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

November 3, 2021

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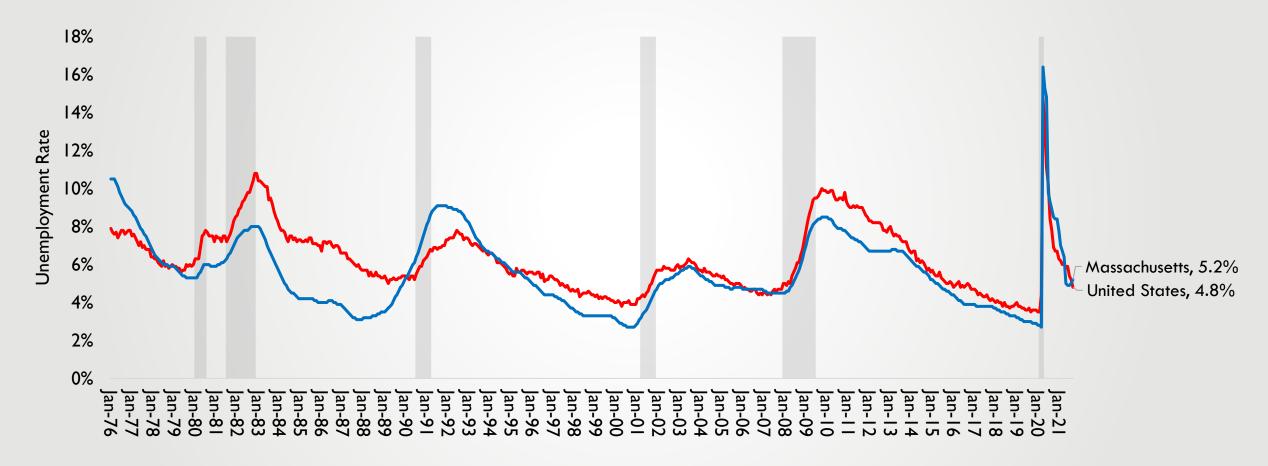
The Massachusetts economy before the COVID-19 pandemic

- Massachusetts has the fastest growing population in the Northeast
- Massachusetts is a leader in job growth in the Northeast, and a lot of that growth is driven by the Greater Boston region
- The dominant sectors in the state have been related to knowledge-based industries
- Prosperity has not been felt evenly throughout the state, and more vulnerable demographic groups and regions were at a disadvantage going into the pandemic

The COVID-19 Economy

In the spring of 2020, unemployment reached historic highs

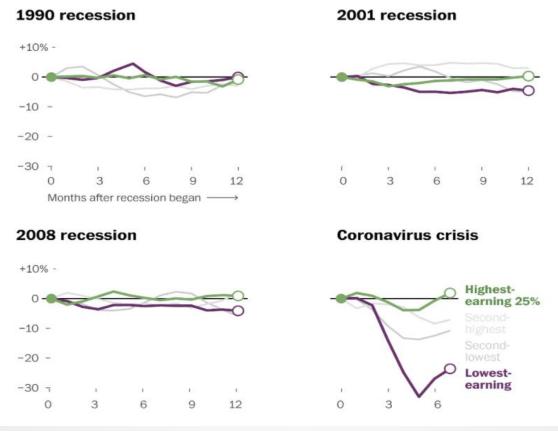
Unemployment rates in Massachusetts and the United States as of September 2021 (seasonally adjusted)



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

The COVID-19 recession is different than any previous recession

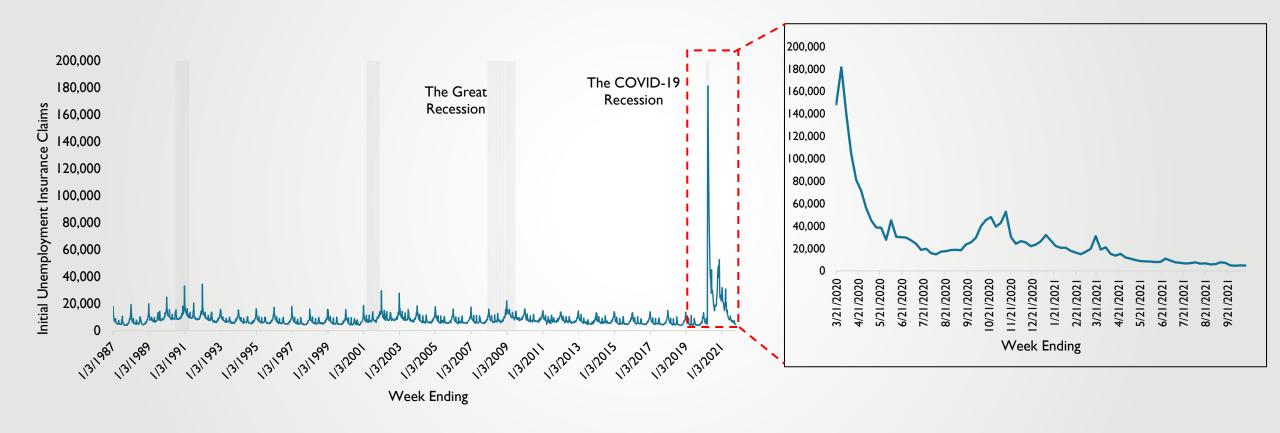
Job change in the U.S. since the beginning of each recession by weekly earnings



Source: "The covid-19 recession is the most unequal in modern U.S. history", by Heather Long, Andrew Van Dam, Alyssa Fowers, and Leslie Shapiro (September 30, 2020) https://www.washingtonpost.com/graphics/2020/business/coronavirus-recession-equality/

Initial unemployment claims have vastly exceeded those of the Great Recession and all previous recessions

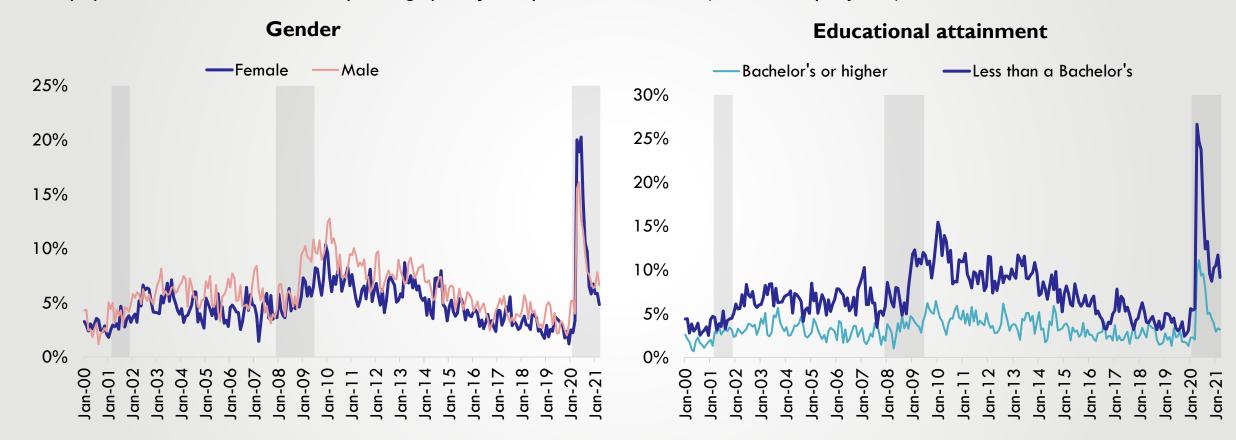
Initial Unemployment Insurance claims in Massachusetts through the week ending September 16, 2021



Source: U.S. Department of Labor; Massachusetts Executive Office of Labor and Workforce Development

Unemployment was highest among women and those with less than a Bachelor's degree

Unemployment rates in Massachusetts by demographics, January 2000-March 2021 (not seasonally adjusted)

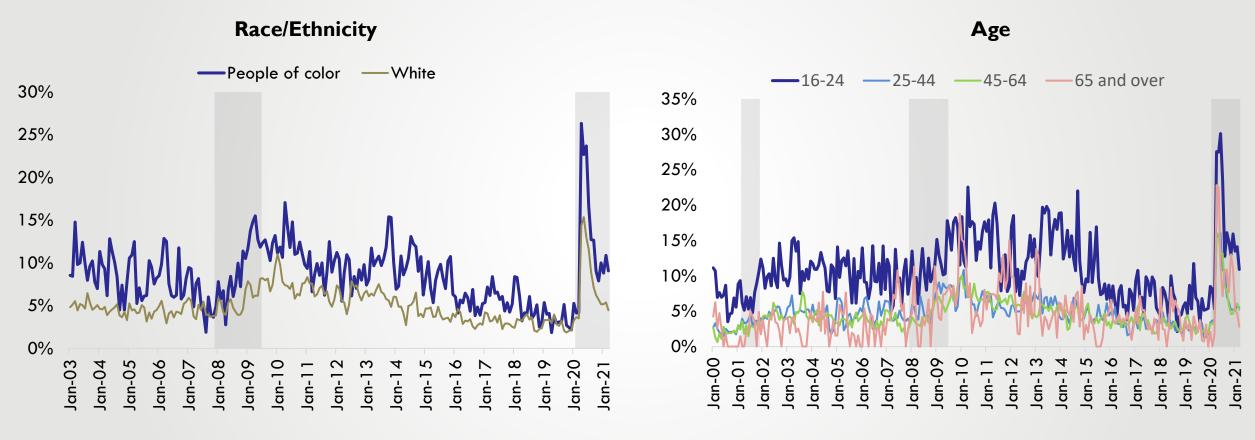


Source: Sarah Flood, Miriam King, Renae Rodgers, Steven Ruggles and J. Robert Warren. Integrated Public Use Microdata Series, Current Population Survey: Version 8.0 [CPS]. Minneapolis, MN: IPUMS, 2020. https://doi.org/10.18128/D030.V8.0; UMDI analysis Note: Data are not seasonally adjusted.

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Unemployment was also highest among people of color and young workers

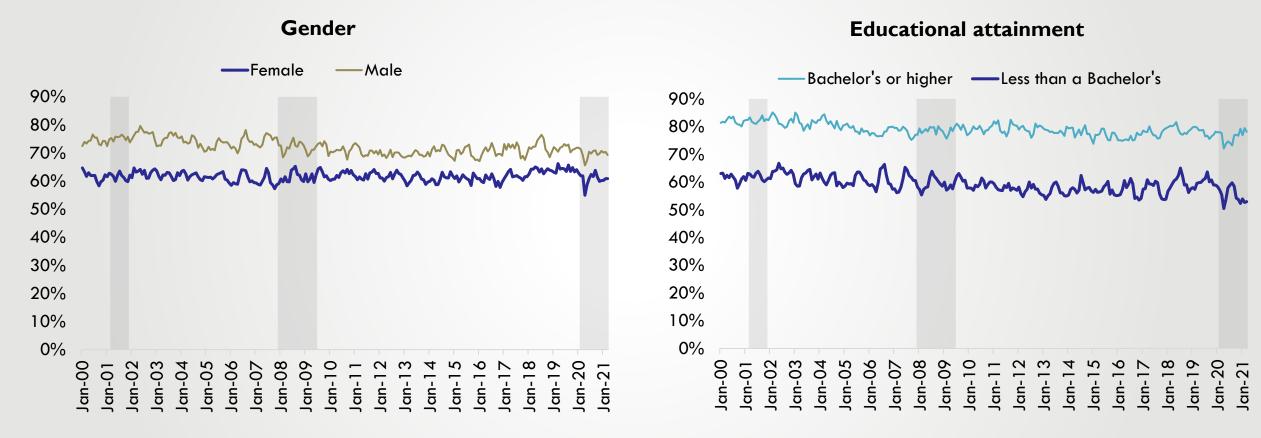
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Labor force participation was lowest among women and those with less than a **Bachelor's degree**

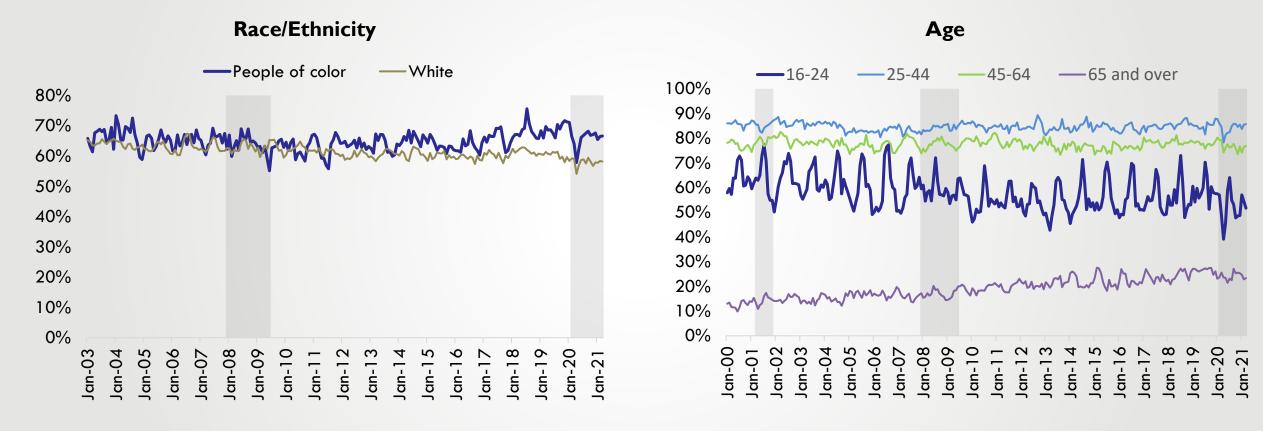
Labor force participation rates in Massachusetts by demographics, January 2000-March 2021 (not seasonally adjusted)



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People of color and young workers do not have the lowest labor force participation, but they are farthest from their pre-pandemic participation levels

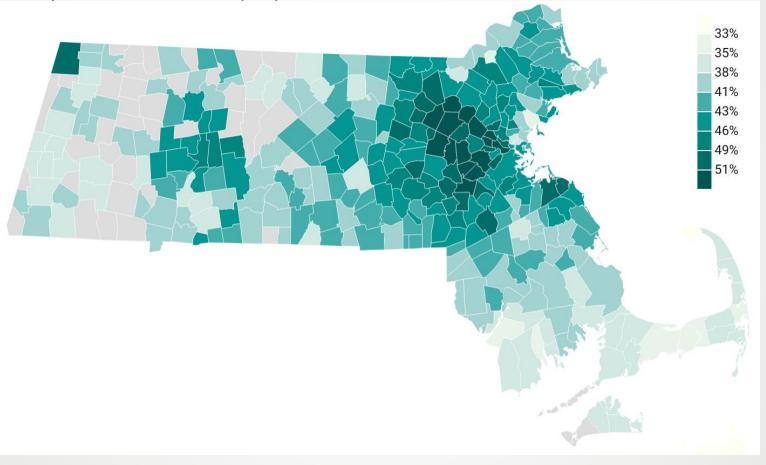
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Boston's suburbs have a high share of workers capable of working from home

Share of telework capable workers by Massachusetts municipality, 2017

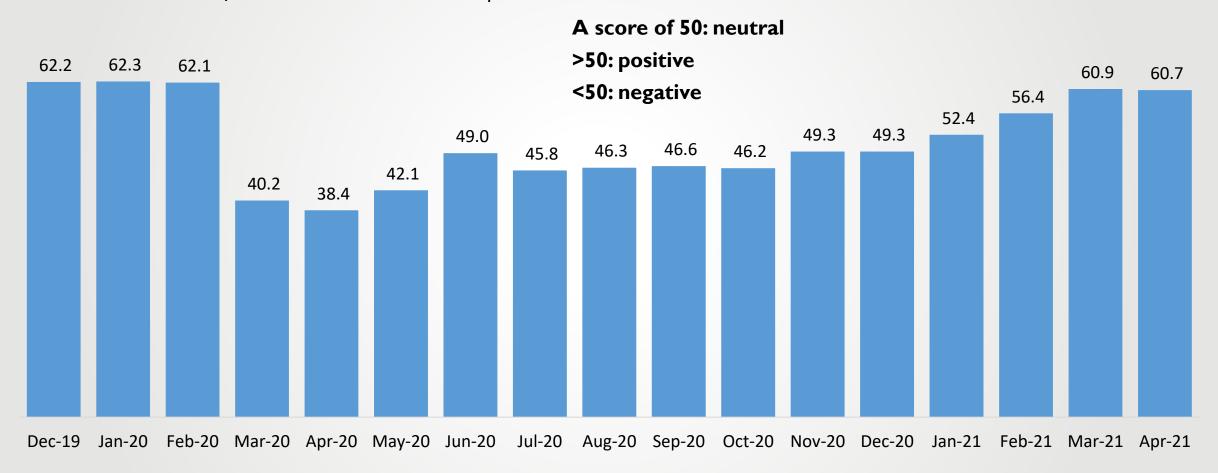


Source: 2018 U.S. Bureau of Labor Statistics Occupational Employment Statistics, 2017 LEHD Origin-Destination Employment Statistics Note: Methodology courtesy of Dingel & Neiman, and Veuger, Brooks, & Begley

Economic recovery, one year into the pandemic

Confidence among Massachusetts' businesses has returned

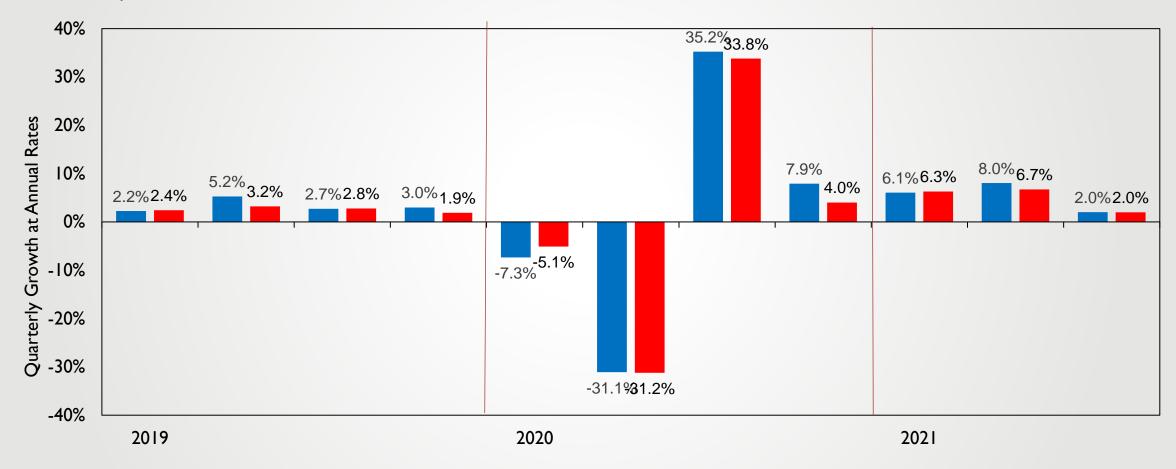
Massachusetts Business Confidence Index, December 2019-April 2021



Source: The Associated Industries of Massachusetts, https://aimnet.org/blog/business-confidence-remains-flat-in-april/

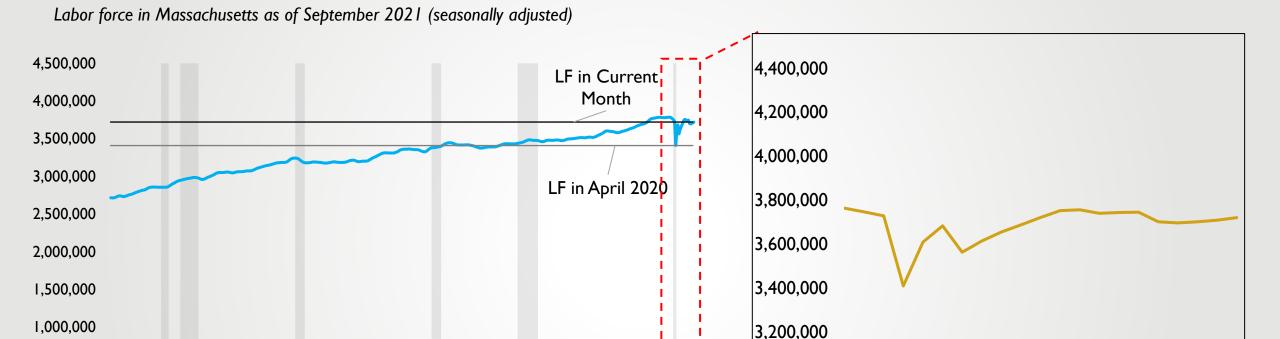
The pace of state and national growth has slowed

Growth in real product, Massachusetts and the United States, Q12019-Q3 2021



Source: U.S. Bureau of Economic Analysis (BEA); Alan Clayton-Matthews

The labor force (unemployed + employed) has begun to rebound



3,000,000

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

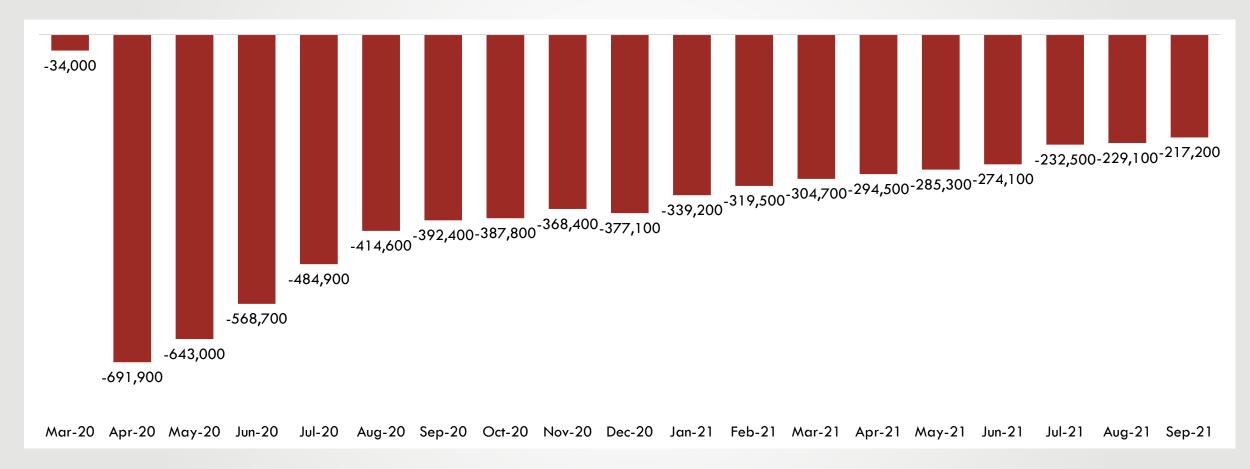
500,000

\(\daggregarrange\) \(\dag

Jun-21 May-21 Apr-21 Mar-21 Feb-21 Jan-21 Dec-20 Oct-20 Oct-20 Sep-20 Aug-20 Jun-20 Jun-20 May-20 Apr-20 Mar-20 Feb-20 Jan-20

Twelve months into the jobs recovery, we are still short over 200,000 jobs compared to the peak over a year ago

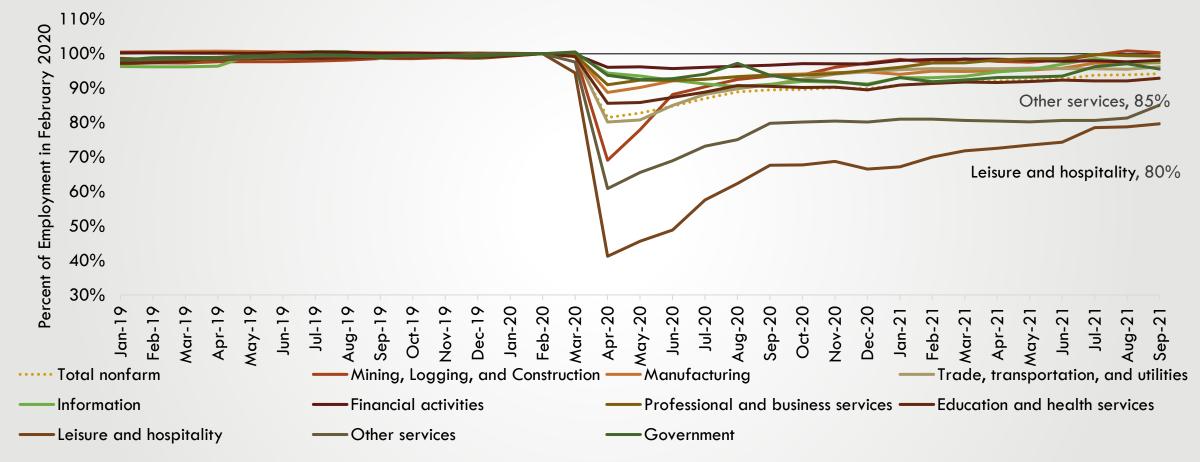
Jobs deficit in Massachusetts relative to February 2020 peak



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

The sectors slowest to recover have been Leisure & Hospitality and Other Services

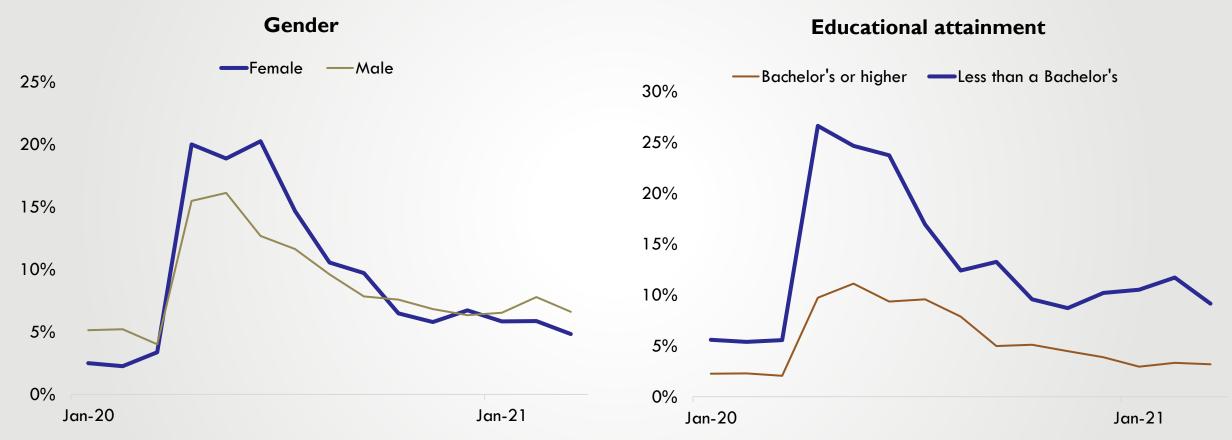
Employment growth by supersector in Massachusetts, February 2020-September 2021



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

The unemployment rate for women is now below that for men; but those with less than a Bachelor's degree still have high unemployment

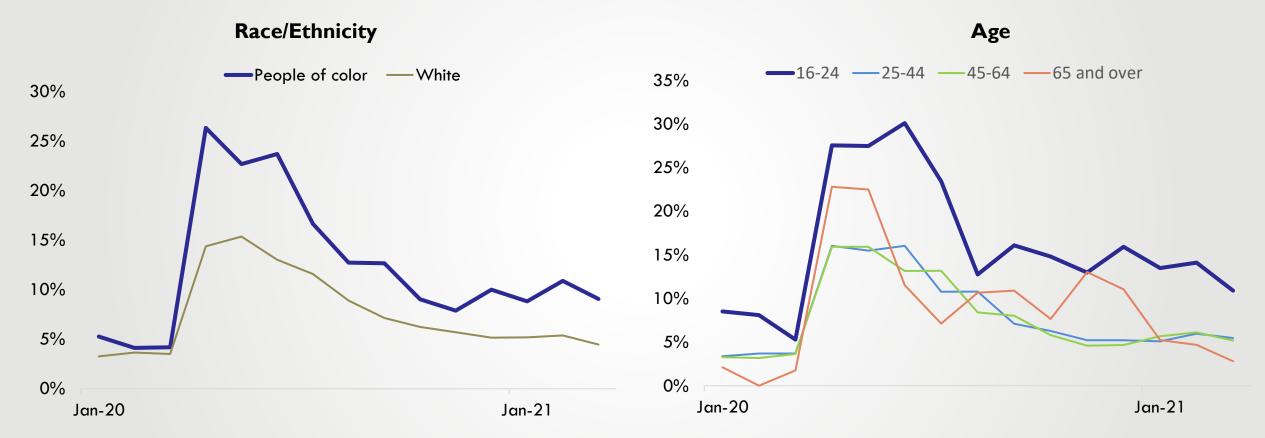
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Unemployment for people of color and the young has decreased substantially but still has not reached pre-pandemic levels

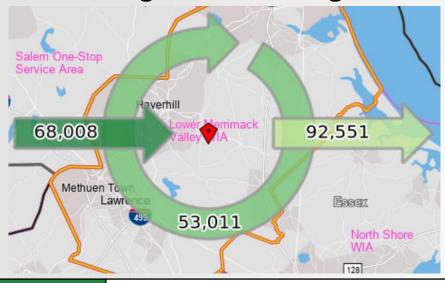
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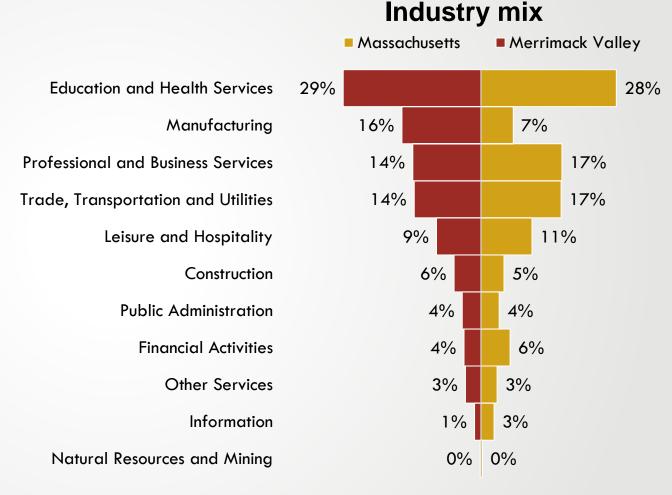
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The Merrimack Valley at a glance (2019)

Commuting flow of the region



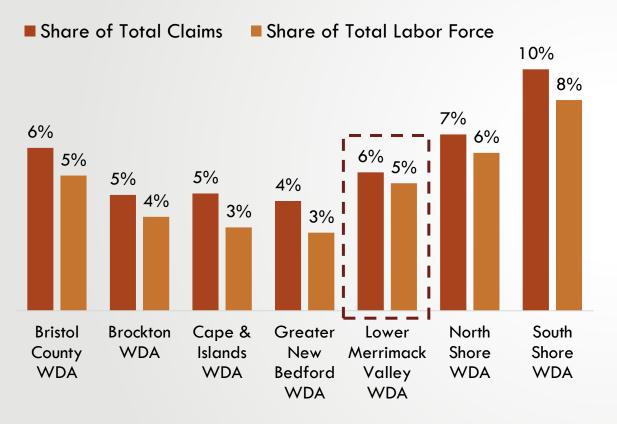
INFLOW	68,008 Employed in Merrimack Valley, Live Outside
	92,551 Employed and Live in Merrimack Valley
OUTFLOW	53.011 Live in Merrimack Valley, Employed Outside



Source: U.S. Census, On the Map; Massachusetts Executive Office of Labor and Workforce Development, Local Area Unemployment (LAU) & ES-2020); UMDI analysis. Merrimack Valley is the Lower Merrimack Valley Workforce Development Area and NECTAs. All ownership types.

The Merrimack Valley at a glance (2020-Present)

Regions with disproportionate concentration of claims compared to their size of the labor force, April 2020



September 2021 Stats





96.9% jobs recovered to Feb. 2020 peak (vs. 96.5% for MA)

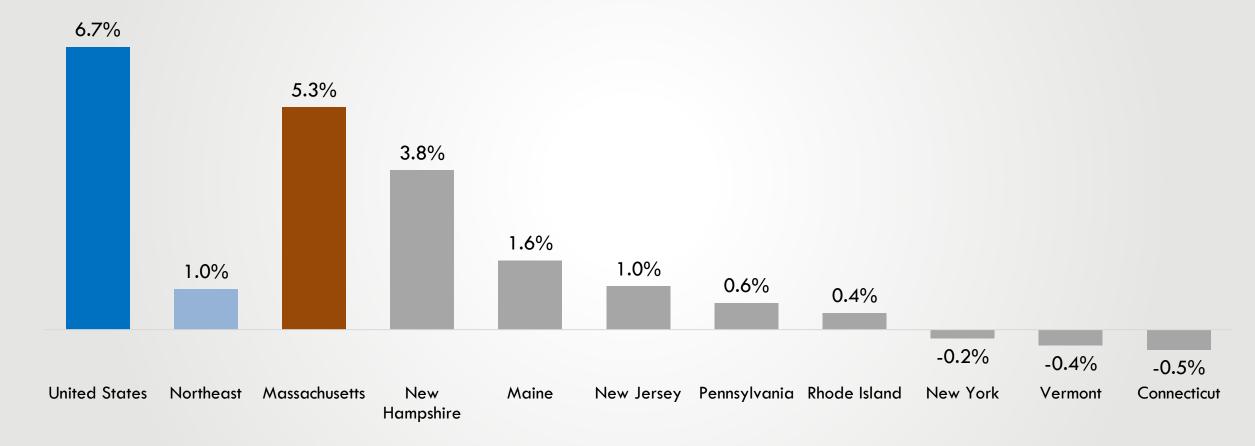
Sectors with higher employment than in Feb. 2020:

Supersector	Feb-20	Sep-21	Change (N)	Change (%)
Leisure and hospitality	15,100	16,200	1,100	7%
Mining, Logging, and				
Construction	8,300	9,200	900	11%
Professional and business				
services	15,600	16,000	400	3%
Manufacturing	18,500	18,700	200	1%

Source: Massachusetts Executive Office of Labor and Workforce Development, Local Area Unemployment (LAU) Statistics & Current Employee Statistics (CES-790); UMDI analysis. Merrimack Valley is the Lower Merrimack Valley Workforce Development Area and NECTAs. Unemployment is not seasonally adjusted.

Massachusetts has the fastest growing population in the Northeast

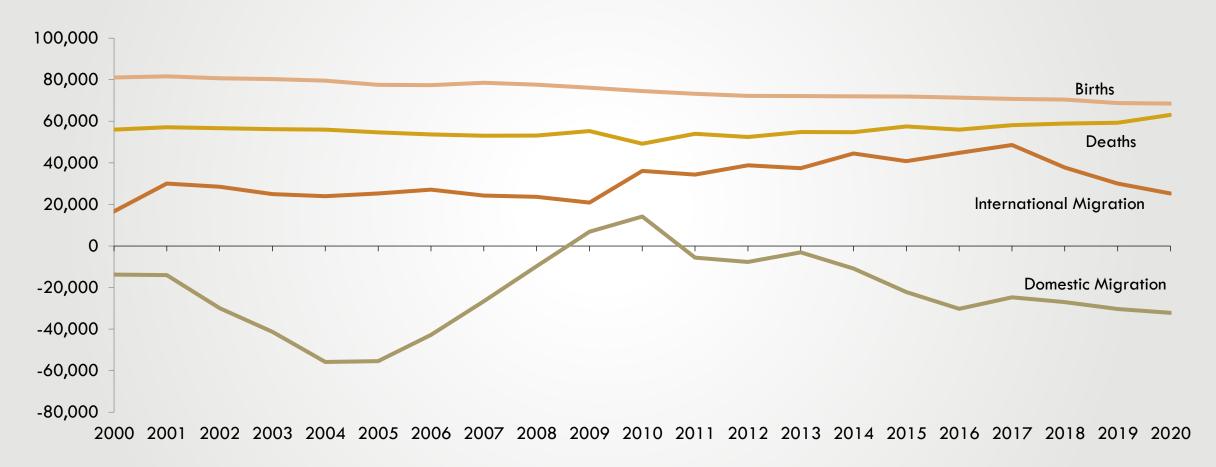
Percent change in resident population by state, 2010-2020



Source Data: U.S. Census Bureau, Change in Resident Population of the 50 States, the District of Columbia, and Puerto Rico: 1910 to 2020, April 26, 2021; UMDI analysis

Massachusetts population growth depends on international migration

Massachusetts estimated components of population change, 2000-2020

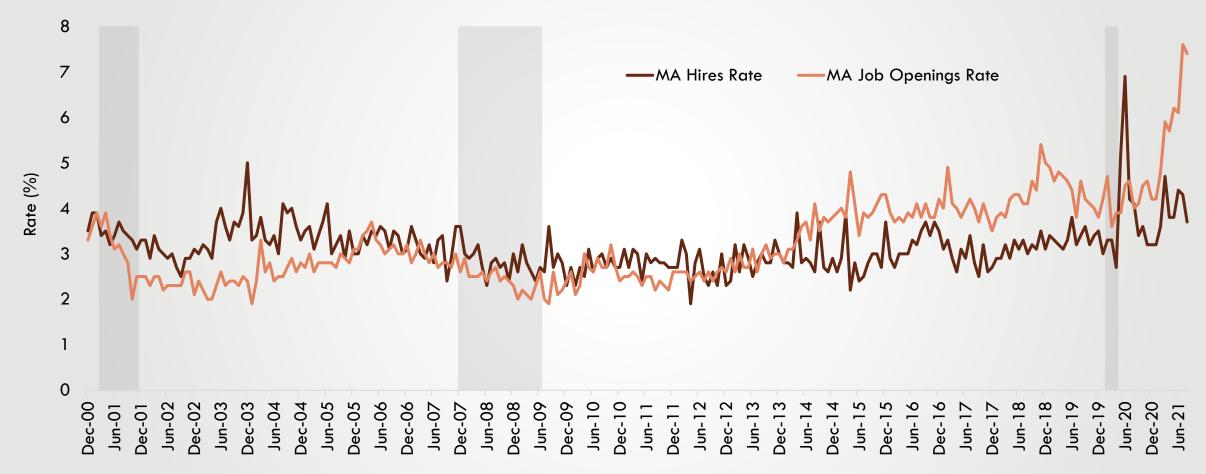


Source: UMass Donahue Institute. Source Data: ST-2000-7; CO-EST2010-ALLDATA; and NST-EST2020-ALLDATA, U.S. Census Bureau Population Division.

COVID-19 and the Labor **Market Crunch**

Massachusetts is experiencing a historic job openings rate which exceeds the hire rate

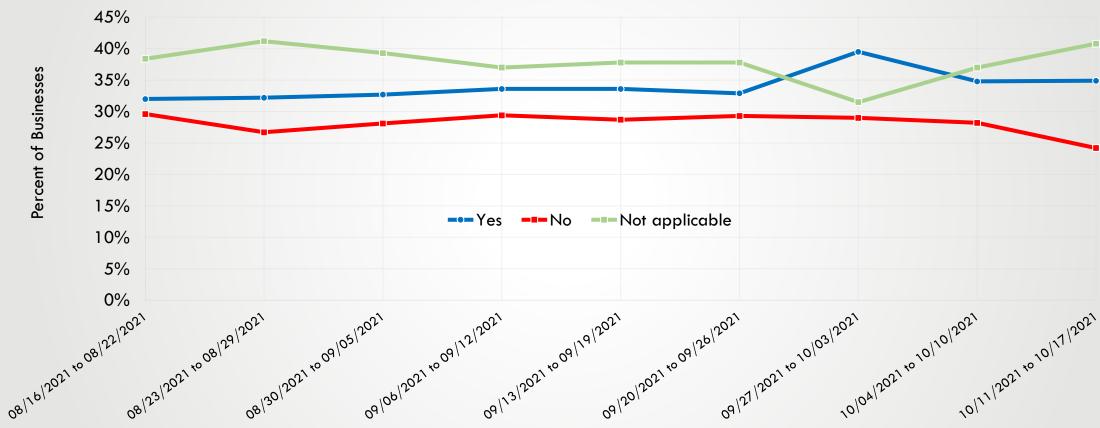
Job Openings Rate and Hire Rate in Massachusetts, December 2000-August 2021 (seasonally adjusted)



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

35% of Businesses faced difficulties hiring paid employees in October, Pulse Survey reports



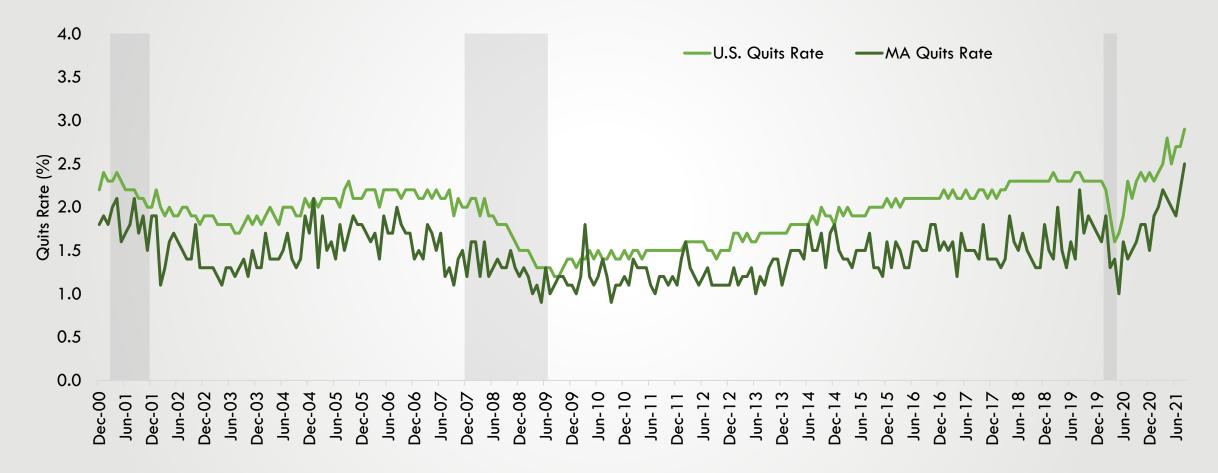


Source: U.S. Census, Small Business Pulse Survey

Note: No data collected between 06/28/2020-08/08/2020, 10/13/2020-11/8/2020, 01/11/2021-02/14/2021, 04/19/2021-05/16/2021, and 07/19/2021-08/15/2021

Both the state and the nation had historic job quits rates in August 2021

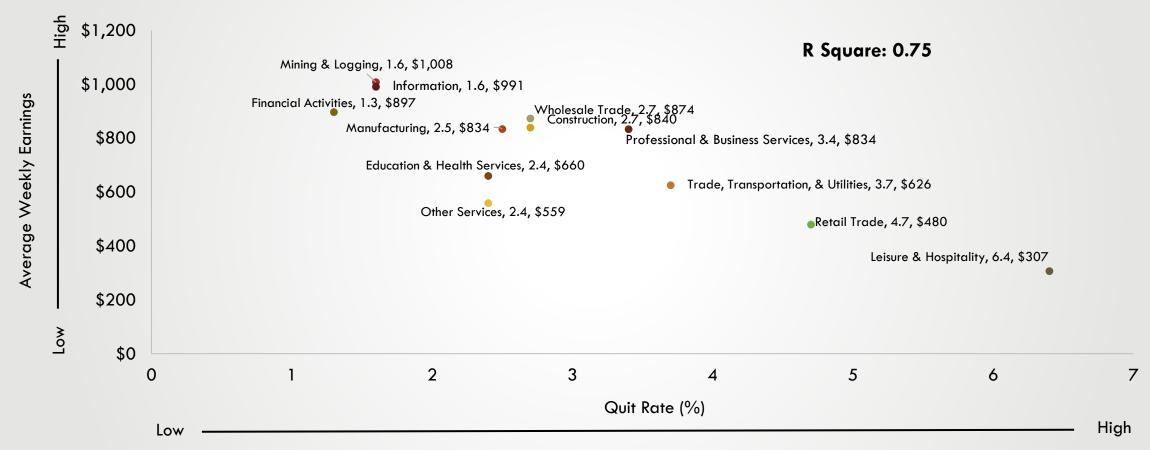
Job Quits Rate in Massachusetts and the United States, December 2000-August 2021 (seasonally adjusted)



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

Some of the reason could relate to wages: Industries with the lowest weekly earnings tend to have the highest job quit rates across the nation.

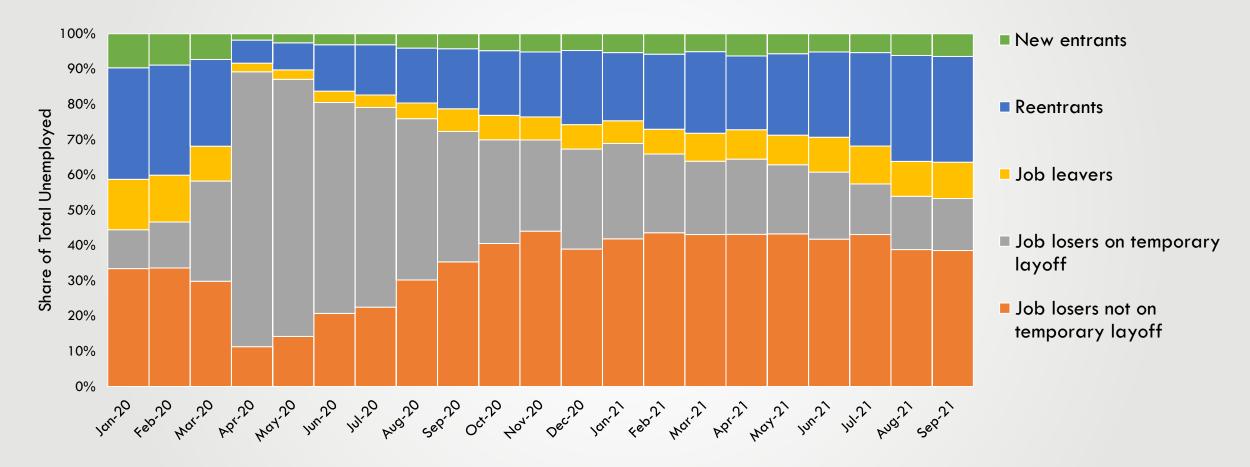
Job Quits Rate and Average Weekly Earnings by Industry in the United States, August 2021 (seasonally adjusted)



Source: U.S. Bureau of Labor Statistics, Job Openings and Labor Turnover Survey (JOLTS); UMDI analysis Note: Trade, Transportation, & Utilities includes Retail and Wholesale Trade. Leisure & Hospitality includes Accommodations & Food Services and Arts, Entertainment, & Recreation. Wage data were not available for Government.

Voluntary job leavers account for about 10% of the total unemployed in the U.S. and are currently at a lower level than in January 2020

Unemployed Persons by Reason for Unemployment in the United States, January 2020-September 2021 (seasonally adjusted)



Source: U.S. Bureau of Labor Statistics, Current Population Survey (CPS); UMDI analysis

Question marks in the economy

- Rising prices, supply chains, and inflation
- The economy has been adding more jobs but the employment numbers are still not where it was prior to March 2020.
- Lower 30-year fixed Mortgage rates- all time low- is leading to higher house prices
- Economic growth (GDP) slowed down in the third quarter and prices are rising Risk of stagflation.
- Why people are leaving their jobs in increasing numbers?
- Labor market disconnection: record job quits and record job openings.

Thank you!

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THE STATE of THE ECONOMY in MASSACHUSETTS

& THE MERRIMACK VALLEY: TRANSIT EDITION

MERRIMACK VALLEY PLANNING COMMISSION NOVEMBER 3, 2021

NOAH S. BERGER
ADMINISTRATOR
MERRIMACK VALLEY REGIONAL TRANSIT AUTHORITY



LABOR: DRIVER SHORTAGE



DUE TO NATIONWIDE SHORTAGE

PIGEON ALLOWED TO DRIVE THE BUS



LABOR: IMPACT of COVID-19

- 15% below MVRTA's required staffing levels
- 27 MVRTA drivers tested positive for COVID-19
- 465 days of missed work
- MVRTA dropped 303 trips in July and 396 in August
- MVRTA temporarily suspended Sunday Service in September

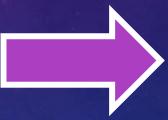




COST: BAUMOL'S COST DISEASE

In the service sector (Health, Education, Transportation or the Arts), unlike the manufacturing or technology sectors, rising wages are not attributed to rising labor productivity.







Baumol's example: The number of musicians and the amount of time needed to play a string quartet is the same as it was in Beethoven's time, yet the musicians earn significantly more today.



RIDERSHIP: IMPACT OF COVID-19

- Bad News: FY22 Q1 (July 2021-September 2021) MVRTA Ridership is 61% of FY20 Q1 Ridership
- Good News: FY22 Q1 MVRTA Ridership is 36% higher than FY21 Q1 Ridership
- FY22 Q1 Paratransit Ridership is 69% of our FY20 Q1 Ridership, but 48% higher than FY21 Q1 Ridership
- Strong Rebounding Routes (compared to Pre-COVID):
 - 75 Lawrence Employment Express: 25% higher than FY20
 - 13 Haverhill Main Street/North Avenue: 79% of FY20
 - Solution
 Lawrence Downtown Shuttle: 76% of FY20
- Poor Rebounding Routes:
 - Boston Commuter Express: 2% of FY20
 - 56 NECC Express: 5% of FY20
 - 21 Andover Shuttle: 35% of FY20
- Fare Revenue is 52% of Pre-COVID levels



RIDERSHIP: CHANGING TRAVEL PATTERNS

- Commuting into Boston (how long?)
- Niche Service
- Trip Chaining
- Discretionary Trips
- **1** Free Fare Service



RIDERSHIP: IMPORTANCE of VISIBILITY

"It's not up to us to wait for riders to come back. It's up to us to go out and get them."

-Katharine Eagan Kelleman, CEO Port Authority of Allegheny County











RIDERSHIP: IMPORTANCE of VISIBILITY BUS STOPS











RIDERSHIP: IMPORTANCE of VISIBILITY VEHICLES







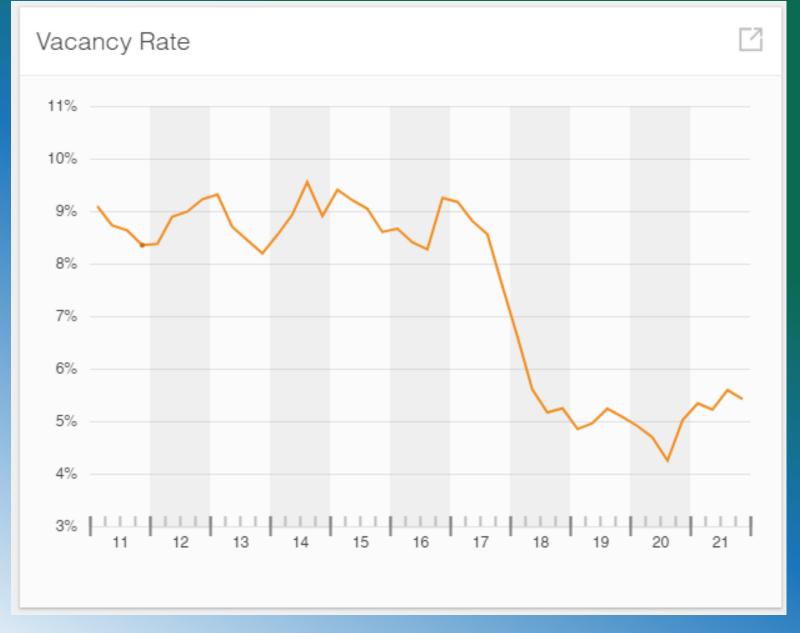
Thank You!

Noah S. Berger
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Authority
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Vacancy

 Vacancy across all commercial real estate types is at 5.4% close to its 10-year low

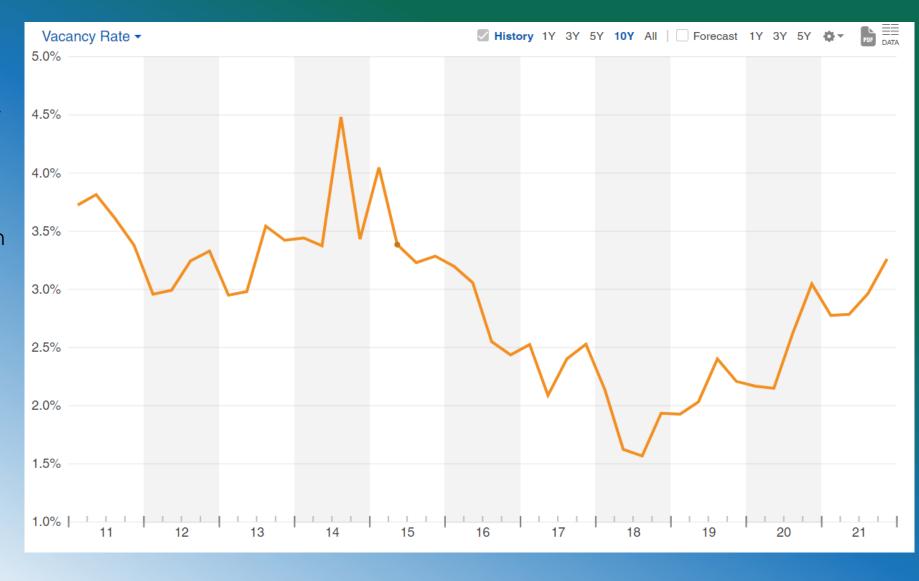






Retail Vacancy

 Vacancy retail real estate products types remains .5% higher than the 10 year average and is trending up. It currently sits at 3.3%





CoStar market analysis of 1,922 properties in 15 communities across the retail market

Downtown Retail Vacancy

 Vacancy in downtown retail real estate products types continues trending downward and sits at a ten-year low of 1.5%

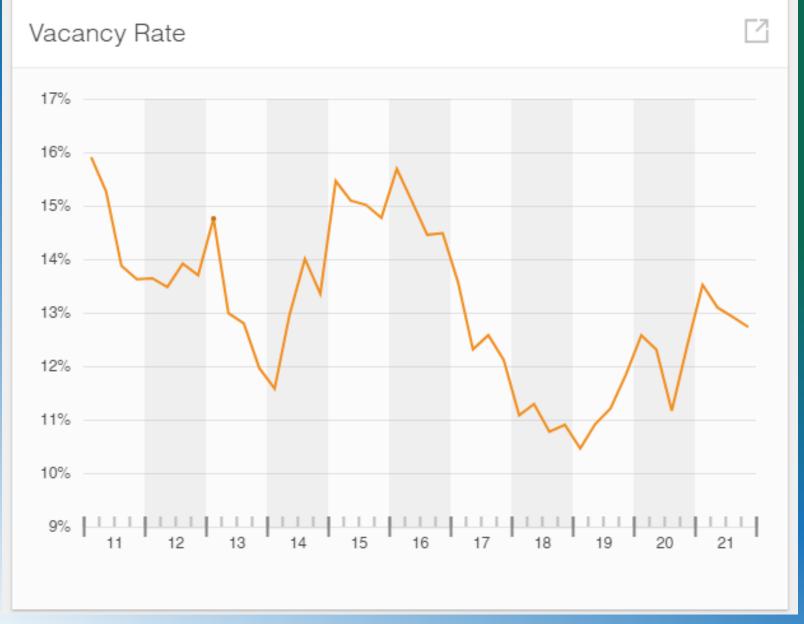




CoStar market analysis of 486 properties in downtown Lawrence, Haverhill, Methuen, Andover, North Andover, Newburyport, Amesbury, and Georgetown.

Office Vacancy

 Vacancy across commercial and medical real estate products types remains around its ten-year average at 12.7%







Industrial Vacancy

 Vacancy across industrial and flex space real estate products types remains near historic lows at 3.2%





CoStar market analysis of 812 properties in 15 communities across the industrial market

Total Rent

 When adjusted to inflation, market rent across all commercial real estate types continues to recede and now sits at 2018 levels of about \$15.80





Retail Rent

 When adjusted to inflation, market rent across all retail real estate types has shrunk to 2012 levels of \$18.60 per square foot.





Office Rent

 When adjusted to inflation, market rent across all office/health care real estate types has shrunk to 2017 levels at \$24.70 per square foot.





Industrial Rent

 When adjusted to inflation, market rent across all industrial and flex real estate types remained steady at \$10.80 per square foot.

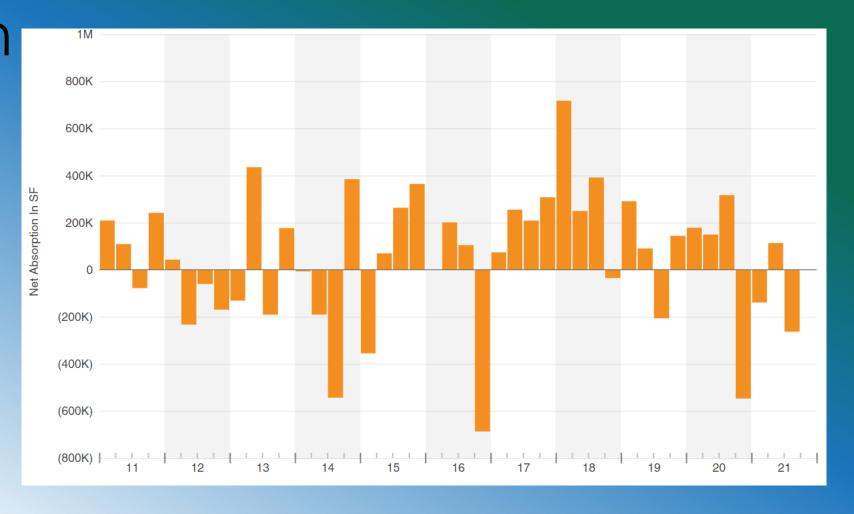




CoStar market analysis of 811 properties in 15 communities across the industrial market

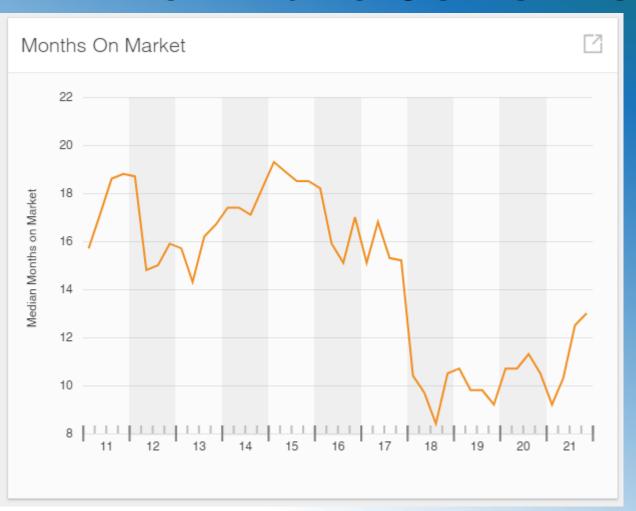
Total Net Absorption

 Total net absorption of all real estate products over 2021 is -288k compared to +98k in 2020





Months to Sell or Lease

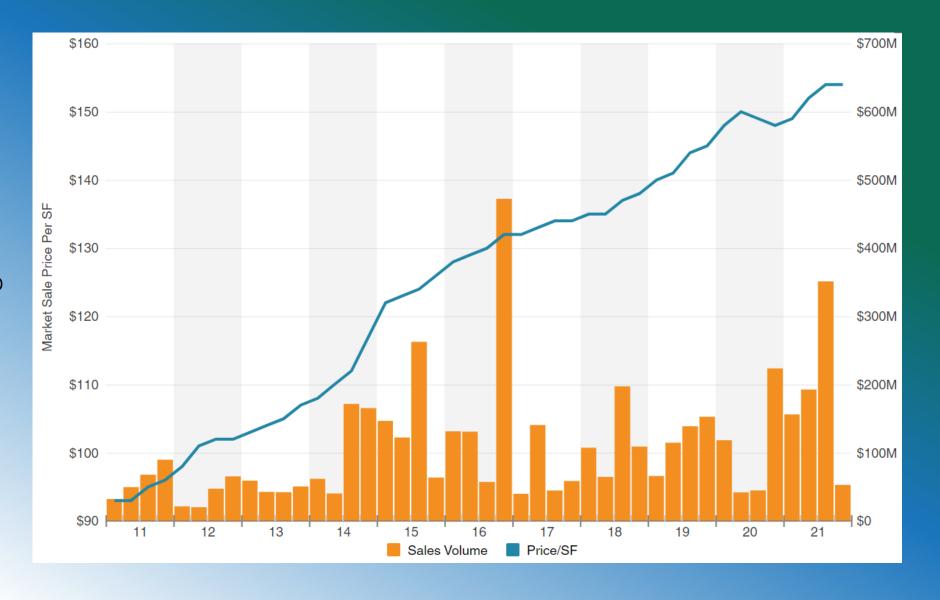






Sales

 Though properties are taking longer to sell, selling itself has remain strong and at a price point that has been only marginally impacted by COVID





CoStar market analysis of 4,139 properties in 15 communities across the entire commercial market

Construction

