

Massachusetts Economic Growth and Challenges in the Age of COVID-19

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What do I want you to know at the end of this presentation?

- Massachusetts has experienced a strong recovery from the pandemic recession
- Knowledge-based industries continue to be important in the state's growth
- Prosperity has not been felt evenly throughout the state
- Demographic headwinds will limit economic growth in the coming years
- Domestic outmigration is a serious concern for the state
- Remote work remains significant in Massachusetts
- The state must attract and retain families, as well as maximize labor market engagement in the coming years to remain competitive.
- Housing is a critical part of any attracting and retention strategy

Massachusetts at a Glance

2.6%

Unemployment Rate
September 2023
(9th lowest in the nation)

6.3%

Unemployment Rate (U-6)
2022-2023
(24th lowest in the nation)

-0.7%

Population Change
2020-2022
(8th lowest in the nation)

2.5%

Job Growth
September 2022 – September 2023
(9th highest in the nation)

18.0%

Foreign Born Residents
2022
(7th highest in the nation)

10.4%

Below Poverty Rate
2022
(9th lowest in the nation)

40.3

Median Age
2022
(17th oldest in the nation)

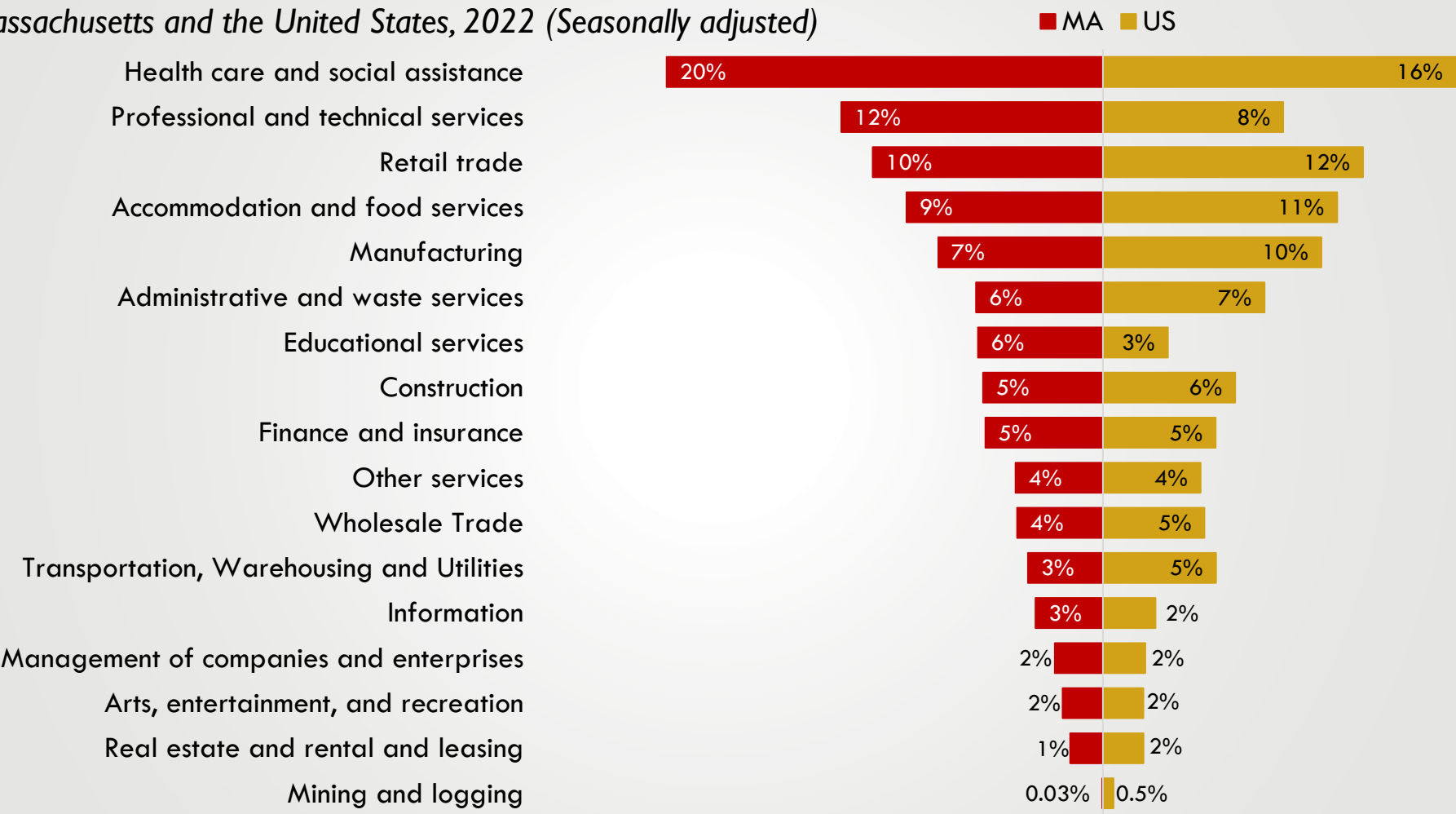
46.6%

Have a College Degree
2022
(highest in the nation)

Sources: Massachusetts Executive Office of Labor and Workforce Development, Local Area Unemployment (LAU) Statistics; Bureau of Labor Statistics; U.S. Census Bureau American Community Survey 2021, 1 Year Estimates; UMass Donahue Institute MassDOT Vintage 2022 Population Projections. November 2022. (UMDI-DOT V2022).

MA is competitive in health care; professional services, and education compared to the US overall

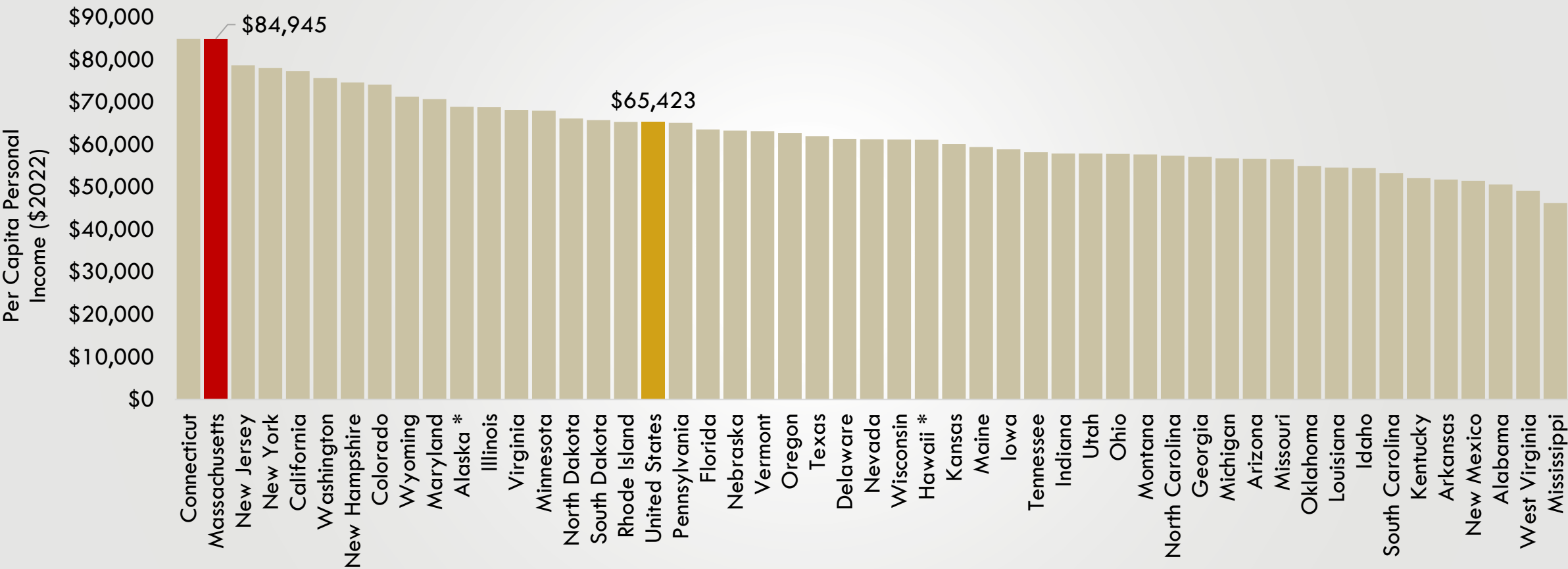
Industry Mix for Massachusetts and the United States, 2022 (Seasonally adjusted)



Source: Bureau of Labor Statistics Current Employment Statistics; UMDI analysis

Massachusetts per capita income reached \$84,945 in 2022 — 30% higher than the national average

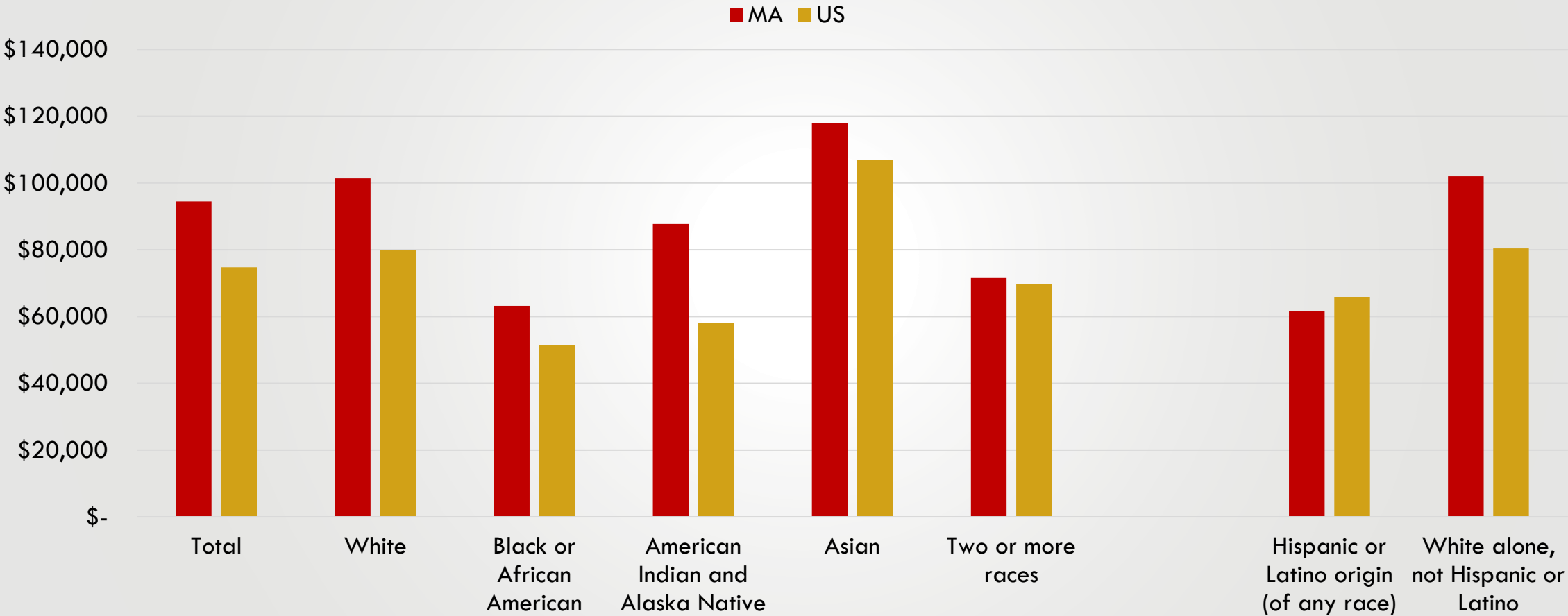
Per capita income by state, 2022



Source: U.S. Bureau of Economic Analysis (BEA), SAINCI Personal Income Summary: Personal Income, Population, Per Capita Personal Income; UMDI analysis

Massachusetts has a higher per capita income than the United States across almost every ethnic group, but still reflects the income disparities seen across the country

Per capita income in the past 12 months (in 2022 inflation-adjusted dollars) by Race and Ethnicity



Source: ACS 2022 1-Year Estimates, Table S1903, UMDI Analysis

Despite having the highest per capita income in the country, Massachusetts struggles with high cost of living

Massachusetts ranks...

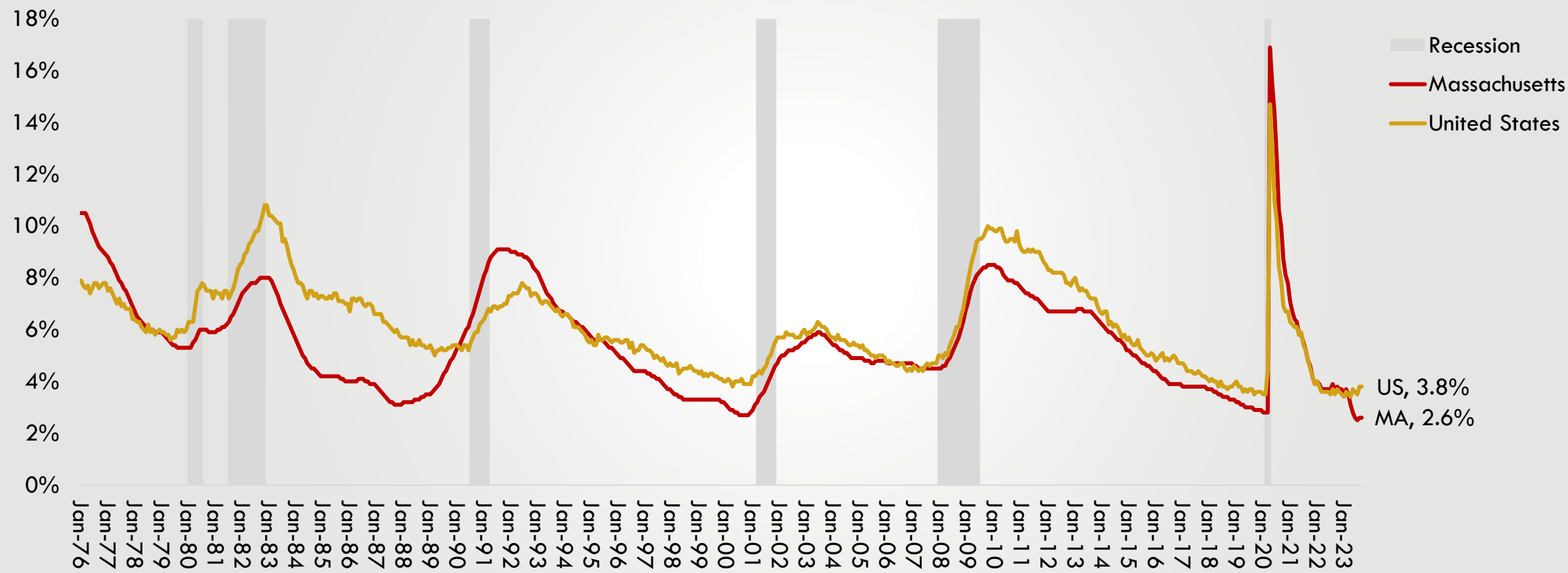


... out of all U.S. states

Sources: Child Care: Center for American Progress, *The True Cost of High-Quality Child Care Across the United States* Table I. Electricity and Natural Gas: US Energy Information Administration. Home Value: Zillow Home Value Index. Traffic: Inrix 2022 Global Traffic Scorecard.

In the spring of 2020, unemployment reached historic highs and has since returned to pre-pandemic lows

Unemployment rates in Massachusetts and the United States as of September 2023 (Seasonally adjusted)

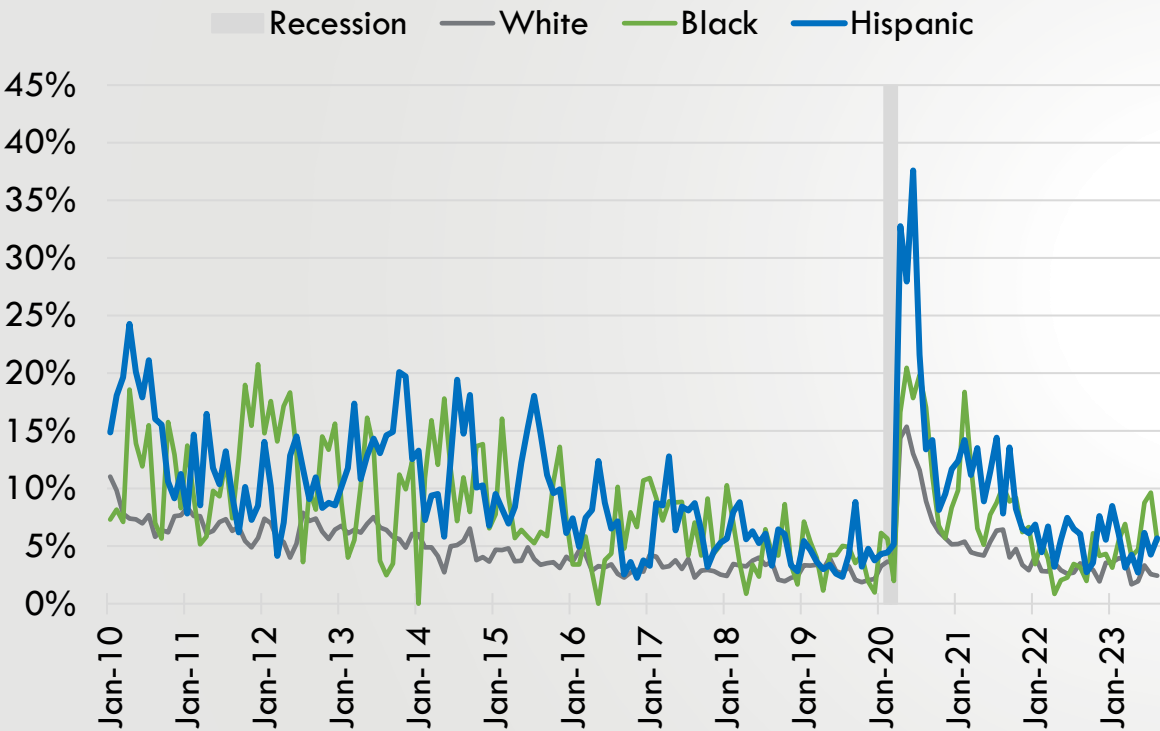


Source: Massachusetts Executive Office of Labor and Workforce Development, Local Area Unemployment (LAU) Statistics; UMDI analysis

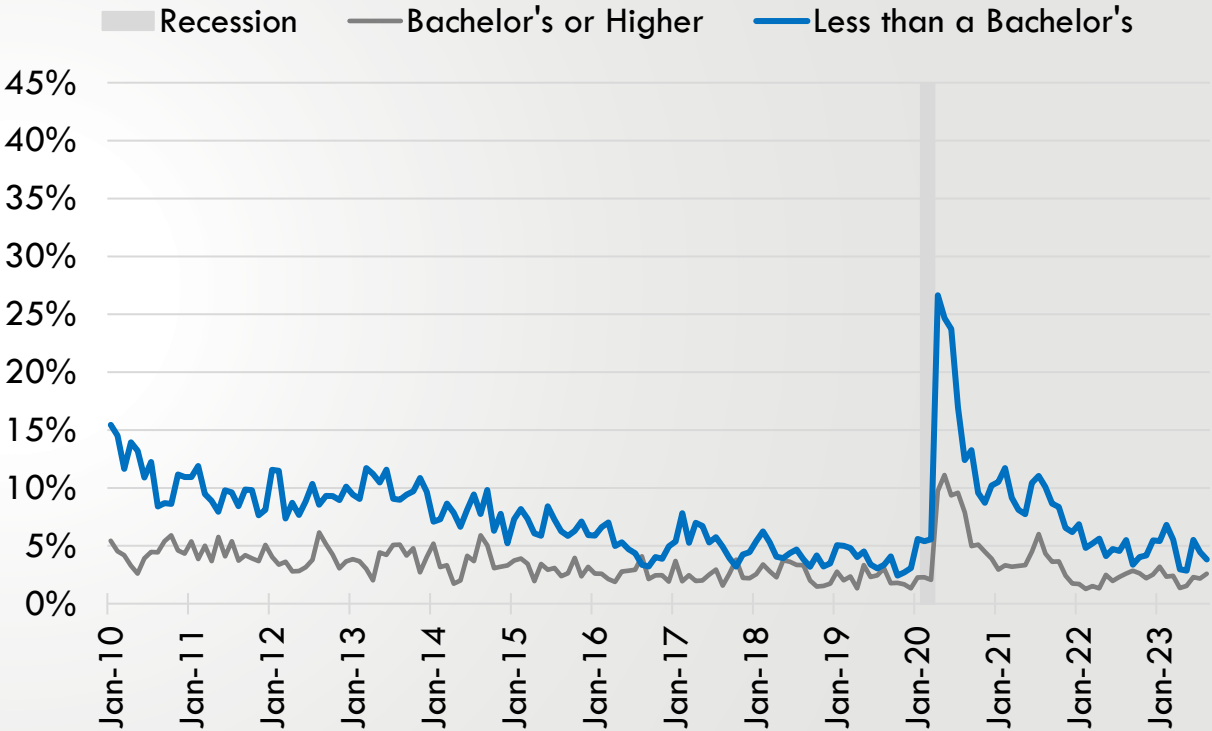
Unemployment has also been highest among people of color and workers with less than a Bachelor's Degree

Unemployment rates in Massachusetts by demographics, January 2010 – August 2023 (Not seasonally adjusted)

Race/Ethnicity



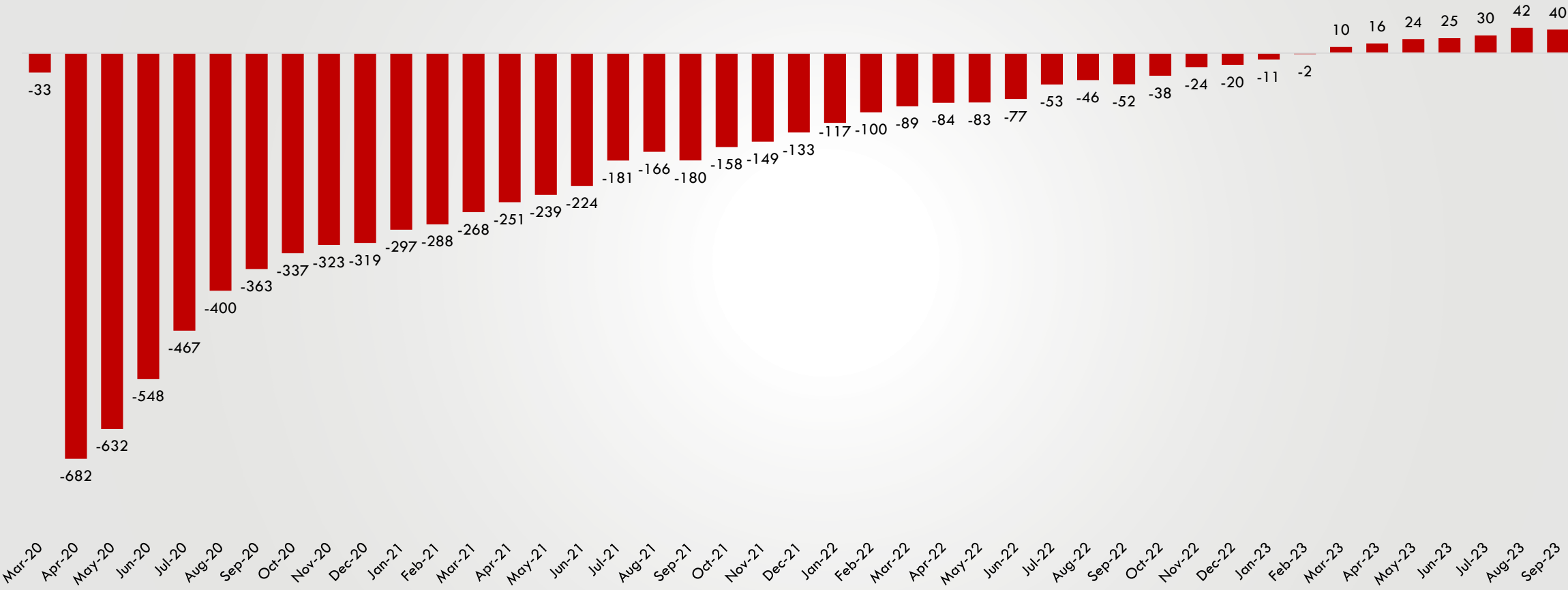
Educational Attainment



Source: Source: Sarah Flood, Miriam King, Renae Rodgers, Steven Ruggles, J. Robert Warren and Michael Westberry. Integrated Public Use Microdata Series, Current Population Survey: Version 9.0 [dataset]. Minneapolis, MN: IPUMS, 2021; UMDI analysis
Note: Data are not seasonally adjusted. Black and white are not Hispanic. Hispanic includes any race.

More than three years into the pandemic, MA has now recovered from Spring 2020 jobs losses

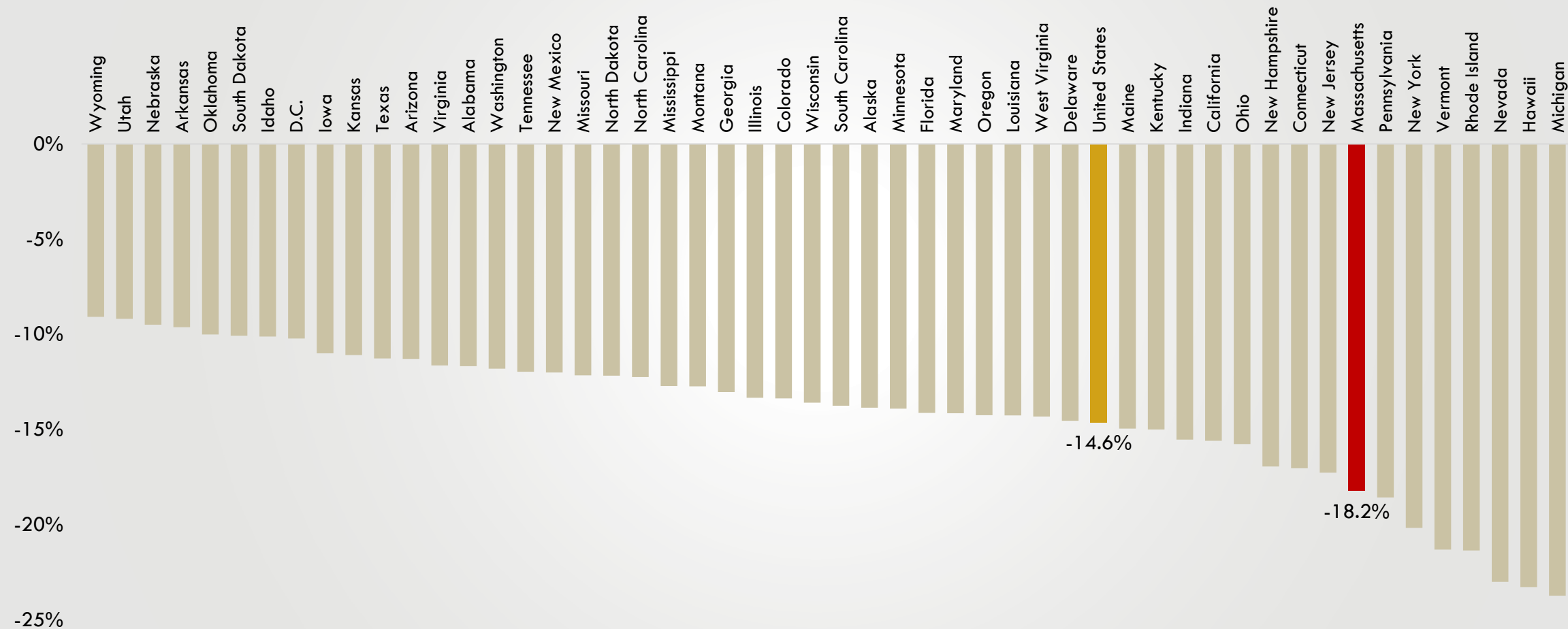
Jobs deficit in Massachusetts relative to February 2020 peak in 1,000s (Seasonally adjusted)



Source: Massachusetts Executive Office of Labor and Workforce Development, Current Employment Statistics (CES-790); UMDI analysis

The shutdown in Massachusetts was more severe than in most states, and MA ranked 45th in job losses in the U.S.

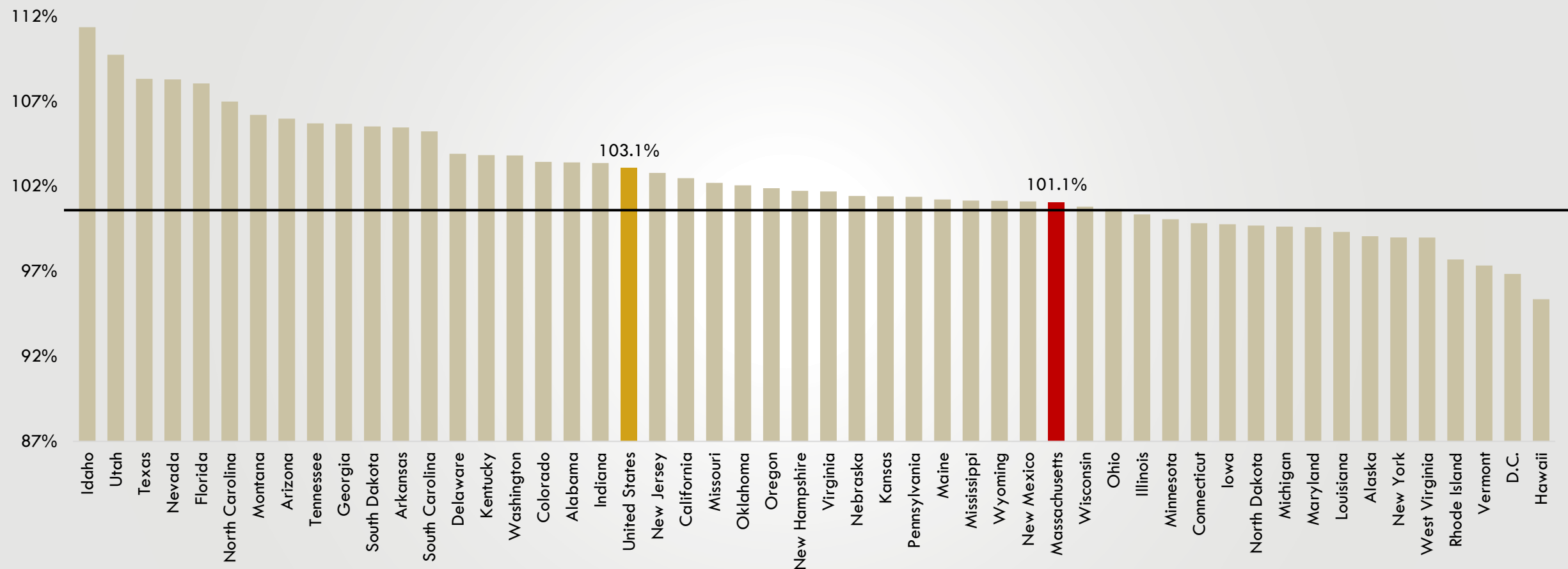
Job loss rates in Massachusetts and all states, February 2020 and April 2020 (Seasonally adjusted)



Source: Bureau of Labor Statistics, Current Employment Statistics; UMDI analysis

The shutdown in Massachusetts was more severe than in most states, and MA ranks 34th in job recovery in the U.S.

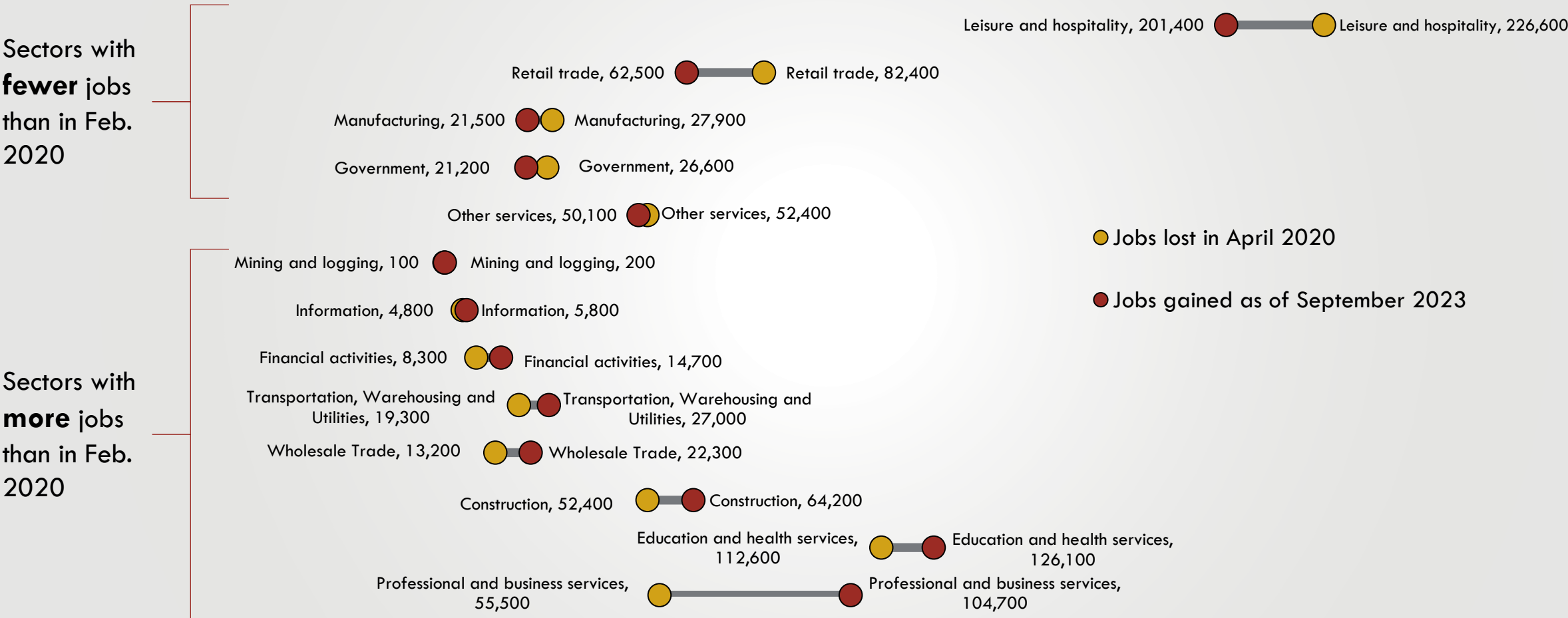
Job recovery rates in Massachusetts and all states, February 2020 and September 2023 (Seasonally adjusted)



Source: Bureau of Labor Statistics, Current Employment Statistics; UMDI analysis

More than three years since the pre-pandemic peak, leisure & hospitality and retail trade are still very slow to recover

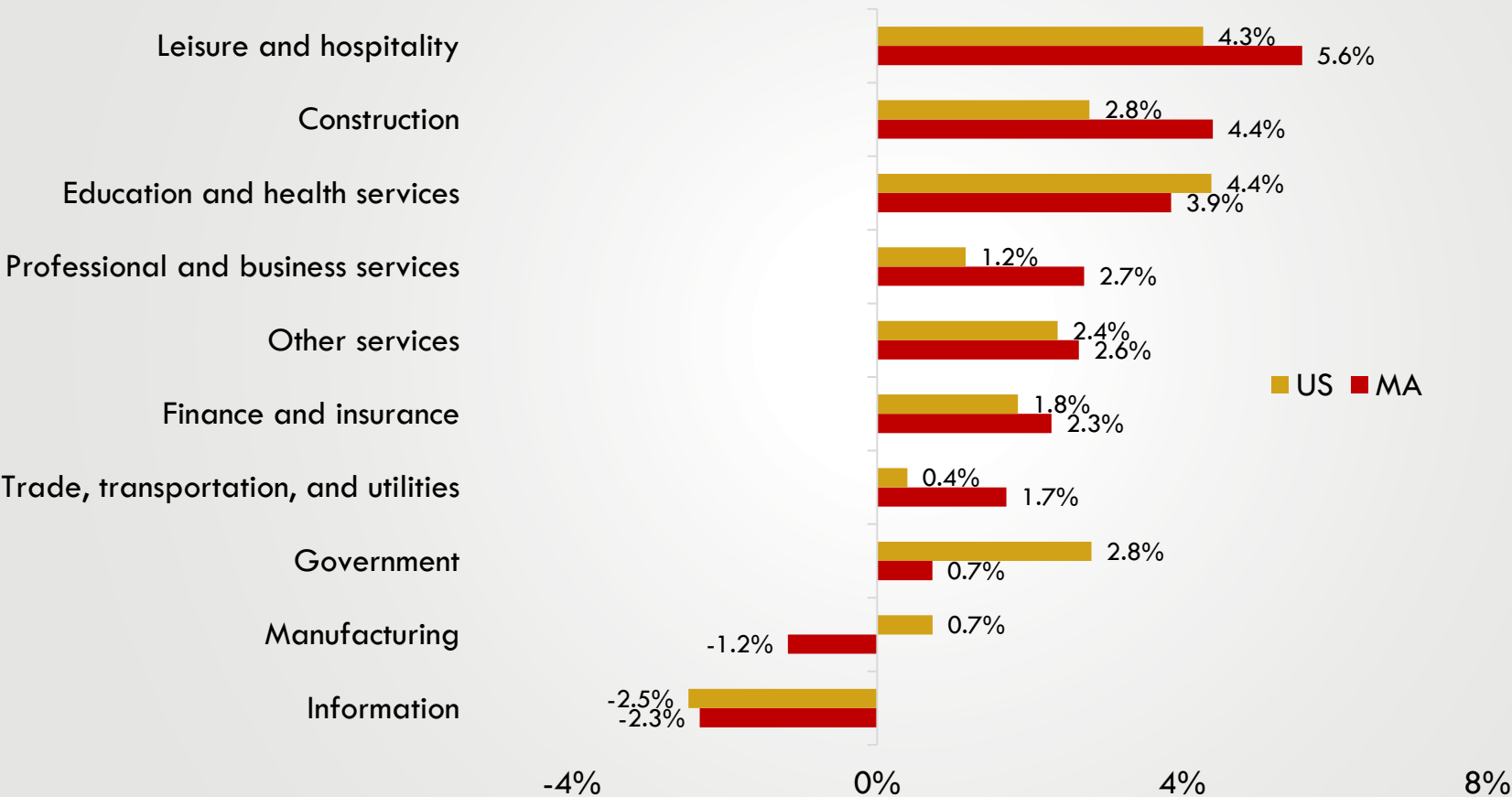
Jobs lost in April 2020 and jobs gained as of September 2023 in Massachusetts (Seasonally adjusted)



Source: Massachusetts Executive Office of Labor and Workforce Development, Current Employment Statistics (CES-790); UMDI analysis

MA outpaced the US in professional services, finance/insurance, and leisure/hospitality; fell short in manufacturing & education/health services

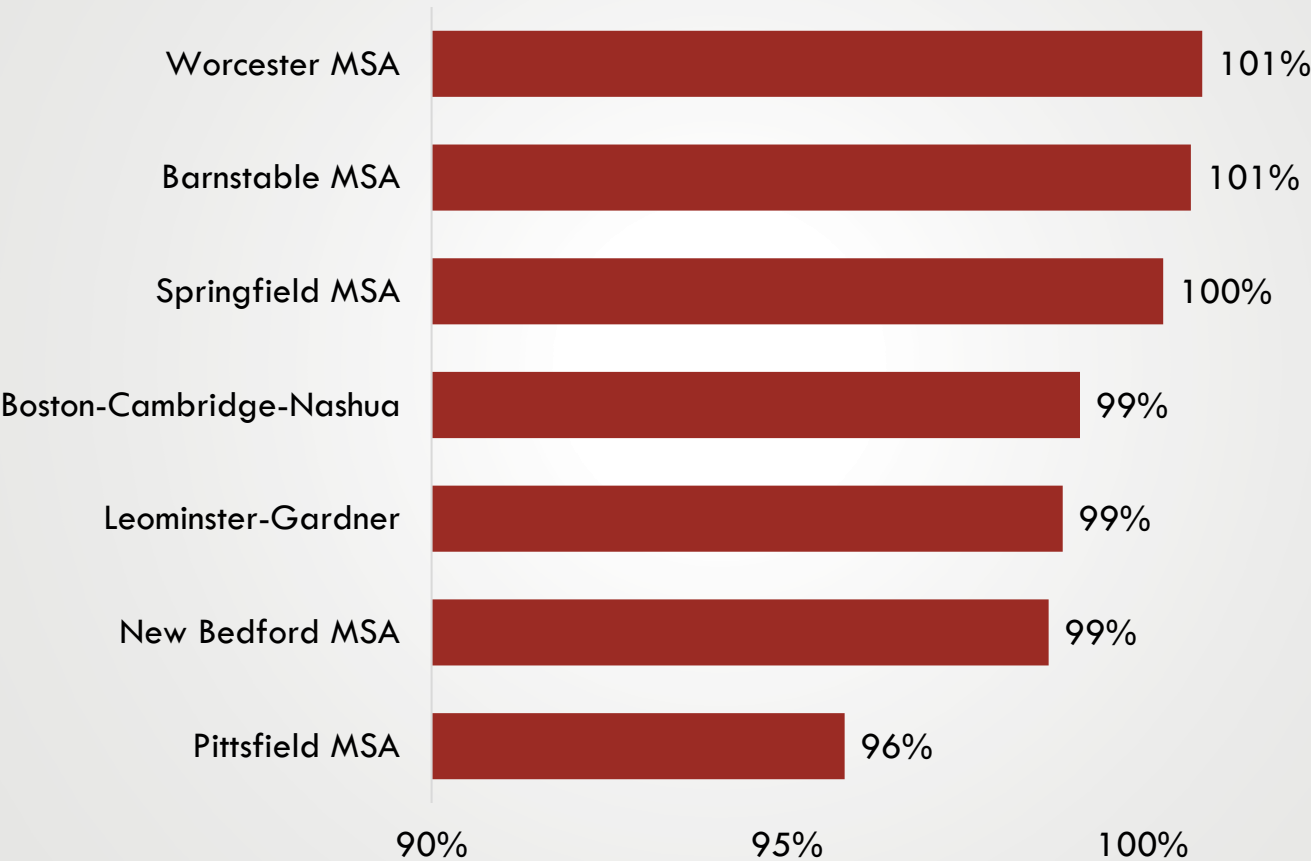
Percent Change in Employment by Industry, September 2022 - September 2023



Source: Massachusetts Executive Office of Labor and Workforce Development, Current Employment Statistics (CES-790); UMDI analysis

Greater Boston lags other areas of the state in jobs recovery but is approaching pre-pandemic employment

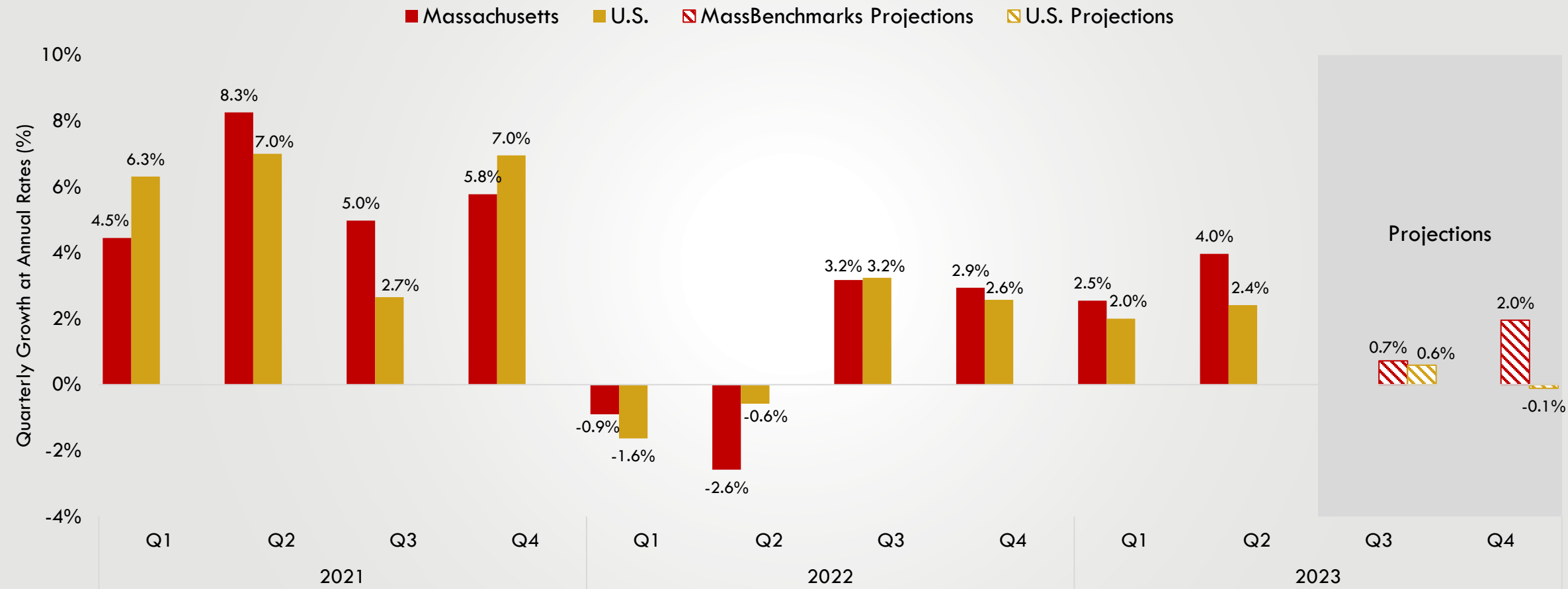
Job recovery rates in Massachusetts' MSAs, February 2020 and August 2023 (seasonally adjusted)



Source: Bureau of Labor Statistics, Current Employment Statistics; UMDI analysis

Massachusetts GDP grew consistently over the last half of 2022 and first half of 2023, by the end of that period outpacing the US

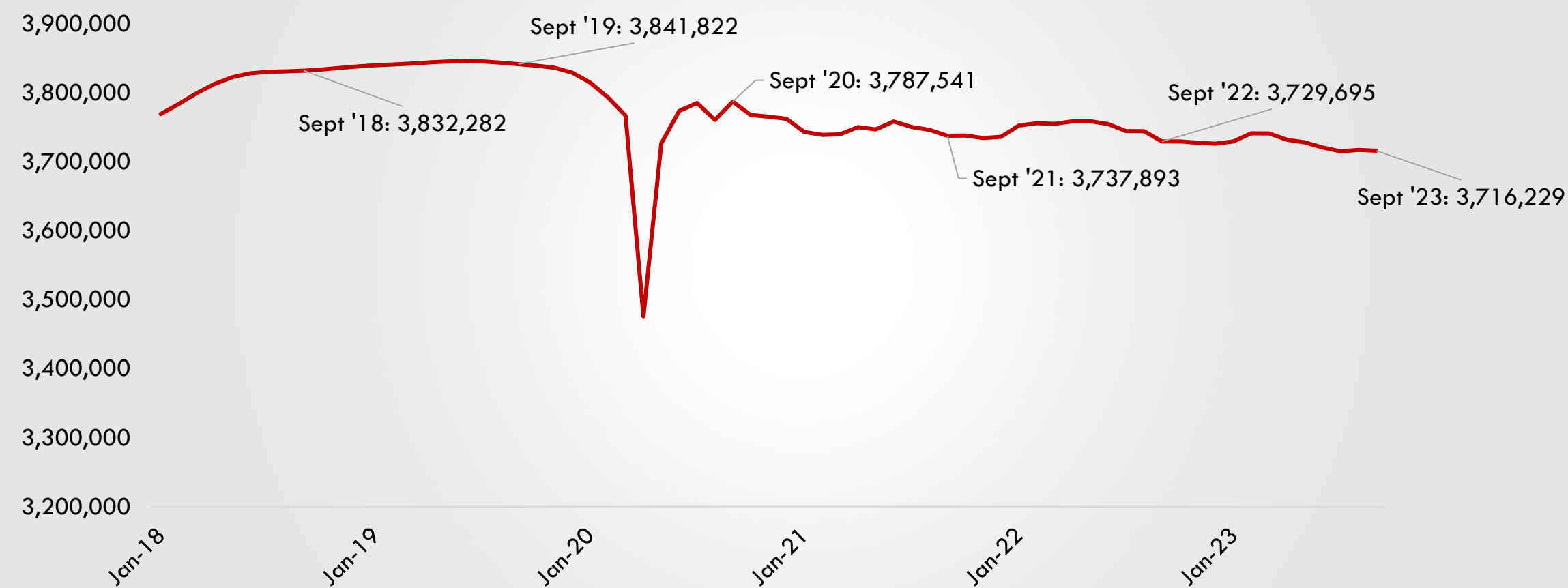
Quarterly Change in GDP for MA, US, and MassBenchmarks Projections, 2021-2023



Source: U.S. Bureau of Economic Analysis, MassBenchmarks calculations by Dr. Alan Clayton-Matthews

The labor force has not recovered to pre-pandemic levels

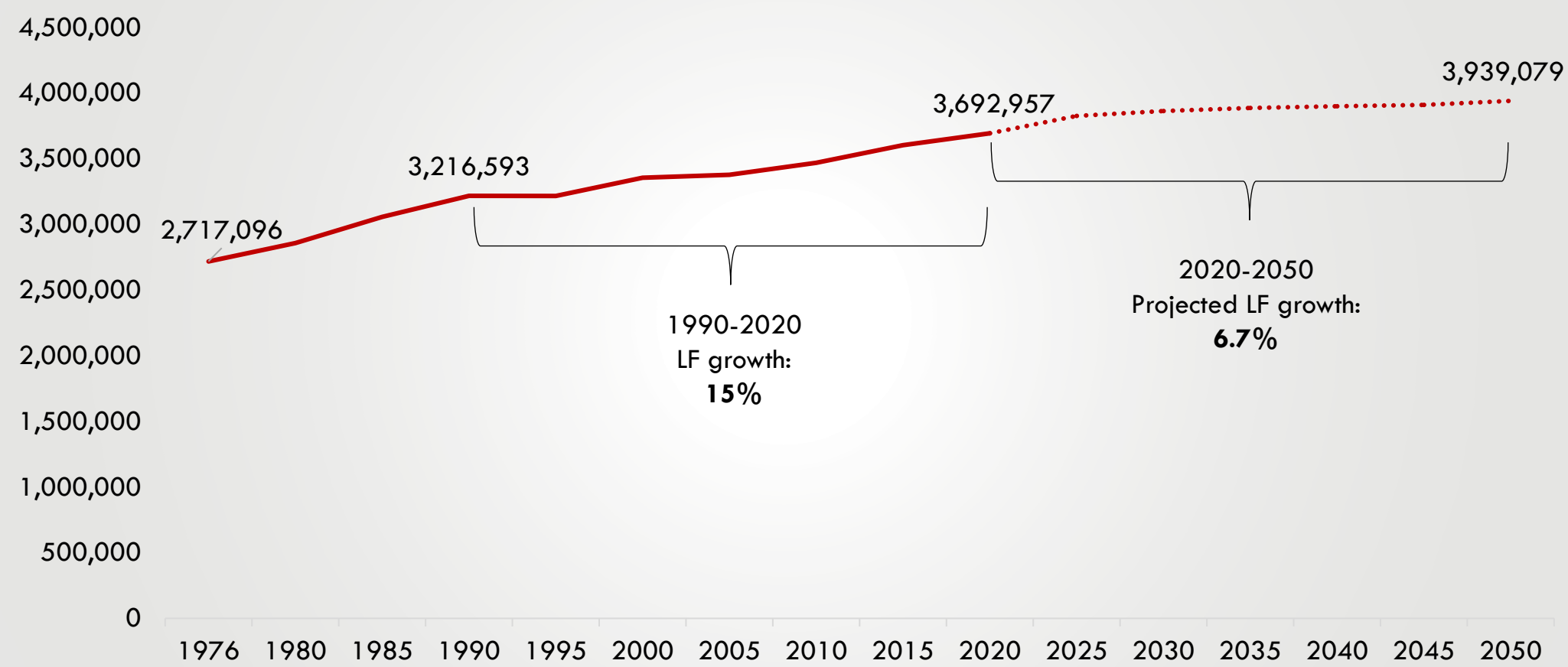
Massachusetts Labor Force, January 2018 – September 2023 (Seasonally adjusted)



Source: Massachusetts Executive Office of Labor and Workforce Development, Local Area Unemployment (LAU) Statistics

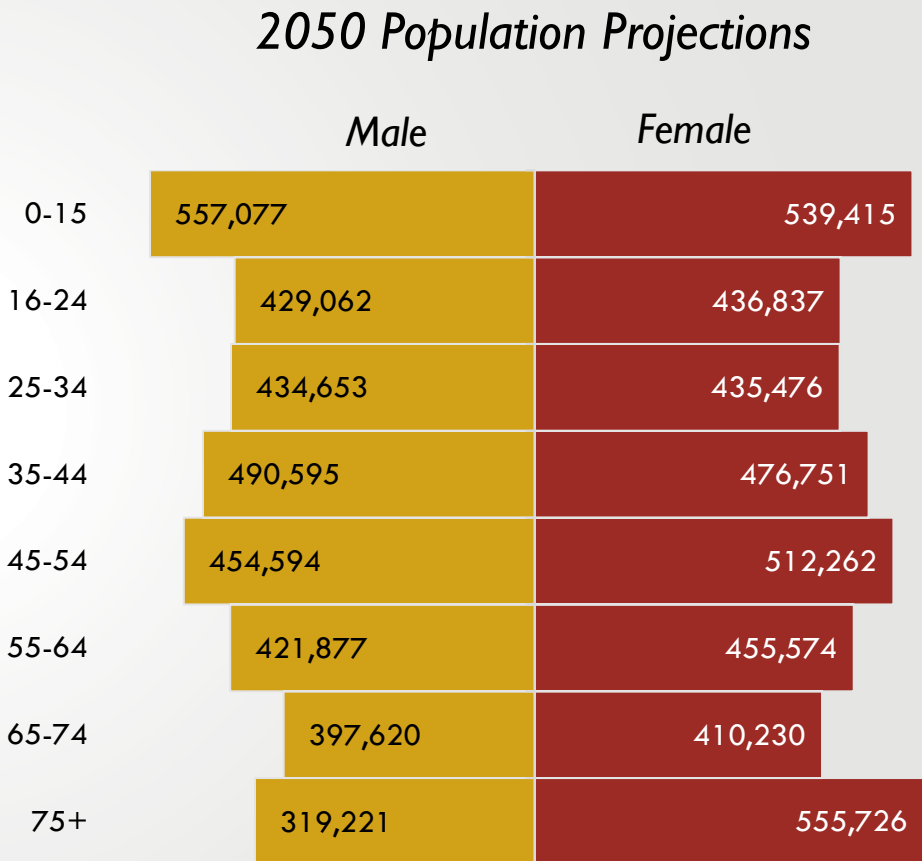
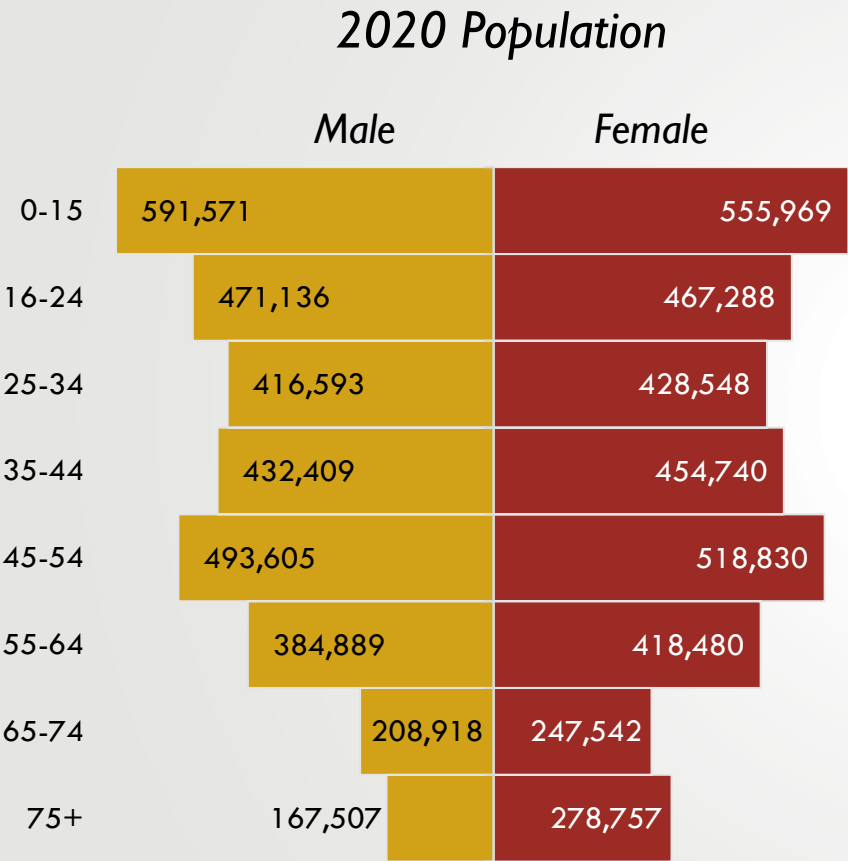
The labor force in Massachusetts is projected to grow at a significantly slower pace over the next 30 years

Projected Massachusetts Labor Force through 2050 (Seasonally adjusted)



Source: Massachusetts Executive Office of Labor and Workforce Development, Local Area Unemployment (LAU) Statistics; UMass Donahue Institute MassDOT Vintage 2022 Population Projections. November 2022. (UMDI-DOTV2022).

Massachusetts's growth in our 65+ age groups will far exceed growth in our working age population through 2050



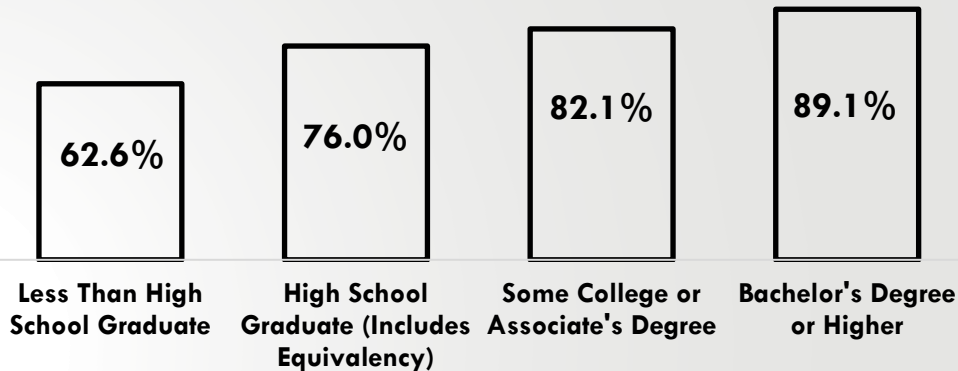
Source: UMass Donahue Institute MassDOT Vintage 2022 Population Projections. November 2022. (UMDI-DOTV2022).

Massachusetts labor force participation rates by demographic groups

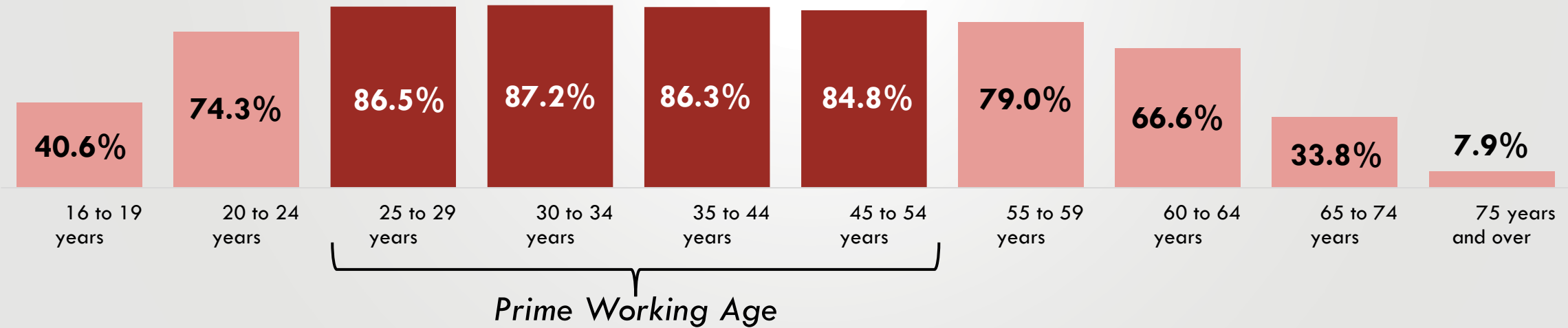
Labor Force Participation Rate Population 16 years and over, 2021



Massachusetts Labor Force Participation Rate by Educational Attainment, 2021



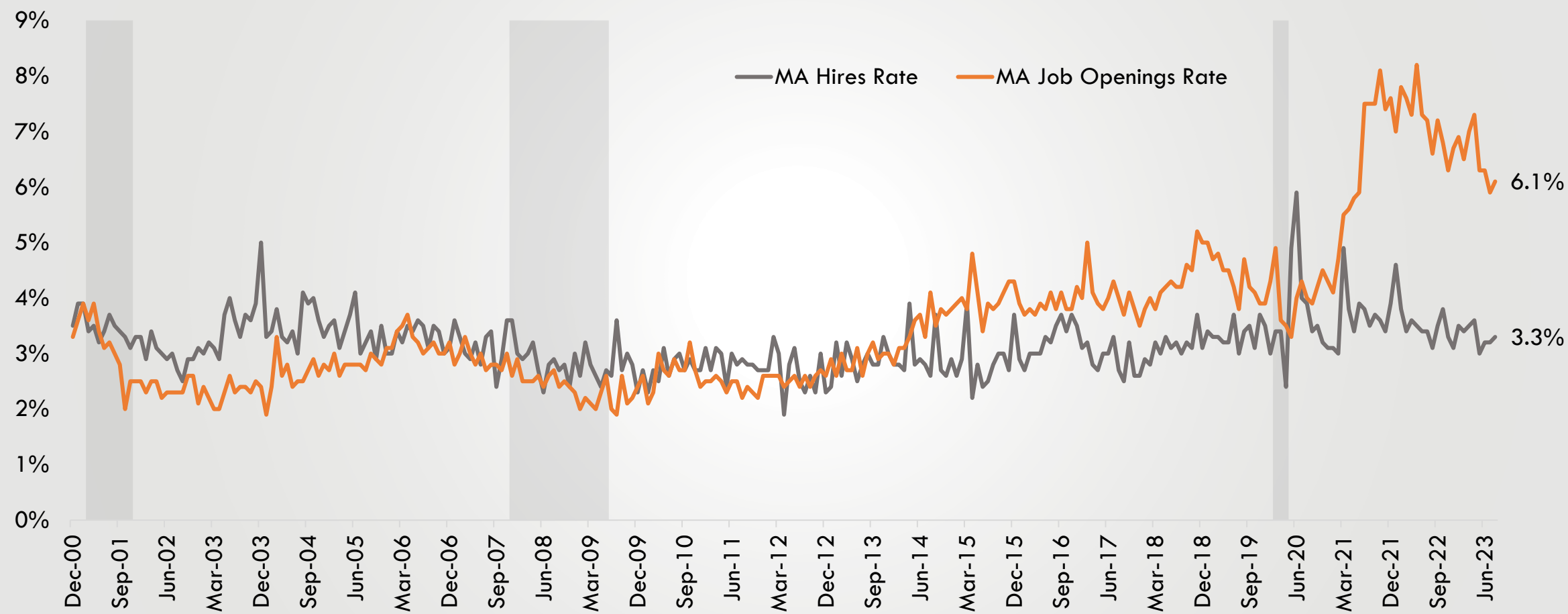
Massachusetts Labor Force Participation Rate by Age, 2021



Source: U.S. Census Bureau American Community Survey, 2021 5-Year Estimates

Massachusetts is experiencing a historically high job openings rate which vastly exceeds the hire rate

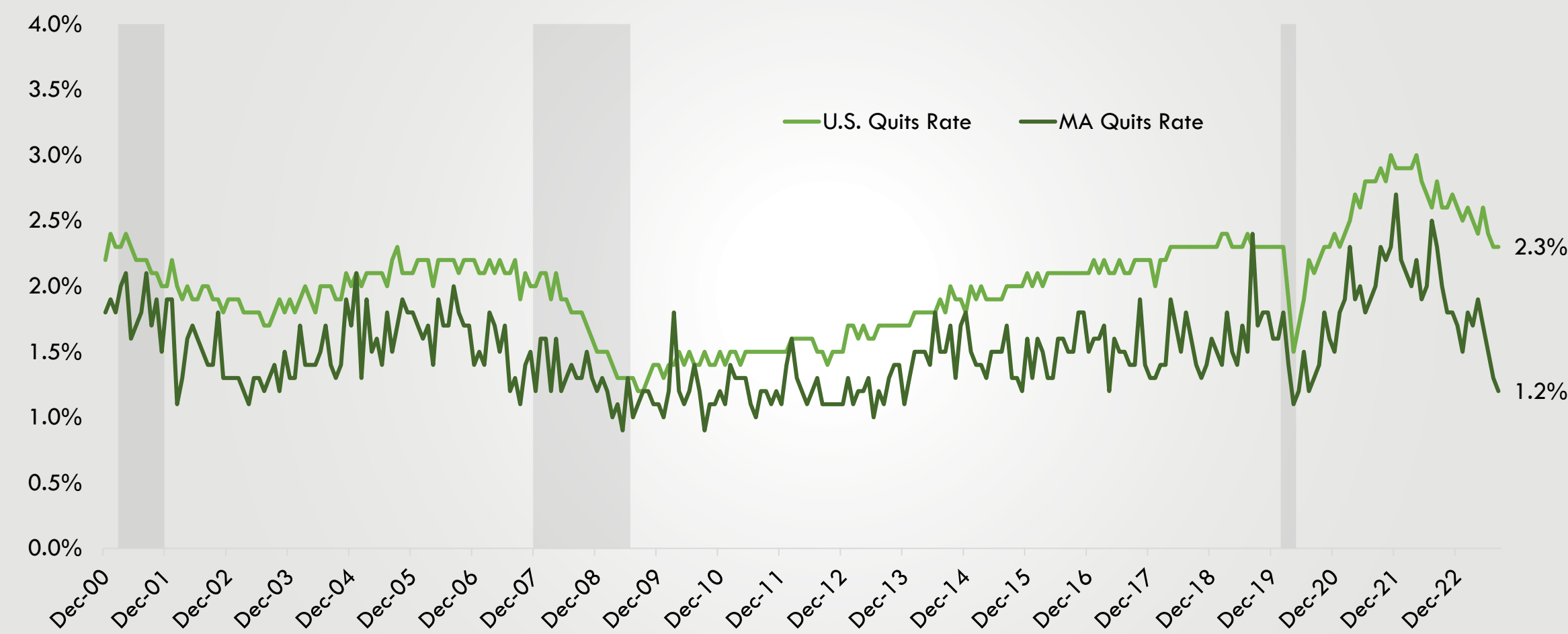
Job openings rate and hire rate in Massachusetts, December 2000-August 2023 (Seasonally adjusted)



Source: U.S. Bureau of Labor Statistics, Job Openings and Labor Turnover Survey (JOLTS); UMDI analysis

MA's quit rate has returned to its historical average, while the US is still experiencing an elevated rate

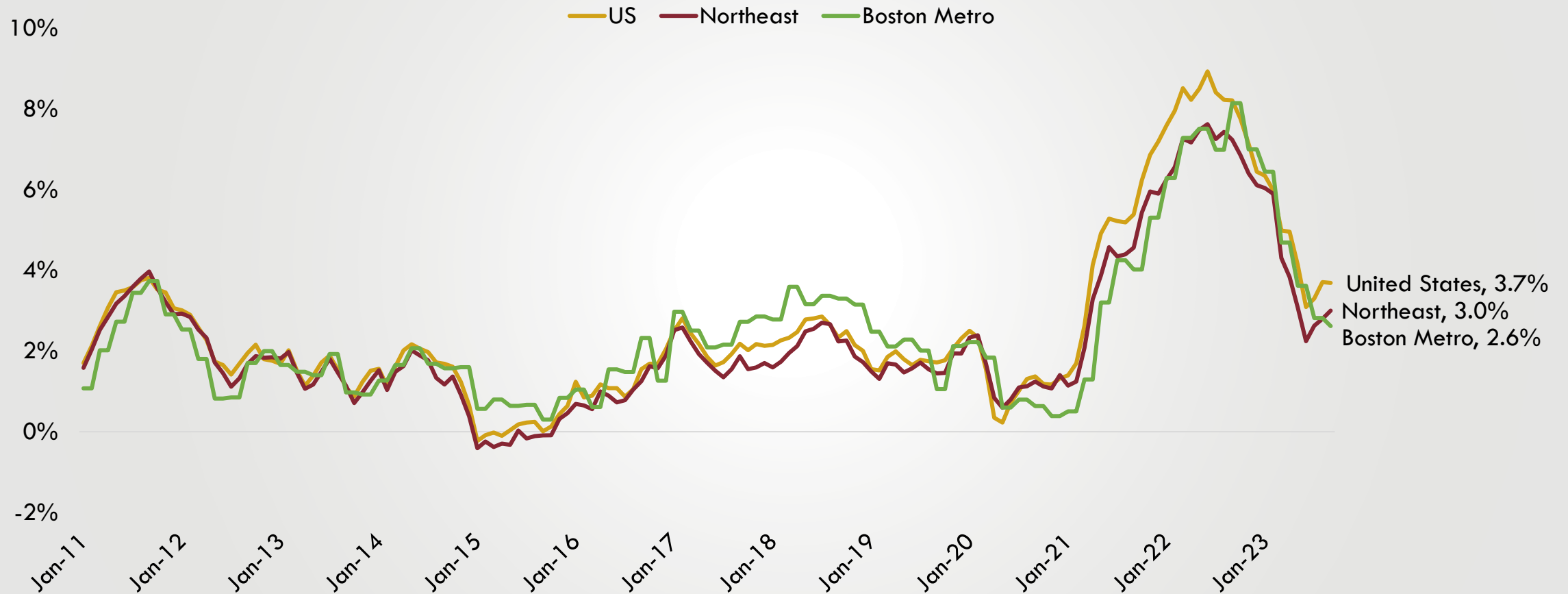
Job quits rate in Massachusetts and the United States, December 2000-August 2023 (Seasonally adjusted)



Source: U.S. Bureau of Labor Statistics, Job Openings and Labor Turnover Survey (JOLTS); UMDI analysis

The Northeast and Boston Metro have closely tracked the overall inflation trajectory in the US, including the recent drop

Inflation Rate for U.S., Northeast, and Boston-Cambridge-Newton, MA-NH MSA, January 2011 - September 2023



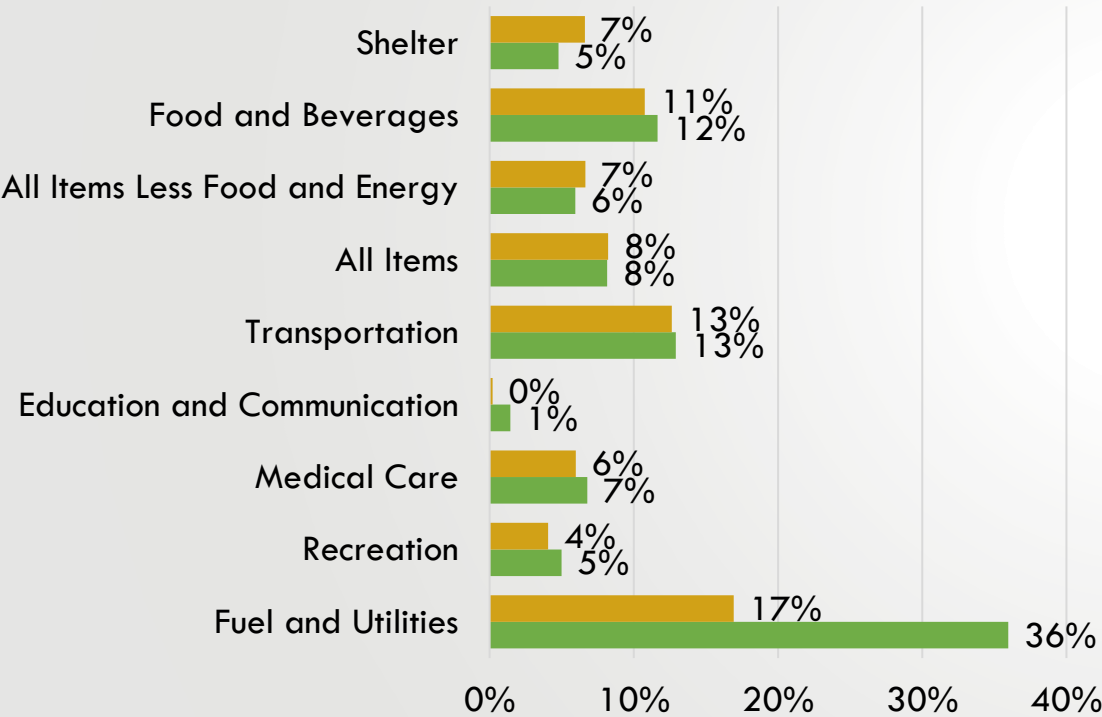
Source: Bureau of Labor Statistics, Consumer Price Index.

Boston fuel & utilities prices have retreated from high prices last year; shelter and food price increases have been steep

Year-over-Year Inflation in Boston MSA and United States

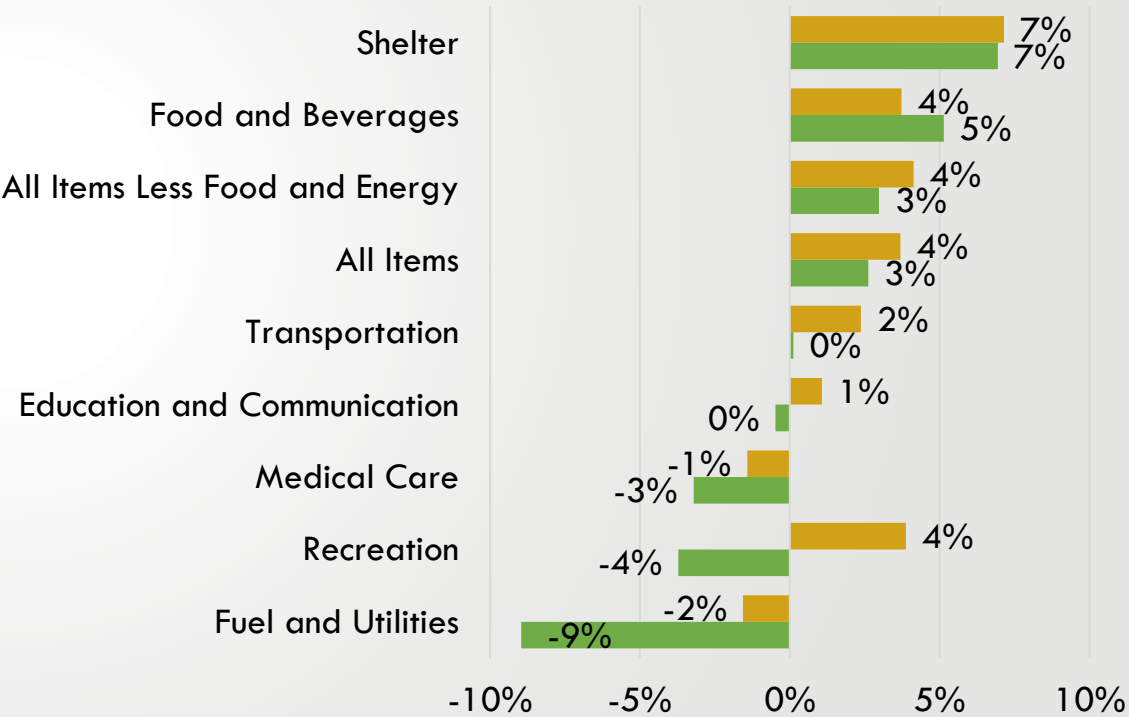
September 2021-2022

US Boston MSA



September 2022-2023

US Boston MSA

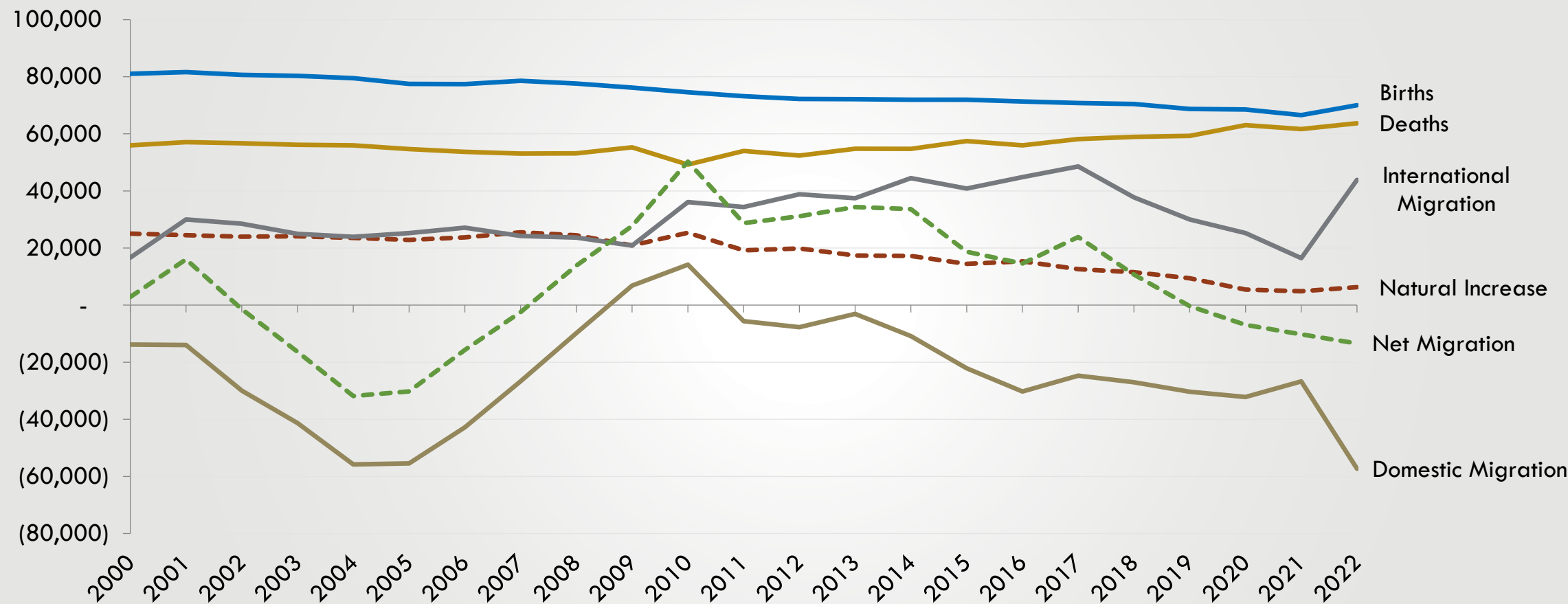


Source: Bureau of Labor Statistics, UMDI Analysis

Migration

Massachusetts population growth depends on international migration

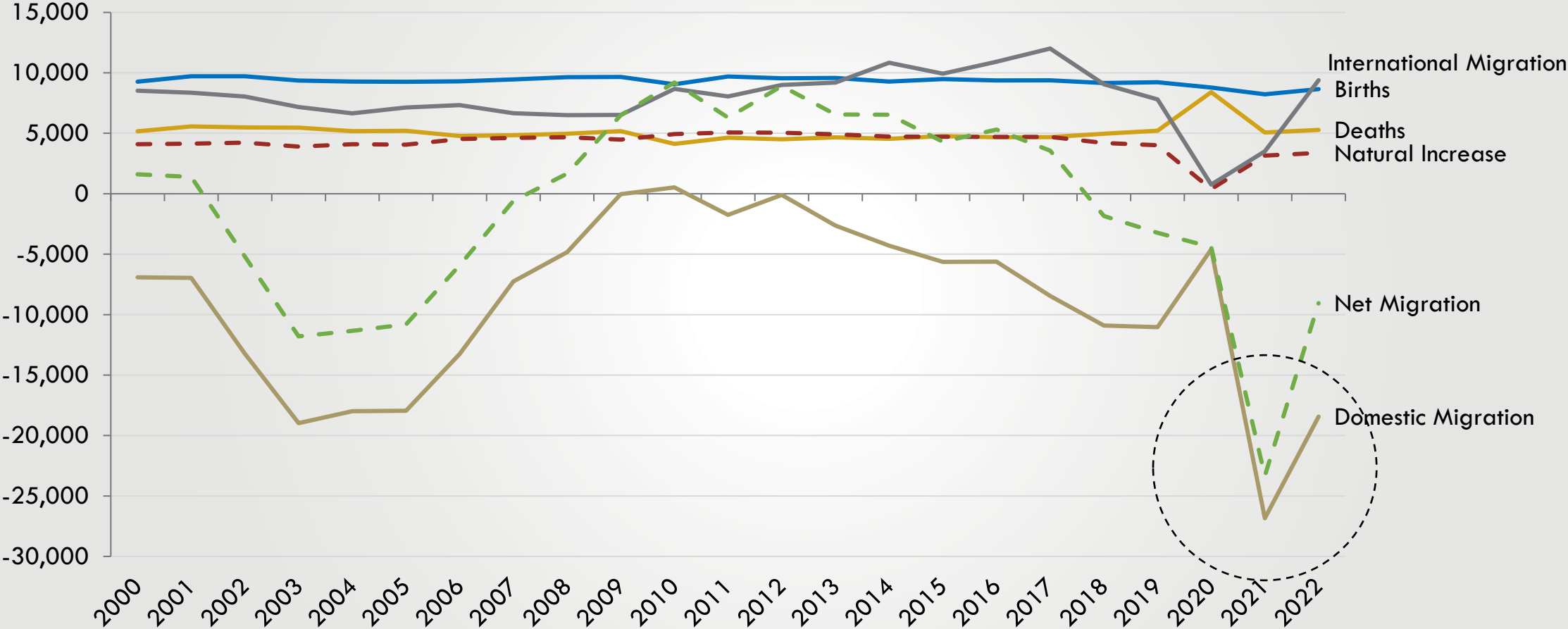
Massachusetts estimated components of population change, 2000-2022



Source: UMass Donahue Institute. Source Data: ST-2000-7; CO-EST2010-ALLDATA; and NST-EST2018-ALLDATA, U.S. Census Bureau Population Division.
Note: no full year data for decennial years of 2000, 2010, and 2020. Data for these years is extrapolated from a three month sample.

Suffolk County has seen a large out-migration during the pandemic; international migration is recovering

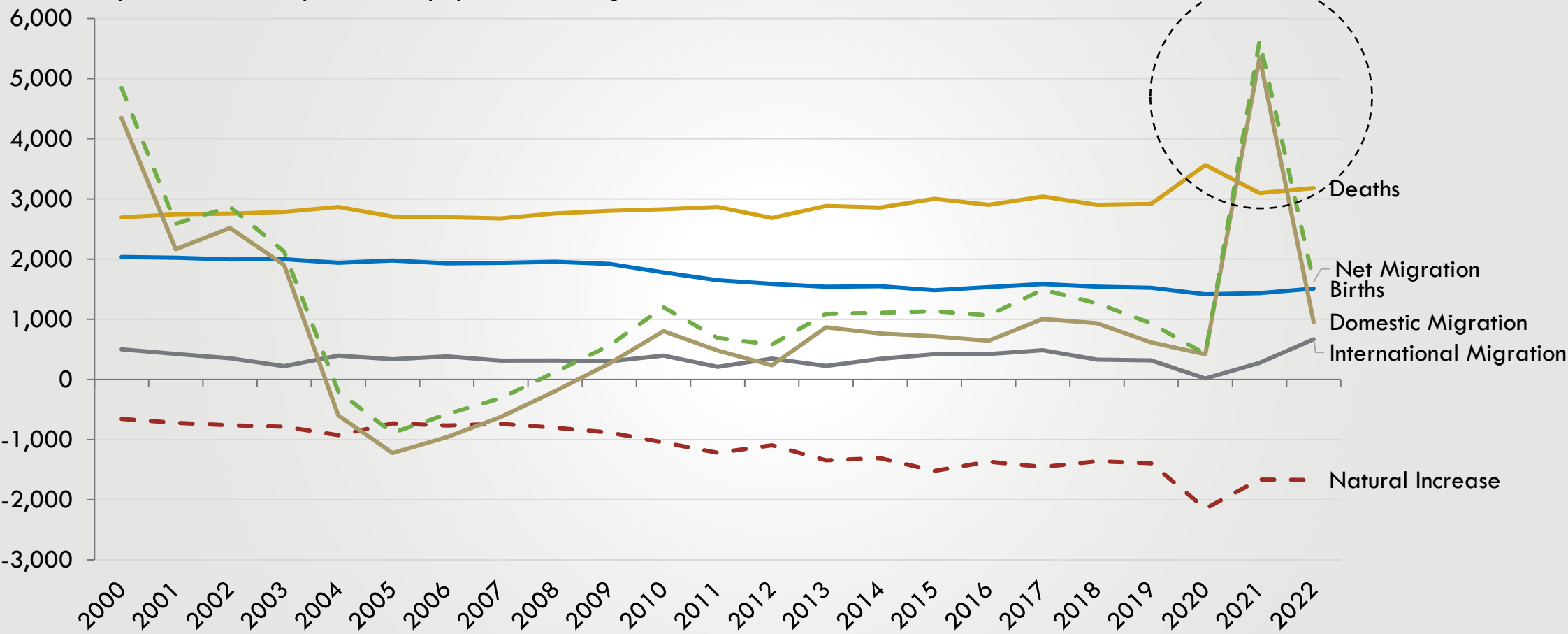
Suffolk County estimated components of population change, 2000-2022



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Note: no full year data for decennial years of 2000, 2010, and 2020. Data for these years is extrapolated from a three month sample.

The Cape and Islands had a spike of in-migration during the first year of the pandemic; in 2022, trends returned to pre-pandemic levels

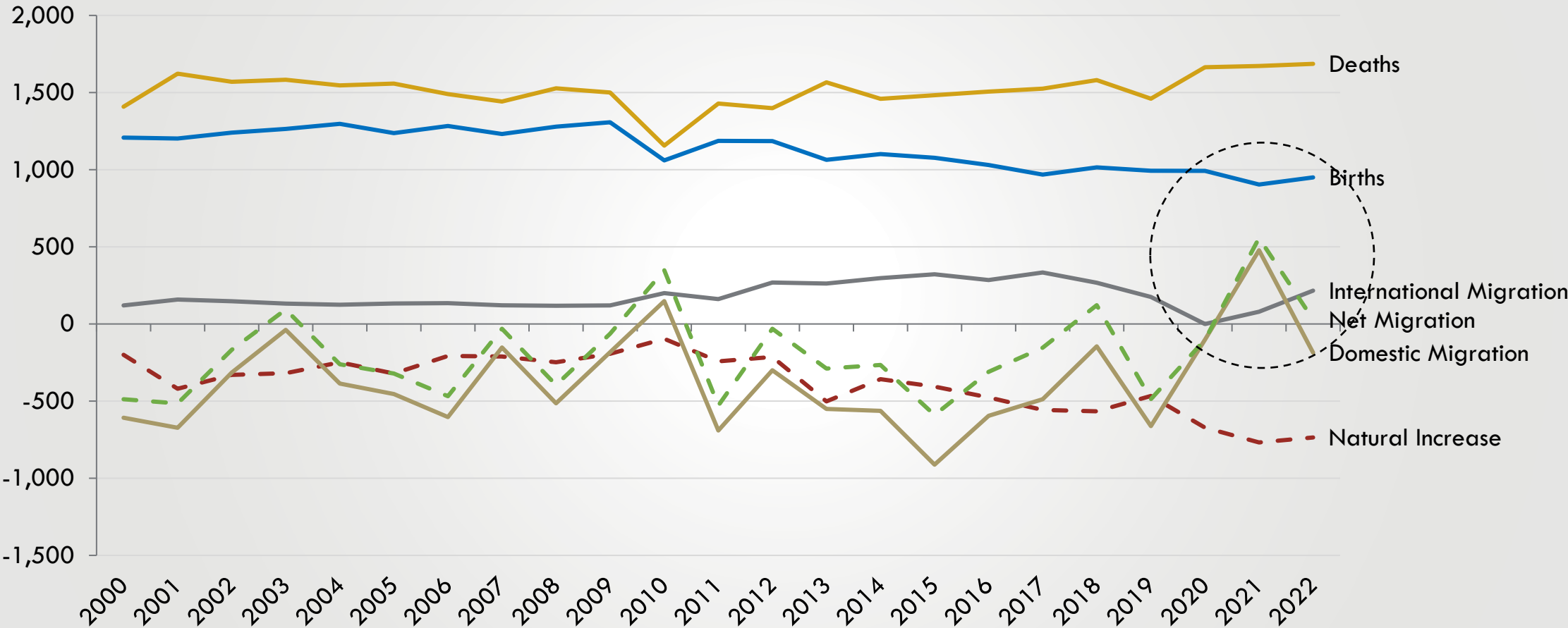
Barnstable County estimated components of population change, 2000-2022



Source: UMass Donahue Institute. Source Data: ST-2000-7; CO-EST2010-ALLDATA; and NST-EST2018-ALLDATA, U.S. Census Bureau Population Division.
Note: no full year data for decennial years of 2000, 2010, and 2020. Data for these years is extrapolated from a three month sample.

The Berkshires also saw, albeit a more modest, boost in domestic in-migration that has since reversed as well

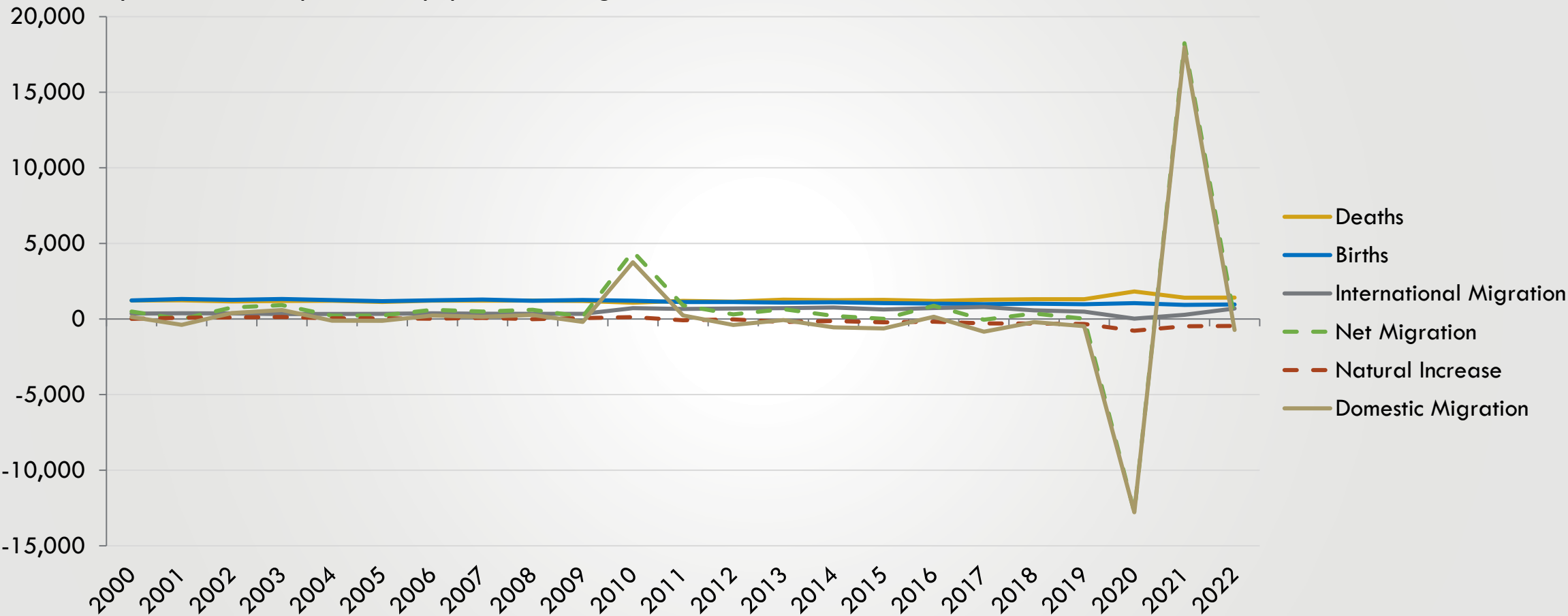
Berkshire County estimated components of population change, 2000-2022



Source: UMass Donahue Institute. Source Data: ST-2000-7; CO-EST2010-ALLDATA; and NST-EST2018-ALLDATA, U.S. Census Bureau Population Division.
Note: no full year data for decennial years of 2000, 2010, and 2020. Data for these years is extrapolated from a three month sample.

Hampshire County's large student population accounted for massive out- and in-migration patterns from 2020 to 2021

Hampshire County estimated components of population change, 2000-2022



Source: UMass Donahue Institute. Source Data: ST-2000-7; CO-EST2010-ALLDATA; and NST-EST2018-ALLDATA, U.S. Census Bureau Population Division.
Note: no full year data for decennial years of 2000, 2010, and 2020. Data for these years is extrapolated from a three month sample.

Massachusetts experiences the most churn in residential migration in its college-aged and immediately post-college cohorts

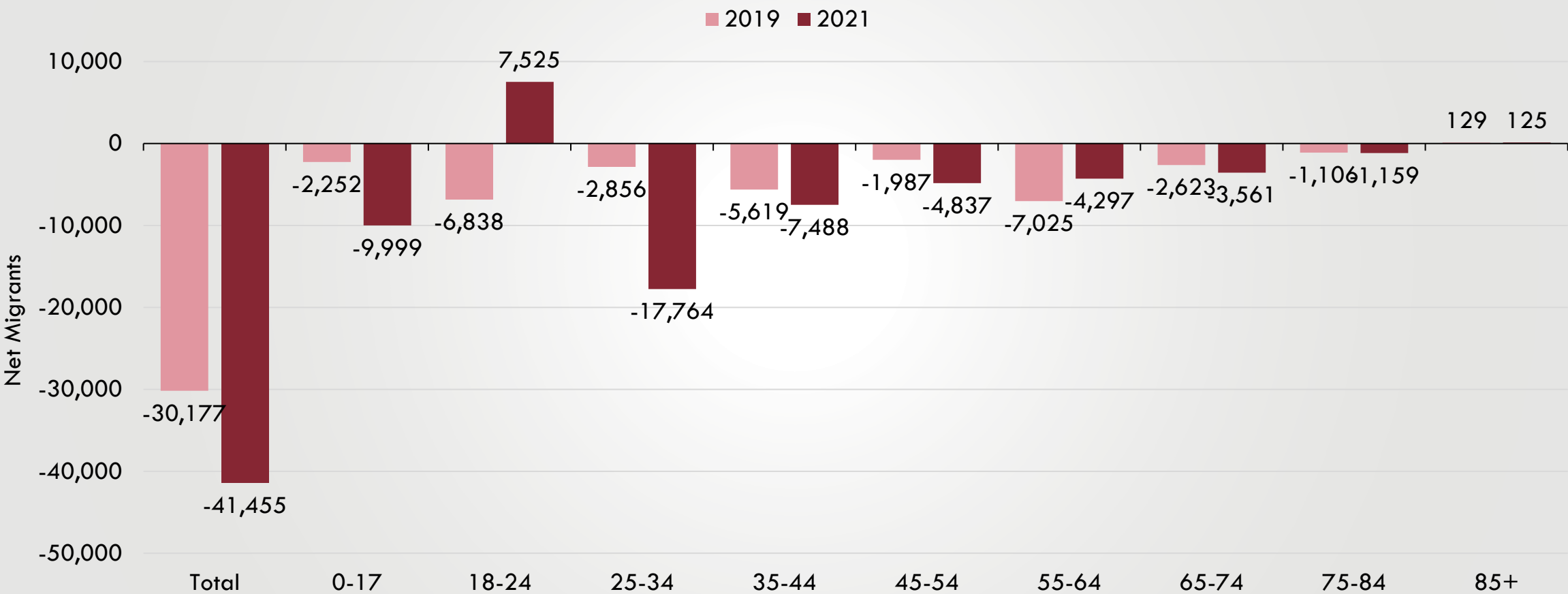
Age Profiles of Massachusetts, In Migrants to Massachusetts, and Out Migrants from Massachusetts, 2020-2021

Age Groups	Baseline		In-Migrants		Out-Migrants		Net Migrants	
	N	%	N	%	N	%	N	Rank
0-17	1,361,814	19.5%	13,893	8.4%	23,892	11.5%	-9,999	8
18-24	688,062	9.9%	62,723	37.9%	55,198	26.7%	7,525	1
25-34	982,106	14.1%	44,636	27.0%	62,400	30.1%	-17,764	9
35-44	895,259	12.8%	13,814	8.3%	21,302	10.3%	-7,488	7
45-54	878,052	12.6%	10,984	6.6%	15,821	7.6%	-4,837	6
55-64	961,225	13.8%	9,131	5.5%	13,428	6.5%	-4,297	5
65-74	733,383	10.5%	5,676	3.4%	9,237	4.5%	-3,561	4
75-84	335,499	4.8%	3,088	1.9%	4,247	2.1%	-1,159	3
85+	149,323	2.1%	1,665	1.0%	1,540	0.7%	125	2
Total	6,984,723	100.0%	165,610	100.0%	207,065	100.0%	-41,455	

Source: U.S. Census Bureau ACS Microdata, 2021. Steven Ruggles, Sarah Flood, Ronald Goeken, Megan Schouweiler and Matthew Sobek. IPUMS USA: Version 12.0 [dataset]. Minneapolis, MN: IPUMS, 2022. <https://doi.org/10.18128/D010.V12.0>

Massachusetts experiences the most churn in residential migration in its college-aged and immediately post-college cohorts

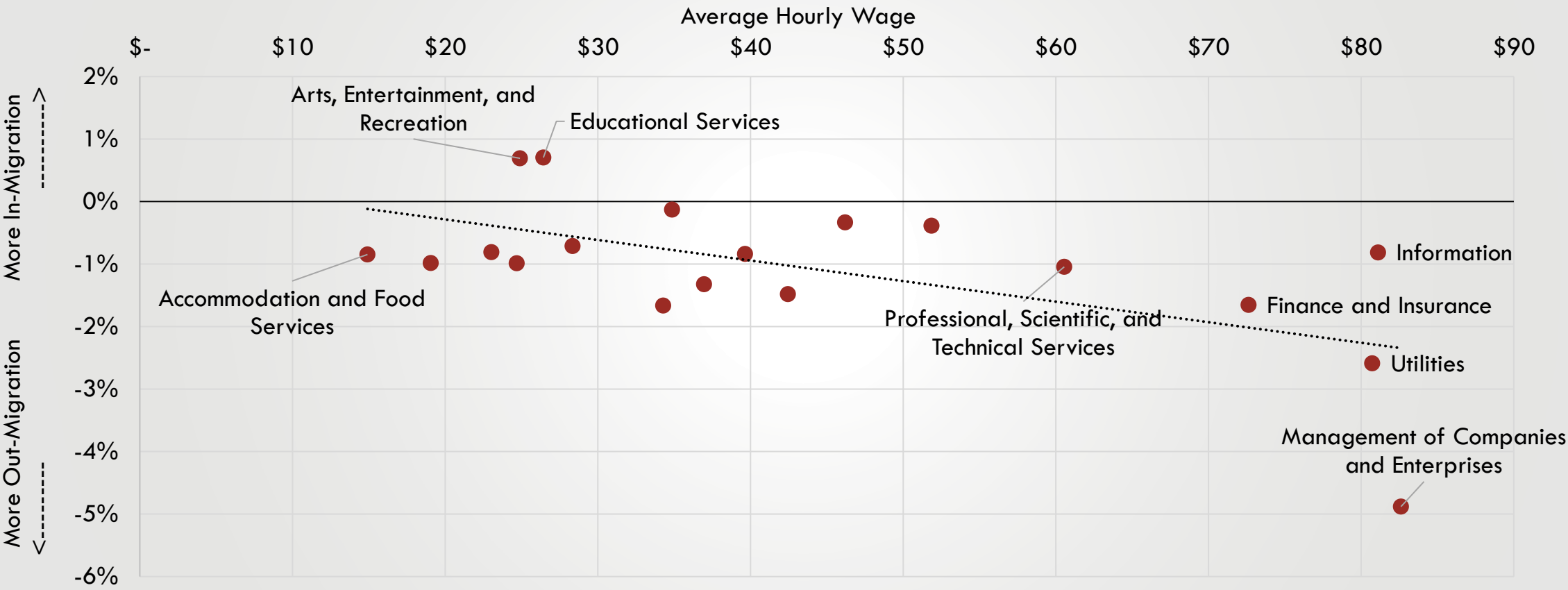
Age Profiles of Net Migrants from Massachusetts, 2019 & 2021



Source: U.S. Census Bureau ACS Microdata, 2019 & 2021. Steven Ruggles, Sarah Flood, Ronald Goeken, Megan Schouweiler and Matthew Sobek. IPUMS USA: Version 12.0 [dataset]. Minneapolis, MN: IPUMS, 2022.
<https://doi.org/10.18128/D010.V12.0>

Professional and business services were more likely to move out of Massachusetts in 2021 compared to service industries

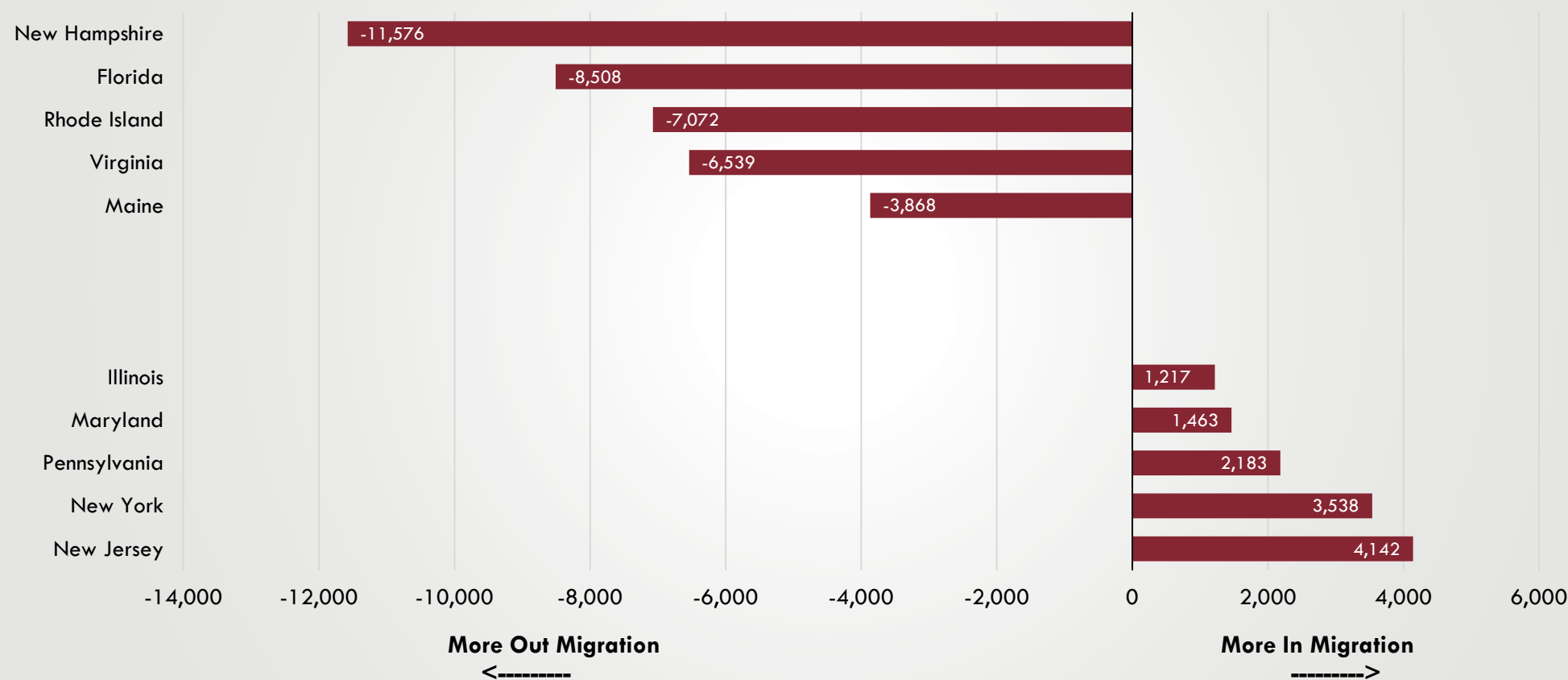
Migration by Industry, as Percent of Total Industry Employment, 2021



Source: U.S. Census Bureau ACS Microdata, 2021. Steven Ruggles, Sarah Flood, Ronald Goeken, Megan Schouweiler and Matthew Sobek. IPUMS USA: Version 12.0 [dataset]. Minneapolis, MN: IPUMS, 2022. <https://doi.org/10.18128/D010.V12.0>

New Hampshire and Florida are the top destinations for MA out-migrants

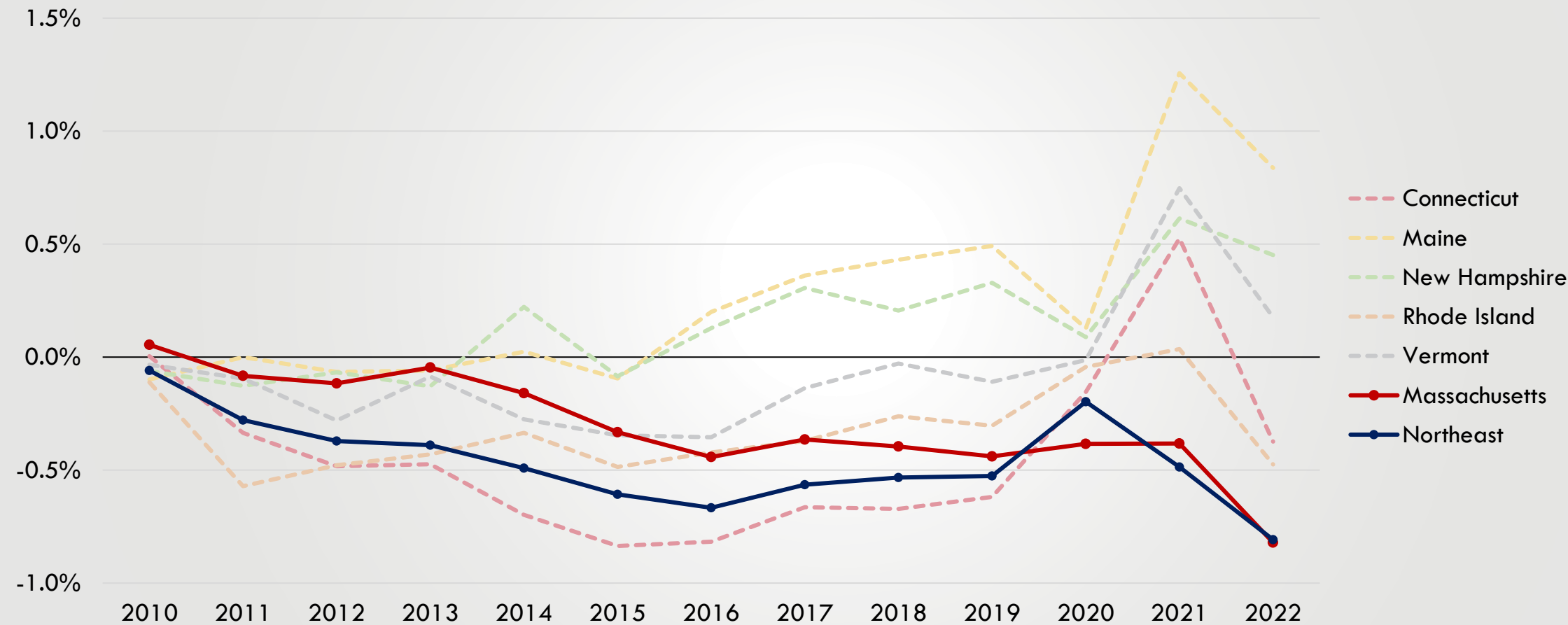
Net Migration to and from Massachusetts, Top 5 States, 2020-2021



Source: U.S. Census Bureau ACS Microdata, 2021. Steven Ruggles, Sarah Flood, Ronald Goeken, Megan Schouweiler and Matthew Sobek. IPUMS USA: Version 12.0 [dataset]. Minneapolis, MN: IPUMS, 2022. <https://doi.org/10.18128/D010.V12.0>

Massachusetts had among the highest out-migration rates of Northeast states, opposed to other New England states with high in-migration such as Maine and New Hampshire

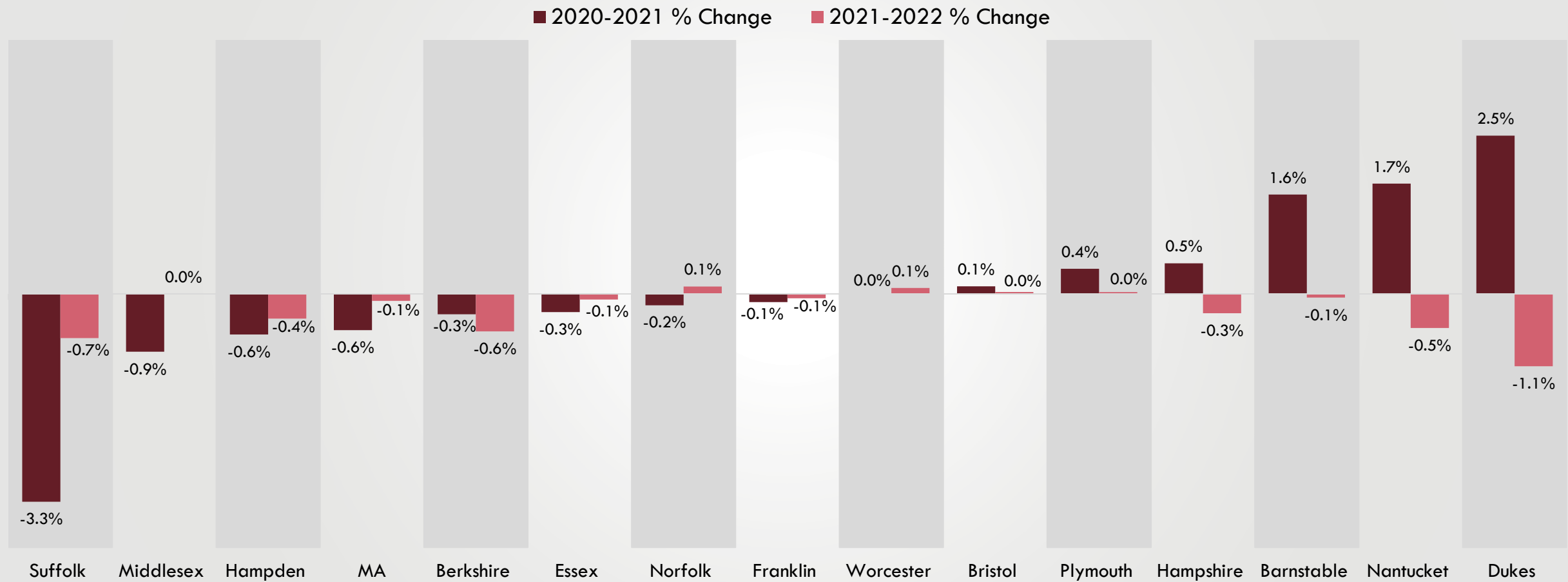
Rate of Domestic Migration for New England States and Region, 2010-2022



Source: U.S. Census Bureau Population Estimates Program, NST EST 2019 All Data; NST EST 2022 All Data
The Northeast region consists of Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont. Only New England states are shown for clarity.

The second year of the Covid-19 Pandemic saw less dramatic swings in county populations, though more counties saw population declines

Year-Over-Year Percent Change in Population, MA and Counties, 2020-2022

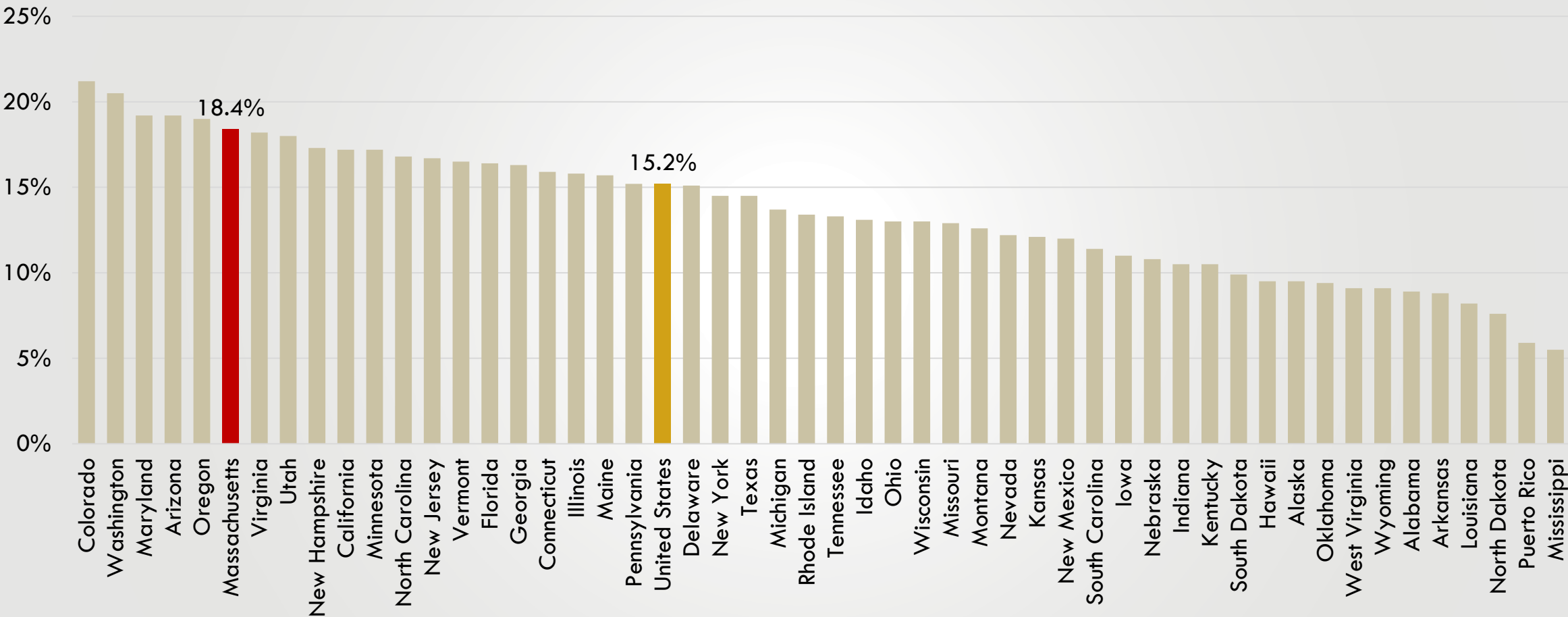


Source: UMass Donahue Institute. Source Data: U.S. Census Bureau, Population Division (CO-EST2022-CHG-25)

Remote Work

Massachusetts has the sixth-highest rate of remote work in the United States

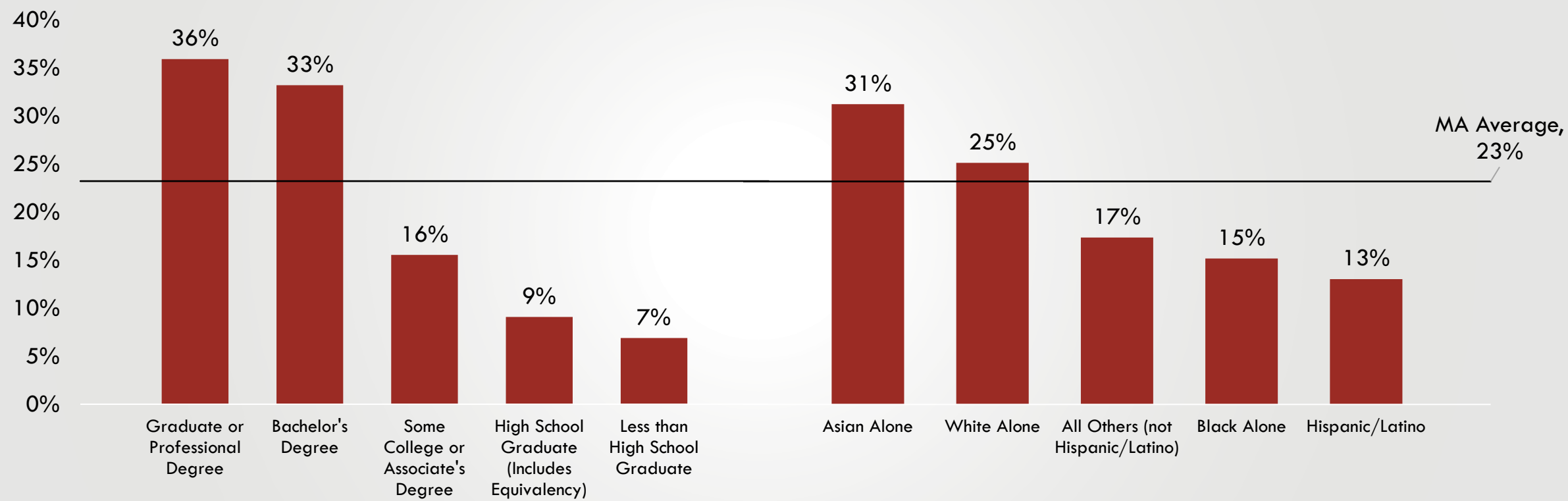
Percentage of workers who work from home, 2022



Source: US Census Bureau, American Community Survey One-Year Estimates, 2022.

Workers with at least a four-year college degree as well as Asian or white workers are more likely than average to work from home in MA

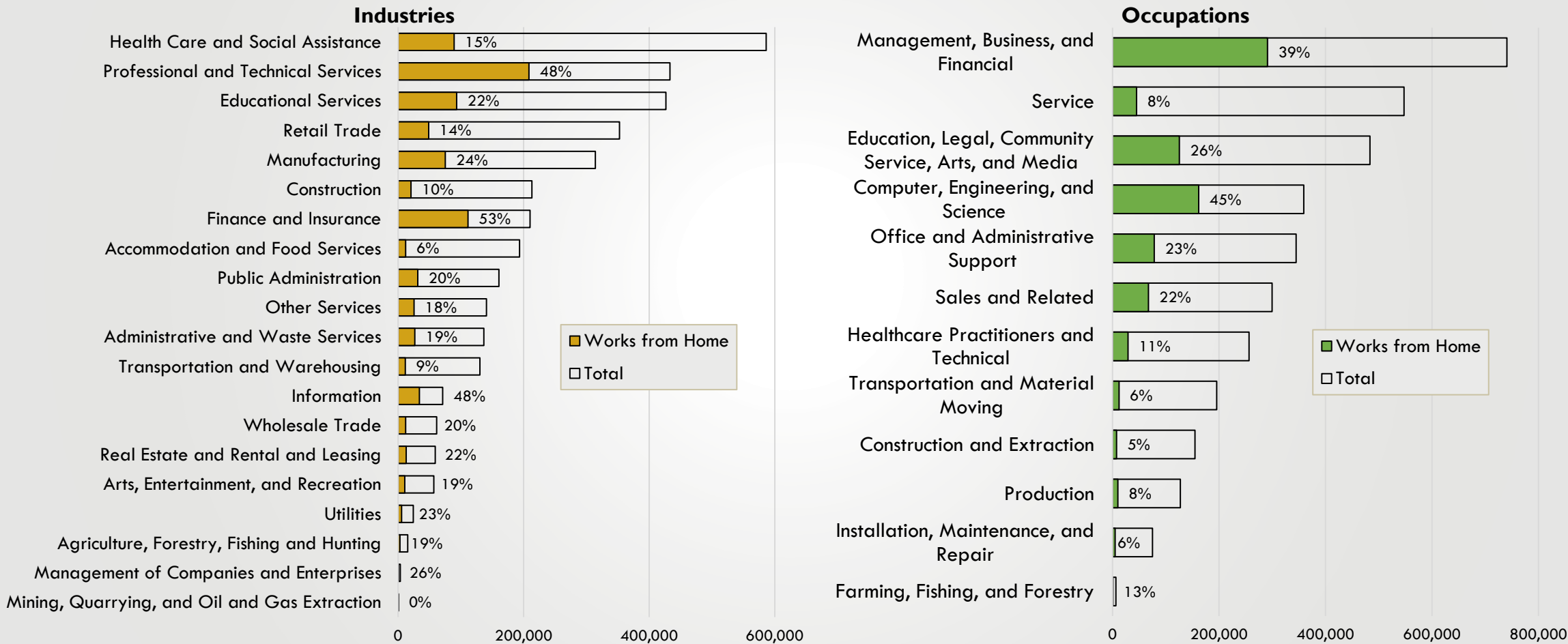
Percent of workers who worked from home in Massachusetts by demographic groups, 2021



Source: U.S. Census Bureau ACS Microdata, 2021. Steven Ruggles, Sarah Flood, Ronald Goeken, Megan Schouweiler and Matthew Sobek. IPUMS USA: Version 12.0 [dataset]. Minneapolis, MN: IPUMS, 2022. <https://doi.org/10.18128/D010.V12.0>

Jobs in STEM, technical, and financial fields are proportionally more likely to have workers who telecommute; sectors and occupations in health care and education also employ many remote workers

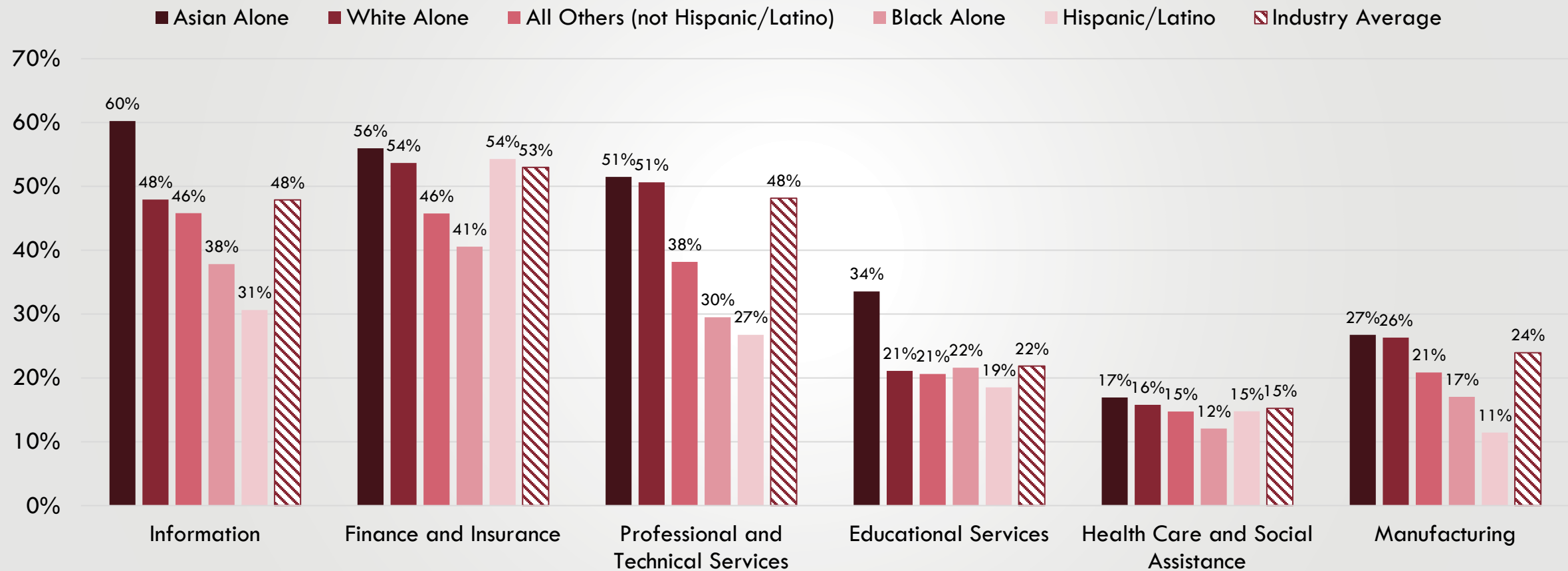
Percent of workers who worked from home in Massachusetts by industry and occupation, 2021



Source: U.S. Census Bureau ACS Microdata, 2021. Steven Ruggles, Sarah Flood, Ronald Goeken, Megan Schouweiler and Matthew Sobek. IPUMS USA: Version 12.0 [dataset]. Minneapolis, MN: IPUMS, 2022. <https://doi.org/10.18128/D010.V12.0>

Black, Hispanic/Latino, and workers of other racial groups were much less likely to work from home across a variety of industries

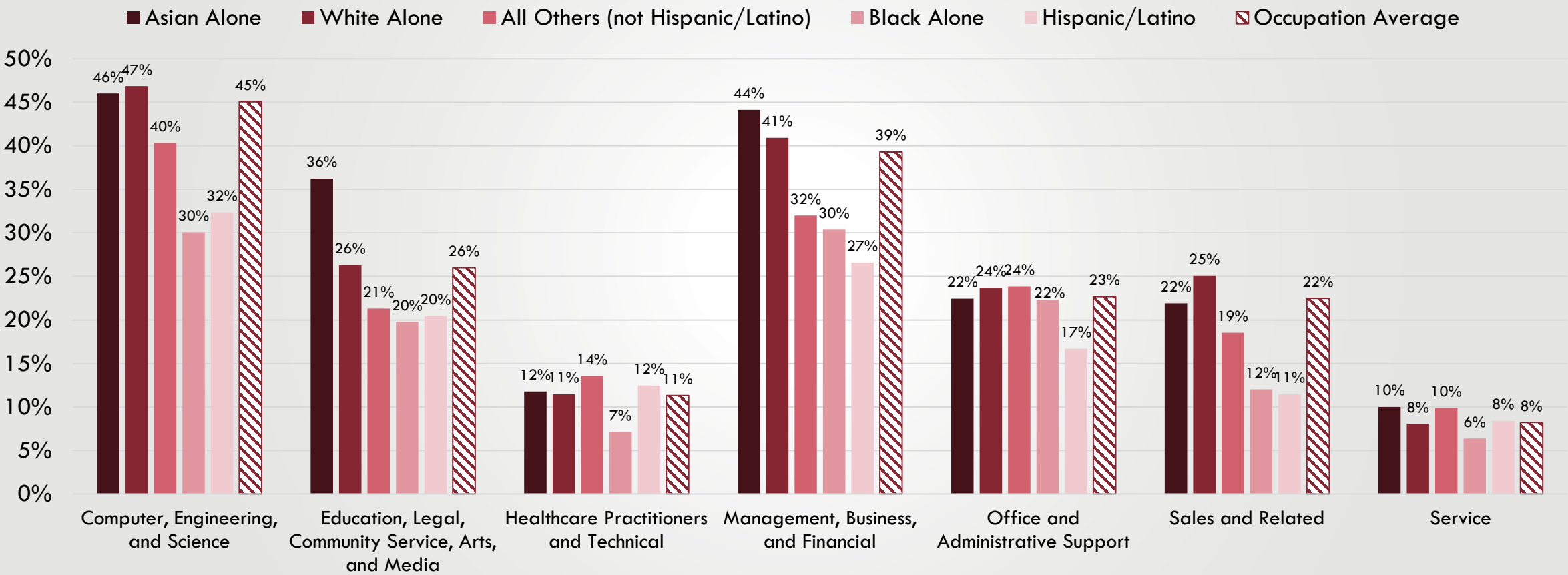
Percent of workers who worked from home in Massachusetts by race/ethnicity and select industries, 2021



Source: U.S. Census Bureau ACS Microdata, 2021. Steven Ruggles, Sarah Flood, Ronald Goeken, Megan Schouweiler and Matthew Sobek. IPUMS USA: Version 12.0 [dataset]. Minneapolis, MN: IPUMS, 2022. <https://doi.org/10.18128/D010.V12.0>

Racial/ethnic disparities in remote work are clear among different occupations as well

Percent of workers who worked from home in Massachusetts by race/ethnicity and select occupation groups, 2021



Source: U.S. Census Bureau ACS Microdata, 2021. Steven Ruggles, Sarah Flood, Ronald Goeken, Megan Schouweiler and Matthew Sobek. IPUMS USA: Version 12.0 [dataset]. Minneapolis, MN: IPUMS, 2022. <https://doi.org/10.18128/D010.V12.0>

Several MA cities have significantly higher rates of remote work for residents compared to the state and US

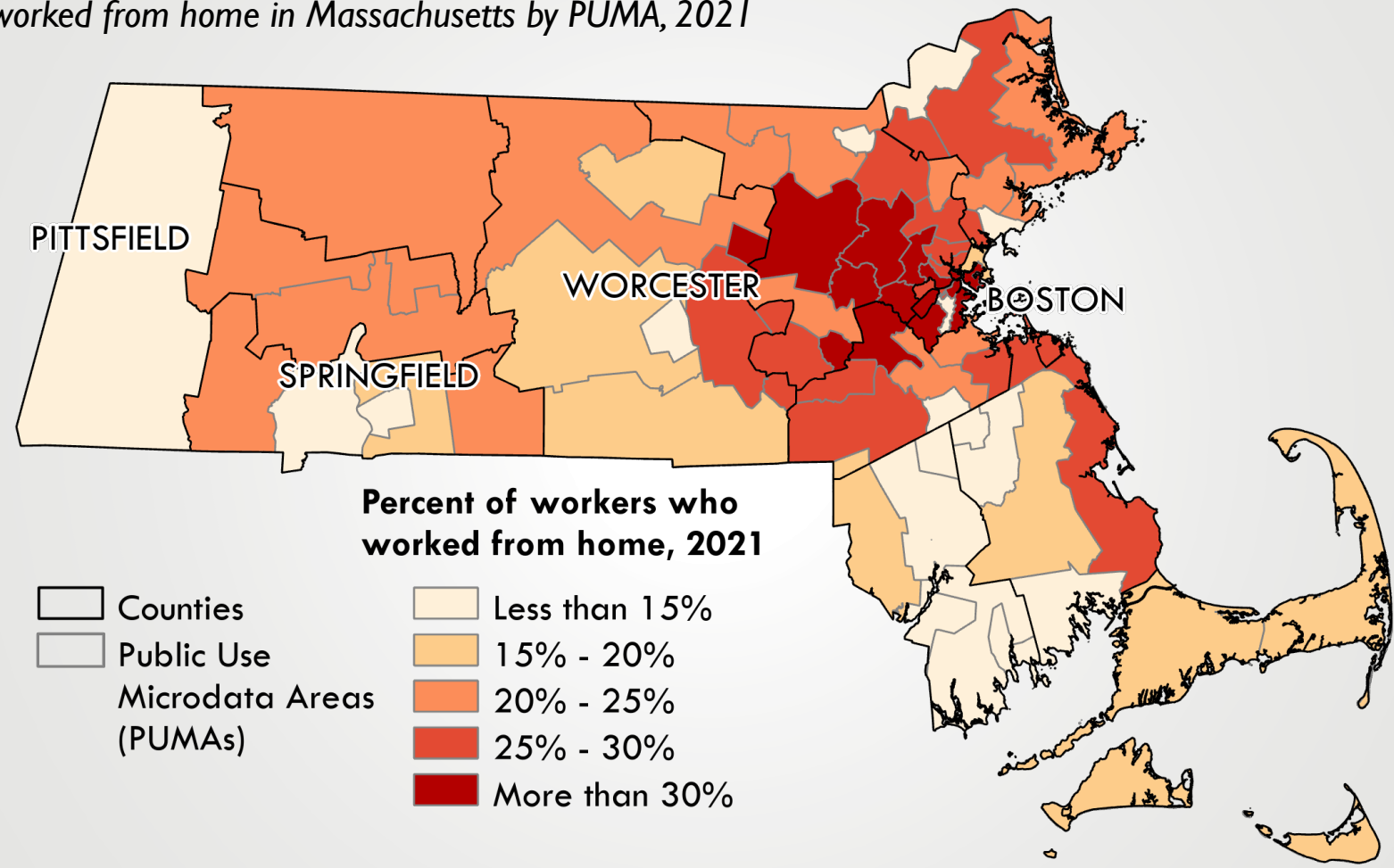
Percent of workers who work from home for selected MA cities, MA, and US, 2022

Newton	33%
Somerville	33%
Cambridge	30%
Boston	21%
Quincy	20%
Massachusetts	18%
Malden	17%
Framingham	16%
United States	15%
Lowell	12%
Worcester	11%
Springfield	9%
Brockton	8%
Lynn	8%
Lawrence	8%
Fall River	6%
New Bedford	6%

Source: US Census Bureau, American Community Survey One-Year Estimates, 2022.

Remote work occurs throughout the state but is concentrated in the Boston metro area and Middlesex County

Percent of workers who worked from home in Massachusetts by PUMA, 2021

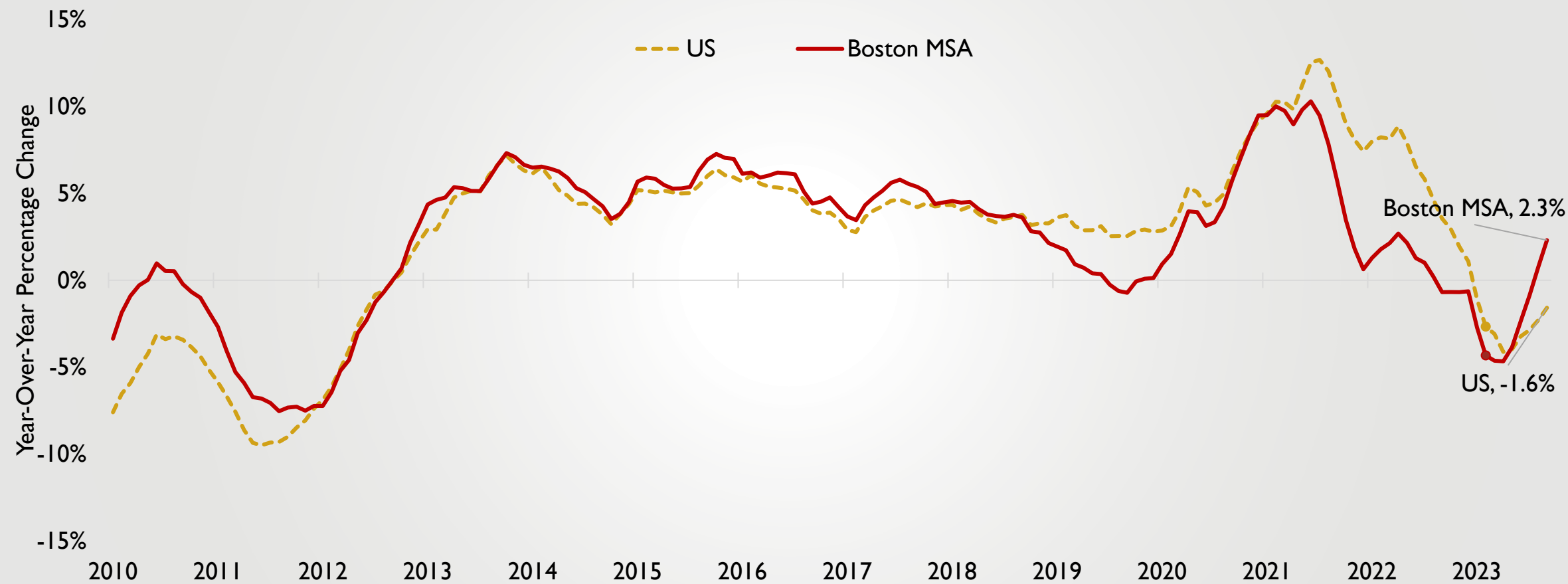


Source: U.S. Census Bureau ACS Microdata, 2021. Steven Ruggles, Sarah Flood, Ronald Goeken, Megan Schouweiler and Matthew Sobek. IPUMS USA: Version 12.0 [dataset]. Minneapolis, MN: IPUMS, 2022. <https://doi.org/10.18128/D010.V12.0>

Housing

After housing price increases fell from pandemic highs, the Boston area prices have begun surging again

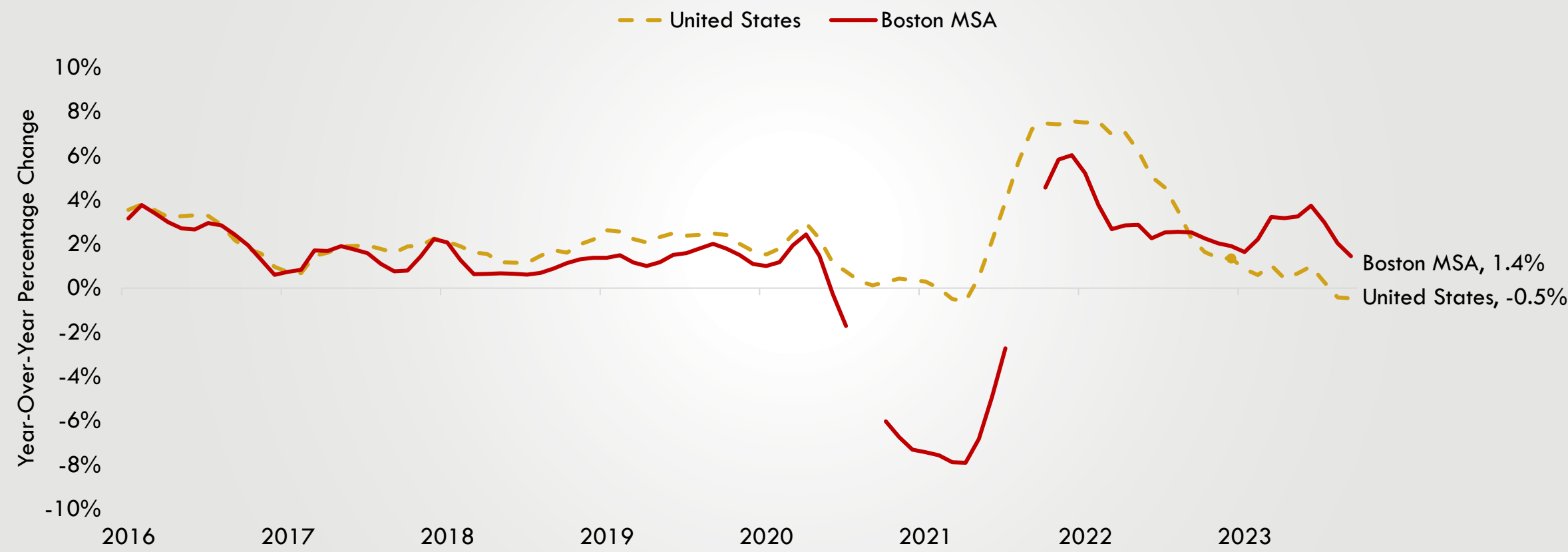
Zillow Home Value Index from 2010 to September 2023 (in 2023 \$)



Source: Zillow Home Value Index, Bureau of Labor Statistics, UMDI Analysis

Rental increases have been higher in the Boston area as well compared to the US

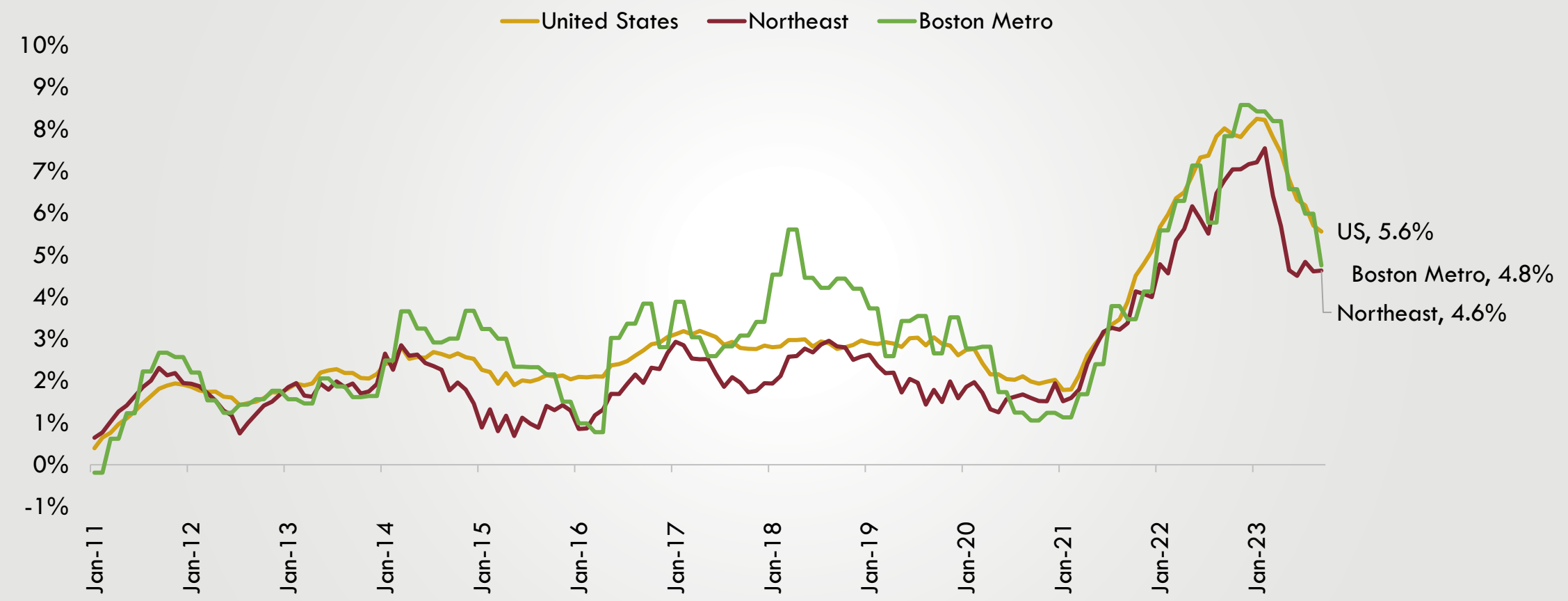
Zillow Observed Rent Index from 2016 to September 2023 (in 2023 \$)



Source: Zillow Observed Rent Index, Bureau of Labor Statistics, UMDI analysis
Note: rental data from Zillow for September and August 2020 are missing, and year-over-year changes for 2021 are omitted as well

The Boston Metro experience large housing cost increases over the past 10 years, including pre-pandemic when inflation was otherwise moderate

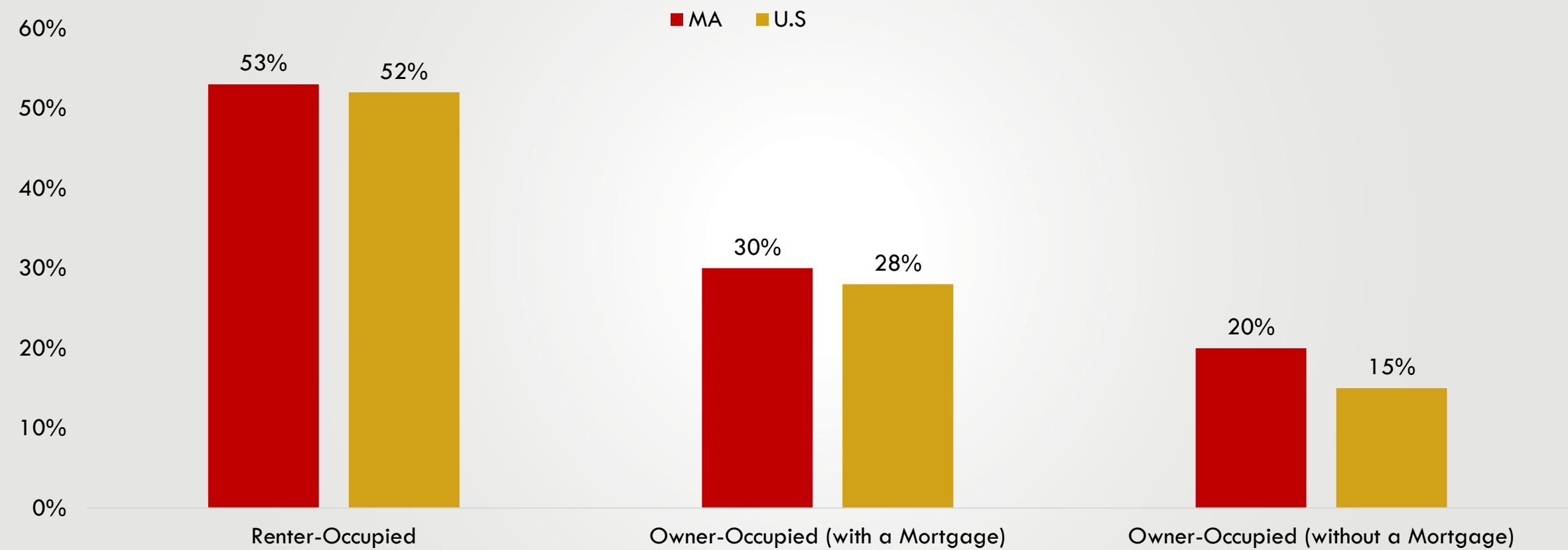
Housing Inflation Rate for U.S., Northeast, and Boston-Cambridge-Newton, MA-NH MSA, January 2011 - September 2023



Source: Bureau of Labor Statistics, Consumer Price Index, Housing

Massachusetts renters are similarly cost burdened compared to the nation, while our homeowners are more likely to be cost burdened

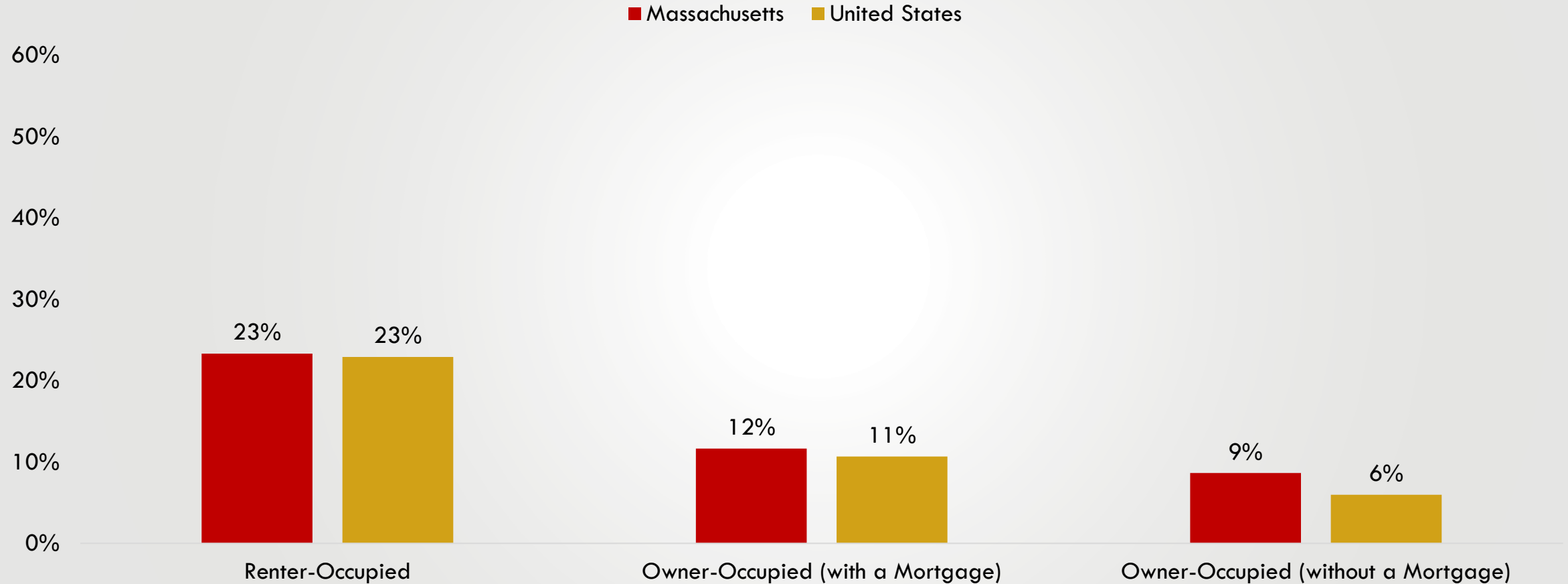
Housing-Cost-Burdened Households in Massachusetts and the United States (Spending 30 Percent or More of Income on Housing Costs)



Source: ACS 2022 1-Year Estimates, Table DP04

Almost 1 in 4 renters in Massachusetts and the US pay half or more of their income toward housing

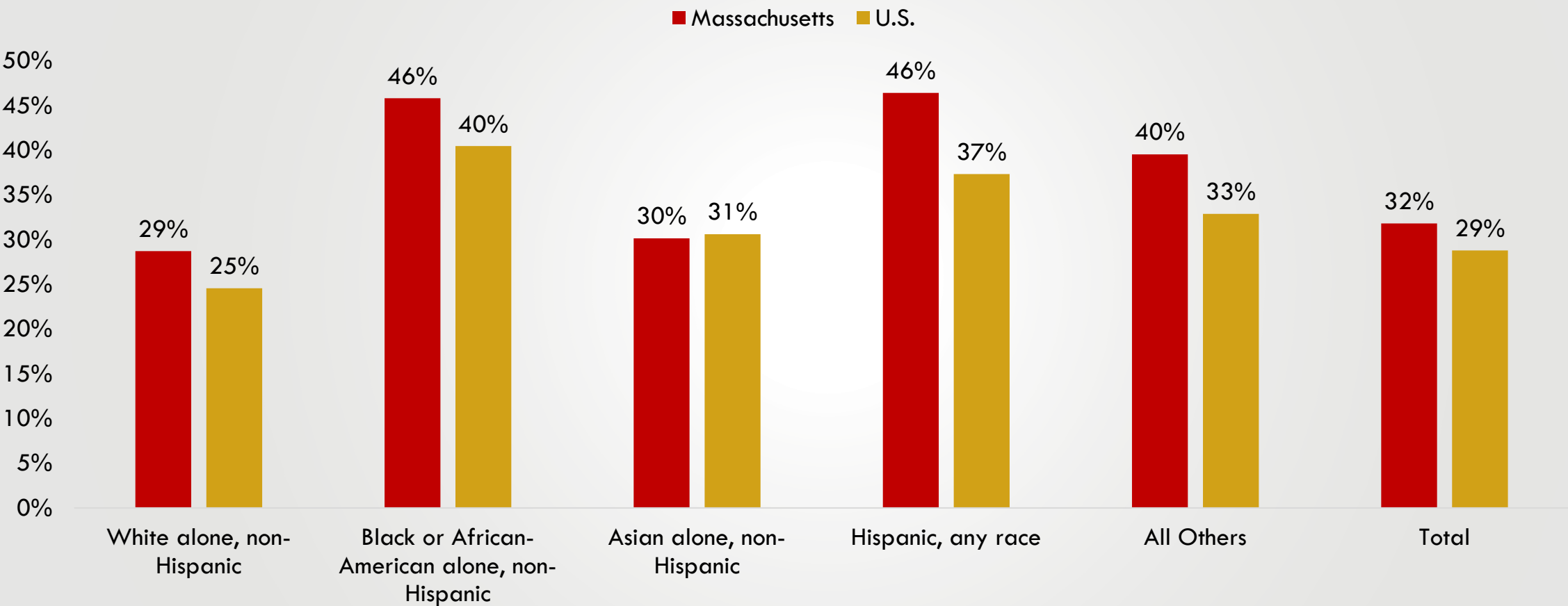
Extreme Housing-Cost-Burdened Households in Massachusetts and the United States (Spending 50 Percent or More of Income on Housing Costs)



Source: ACS 2017-2021 5-Year Estimates, Tables B25070, B25091

Especially for Black and Hispanic households, housing cost burden tends to be more prevalent in Massachusetts compared to the nation

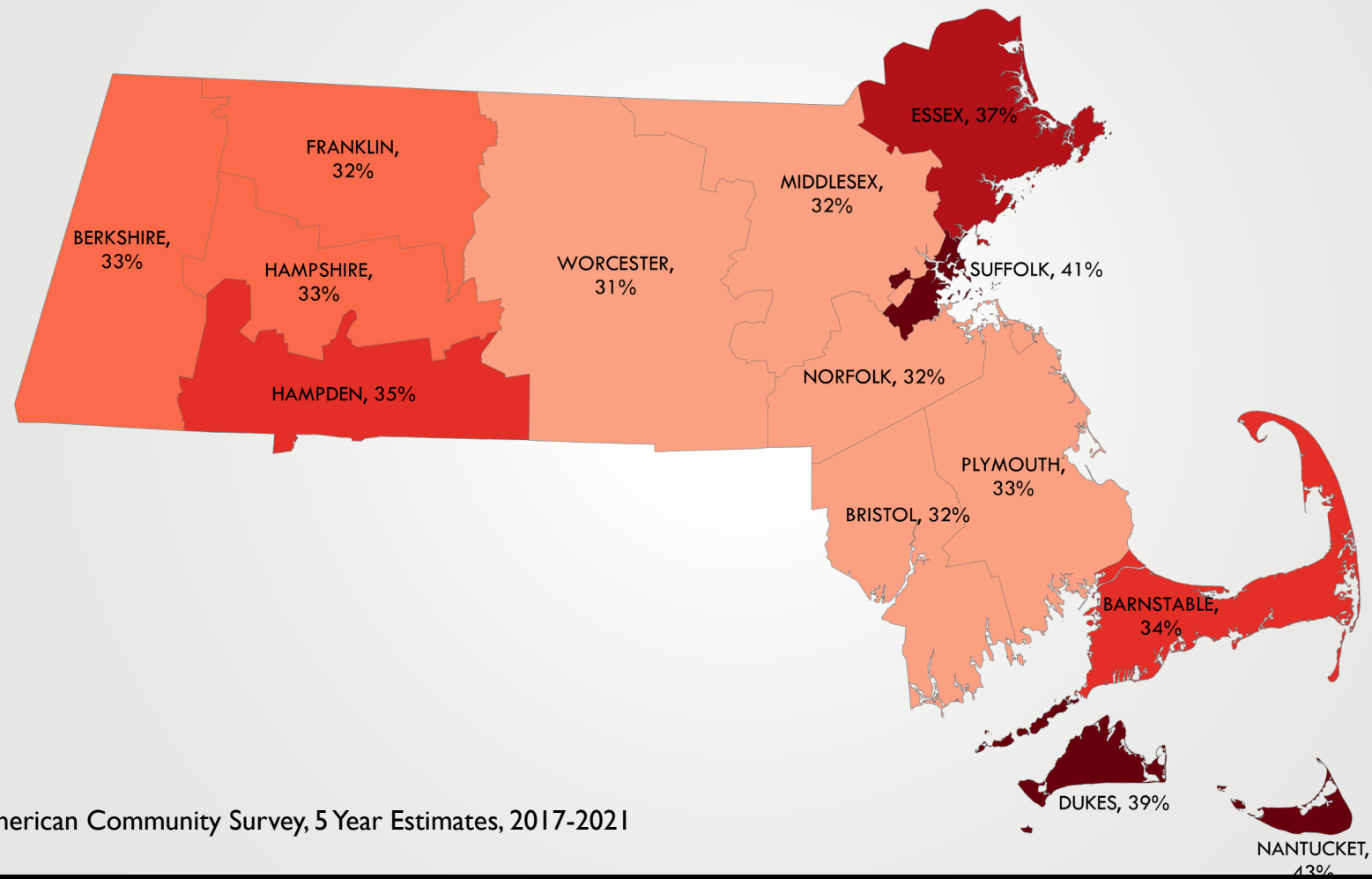
Housing-Cost-Burdened Households in Massachusetts and the United States by Race/Ethnicity



Source: HUD Comprehensive Housing Affordability Strategy, 2016-2020. Tabulations by UMass Donahue Institute. Includes owner-occupied and renters.

Boston, North Shore, Hampden County, and Cape Islands are particularly housing cost burdened

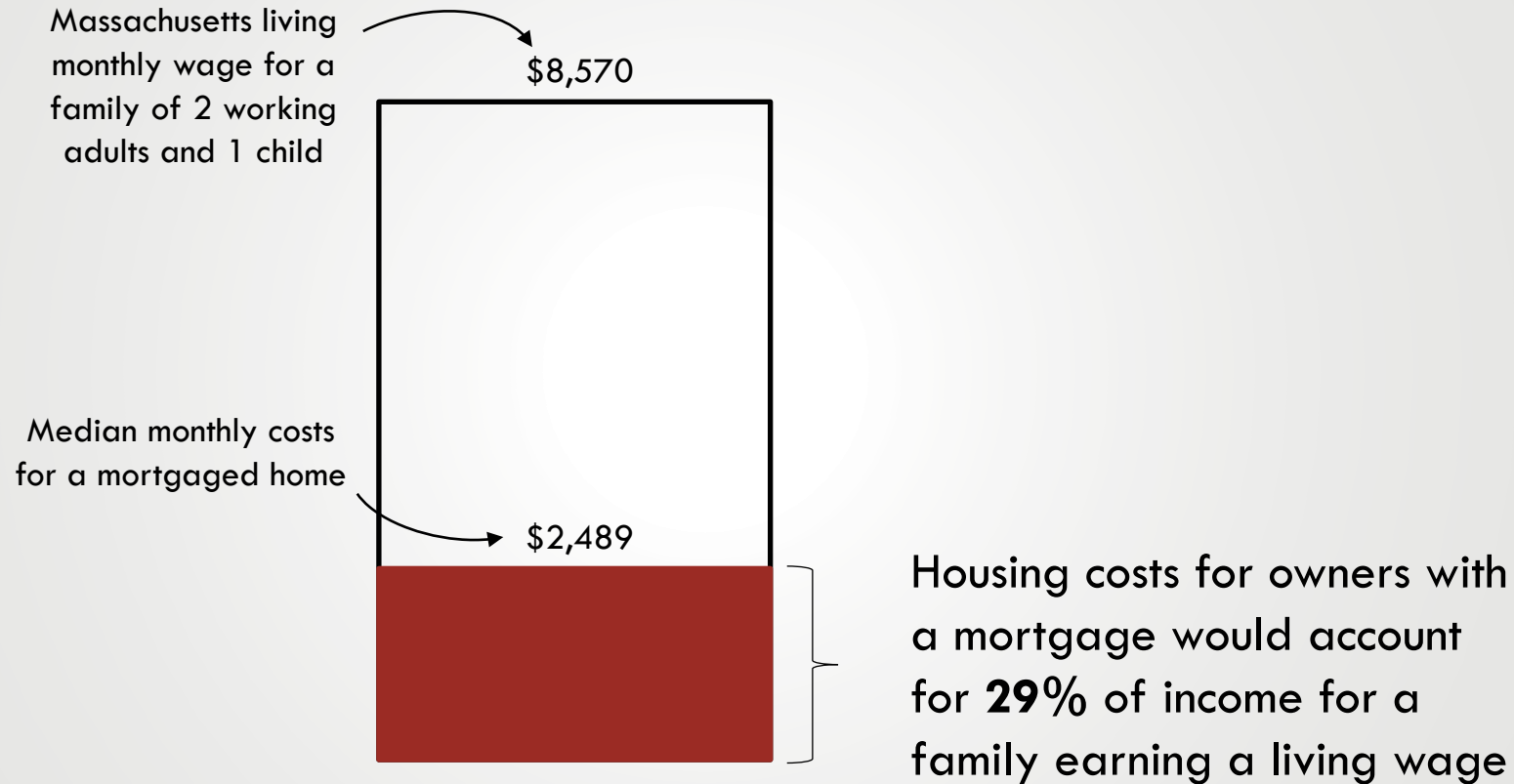
Percent of Households that are Housing Cost Burdened (Renter-Occupied and Owner-Occupied Units) by Massachusetts County



Source: U.S. Census Bureau, American Community Survey, 5 Year Estimates, 2017-2021

The median cost of a mortgaged home in Massachusetts would nearly cost burden a family with household income at the living wage

Massachusetts Living Wage (Household Income) and Median Housing Costs in Massachusetts, 2022 (in 2022 \$)

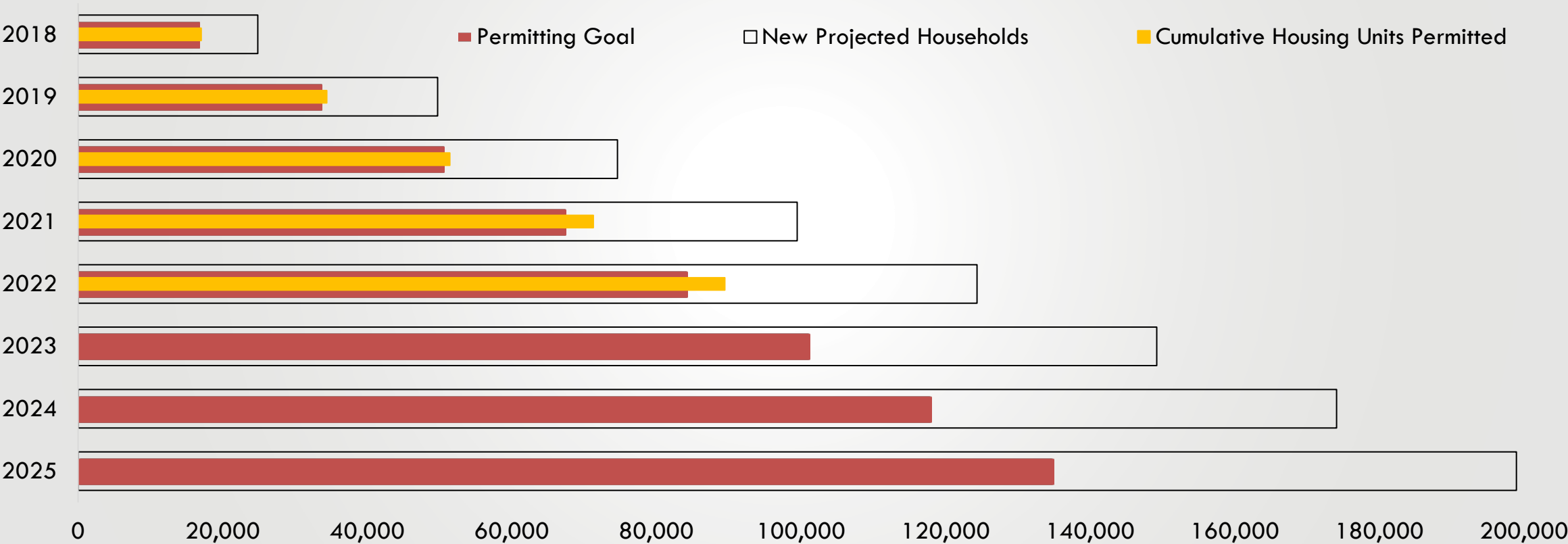


Source: ACS 2022 1-Year Estimates, Table DP04; MIT Living Wage Calculator.

Note: Living wage is the combination of is a household of two working adults with one child.

Housing unit permitting is keeping pace with the goals from the state’s Housing Choice legislation, but not with the projected growth in households

Cumulative Housing Units Permitted in Massachusetts from 2018-2025



Source: Mass.gov, U.S. Census Building Permit Survey. Projections by UMass Donahue Institute. 2022 annual housing unit permits are preliminary.

On October 18th, the Healey-Driscoll Administration released details on the forthcoming Affordable Homes Act

\$4.1 Billion

Proposed new spending to promote new construction, renovate existing public housing, and support existing affordable housing

New Policies

Simplify some types of development (ADUs, state-owned land, transit-oriented development), adjust public housing regulations, and support new state-wide planning

Tax Credits

New and expanded credits aimed at homeownership and Community Development Corporations

Thank you!

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