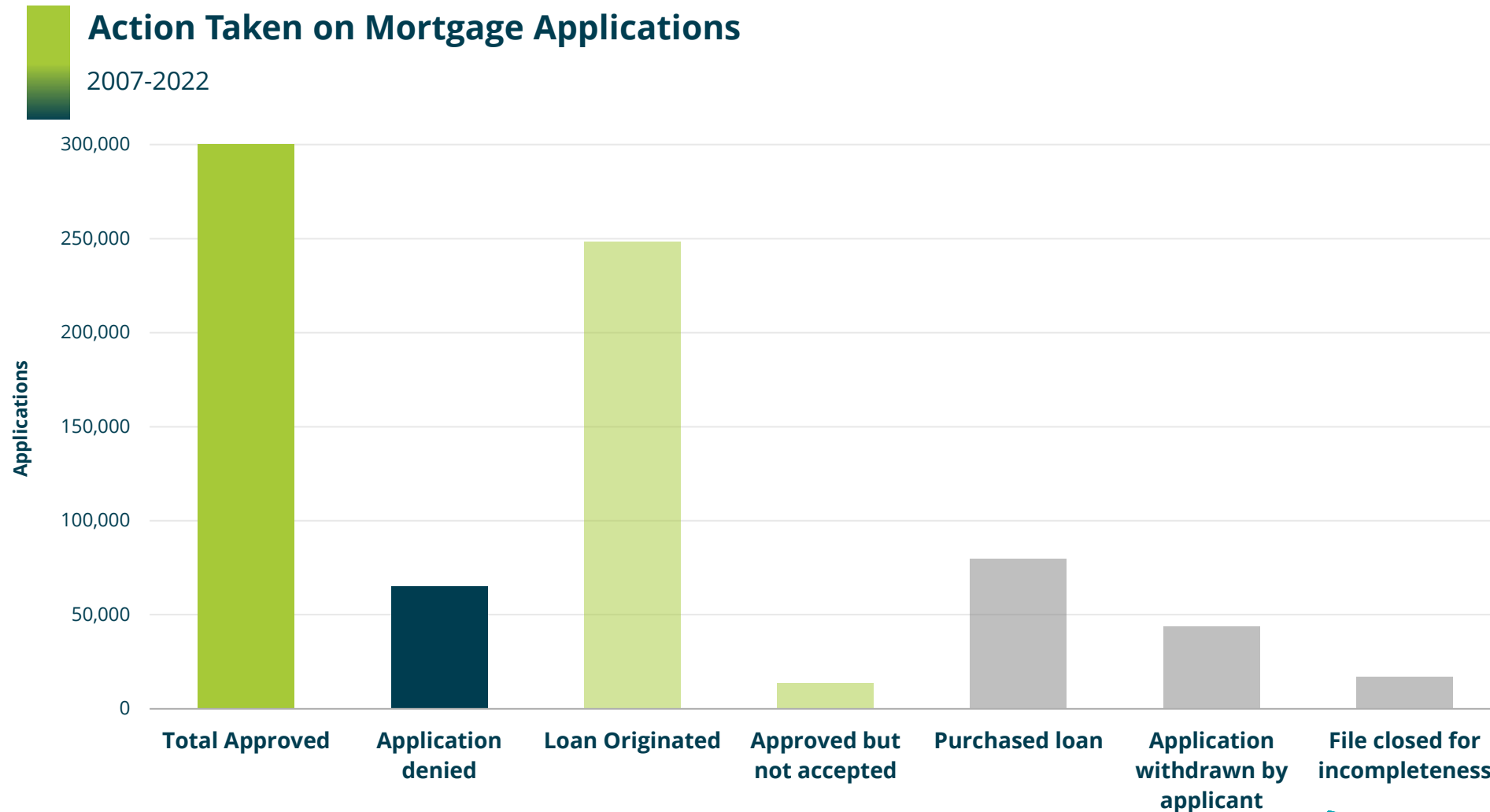
Findings

- Growing gap in affordability of mortgages
- Sustained differences across racial groups
- Boston follows national trends

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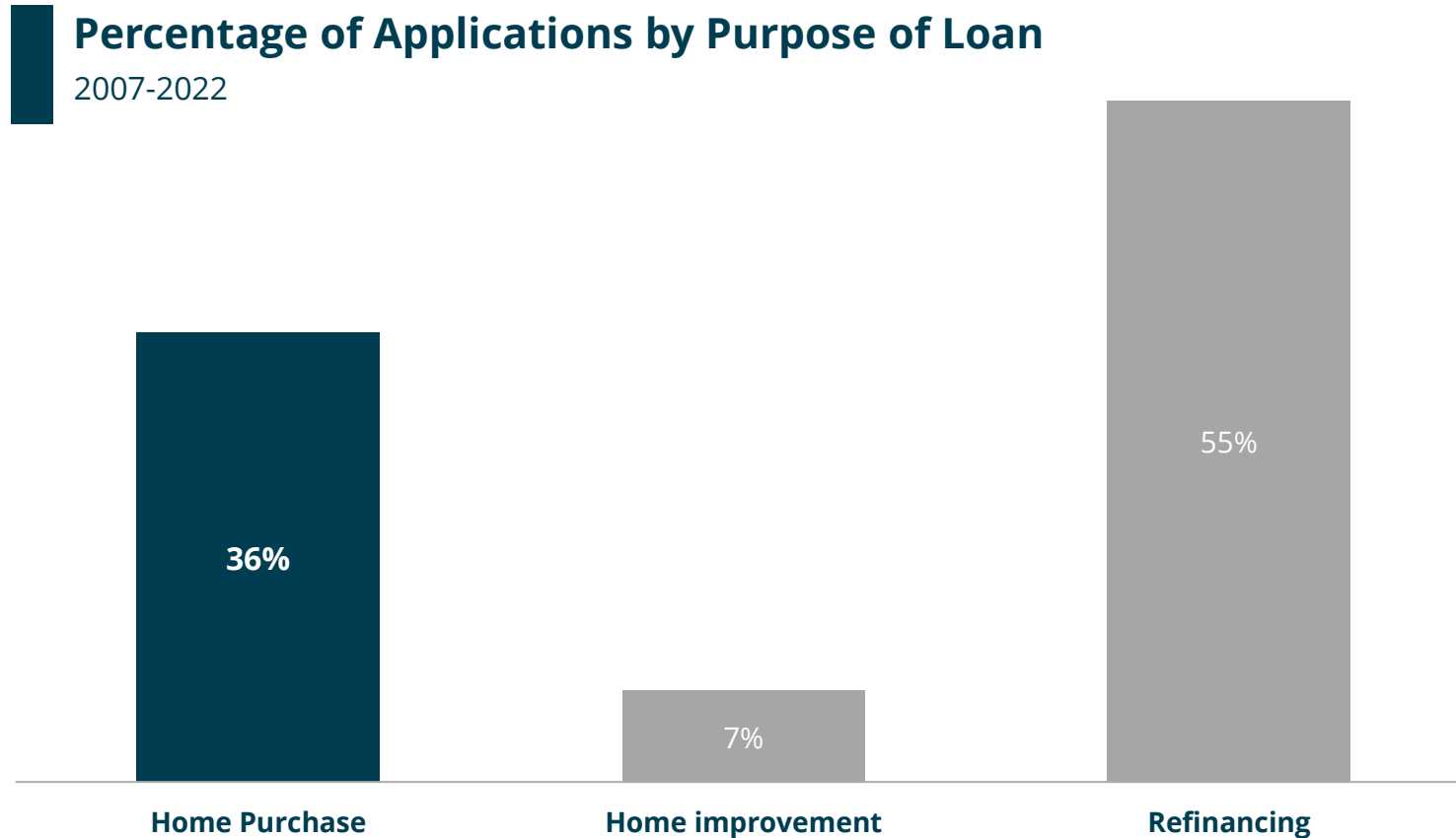
- 1 HMDA Data, Motivations, and Objectives
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There were ~470,000 mortgage applications in Boston, from 2007-2022



Source: Consumer Financial Protection Bureau, HMDA Data 2007-2022, BPDA Research Division Analysis.

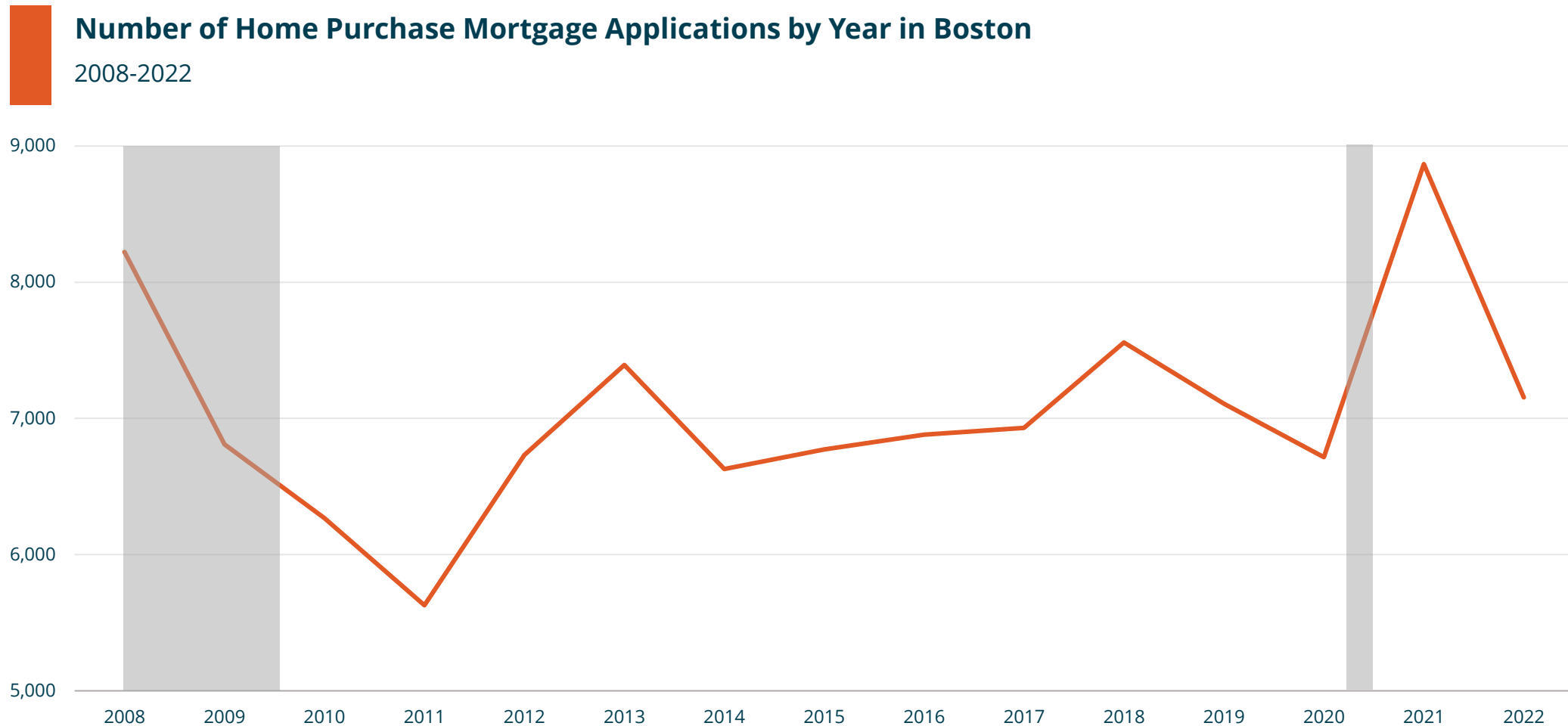
Home Purchase mortgages made up over 1/3 of applications in Boston



Number of Applications:

- 118,000 for Home Purchases
 - 103,500 approved
 - 14,500 denied
- 24,000 for Home Improvements
- 179,000 for Refinancing

Home purchase mortgage applications in Boston peaked in 2021

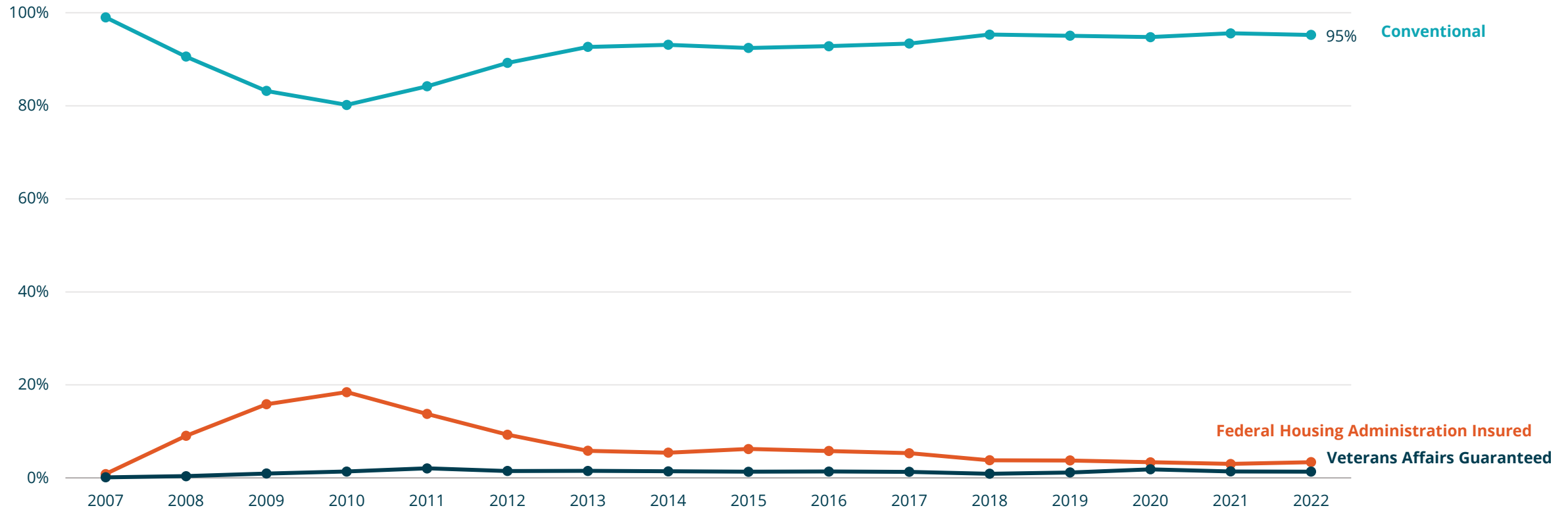


Source: Consumer Financial Protection Bureau, HMDA Data 2008-2022, BPDA Research Division Analysis.

109,000 of Boston's home-purchase loan applications were conventional mortgages

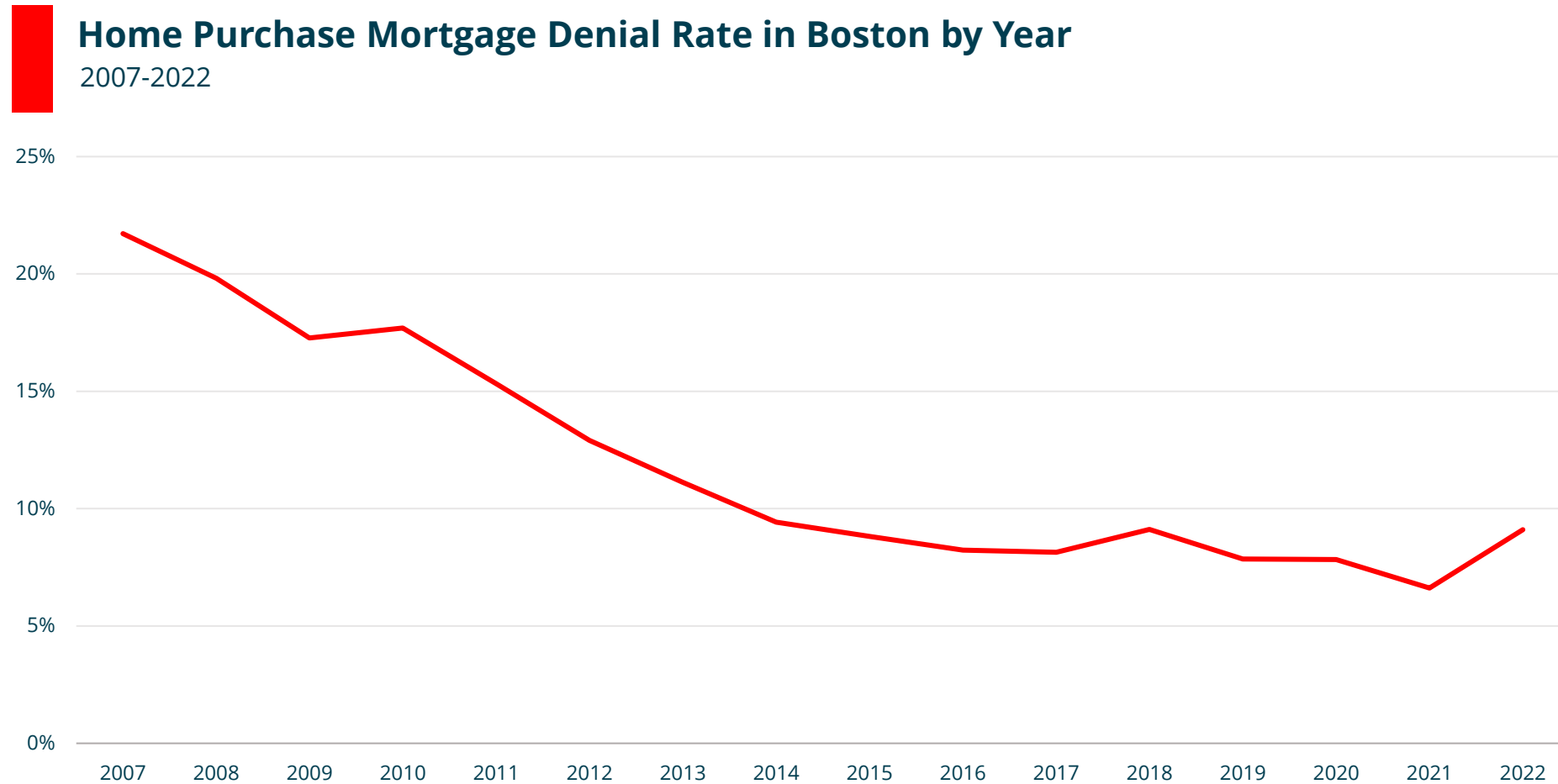
Proportion of home-purchase mortgages applications by loan type

2007-2022



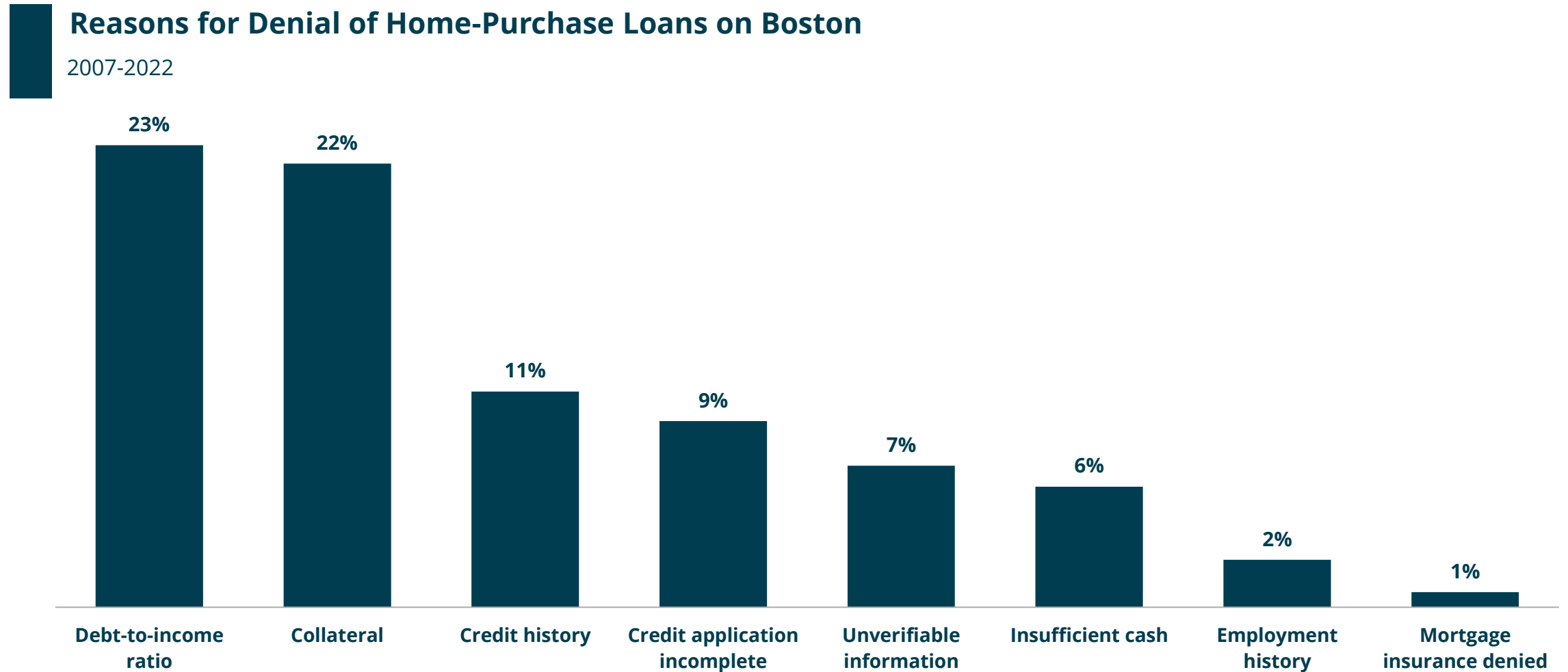
Source: Consumer Financial Protection Bureau, HMDA Data 2007-2022, BPDA Research Division Analysis.

Denial rates in Boston have been decreasing since 2007



Source: Consumer Financial Protection Bureau, HMDA Data 2007-2022, BPDA Research Division Analysis.

Debt-to-income ratio was the most common reason for denial

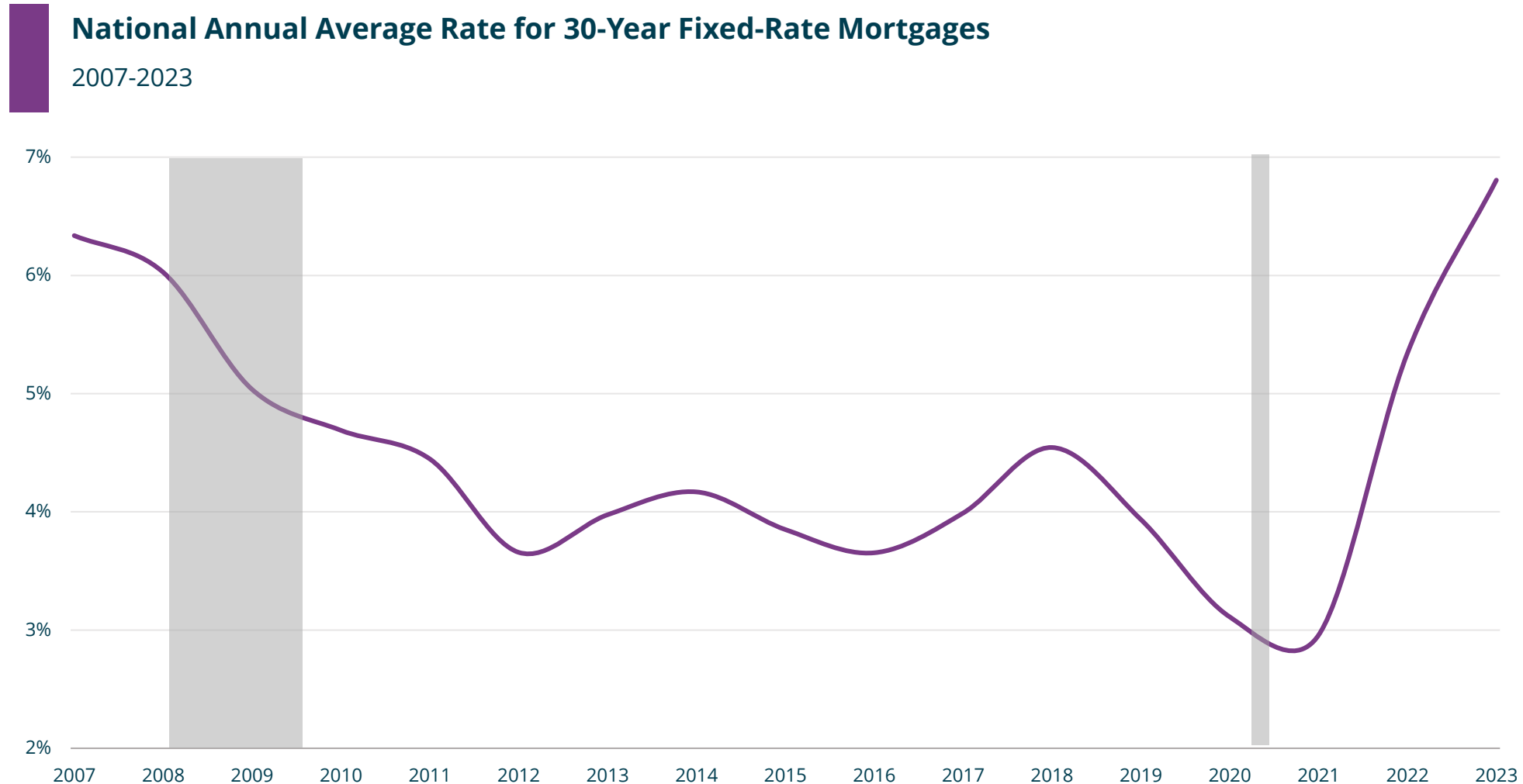


Source: Consumer Financial Protection Bureau, HMDA Data 2007-2022, BPDA Research Division Analysis.

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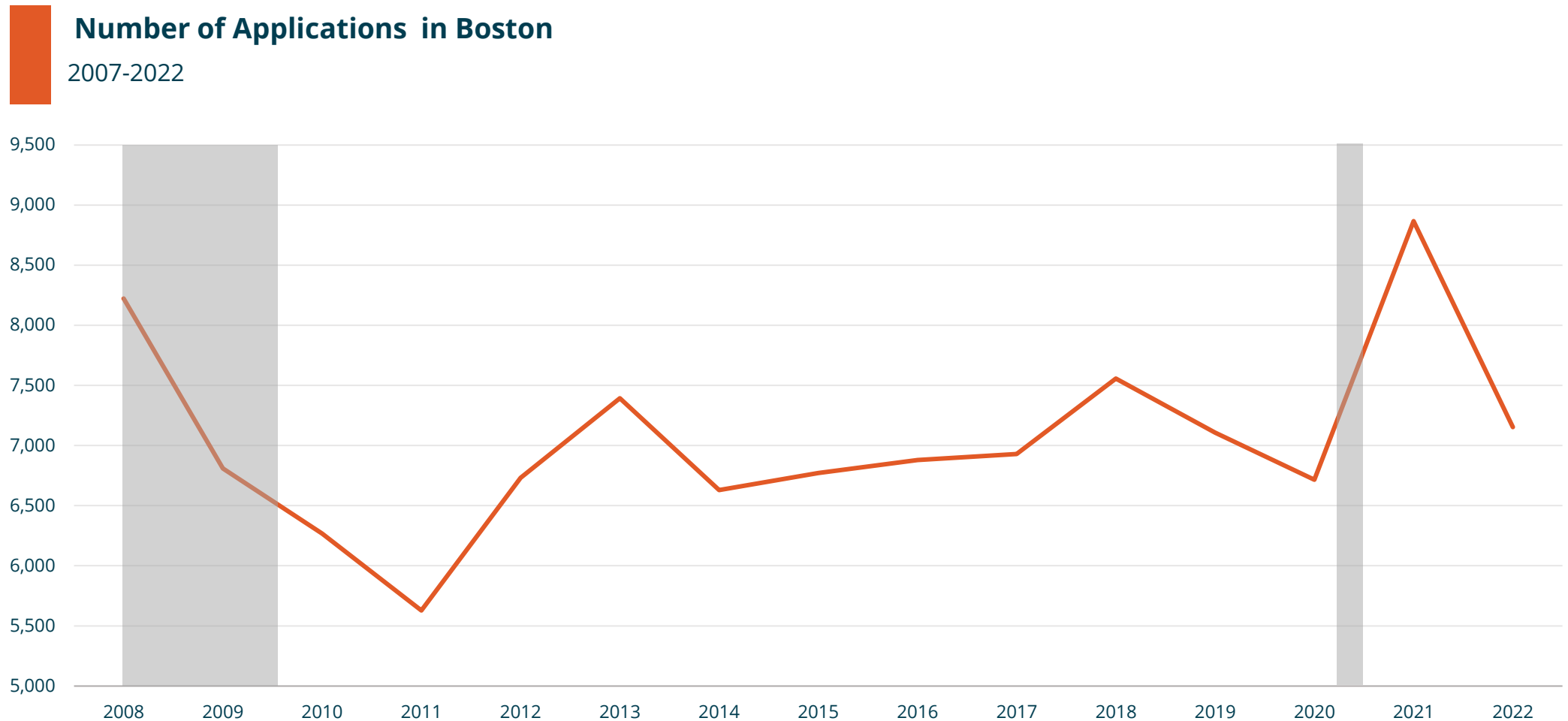
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The 30-year mortgage rate decreased since the Great Recession to a 50-year low in 2021



Source: Federal Reserve Bank of St. Louis, 2007-2023 30-Year Fixed Rate Mortgage Annual Average in the United States, BPDA Research Division Analysis

Since 2011, the 30-year mortgage rate has mirrored the yearly number of applications

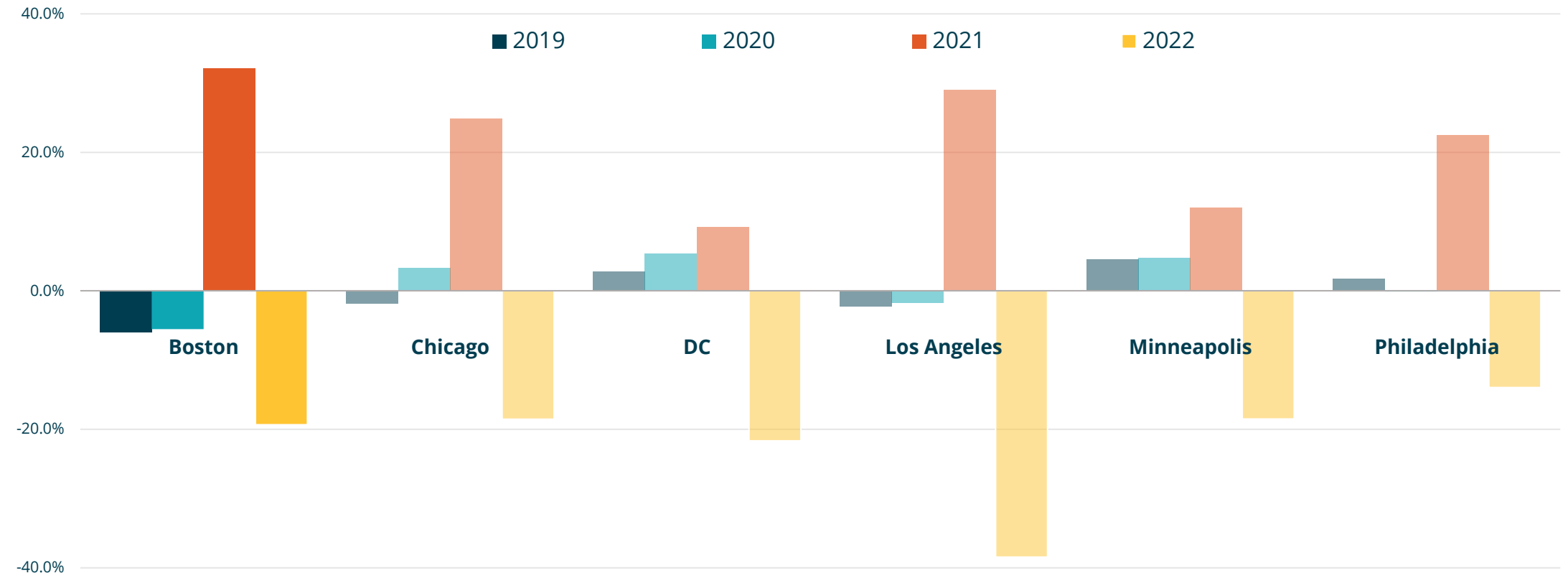


Source: Consumer Financial Protection Bureau, HMDA Data 2007-2022, BPDA Research Division Analysis.

Post-pandemic trends in home purchase loan applications in Boston are similar to those of comparable cities nationwide

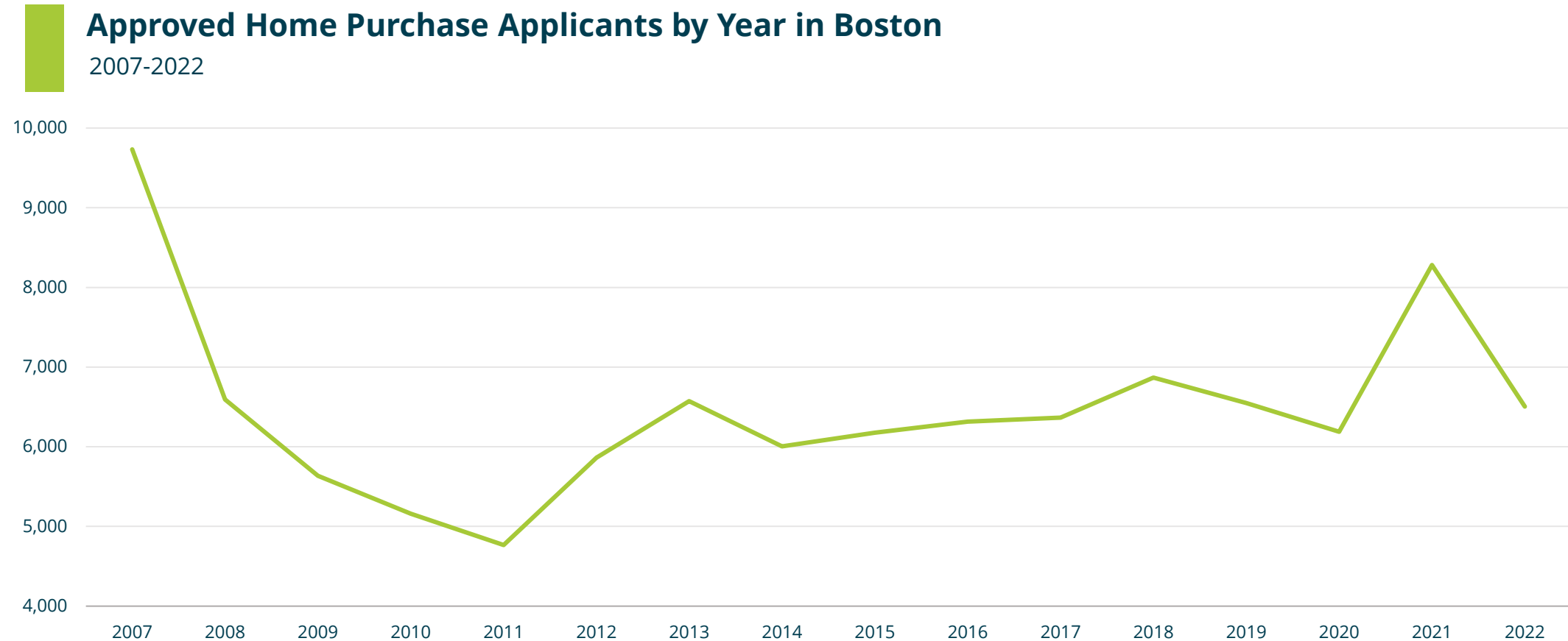
Yearly Percentage Change in Home Purchase Loan Applicants by City

2018-2022



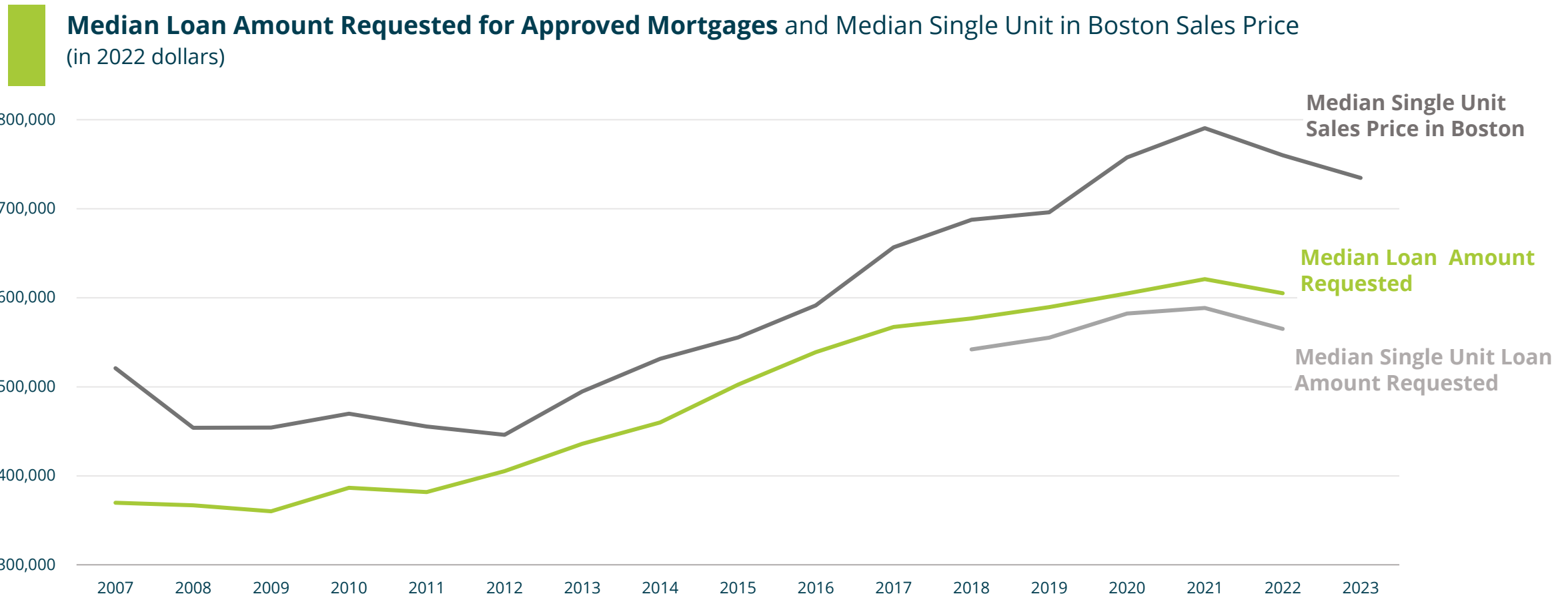
Source: Consumer Financial Protection Bureau, HMDA Data 2018-2022, BPDA Research Division Analysis.

The largest increases in approved home purchase loan applicants came in 2012-13 and 2021

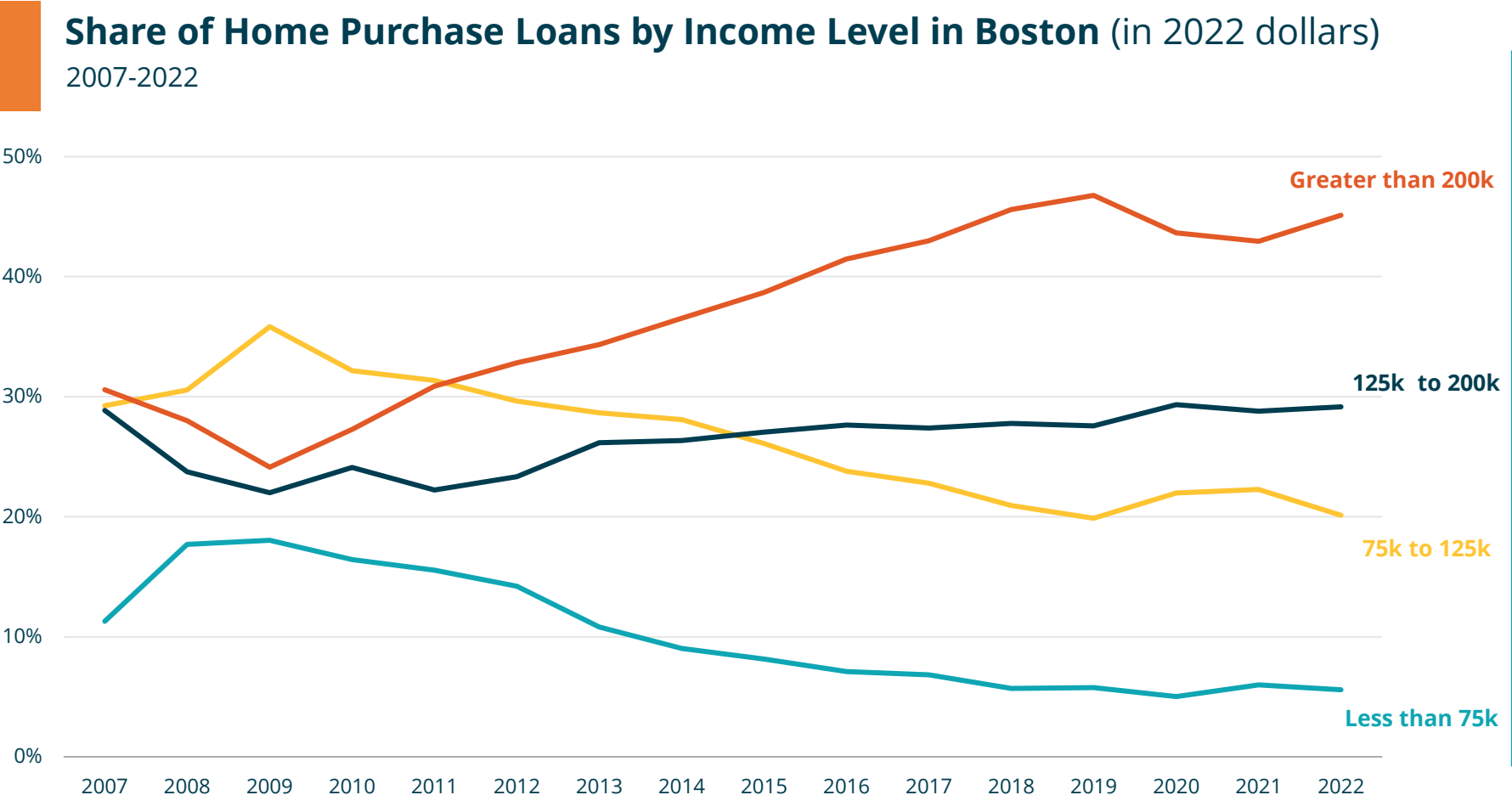


Source: Consumer Financial Protection Bureau, HMDA Data 2007-2022, BPDA Research Division Analysis.

The median loan amount for approved mortgages increased consistently from 2009-2021



The share of Boston's approved home loans for high-income earners have steadily increased since 2009



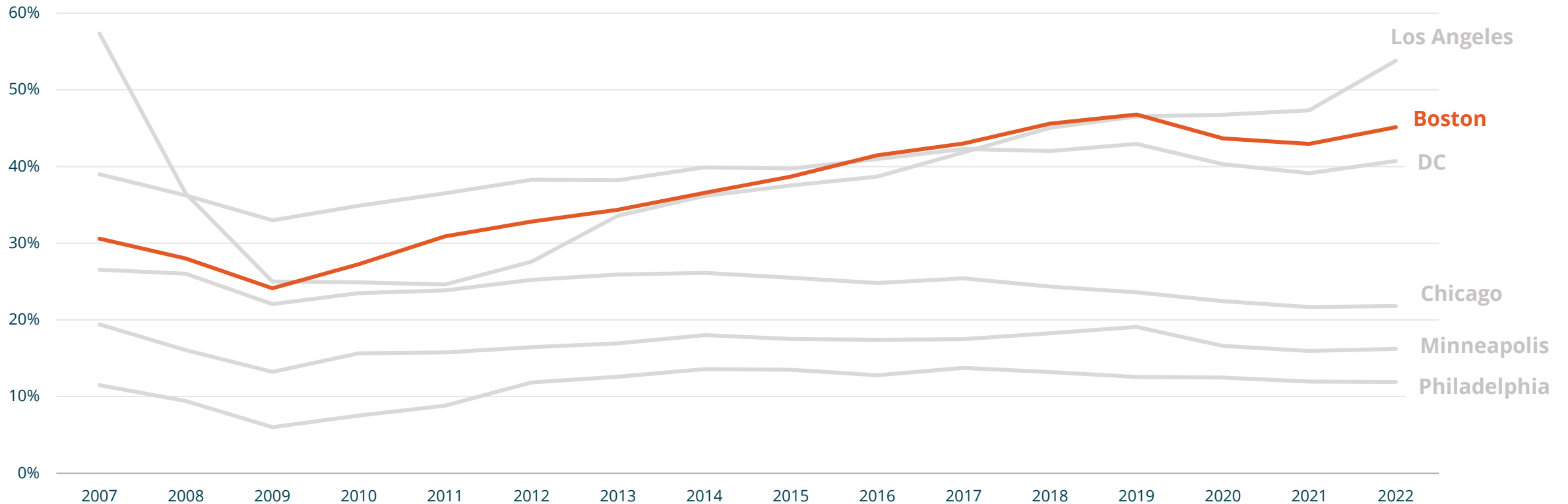
Boston Income Breakdown 2022

- Median Household Income: \$89,000
- 37% of households have an income greater than 125k
- 50% of households earn less than 75K

Source: Consumer Financial Protection Bureau, HMDA Data 2007-2022, and U.S. Census Bureau, 2018-2022 American Community Survey, BPDA Research Division Analysis.

The shift in mortgage affordability was not uniform nationally

Share of Approved Applicants with Incomes Greater than 200k (in 2022 dollars)
2007-2022

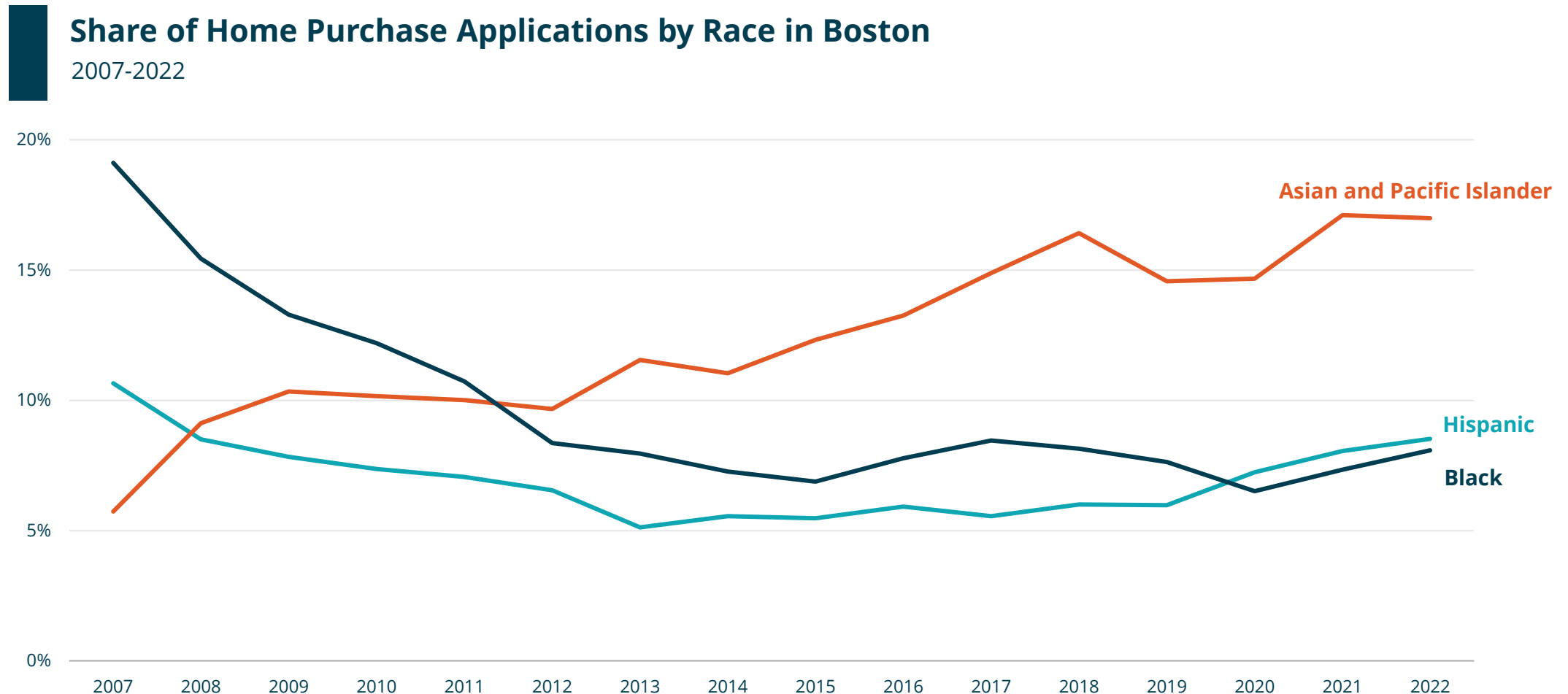


Source: Consumer Financial Protection Bureau, HMDA Data 2007-2022, BPDA Research Division Analysis.

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Between 2007 and 2022, the share of home purchase loan applications dropped by half for Black applicants, while tripling for Asian and Pacific Islander applicants



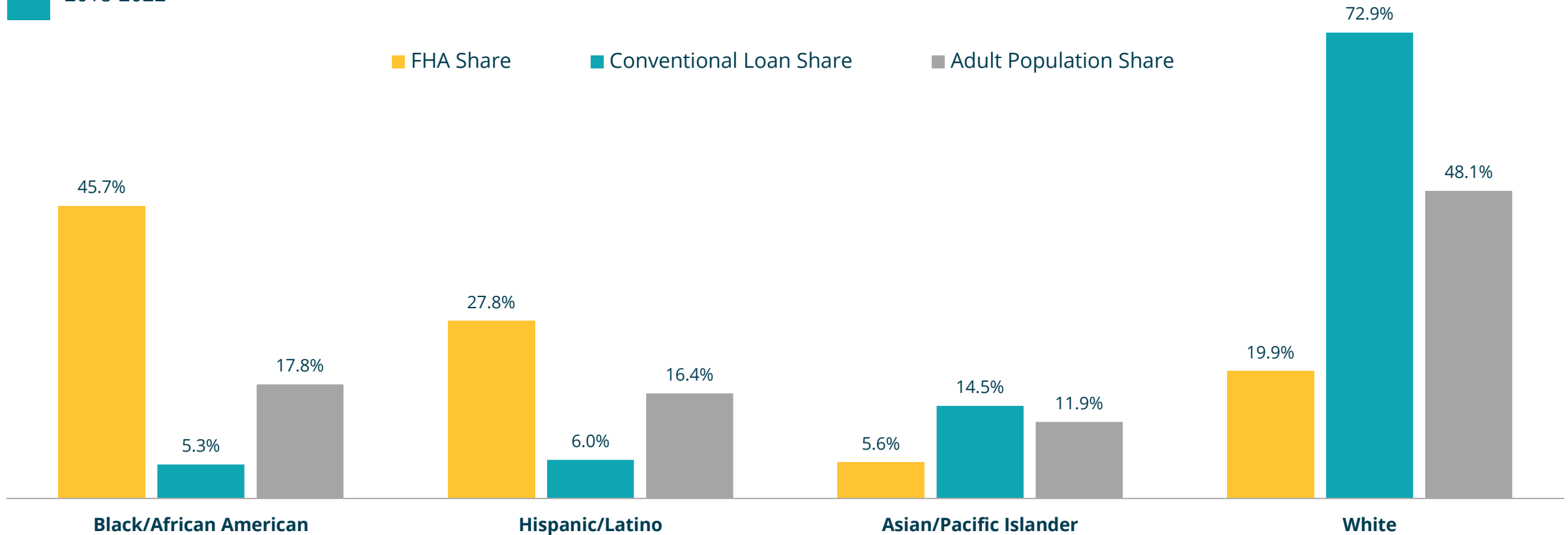
Source: Consumer Financial Protection Bureau, HMDA Data 2007-2022, BPDA Research Division Analysis.

White and Asian applicants are over-represented in Boston approved conventional mortgage applications

Share of Approved Home Purchase Loans and Adult Population by Race and Ethnicity in Boston

2018-2022

FHA Share Conventional Loan Share Adult Population Share

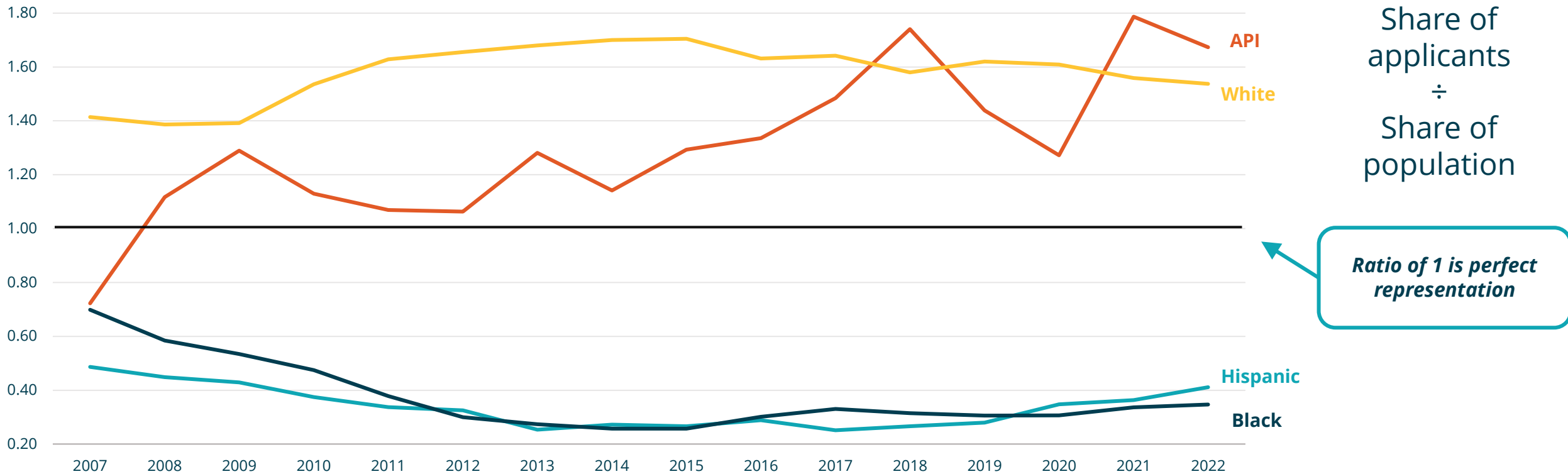


Source: Consumer Financial Protection Bureau, HMDA Data 2018-2022 and U.S. Census Bureau, 2020 Decennial Census, BPDA Research Division Analysis.

Hispanic and Black individuals have significantly less approved applications relative to their population

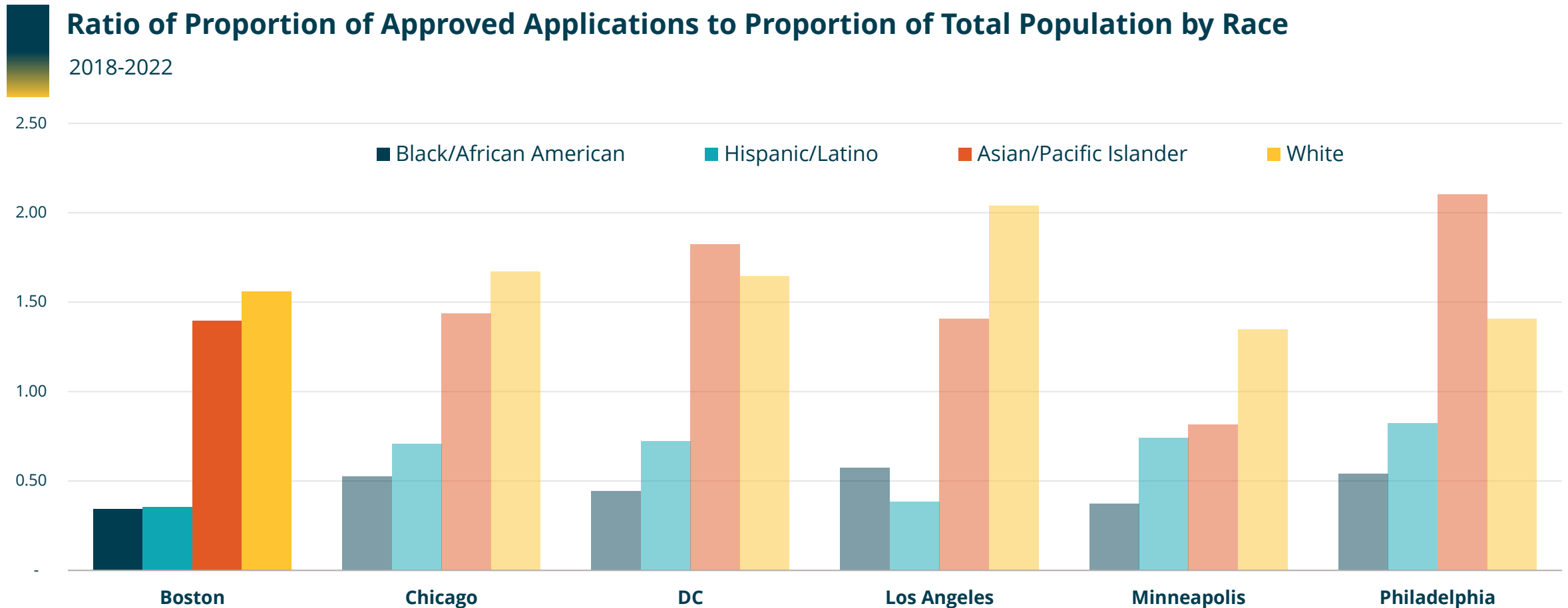
Ratio of Approved Applications to Population by Race in Boston

2007-2022



Source: Consumer Financial Protection Bureau, HMDA Data 2007-2022, and U.S. Census Bureau, 2007-2022 1-Year American Community Survey, BPDA Research Division Analysis.

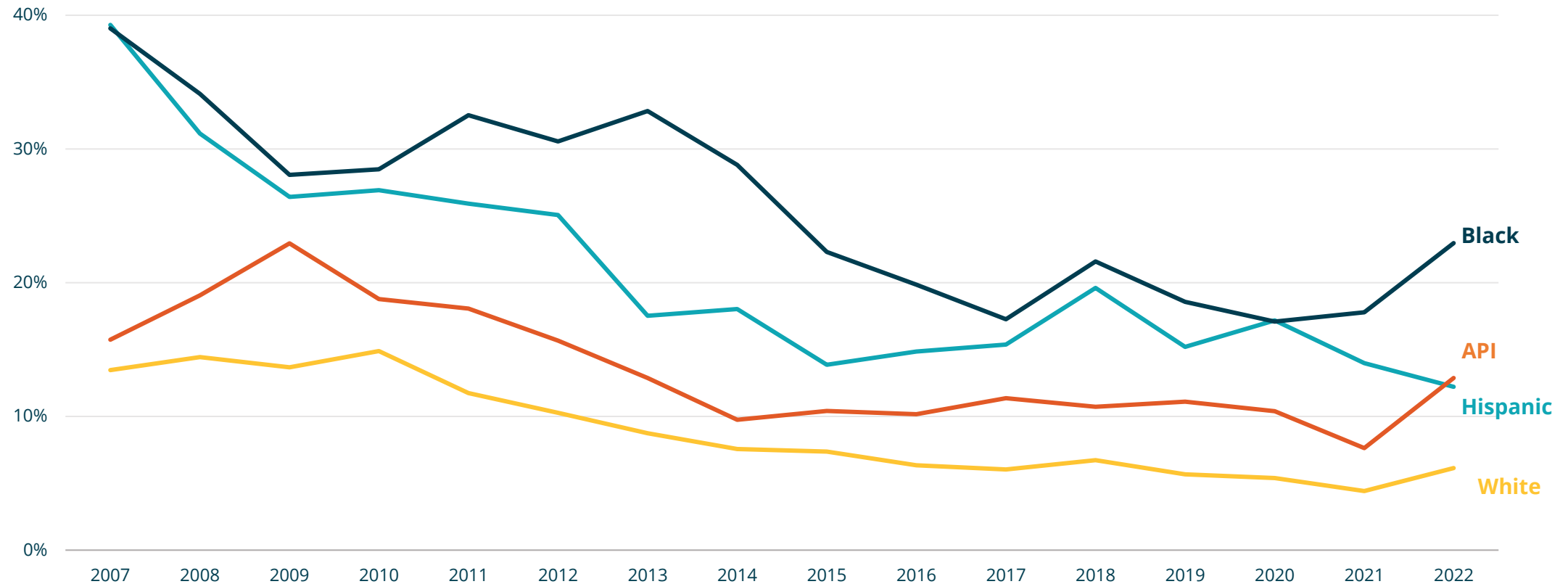
Boston is similar to comparable cities with regards to the racial differences in approved applications



Source: Consumer Financial Protection Bureau, HMDA Data 2018-2022 and U.S. Census Bureau, 2020 Decennial Census, BPDA Research Division Analysis.

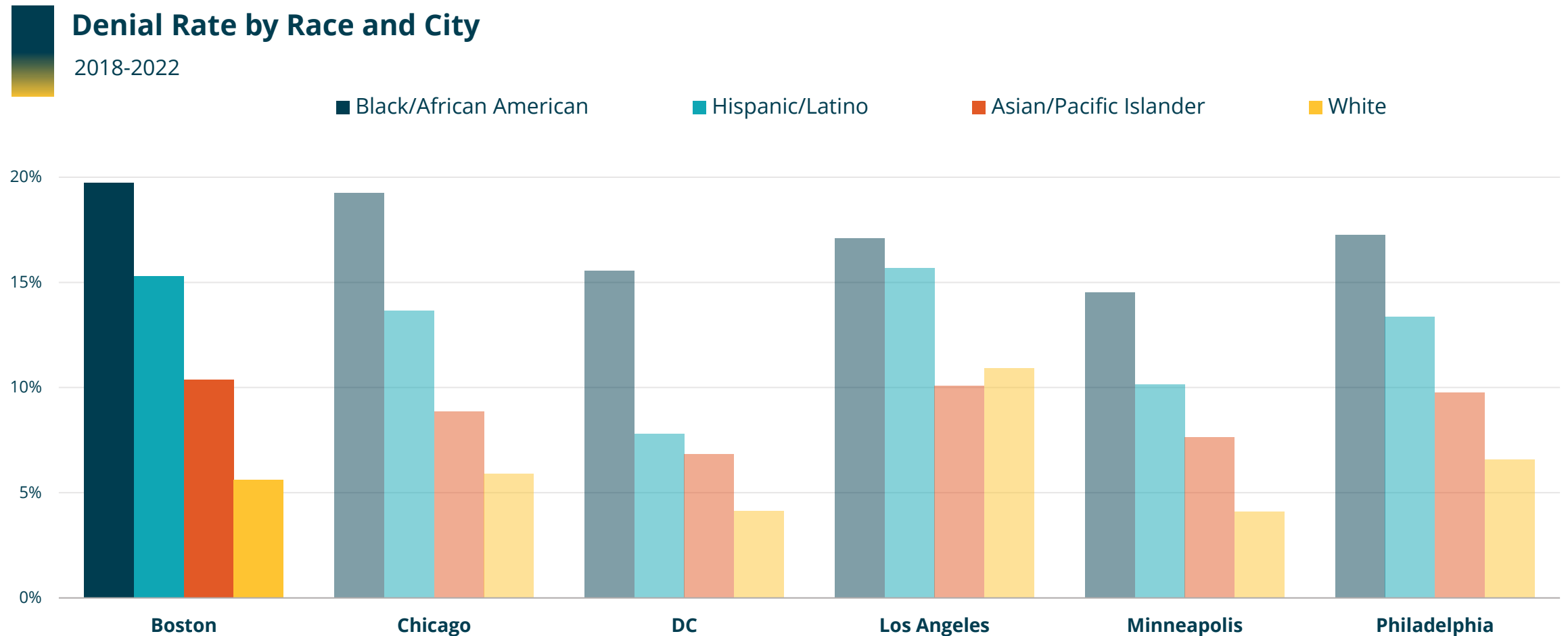
The denial rate gap between demographic groups is evident throughout the sample

Yearly Denial Rate of Home Purchase Loans by Race in Boston
2007-2022



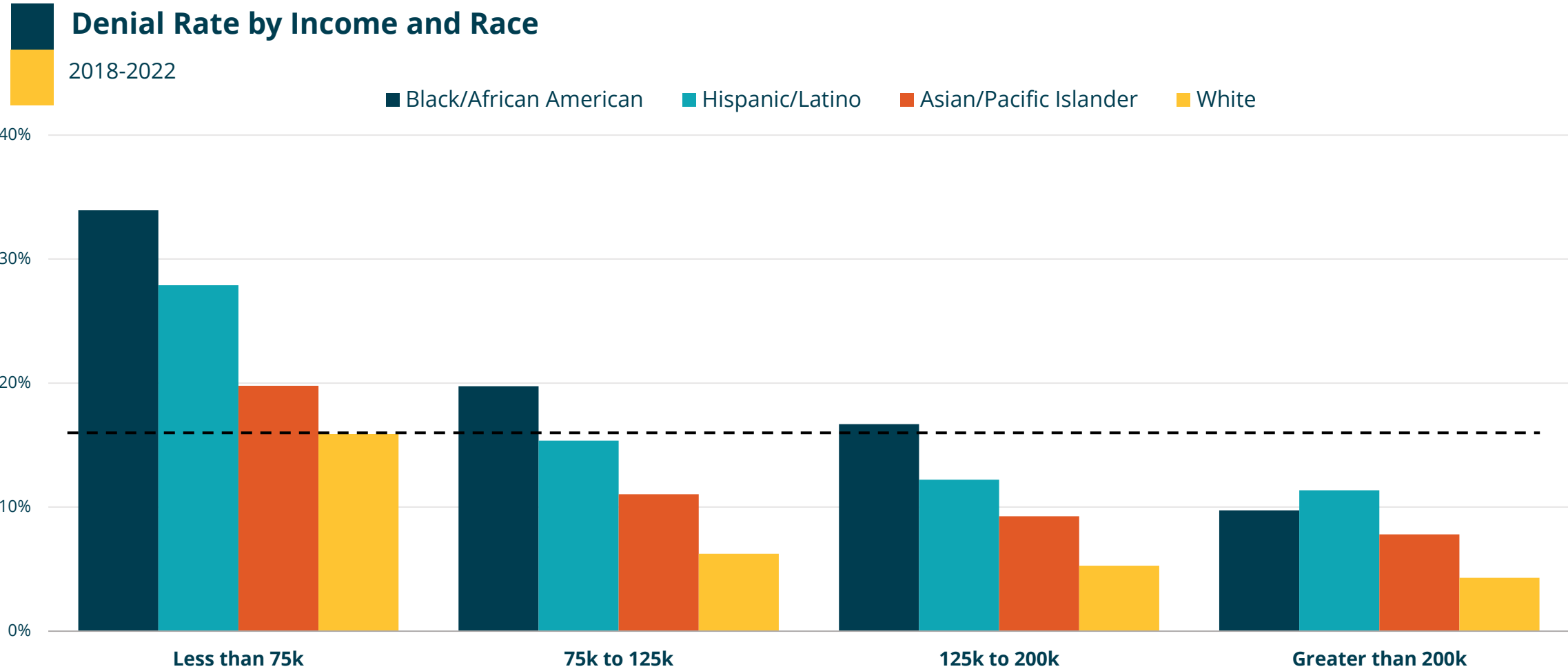
Source: Consumer Financial Protection Bureau, HMDA Data 2007-2022, BPDA Research Division Analysis.

Boston is similar to comparable cities regarding the racial disparity in denial rates



Source: Consumer Financial Protection Bureau, HMDA Data 2018-2022, BPDA Research Division Analysis.

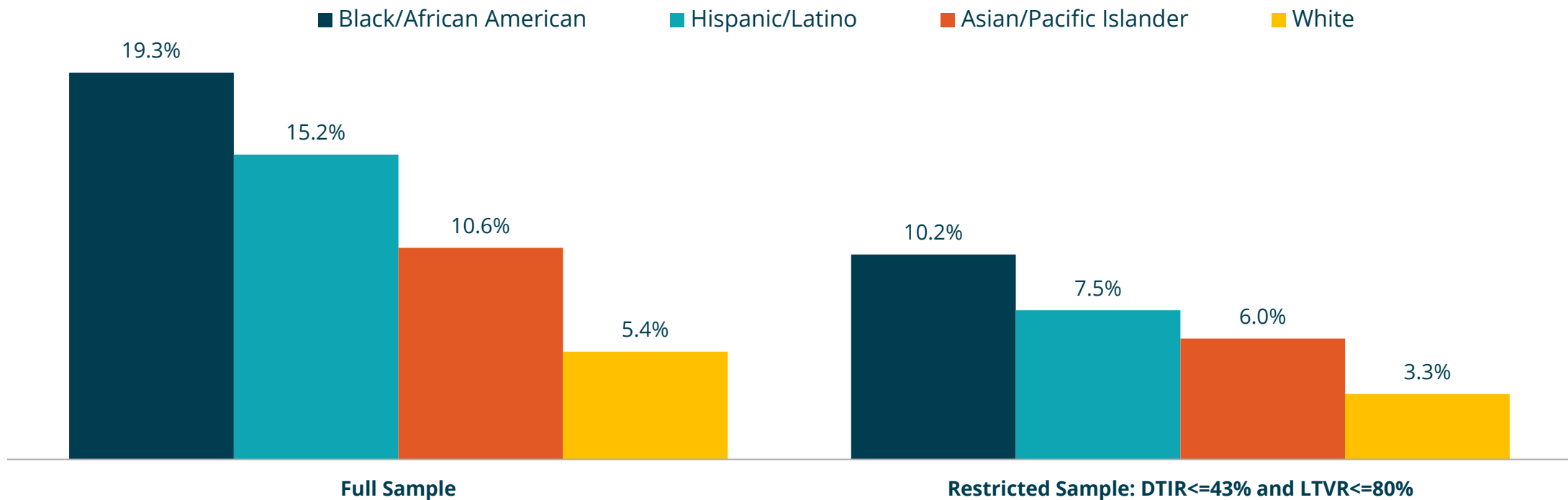
White individuals earning less than 75k have a lower denial rate than Black applicants earning \$125-200k



Source: Consumer Financial Protection Bureau, HMDA Data 2018-2022, BPDA Research Division Analysis.

Denial rate differences across race continue after accounting for debt and loan amount

Denial Rates by Race, Controlled for Debt-to-Income Ratio (DTIR) and Loan-to-Value Ratio (LTVR)
2018-2022

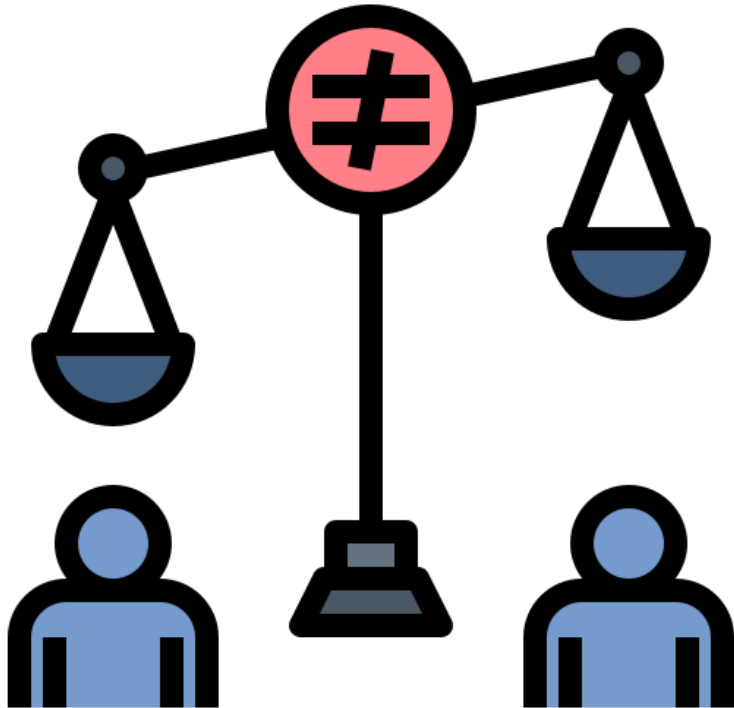


Source: Consumer Financial Protection Bureau, HMDA Data 2018-2022, BPDA Research Division Analysis.

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Increasingly Unequal Distribution

- Access to credit not representative of Boston's diversity
- Decrease in proportion of FHA
 - Increase in loans to high-income applicants

Disparities in Denial Rates

- Across race and ethnicity
 - Accentuated post-pandemic?
- Accounting for income, debt, and loan amount
 - More than economic inequalities?

Implications

- Impact on building generational wealth
- Continuing economic inequality across race
 - Barrier to economic mobility

Potential Next steps

- Individual mortgage rates
- Geographical analysis
- Role of race and ethnicity