



MULTIFAMILY NATIONAL OUTLOOK

SPRING 2021

PRESENTERS



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AGENDA

- Opening Remarks
- 2021 Outlook, Financial Markets & Employment Trends
- Multifamily Fundamentals
- Pandemic Impacts on Multifamily Investments
 - The Future of Work
 - Single-Family Rentals and Built-to-Rent

OPENING REMARKS

Yardi Matrix House View – November 2020

- Since the start of the pandemic, we have seen the following migration trends:
 - Gateway markets to secondary tech hub markets
 - Gateway markets to smaller cities within the same metro
 - Urban cores to the suburbs
 - Are these trends *temporary or permanent*?
- Rent, occupancy and renewal percentages have fallen in primary markets amid job losses and migration out of these markets, while tech hub markets have benefitted from population and employment growth
- Despite the economic effects of the pandemic, we don't expect valuations in gateway markets to decrease that much and we expect valuations in tech hub markets to increase
- Overall, multifamily is holding up fairly well, but there are some points of pain
- People are still paying rent and rents have not declined as much as initially feared
- Gateway markets have a long road ahead but will recover. Local political risk has been heightened since June and can't be ignored anymore
- Tech hub markets will continue to grow, but infrastructure investment is a key variable as to how well
- The recovery will vary based on metro and level of income

Yardi Matrix House View – April 2021

- The economy is heating up as the job market strengthens
 - The U.S. economy added 916,000 jobs and the unemployment rate fell to 6% in March
 - Inflation concerns are still elevated as input prices increase
- The pandemic has further fueled a general spreading of the population
 - The question for investors is still how much of this is temporary vs permanent?
 - How permanent these demographic changes are is largely **dependent on the future of work**
- Gateway markets and urban cores are turning a corner, but still swimming upstream
 - More supply is still being delivered in urban cores as projects started prior to the pandemic continue to get completed
 - As people get vaccinated and demand picks up in the urban cores, there will be less concessions. **We are already seeing this happening**
 - Tech hub markets are doing well and will continue to grow
- The Great Recession paved the way for single-family rentals (SFR) and the COVID-19 pandemic fueled a surge in popularity with SFR and built-to-rent
 - New players continue to enter the market as demand for SFR continues to flourish
 - We are tracking SFR and built-to-rent supply and will continue to expand our coverage

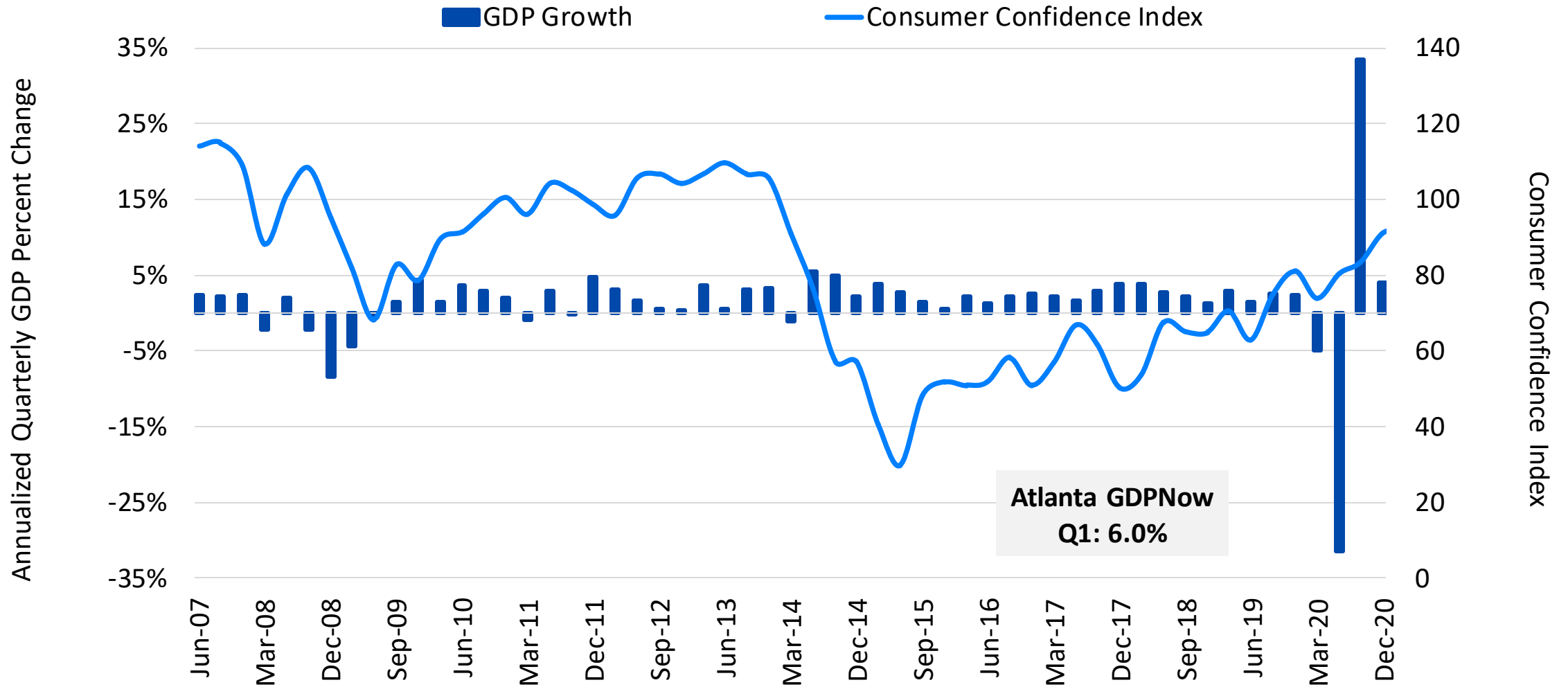
Other Pre-COVID Issues Still Exist...We Will Revisit These in Future Programs!

- Affordability
 - Constraints to building class B
 - Rent control
- Political risk
- Environmental risk
- Infrastructure - cities' ability to handle future growth
- Key technologies - increasing productivity and decreasing costs



2021 OUTLOOK, FINANCIAL MARKETS & EMPLOYMENT TRENDS

GDP Growth Recovering After Plummeting in First Half of 2020



U.S. GDP Forecast: a V/U-Shaped Recovery

We share Evercore ISI's view, that the recovery in GDP looks like a V/U-shaped rebound

In April 2021, Evercore raised their year-over-year nominal GDP forecasts to **11.7% for 2021** and **6.7% for 2022**

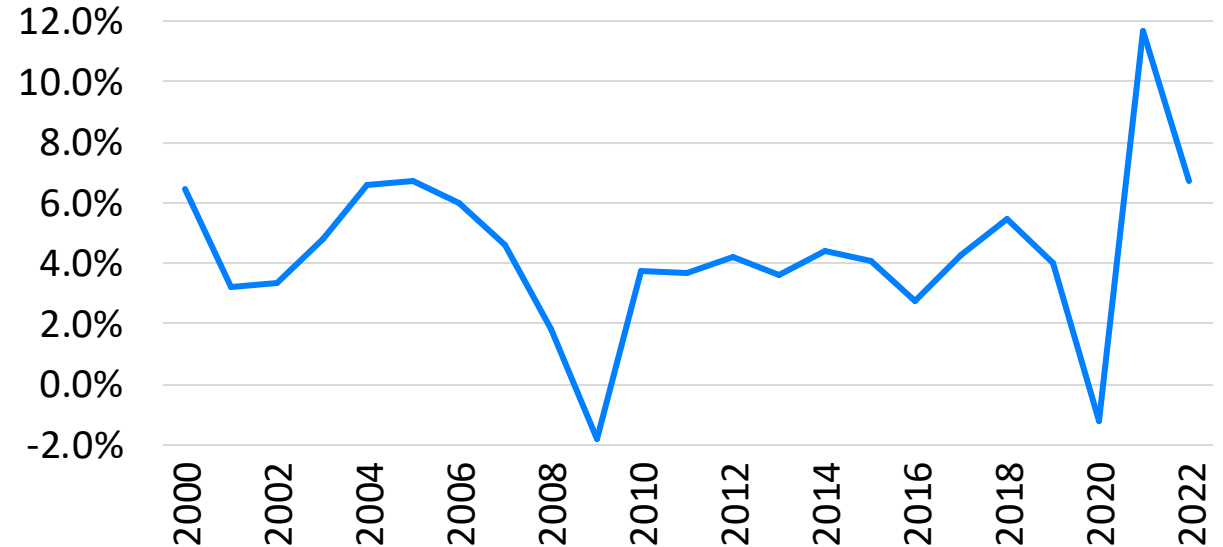
The GDP forecast was raised due to 5 key factors:

- Fiscal and monetary stimulus
- Reopening around the globe
- Economic momentum, such as homebuilding
- Increased U.S. saving rate and inventory rebuilding
- Rising consumer net worth, **which is on track to grow by 20% year-over-year**

If this forecast is accurate, the recovery will be V/U-shaped

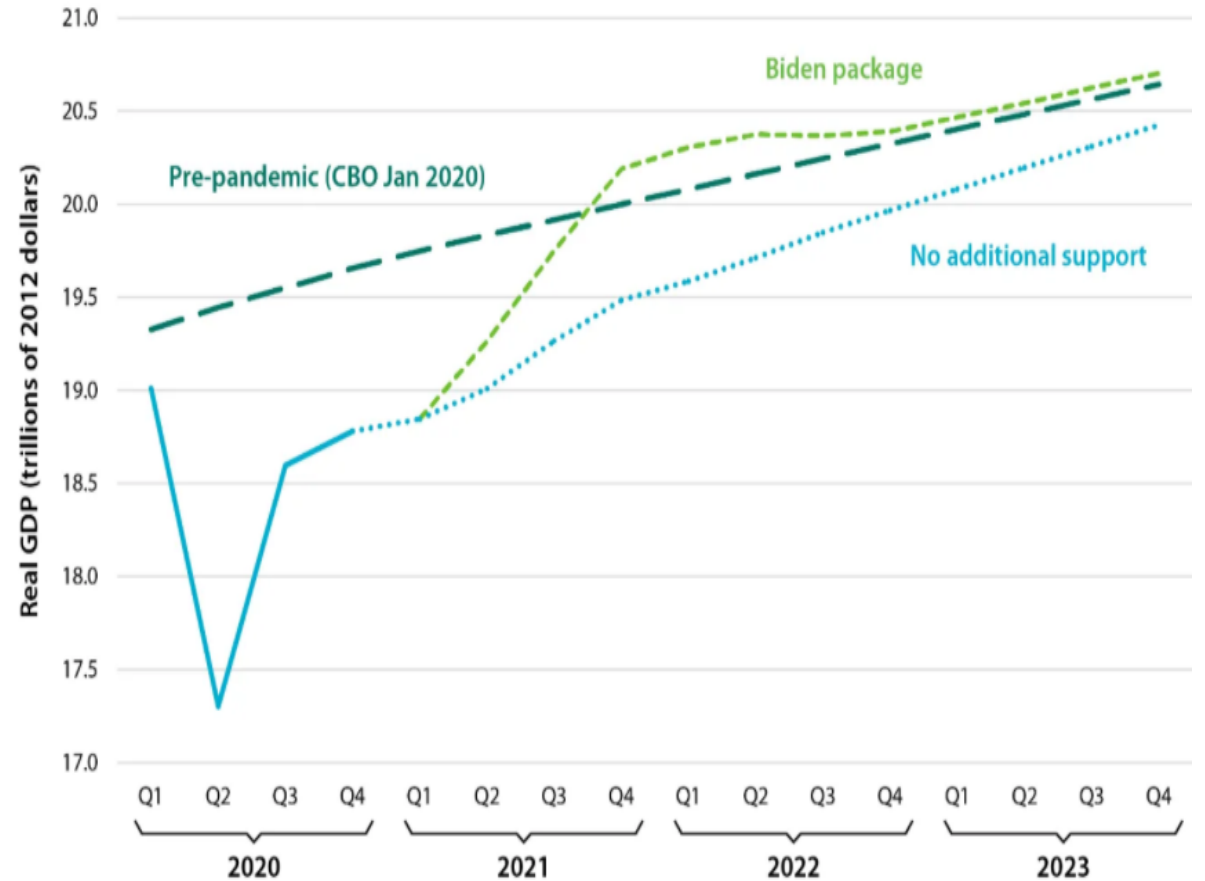
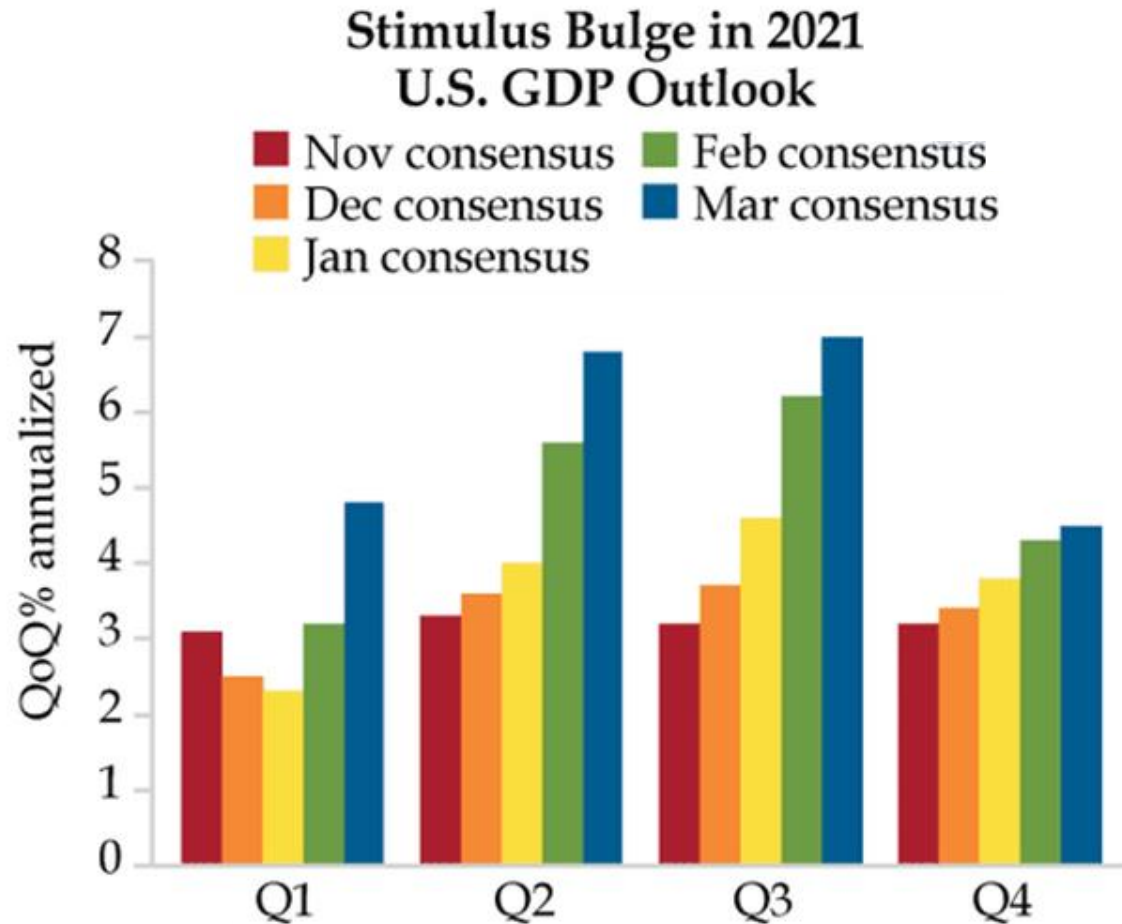
	2020	2021 Forecast	2022 Forecast
Real GDP: YoY % Change	-2.5%	9.0%	3.0%
Nominal GDP: YoY % Change	-1.2%	11.7%	6.7%
10-Year Bond Yield: Year-end	0.93%	2.00%	2.80%
Unemployment Rate: Year-end	6.7%	4.0%	3.2%

Nominal Annual GDP: YoY % Change



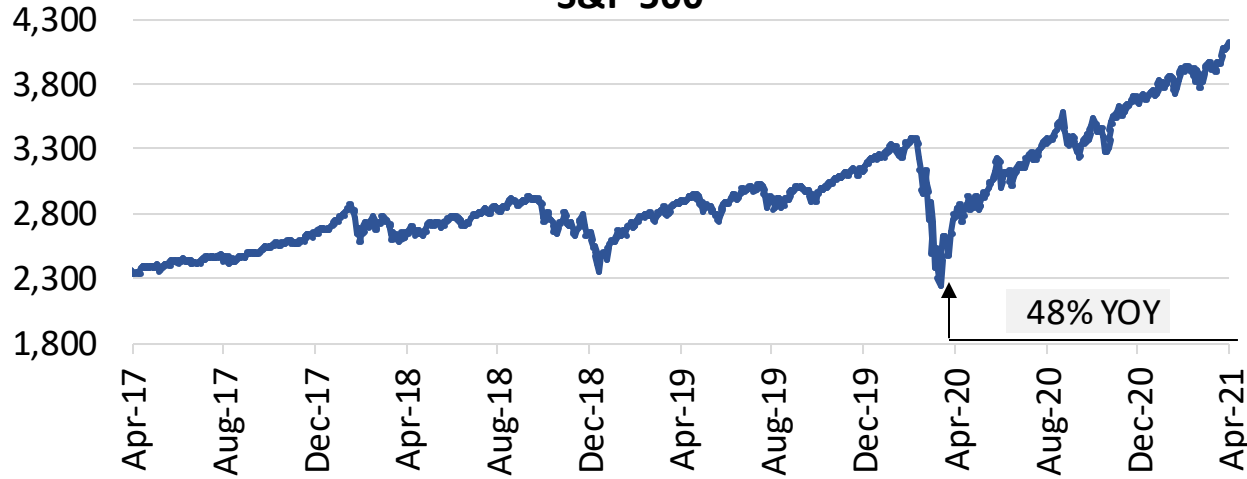
Economists Are Updating GDP Forecasts Amid New COVID Relief Package

We Will Have a Couple Years of Very Strong Growth



U.S. and International Financial Markets

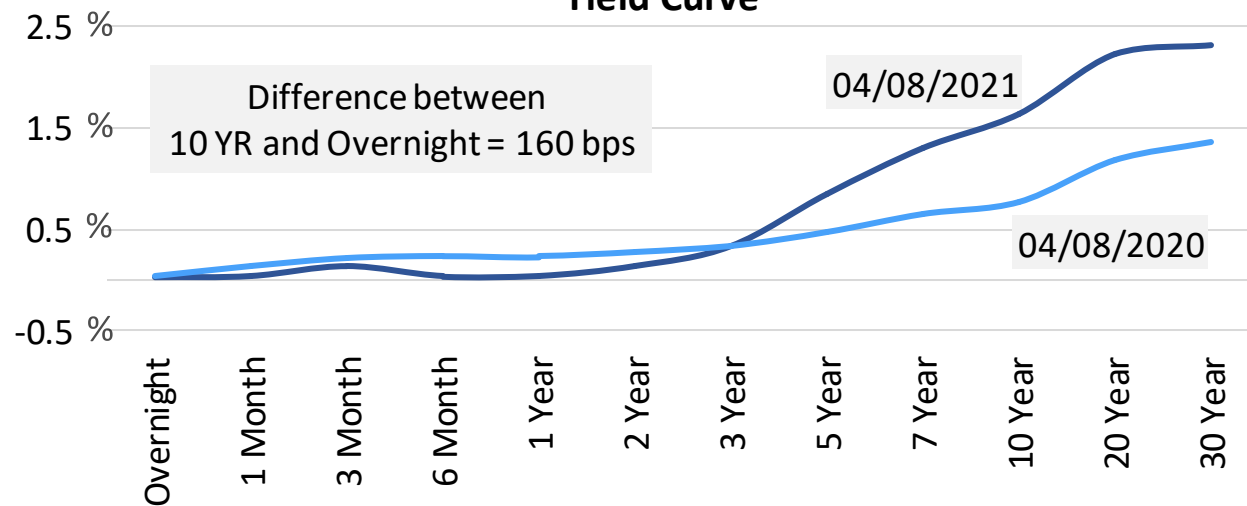
S&P 500



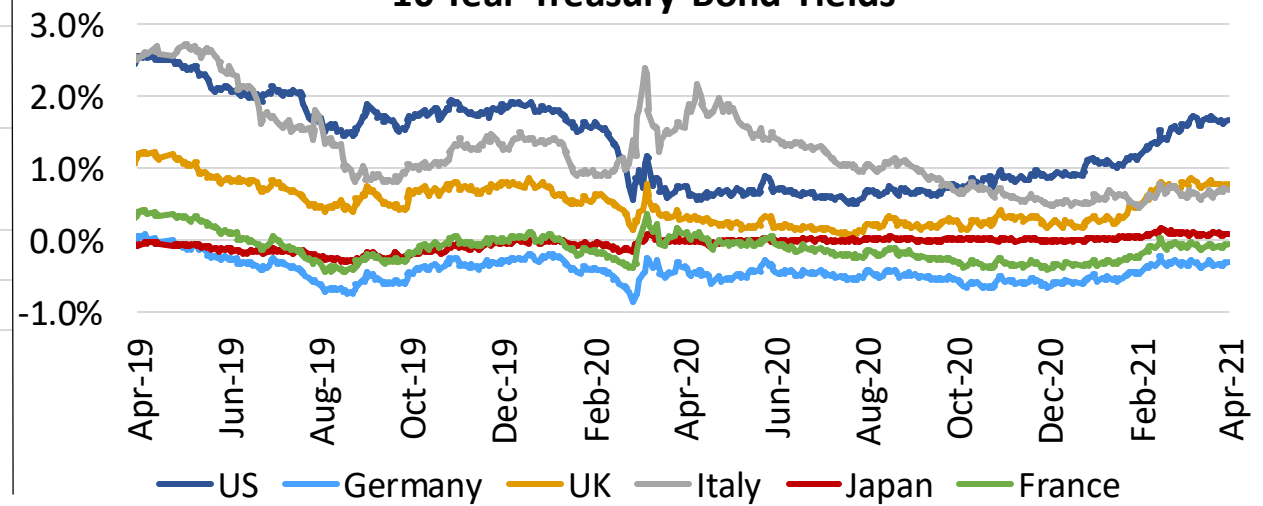
10-Year Treasury Note



Yield Curve



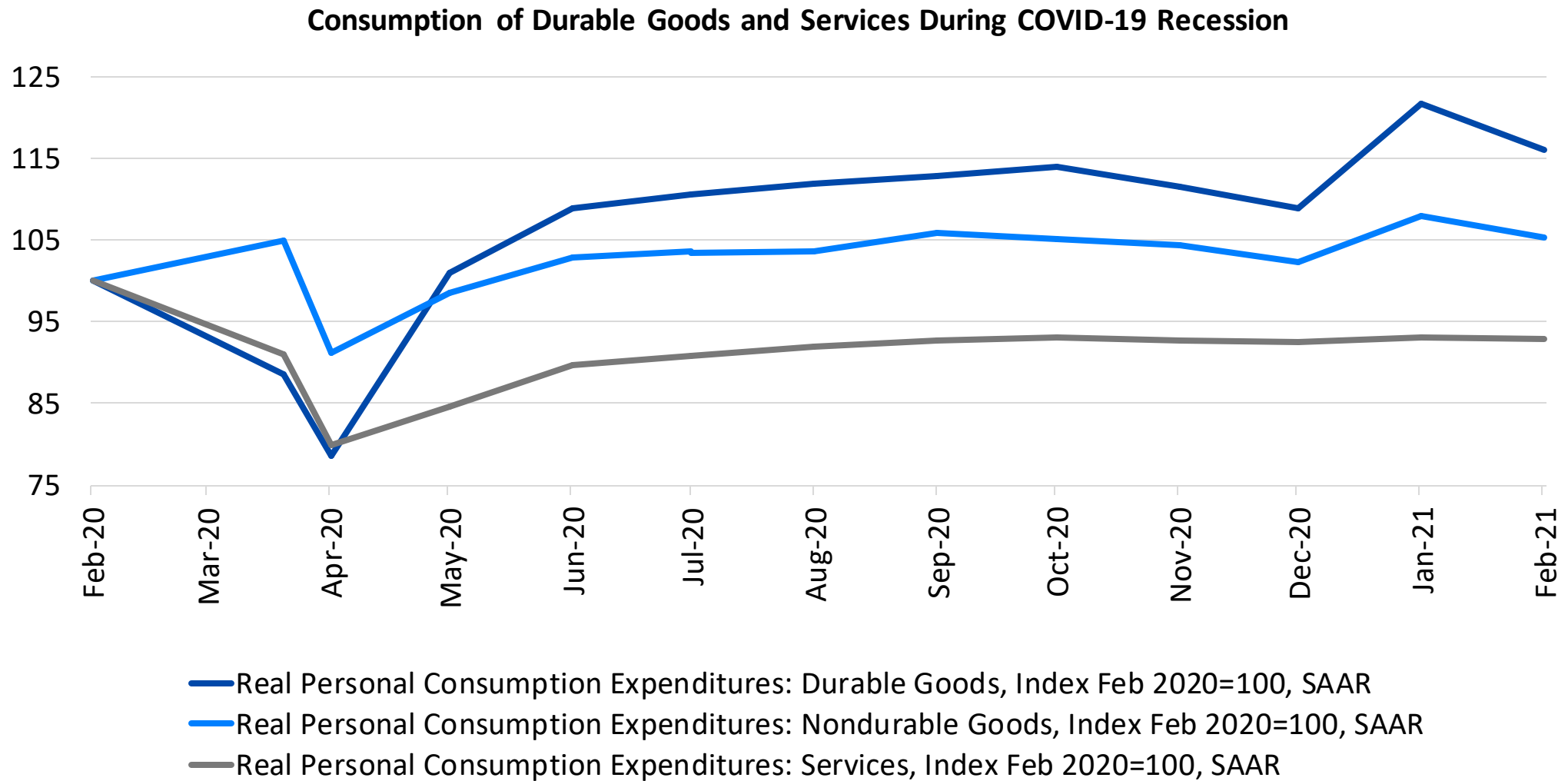
10 Year Treasury Bond Yields



Source: Yardi Matrix; Moody's Analytics; Investing.com

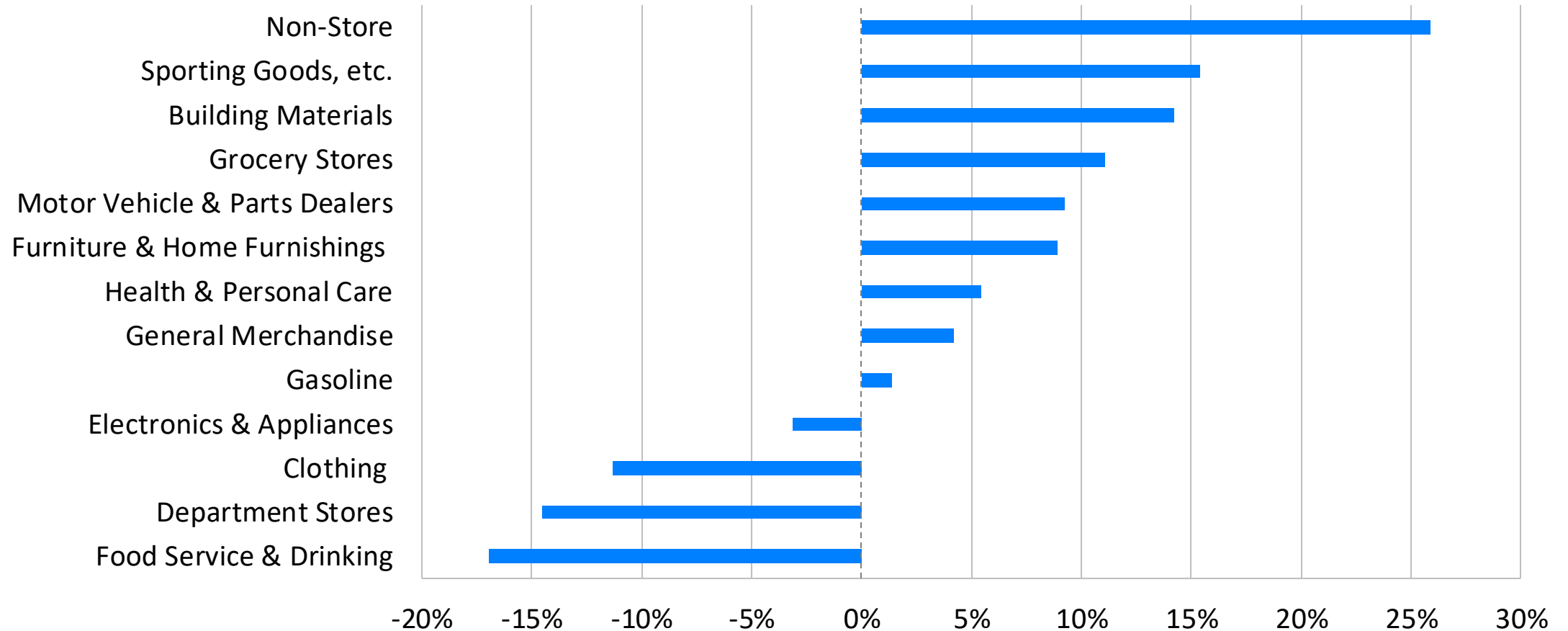


From Services to Goods: Consumers Spending More on Durable Goods



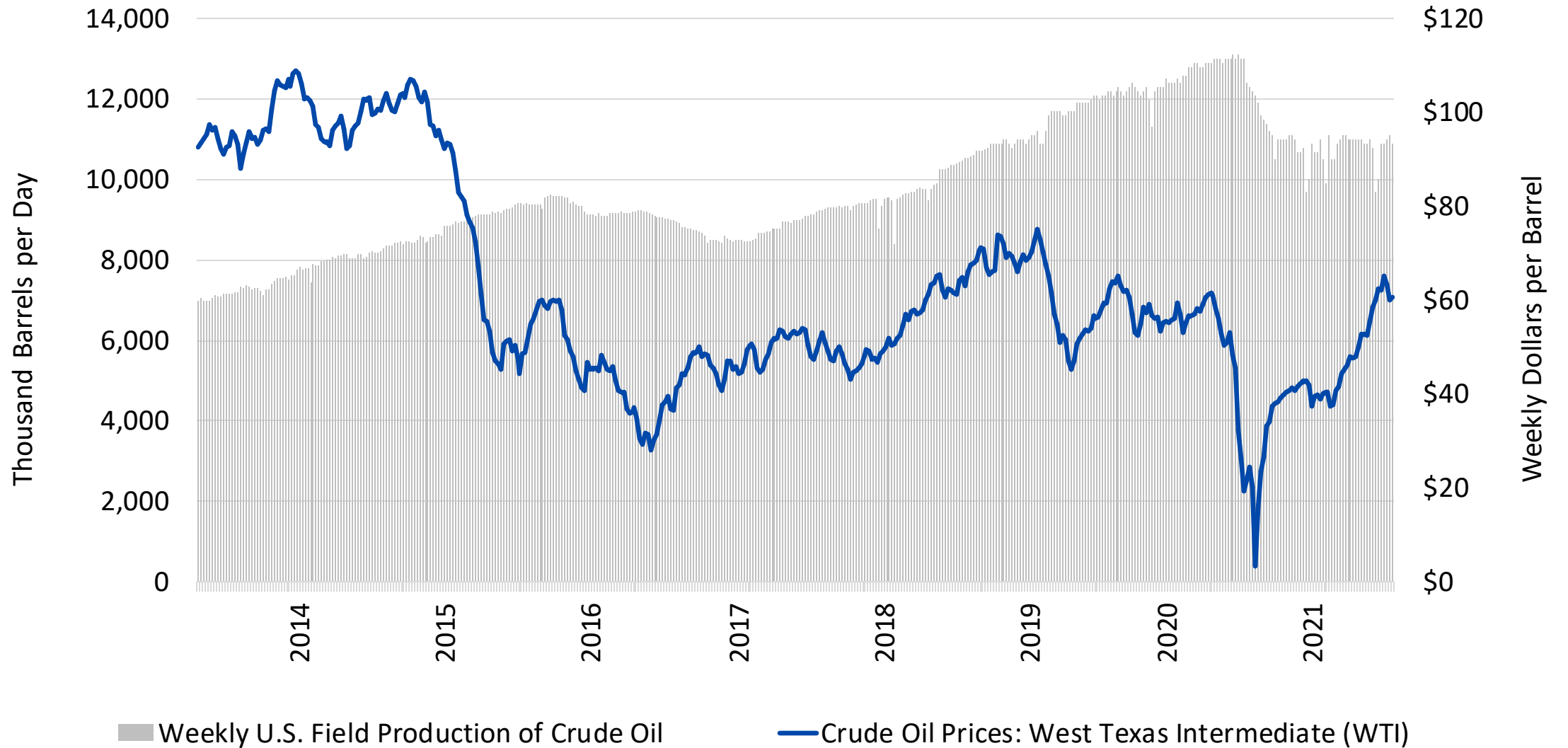
Spending Increased on Non-store, Sporting Goods and Building Materials

Change in Monthly Retail Sales

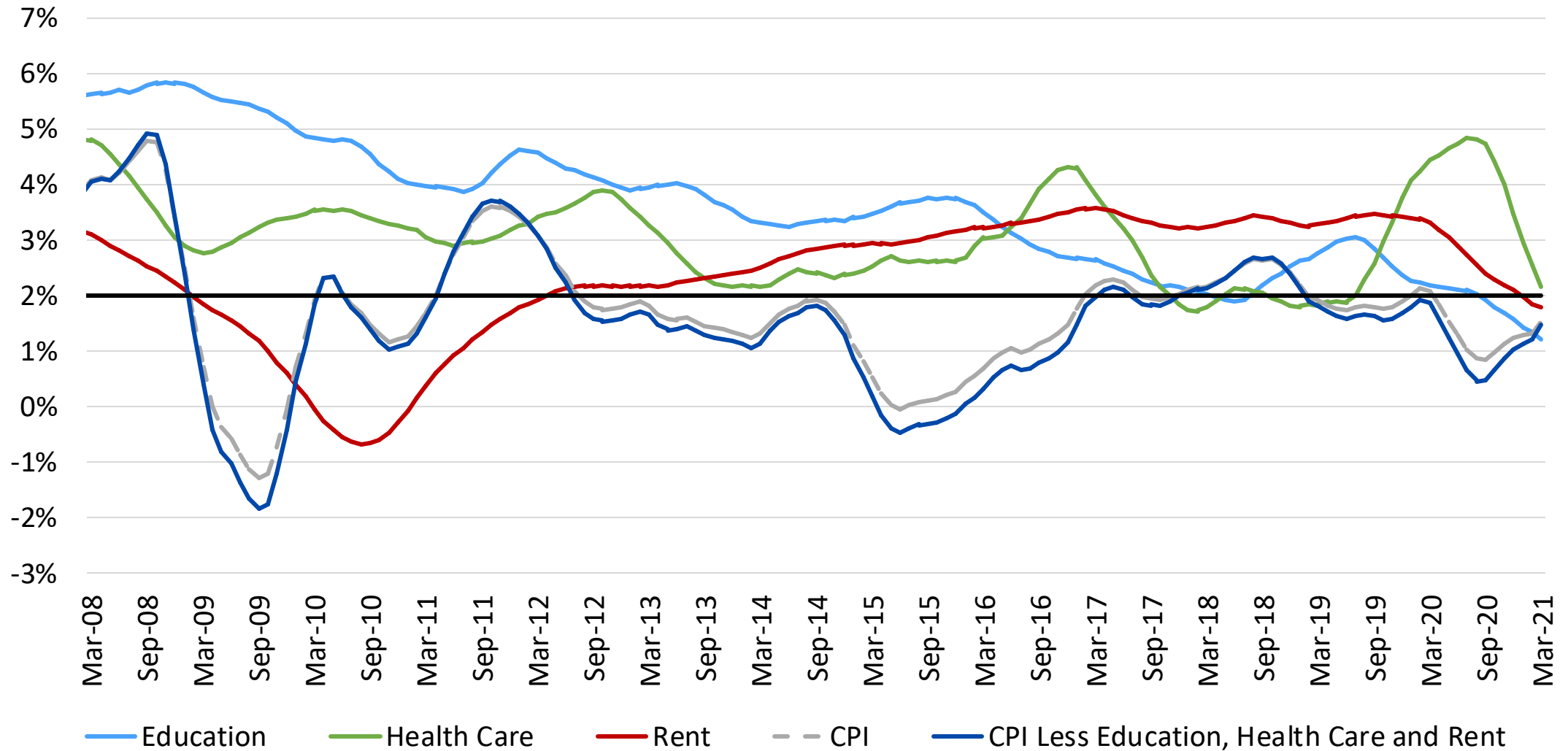


Percent Change in Sales: Feb 2020 - Feb 2021

U.S. Oil Prices Indicate A Potential for Moderate Inflation



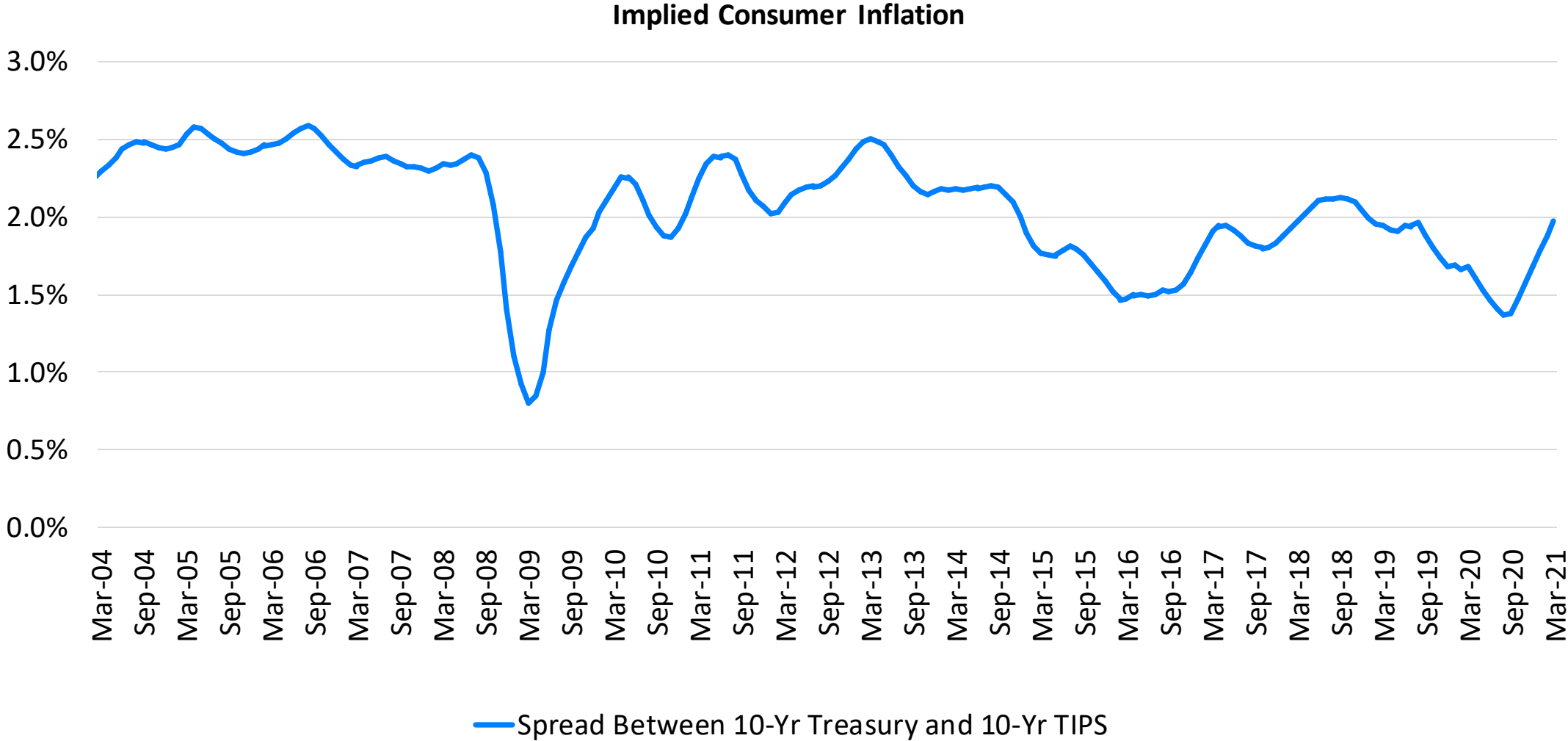
Everything You Used to Know on Inflation Has Been Upended



*YoY 6 month moving averages. CPI Less Health Care, Education and Rent is an estimate using BLS document "Math calculations to better utilize CPI data"

Source: Moody's Analytics; Bureau of Labor Statistics (BLS)

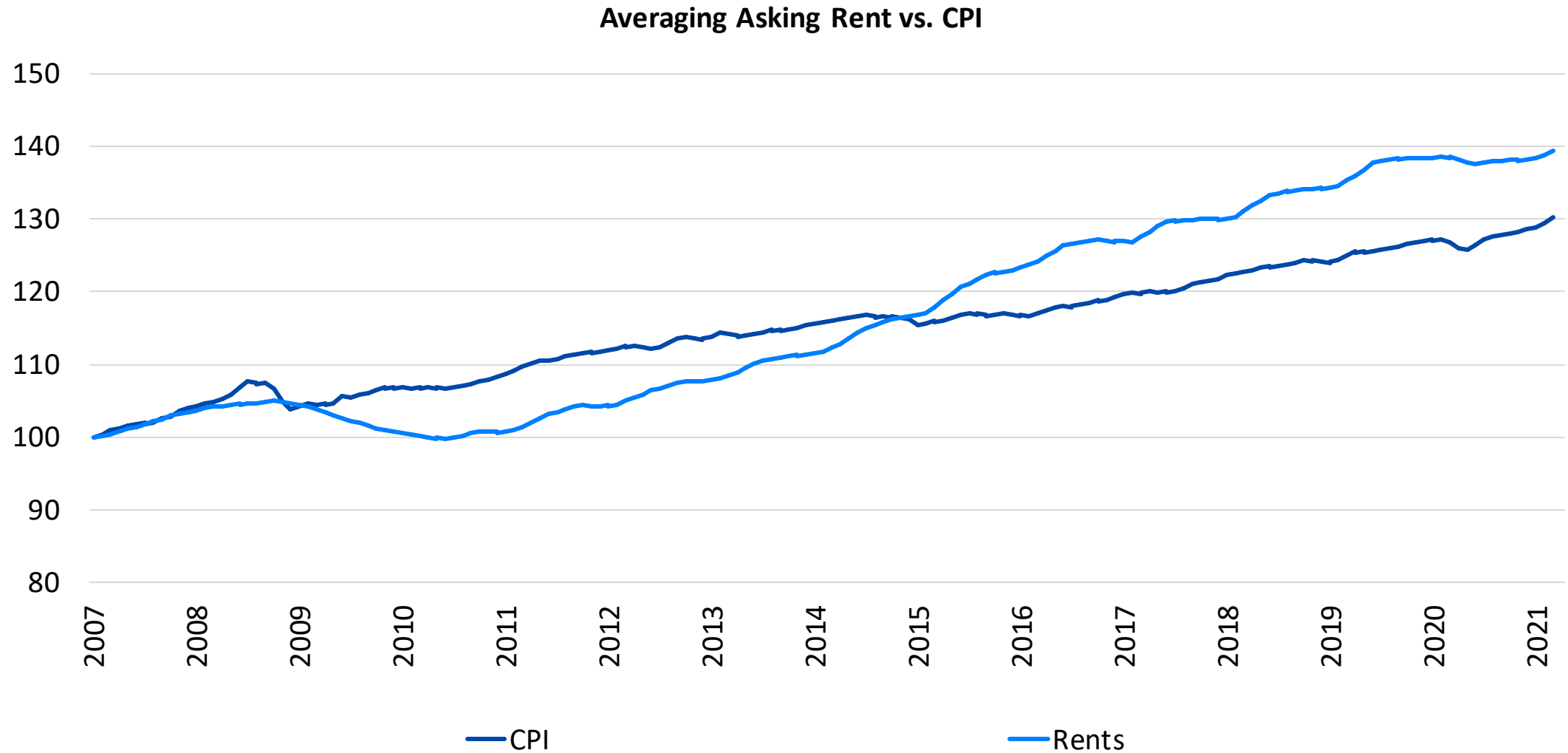
Inflation Concerns Are Longer-term



Source: Yardi Matrix; Federal Reserve Bank of St. Louis; Moody's Analytics; U.S. Bureau of Labor Statistics (BLS)



Average Asking Rent Rising Faster than Consumer Inflation

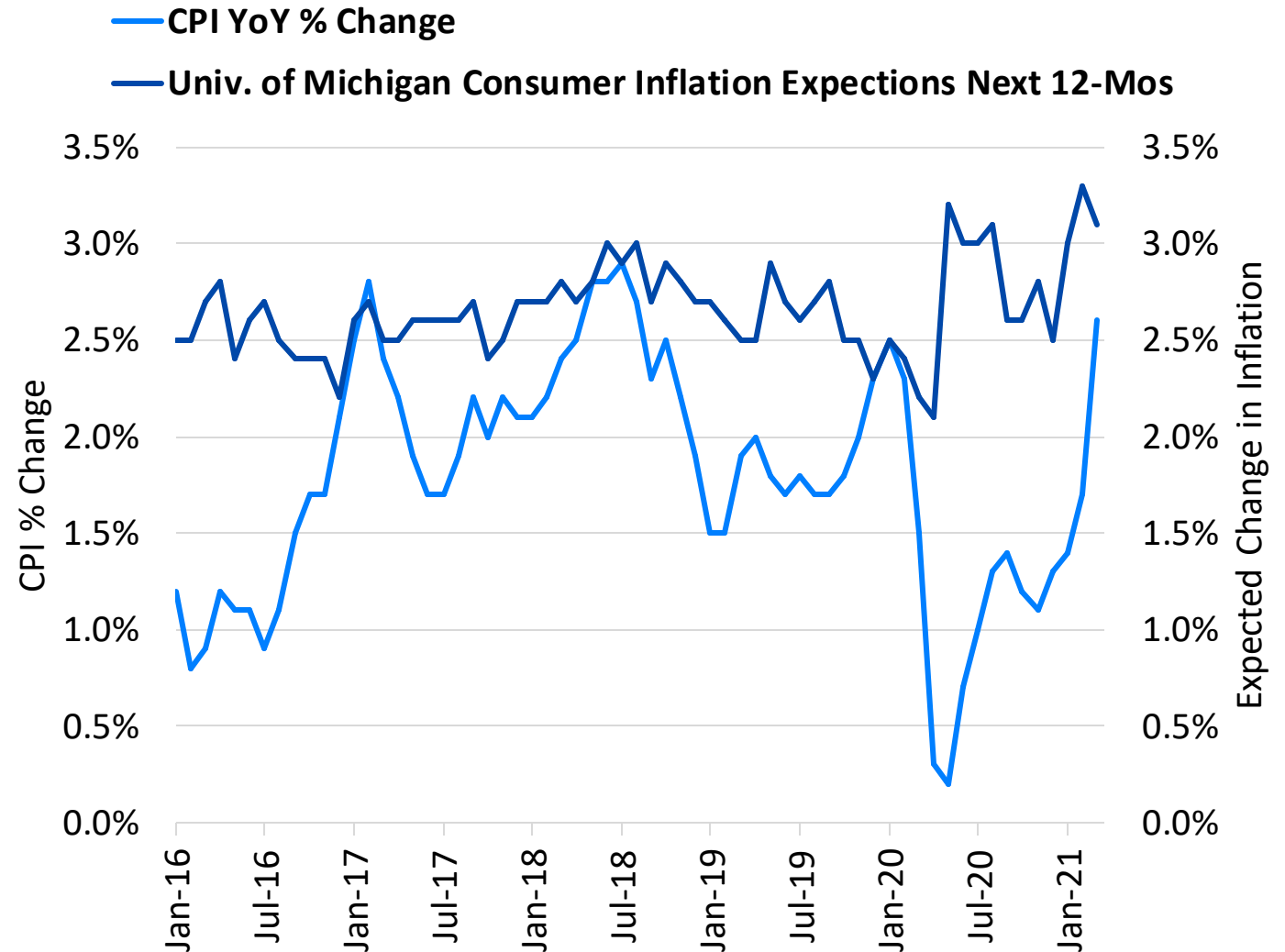


*Indexed to January 1, 2007

Source: Yardi Matrix; U.S. Bureau of Labor Statistics (BLS)

Rising Consumer Inflation Expectations

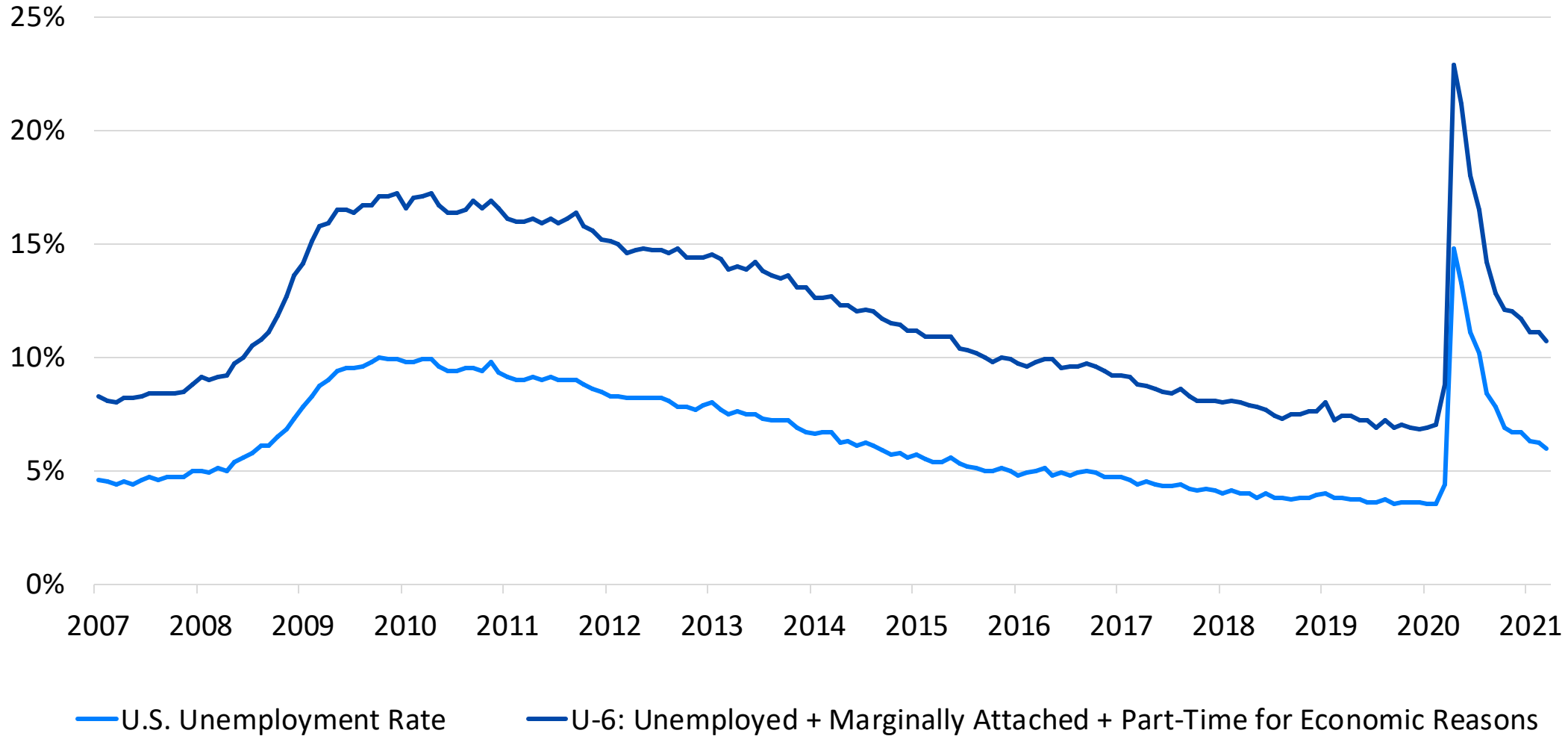
- As the economy continues to grow—boosted by fiscal stimulus, the vaccine rollout and pent-up demand for consumption—inflation will likely climb
- With the Federal Reserve’s plan to keep interest rates low until they reach their target of inflation averaging 2.0% over time, some are concerned inflation will be pushed above this target over time
- In March, the University of Michigan’s Surveys of Consumers found consumers anticipate the one-year inflation rate to be elevated at 3.1%, a drop from 3.3% in February, but up from 3.0% in January and 2.5% in December



*All items in U.S. city average, all urban consumers, seasonally adjusted.

Source: Yardi Matrix; Wall Street Journal; U.S. Bureau of Labor Statistics; University of Michigan, Surveys of Consumers

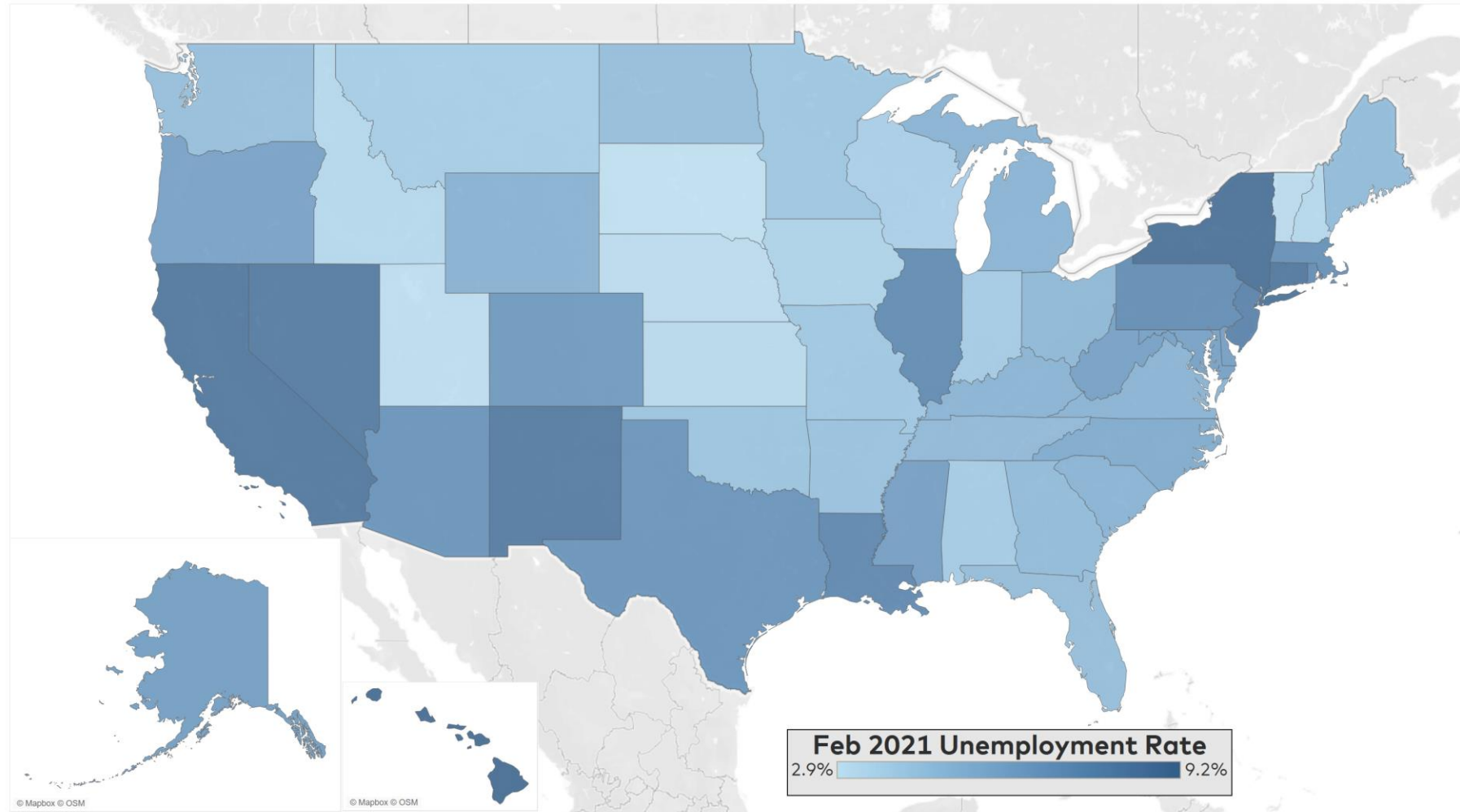
Unemployment and Underemployment Falling, but Still Elevated



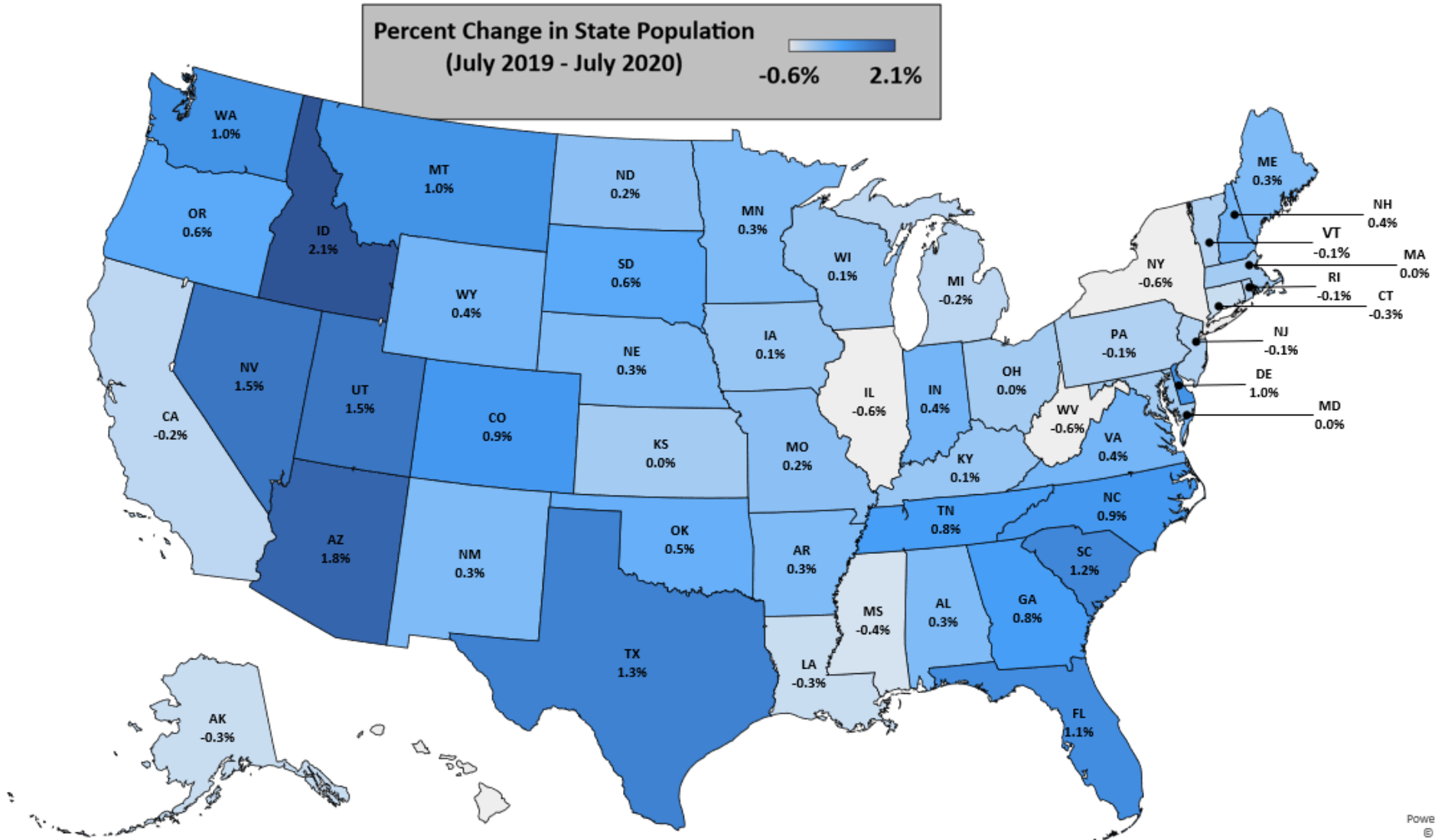
*Data as of April 2, 2021.
Source: Yardi Matrix; Bureau of Labor Statistics (BLS)



Hawaii, California, New York Still Have the Highest Unemployment



12-Month Population Growth Greatest in SE, SW and NW States



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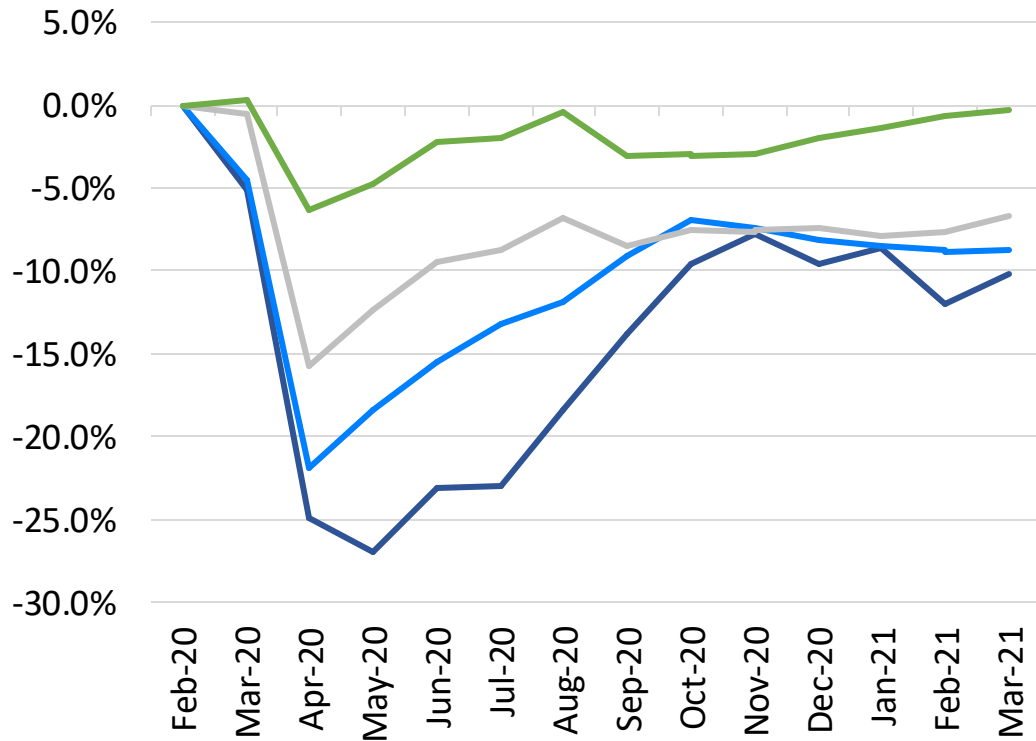
*Annual estimates of the state resident population from July 1, 2019 to July 1, 2020

Source: Yardi Matrix; U.S. Census Bureau, "Annual Estimates of the Resident Population for the United States, Regions, States, and the District of Columbia"



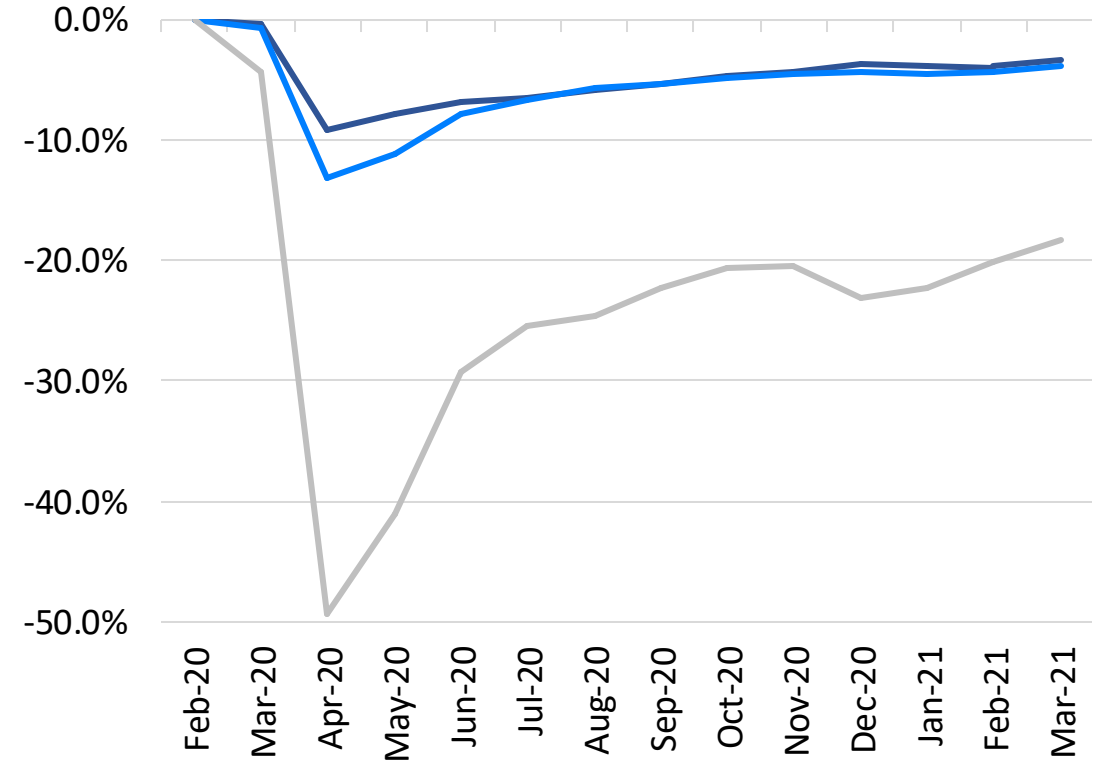
The Labor Market Recovery Has Been K-shaped

% Change in Employment by Educational Attainment from Feb. 2020



- Less than a high school diploma
- High school graduates
- Some college or associate's degree
- Bachelor's degree and higher

% Change in Employment by Wages from Feb. 2020

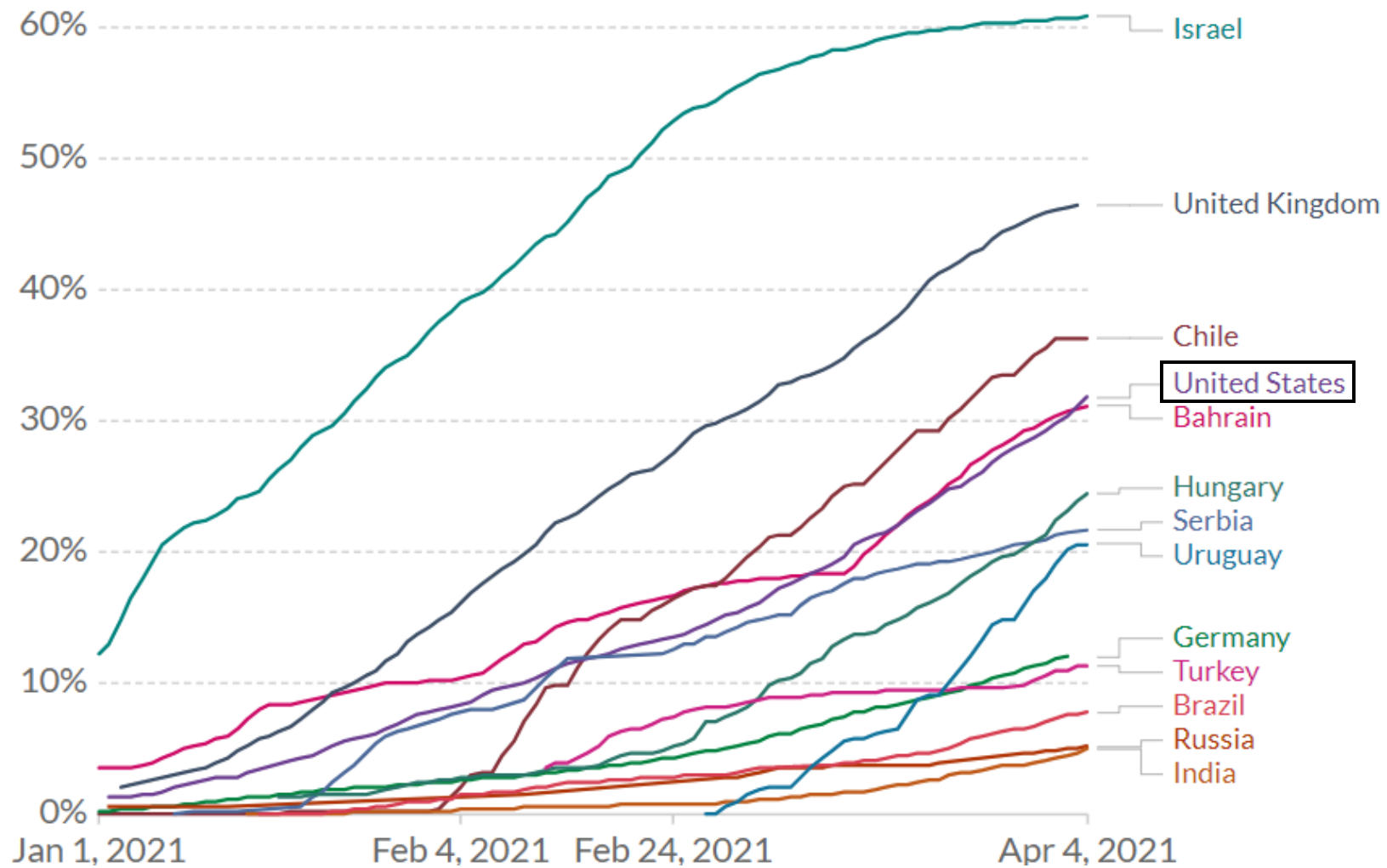


- High (Over \$29/hour)
- Medium (\$18-29/hour)
- Low (Under \$18/hour)

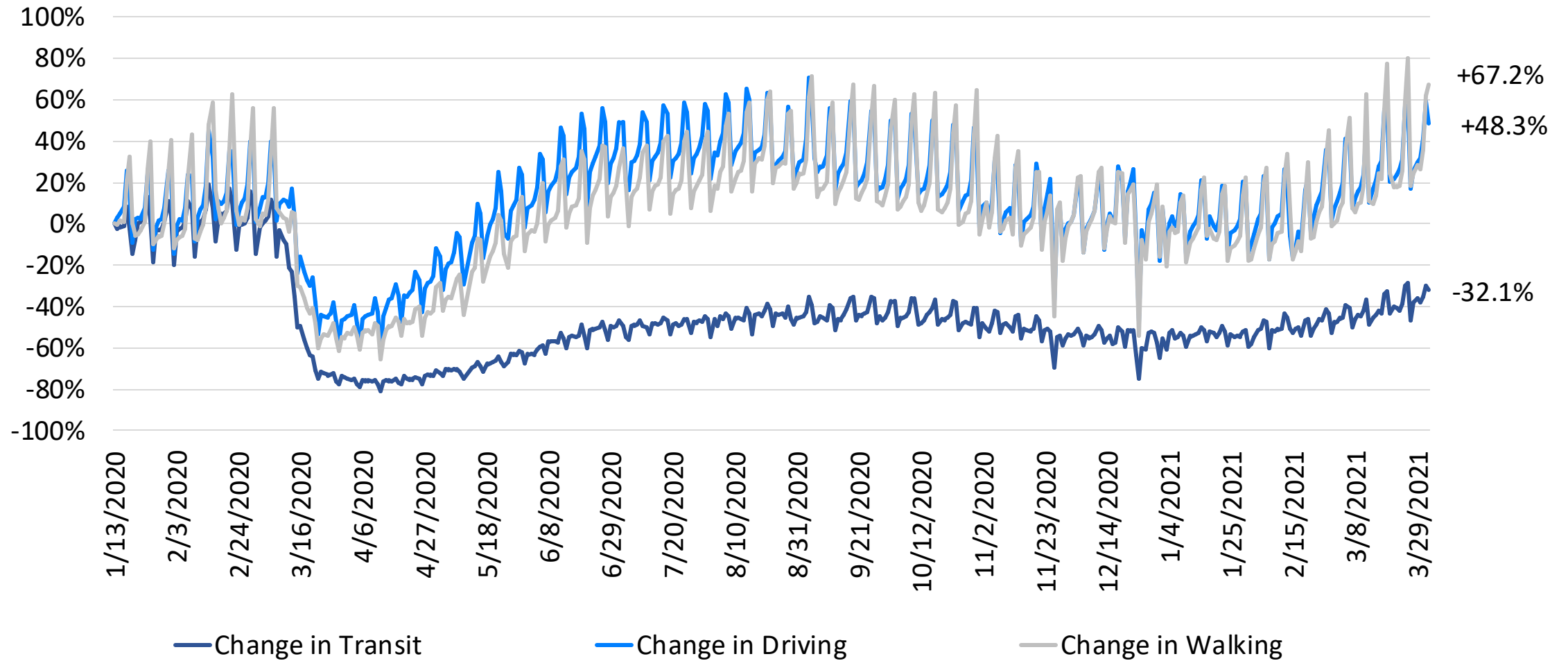
*For change in employment by education level: 25 years and older, seasonally adjusted. For change in employment by wages: seasonally adjusted

Source: Yardi Matrix; Evercore ISI; Business Insider; Wall Street Journal; U.S. Department of Labor

Things Are Beginning to Open Up as More People Get Vaccinated



Nationally, Driving and Walking Mobility Has Fully Recovered to Pre-Pandemic Levels While Transit Mobility Remains Low



Change in routing request = January 13, 2020 – April 2, 2021
Source: Yardi Matrix; Apple.com, "Mobility Trends Report"

Current U.S. Federal Policies Return to Favoring Urban/Suburban Consumers

PRO-GROWTH

- Low interest rates for longer
- Fiscal policy
 - Maybe too much?
- Vaccination ramp-up



Potential for inflation –
offset by aging population
and deflationary technology

AMBIGUOUS/UNCLEAR

- Blue state/city bailouts
- Federal minimum wage proposal
- Immigration
- Trade policy with China
- Tax policy
- Alternative energy policies
- Racial “equity” policies
- Emerging inflation

ANTI-GROWTH

- Executive orders/regulatory policy
 - Energy: oil and gas
 - Finance?
 - Tech?
- Inability to open schools
 - Public sector unions



Anti-growth in tone more
than reality, so far

\$1.9T Stimulus Bill: Where is the Money Going?

MAJOR PROVISIONS

- **Unemployment Benefits:**
 - Extends the \$300 weekly unemployment benefit through Sept. 6, 2021
 - Provides a tax break on \$10,000 in unemployment benefits
- **Stimulus Checks (\$400 billion):**
 - \$1,400 stimulus checks to individuals earning \$75,000 per year and couples earning \$150,000 per year – benefit disappears for individuals earning more than \$80,000 per year and couples earning more than \$160,000 per year
- **Child Tax Credit:**
 - Most Americans would receive \$3,000 a year for each child ages 6 to 17, and \$3,600 for each child under 6
 - The provision in the bill will last one year and will be sent via direct deposit on a “periodic” basis
- **State and Local Government Aid (\$350 billion)**
- **Multi-employer Pension Plans (\$86 billion):**
 - Provides struggling pension plans enough money to pay retirees their full pensions for the next few decades
- **School Support (\$171 billion):**
 - K-12 schools (\$130 billion) – Improving ventilation systems, reducing class sizes, buying PPE, and implementing social distancing
 - Colleges and other higher-education (\$40 billion) – support financial aid grants to prevent hunger, homelessness
 - Head Start Program (\$1 billion) – provide early-childhood education, health and nutrition services to low-income children and families

- **Housing Assistance (\$30 billion):**
 - \$20 billion – emergency rental assistance and other relief for the homeless
 - \$10 billion – mortgage and homeownership assistance
- **Pandemic Response:**
 - Coronavirus testing and contact tracing, increasing the size of the public health workforce, funding vaccine distribution

OTHER PROVISIONS

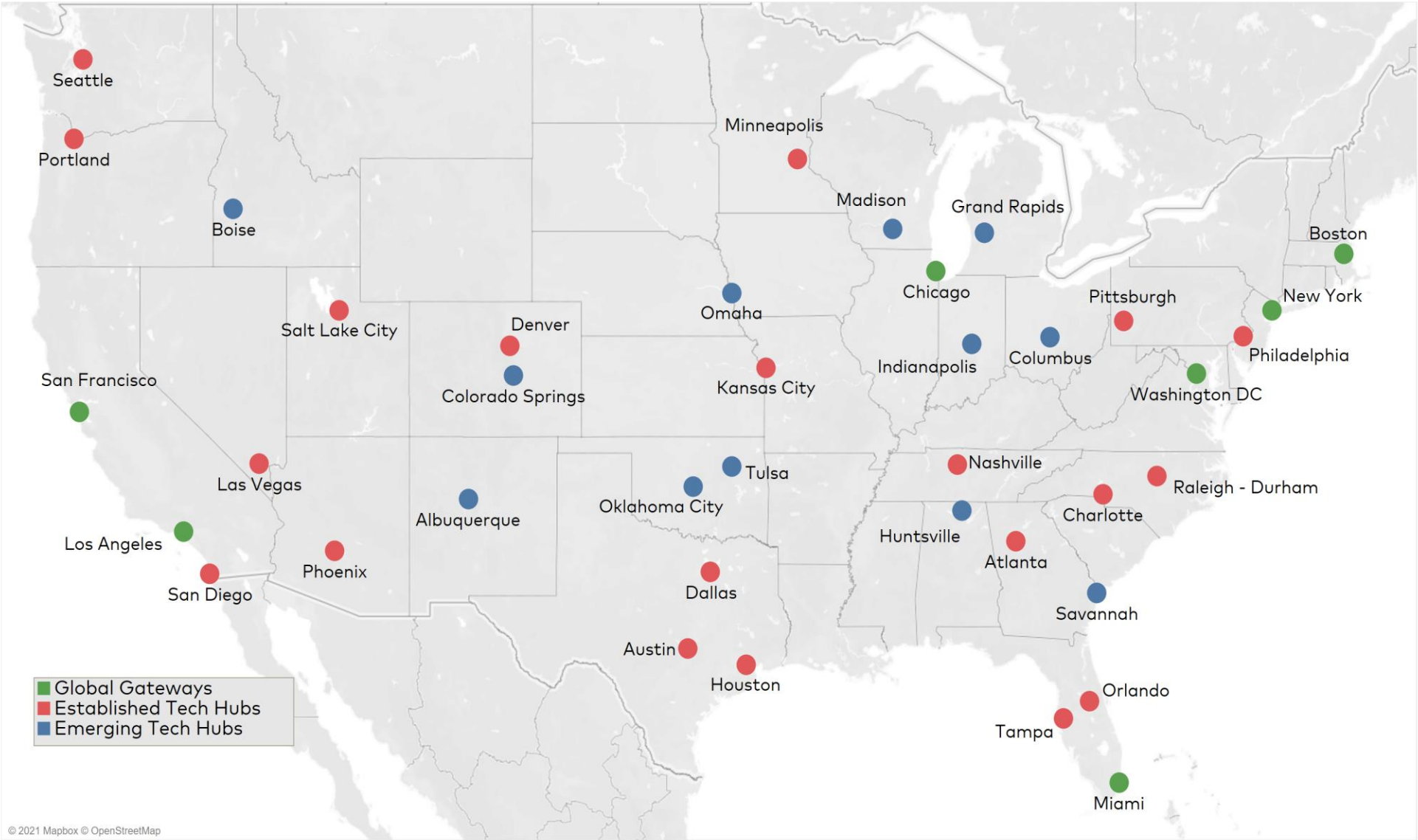
- **FEMA Emergency Food and Shelter Program (\$510 million):**
 - Support homeless service providers for overnight shelter, meals, one month’s rent and mortgage assistance, and one month’s utility payments
- **Expands the Employee Retention Tax Credit**
- **Makes all Coronavirus-Related Student Loans Tax Free**
- **Amtrak Funding (\$200 million)**
- **Provider Relief Program (\$8.5 billion):**
 - Provides funds to assist rural health care providers
- **Education Funding (\$5.5 billion):**
 - \$1.25 billion – summer enrichment
 - \$1.25 billion – after-school programs
 - \$3 billion – education technology
- **Agriculture – Food Supply Chain (\$4 billion)**
- **Increases Federal COBRA health insurance program from 85% to 100%**
- **Infrastructure (\$10 billion):**
 - Help local governments continue crucial capital projects

Prognosis 2021

- We are in a generalized recovery
 - Knowledge-based sectors are leading the recovery
 - We expect the lagging sectors to open up later this year
- GDP is coming back, and employment is following, with a bit of a lag
- Key indicators Yardi Matrix will be following closely
 - Rising consumer inflation rates; asset inflation is already here
 - Rising long-term interest rates
 - Migration flows out of gateway markets
- Multifamily has done well, with tech hubs growing and gateway markets recovering off a bottom

MULTIFAMILY FUNDAMENTALS

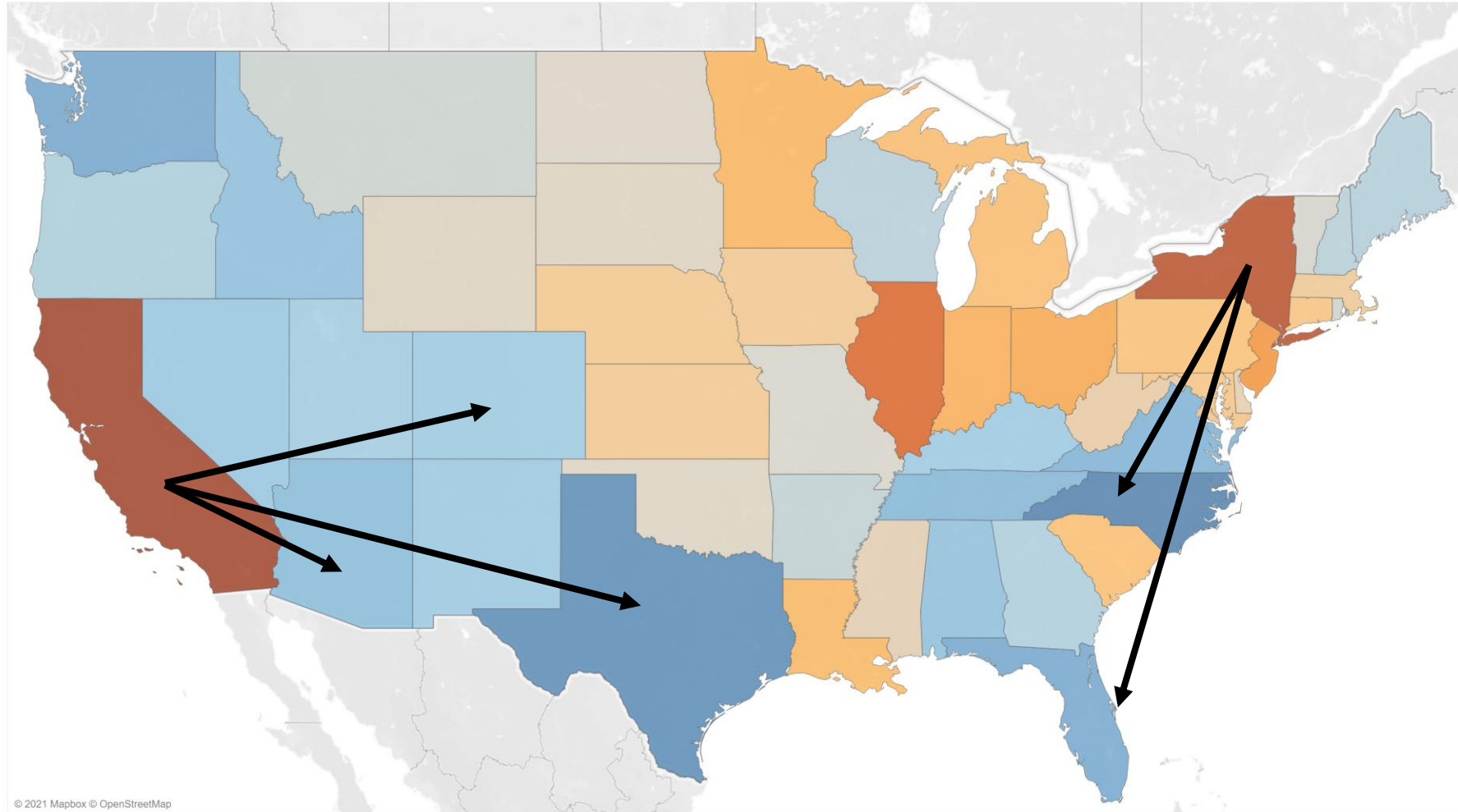
Our Market Universe for Investment Strategy Analysis



Source: Yardi Matrix

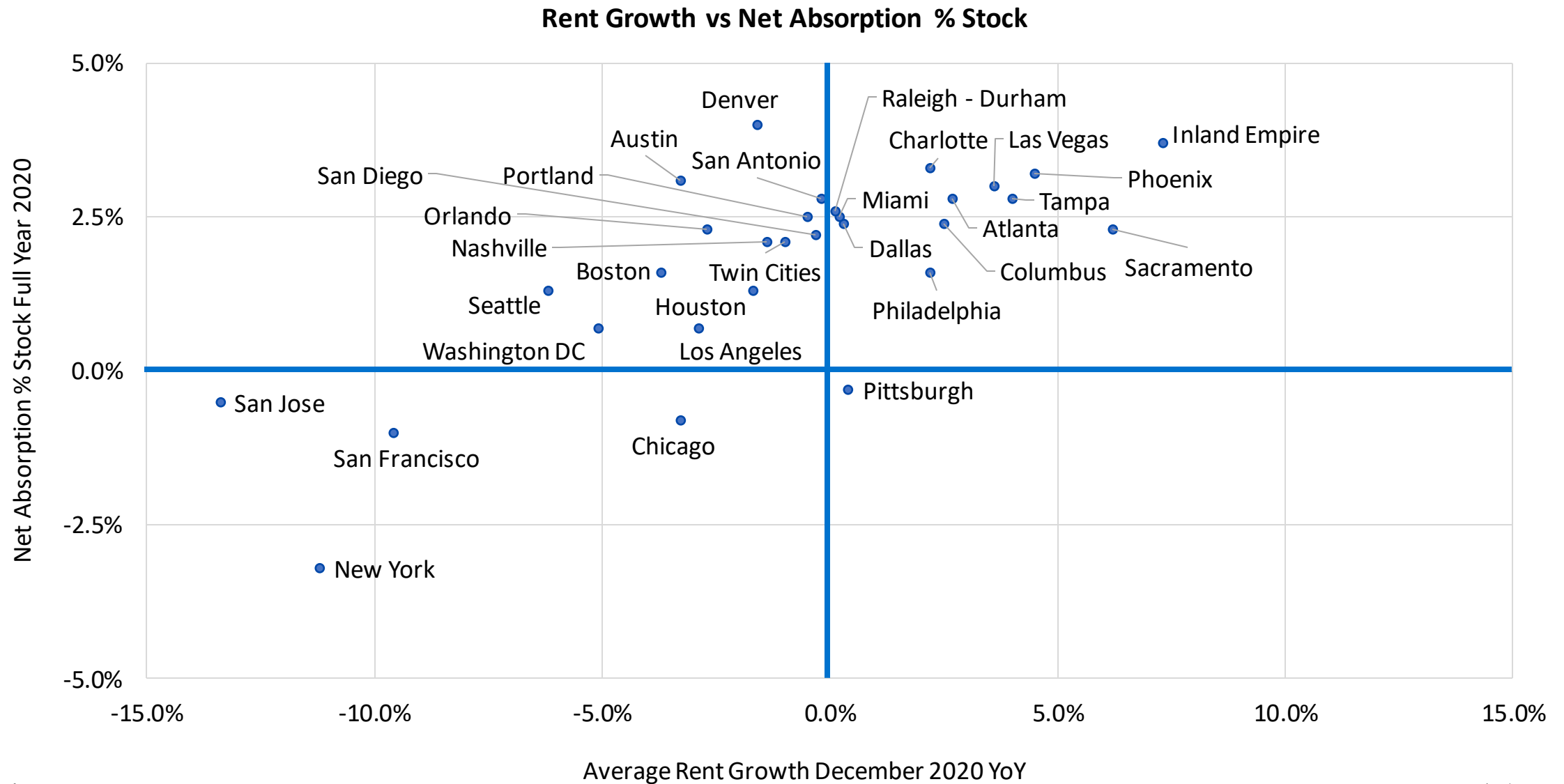


Migration Amid COVID-19: Gateway Markets Experiencing Mass Exodus, Southwest Gains

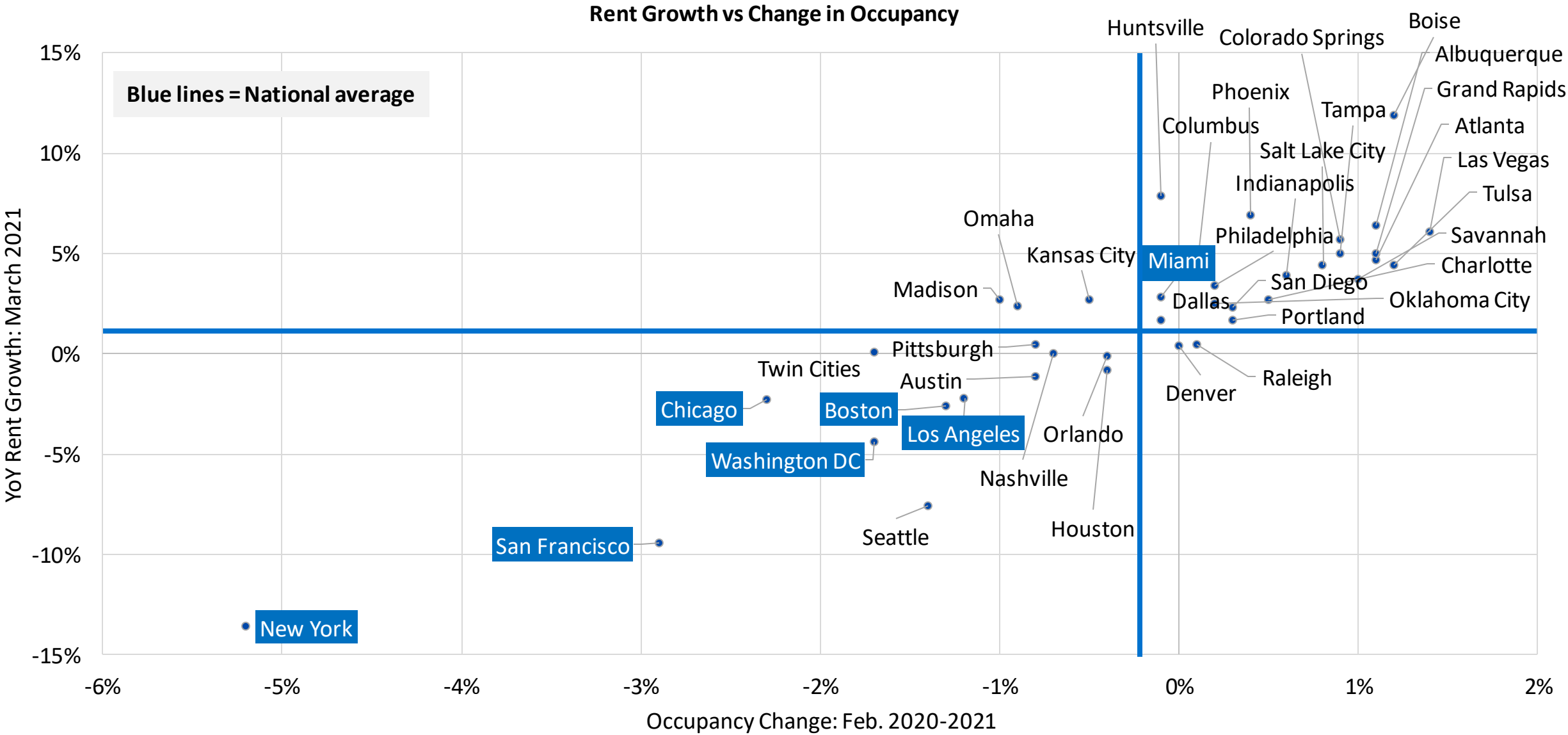


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Absorption Has Been Strongest in Tech Hub Markets



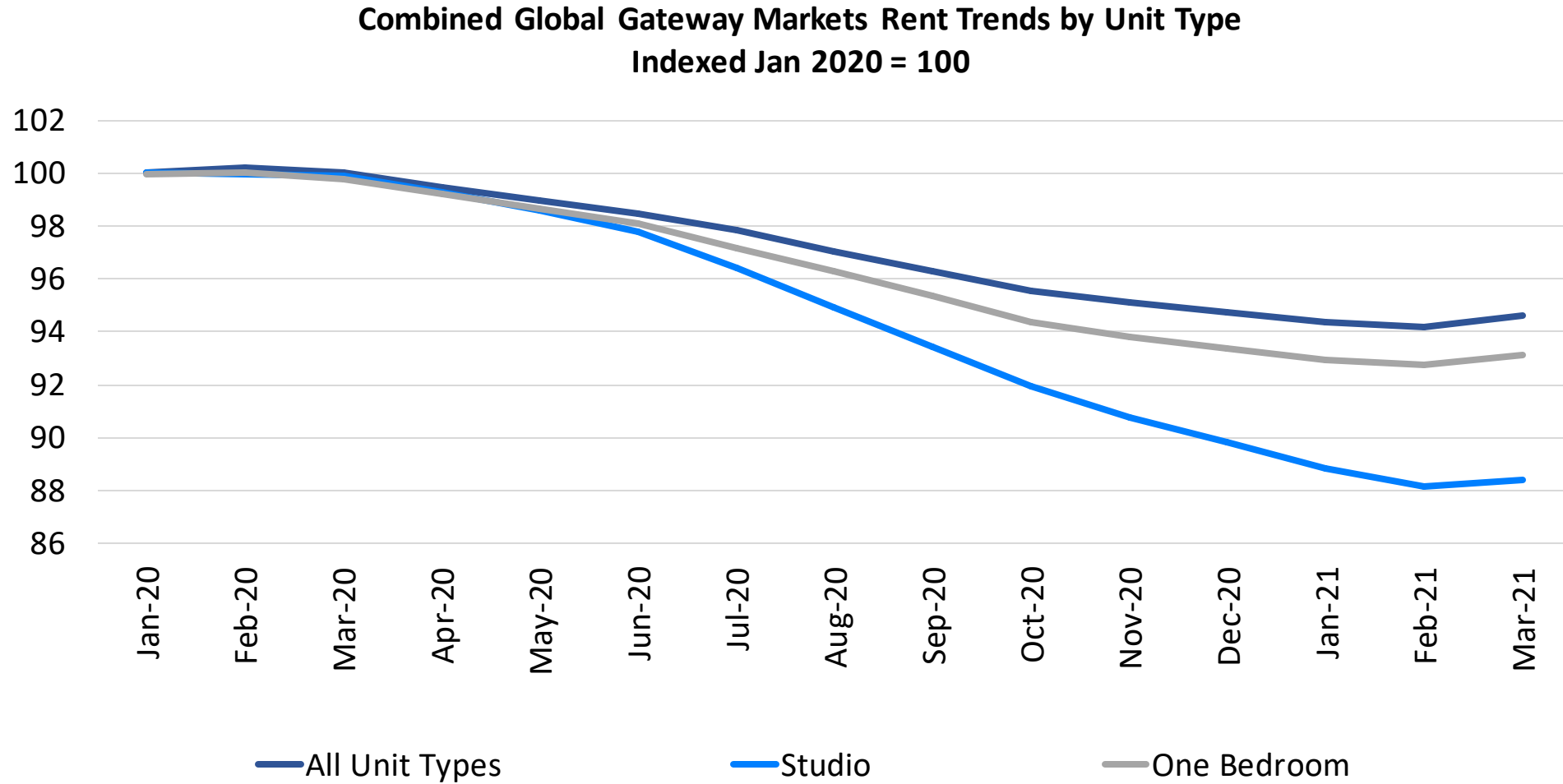
Rent & Occupancy Growth Highest in Emerging Tech Hub Markets



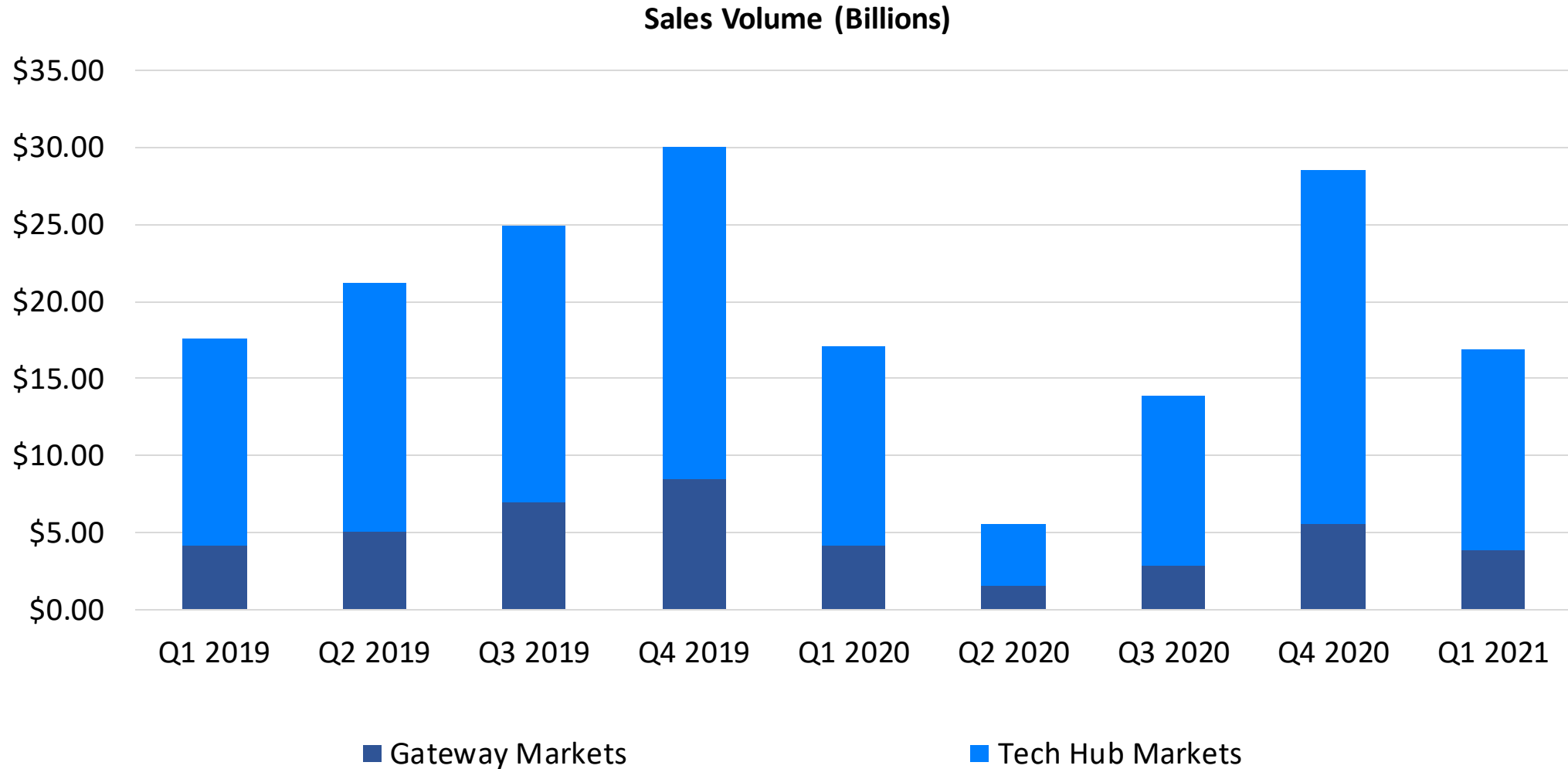
Markets in dark blue boxes are gateway markets
 Source: Yardi Matrix



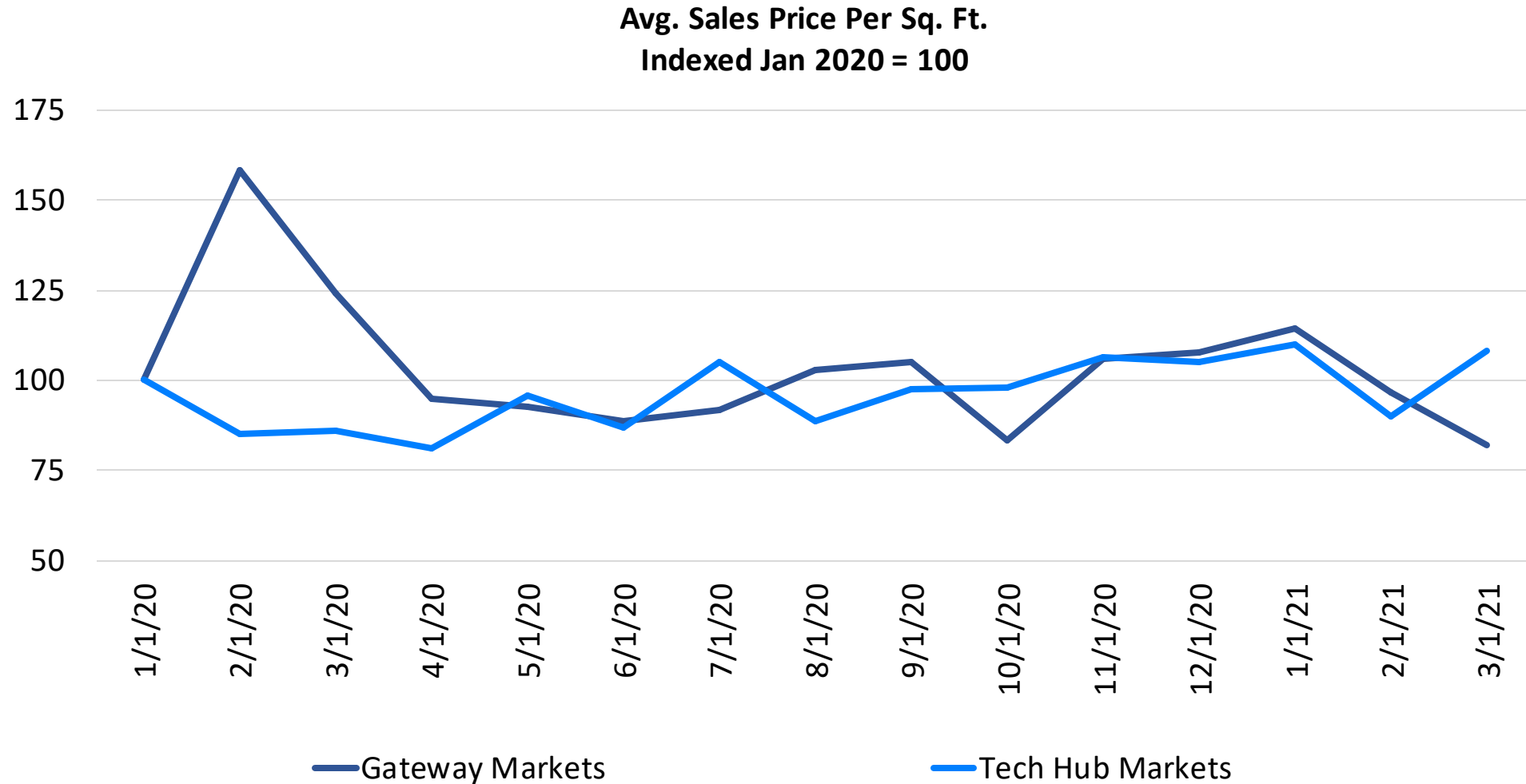
Young Professionals Fled Gateway Markets, Leaving Studio and One-Bedroom Units Struggling...But a Bottoming is Emerging



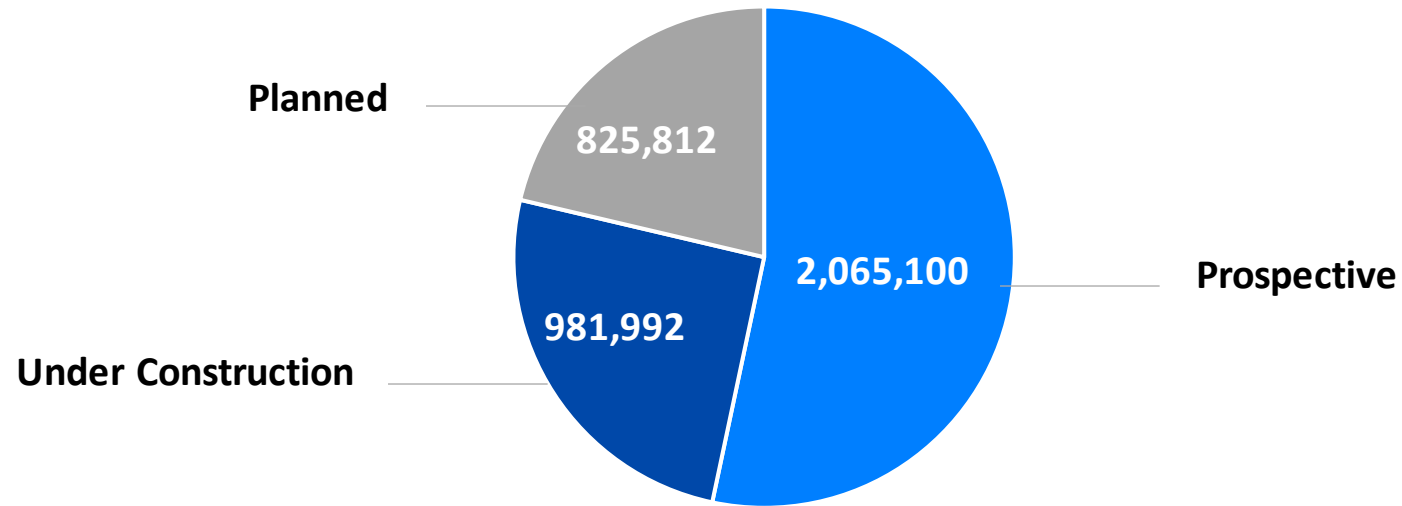
Multifamily Sales Volume Was Slow In the Beginning of 2020, but Picked up in Q4



Average Multifamily Sales Price Per Sq. Ft. Has Fallen in Gateway Markets Over the Past Few Months, While Tech Hub Sales Prices Recently Popped Up



New Supply Pipeline: Where is New Supply Concentrated?



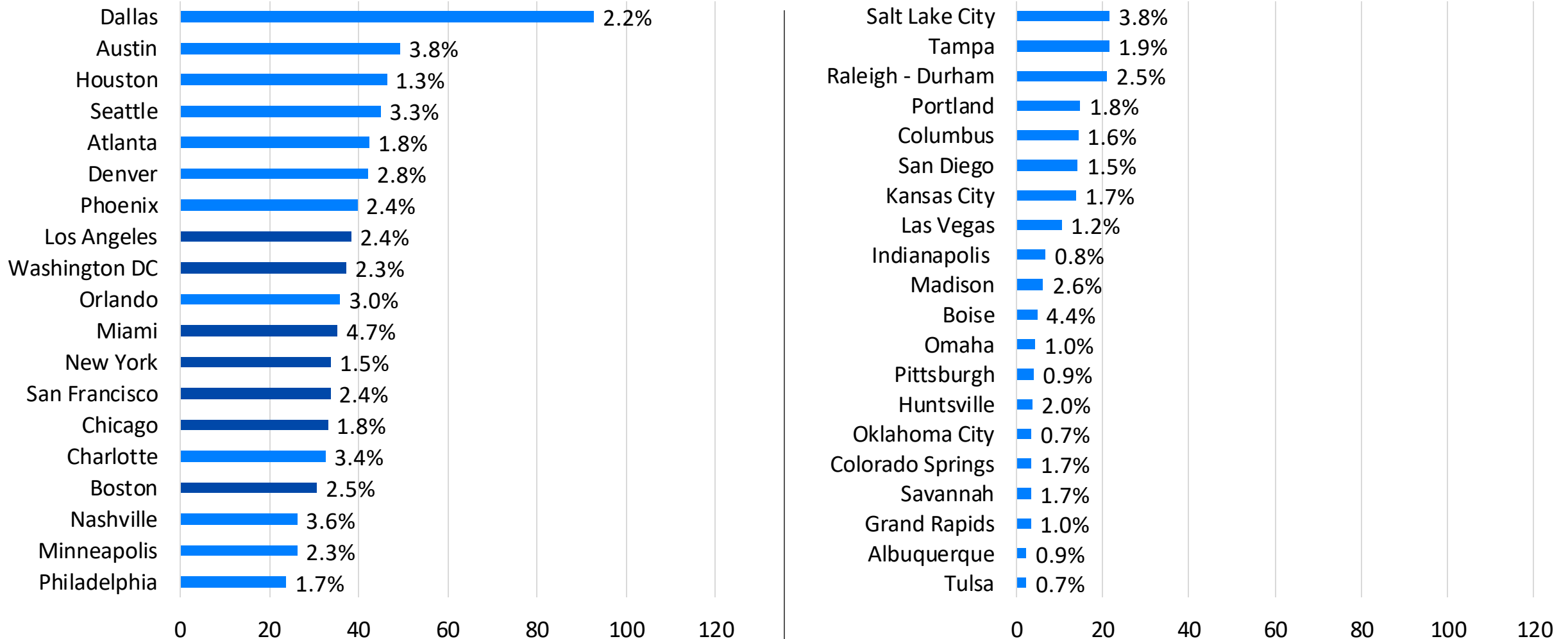
Top 10 Markets	Units	UC as a % of Existing Stock
Boise	3,134	14.7%
Miami	19,442	14.1%
Austin	34,116	13.4%
Salt Lake City	12,636	11.8%
SW Florida Coast	8,261	11.5%
Nashville	16,041	11.5%
Ft Lauderdale	11,093	10.6%
Tri-Cities	1,548	9.8%
Reno	3,957	9.8%
Bay Area – East Bay	13,780	9.7%

Top 10 Markets	Units	Planned as a % of Existing Stock
Asheville	4,948	26.8%
Miami	32,348	23.5%
Wilmington	4,288	20.1%
Urban Chicago	36,146	19.8%
Northern New Jersey	43,628	19.1%
Portland, ME	2,370	18.0%
SW Florida Coast	12,653	17.6%
Ft Lauderdale	18,020	17.2%
White Plains	11,639	16.6%
Nashville	19,987	14.3%

Top 10 Markets	Units	Prospective as a % of Existing Stock
Miami	91,208	66.2%
San Francisco	60,475	48.4%
SW Florida Coast	31,401	43.8%
Sacramento	45,351	34.1%
Bay Area – South Bay	42,089	32.3%
Queens	33,450	32.3%
Pensacola	10,856	30.8%
Metro Los Angeles	57,719	30.5%
Raleigh-Durham	49,514	30.0%
West Palm Beach	20,066	29.3%

Tech Hubs Are Forecasted to Have the Highest Number of Deliveries on an Absolute & Percent of Stock Basis

Forecasted New Unit Deliveries 2021-2025 (Thousands) - Percentages Denote Avg Annual Growth as a % of Stock



Markets with dark blue lines are gateway markets

Source: Yardi Matrix

Even With The Large Pipelines, Most Tech Hub Markets Are Likely to Remain Balanced

Market	Historical 3-Yr Avg. Net Absorption as a % of Stock	Projected 3-Yr Avg. Completions as a % of Stock	Difference	Market	Historical 3-Yr Avg. Net Absorption as a % of Stock	Projected 3-Yr Avg. Completions as a % of Stock	Difference
Portland	3.0%	0.9%	2.0%	Boise	5.8%	5.6%	0.3%
Salt Lake City	4.5%	2.7%	1.8%	Kansas City	1.9%	1.8%	0.1%
Nashville	4.0%	2.5%	1.6%	Charlotte	3.6%	3.6%	0.1%
Raleigh - Durham	3.5%	2.0%	1.5%	Austin	4.1%	4.3%	-0.2%
Denver	4.5%	3.1%	1.4%	Oklahoma City	1.4%	1.6%	-0.2%
Twin Cities	2.3%	1.1%	1.2%	Houston	1.2%	1.4%	-0.2%
Phoenix	2.9%	1.9%	1.1%	Boston	2.5%	3.1%	-0.6%
Orlando	2.5%	1.5%	1.0%	Tulsa	1.6%	2.4%	-0.8%
Seattle	3.4%	2.4%	1.0%	San Francisco	0.9%	1.7%	-0.9%
Omaha	1.8%	0.8%	1.0%	Chicago	1.2%	2.1%	-0.9%
Colorado Springs	3.0%	2.1%	0.9%	Tampa	2.7%	3.6%	-1.0%
Las Vegas	2.2%	1.4%	0.9%	Washington DC	1.6%	2.6%	-1.1%
Grand Rapids	2.0%	1.3%	0.7%	Philadelphia	1.9%	3.1%	-1.2%
Madison	3.4%	2.8%	0.6%	Huntsville	1.8%	3.1%	-1.3%
Indianapolis	1.5%	1.0%	0.6%	Los Angeles	1.2%	2.5%	-1.3%
Columbus	2.2%	1.8%	0.4%	Pittsburgh	1.2%	2.7%	-1.5%
Savannah - Hilton Head	3.1%	2.7%	0.4%	Miami	3.6%	5.5%	-1.9%
Dallas	2.9%	2.5%	0.4%	San Diego	1.9%	4.0%	-2.2%
Albuquerque	1.7%	1.3%	0.4%	New York	0.4%	3.6%	-3.2%
Atlanta	2.6%	2.2%	0.4%				

Gateway markets are bolded

Source: Yardi Matrix



Tech Hub Markets Are Forecasted to Have the Most Rent Growth This Year...

Market	YOY Rent Growth Year-End 2021	Occupancy Year-End 2021	YOY Rent Growth Year-End 2022	Occupancy Year-End 2022	Market	YOY Rent Growth Year-End 2021	Occupancy Year-End 2021	YOY Rent Growth Year-End 2022	Occupancy Year-End 2022
Las Vegas	5.2%	95.3%	3.5%	94.9%	Austin	3.5%	93.6%	2.9%	93.9%
Boise	4.5%	96.5%	4.5%	96.9%	Columbus	3.5%	94.8%	3.1%	94.3%
Phoenix	4.3%	95.1%	4.2%	94.9%	Dallas	3.5%	94.2%	3.1%	94.3%
Atlanta	3.9%	94.3%	3.4%	93.9%	Houston	3.5%	92.2%	3.3%	91.8%
Raleigh	3.8%	94.6%	3.7%	94.7%	Grand Rapids	3.4%	96.3%	3.5%	96.4%
Denver	3.7%	94.5%	3.4%	94.6%	Charlotte	3.3%	94.8%	3.4%	95.2%
Indianapolis	3.7%	94.5%	2.7%	94.4%	Orlando	3.3%	93.8%	3.4%	94.0%
San Diego	3.7%	96.0%	2.7%	96.0%	Huntsville	3.2%	96.5%	3.5%	96.6%
Colorado Springs	3.6%	95.4%	3.8%	95.0%	Albuquerque	3.1%	96.2%	4.0%	96.4%
Salt Lake City	3.6%	96.0%	3.9%	95.8%	Kansas City	3.0%	94.3%	3.0%	94.4%

Sorted by YOY Rent Growth Year-End 2021

Source: Yardi Matrix

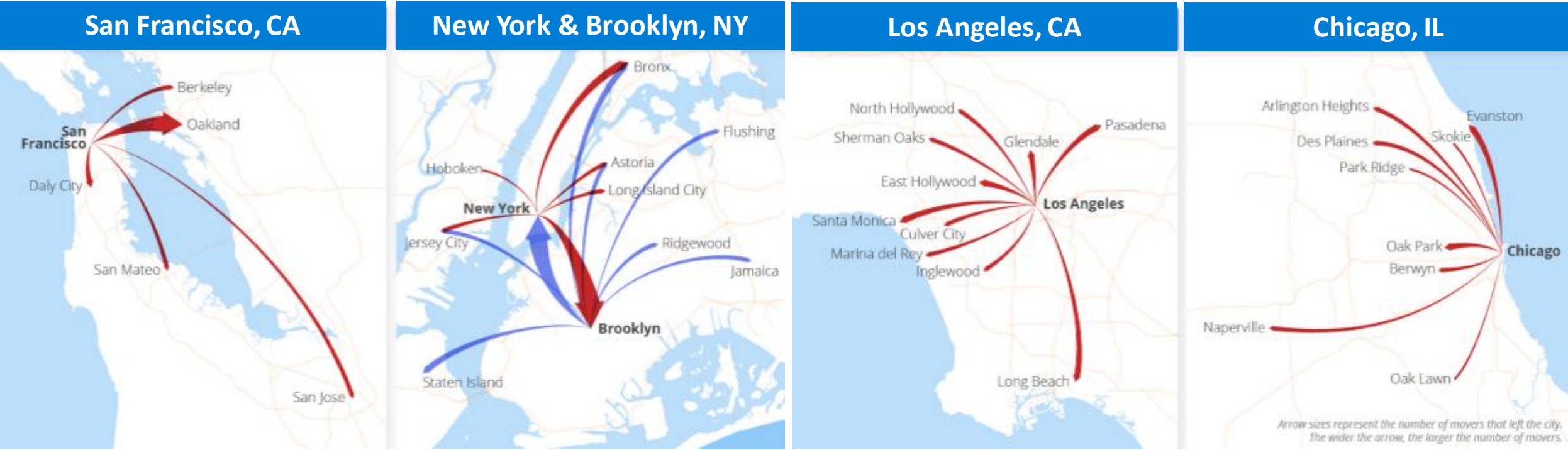
While Gateway Markets Are Forecasted to Have the Least Rent Growth

Market	YOY Rent Growth Year-End 2021	Occupancy Year-End 2021	YOY Rent Growth Year-End 2022	Occupancy Year-End 2022	Market	YOY Rent Growth Year-End 2021	Occupancy Year-End 2021	YOY Rent Growth Year-End 2022	Occupancy Year-End 2022
Nashville	3.0%	94.5%	2.9%	94.3%	Miami	2.3%	94.7%	2.7%	94.8%
Portland	3.0%	95.1%	3.1%	95.0%	Chicago	2.2%	92.0%	2.4%	91.8%
Tulsa	3.0%	93.9%	3.3%	93.7%	Washington DC	2.2%	93.7%	2.2%	94.7%
Tampa	2.9%	95.3%	3.0%	95.5%	Philadelphia	2.2%	95.5%	2.5%	95.5%
Boston	2.8%	95.4%	2.3%	95.2%	Madison	1.8%	97.2%	1.7%	96.9%
Savannah	2.8%	93.6%	2.5%	93.7%	Manhattan	1.8%	93.5%	2.5%	93.7%
Oklahoma City	2.6%	93.0%	2.4%	93.5%	Pittsburgh	1.5%	95.6%	1.6%	95.9%
Twin Cities	2.6%	95.1%	2.5%	95.1%	Los Angeles	1.0%	94.4%	2.7%	94.3%
Omaha	2.5%	95.4%	2.7%	95.6%	San Francisco	-0.8%	93.0%	2.2%	93.2%
Seattle	2.5%	94.5%	3.1%	94.6%					

Sorted by YOY Rent Growth Year-End 2021. Gateway markets are bolded

Source: Yardi Matrix

The Movement Isn't Just From Gateway To Tech Hub Markets – Residents Are Moving From Densely Populated Cities To Suburbs



*Data pulled from total USPS change-of-address requests filed between Feb. 1 2020 and Jul. 31 2020. Data represents net move ins/outs
Source: Yardi Matrix; MYMOVE, <https://www.mymove.com/moving/covid-19/coronavirus-moving-trends/>

Local Moves Give Downtowns and Gateway Markets Hope: Residents Are More Likely to Return Post-Pandemic

Top 5 places where people moving out of **Manhattan** went:

Moving To	Distance from Downtown	Number of Movers
Brooklyn, NY	10 miles	2,910
East Hampton, NY	106 miles	1,642
Southampton, NY	95 miles	670
Jersey City, NJ	8 miles	334
Sag Harbor, NY	104 miles	313

Top 5 places where people moving out of **San Francisco** went:

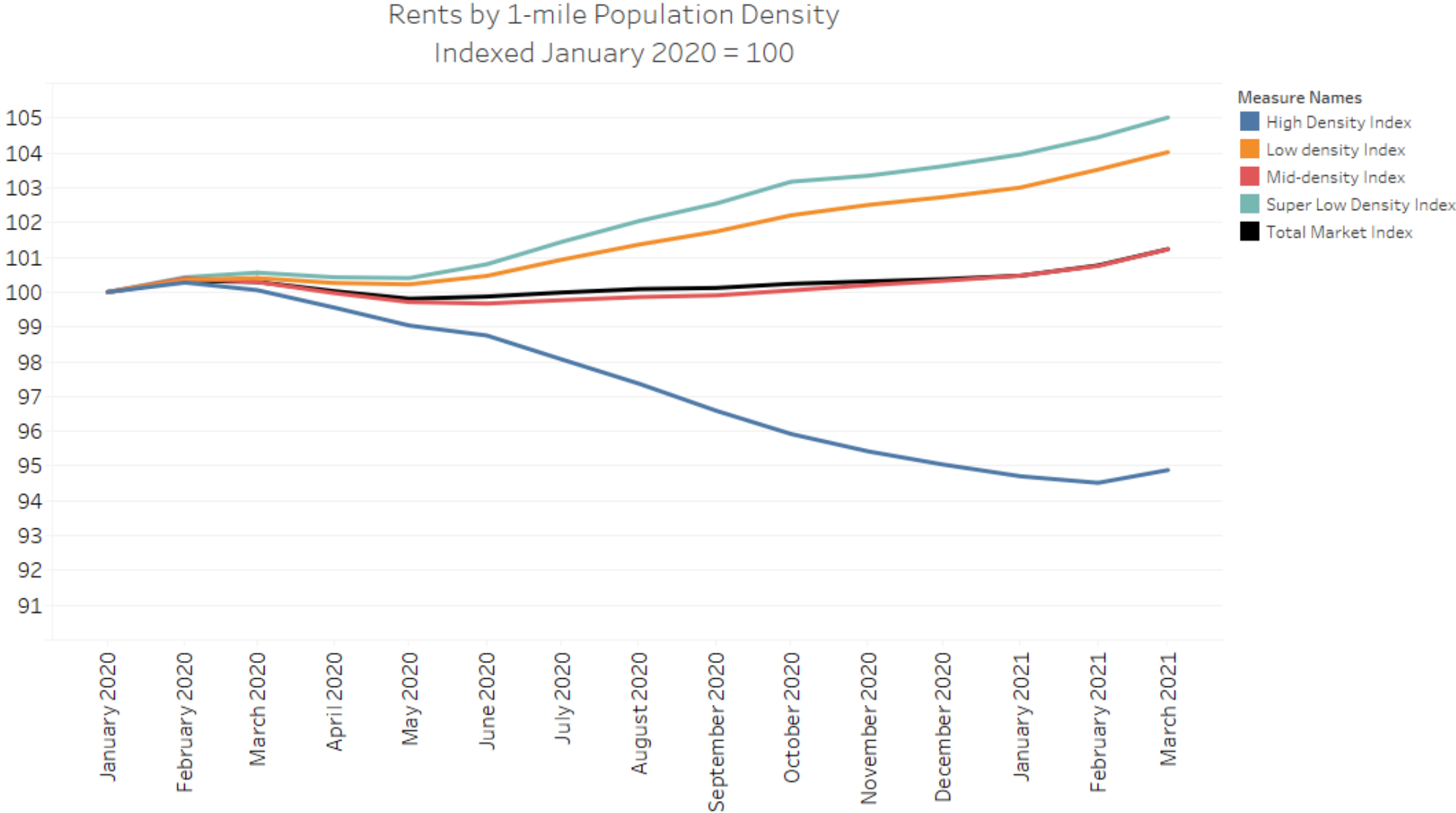
Moving To	Distance from Downtown	Number of Movers
Alameda, CA	14 miles	8,131
San Mateo, CA	30 miles	6,637
Marin County, CA	58 miles	4,155
Contra Costa, CA	44 miles	3,814
Santa Clara, CA	45 miles	2,592

- In all, **3.6 million** requests for mail forwarding were to addresses in the same county, compared with just **420,970** who moved beyond their original county
- About **41%** of change-of-address requests in San Francisco between March and November were within the city
- The fact that many people are not going very far could represent a silver lining

So, where are people moving to **Texas** coming from?

- The majority of Texas moves are local - people are moving around the cities and suburbs of Houston, Dallas and Austin

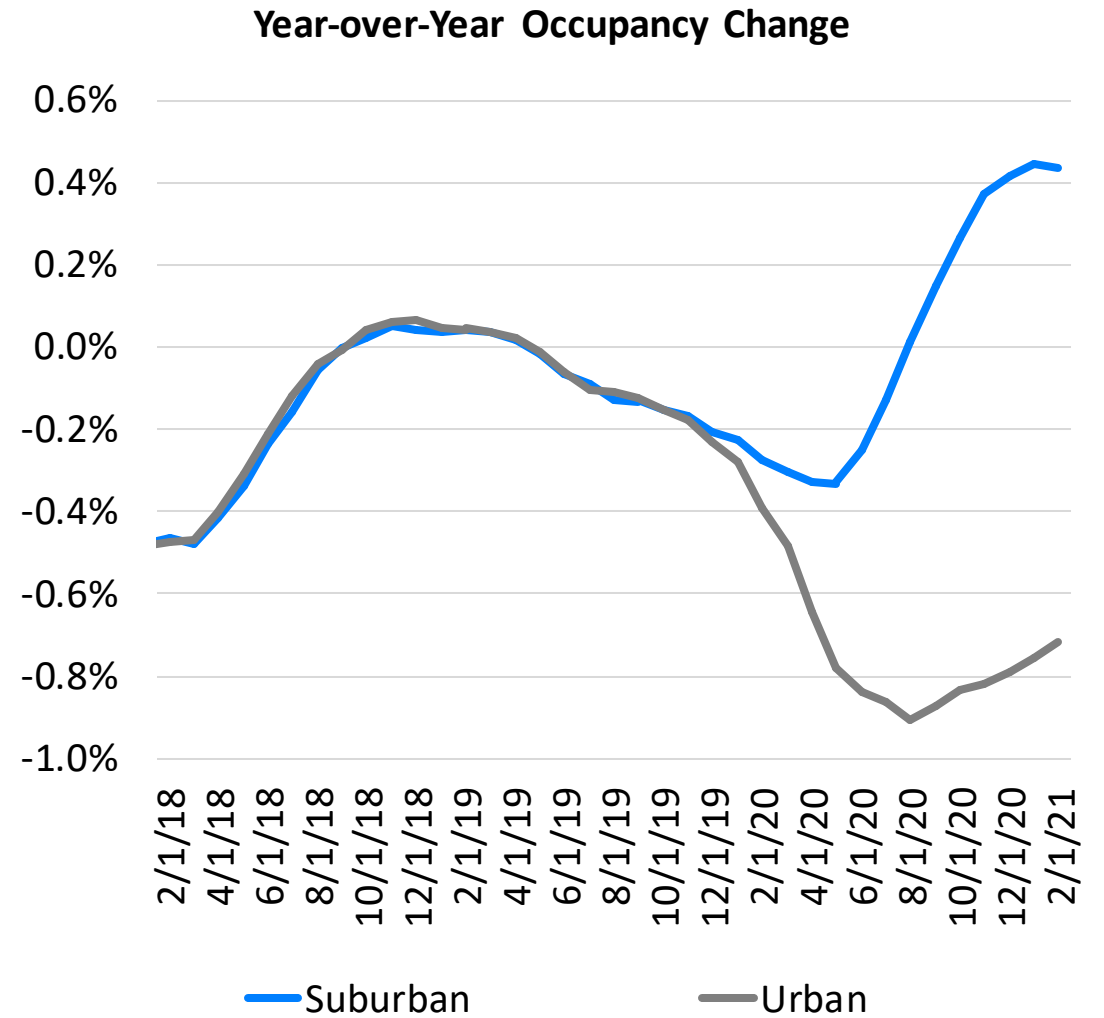
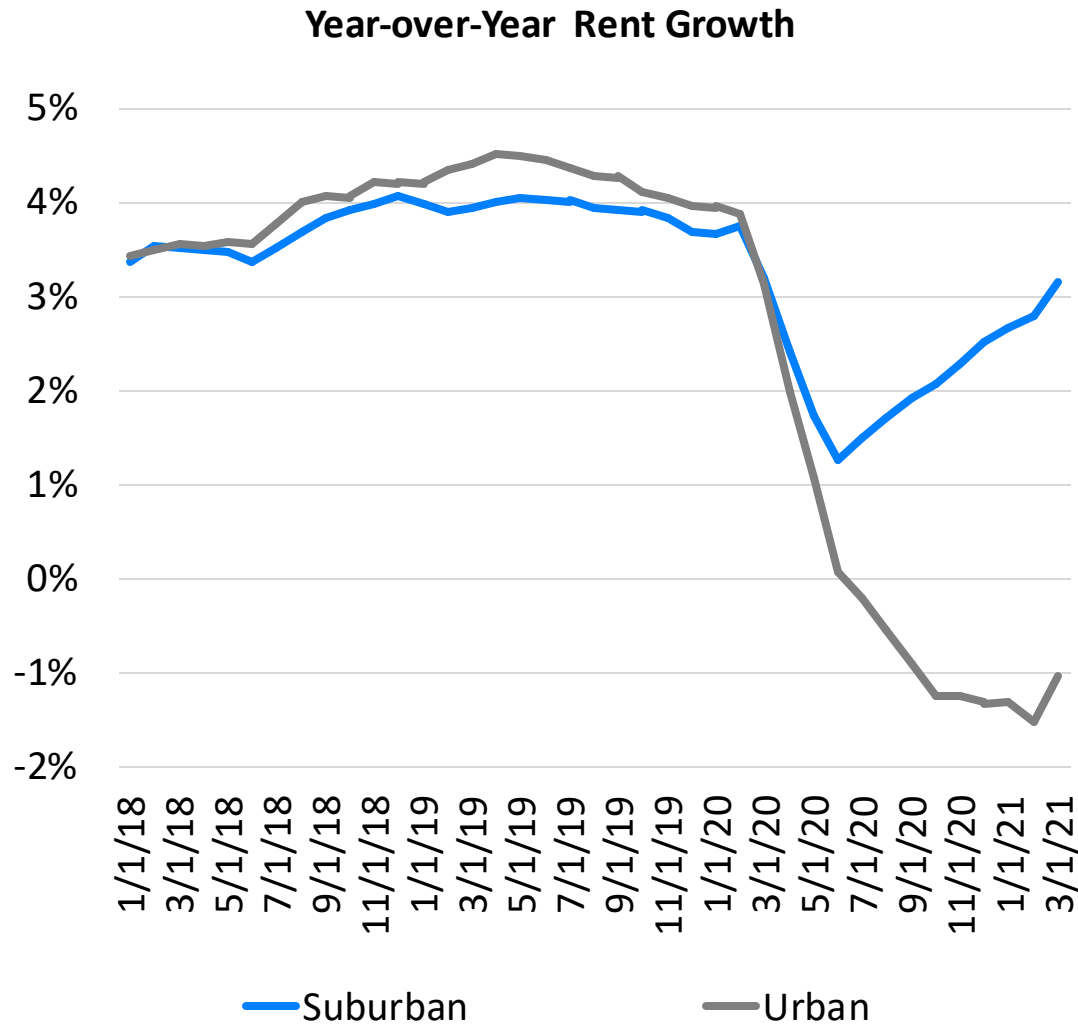
Nationally, High Density Areas Have Seen the Biggest Impact On Rents



Source: Yardi Matrix

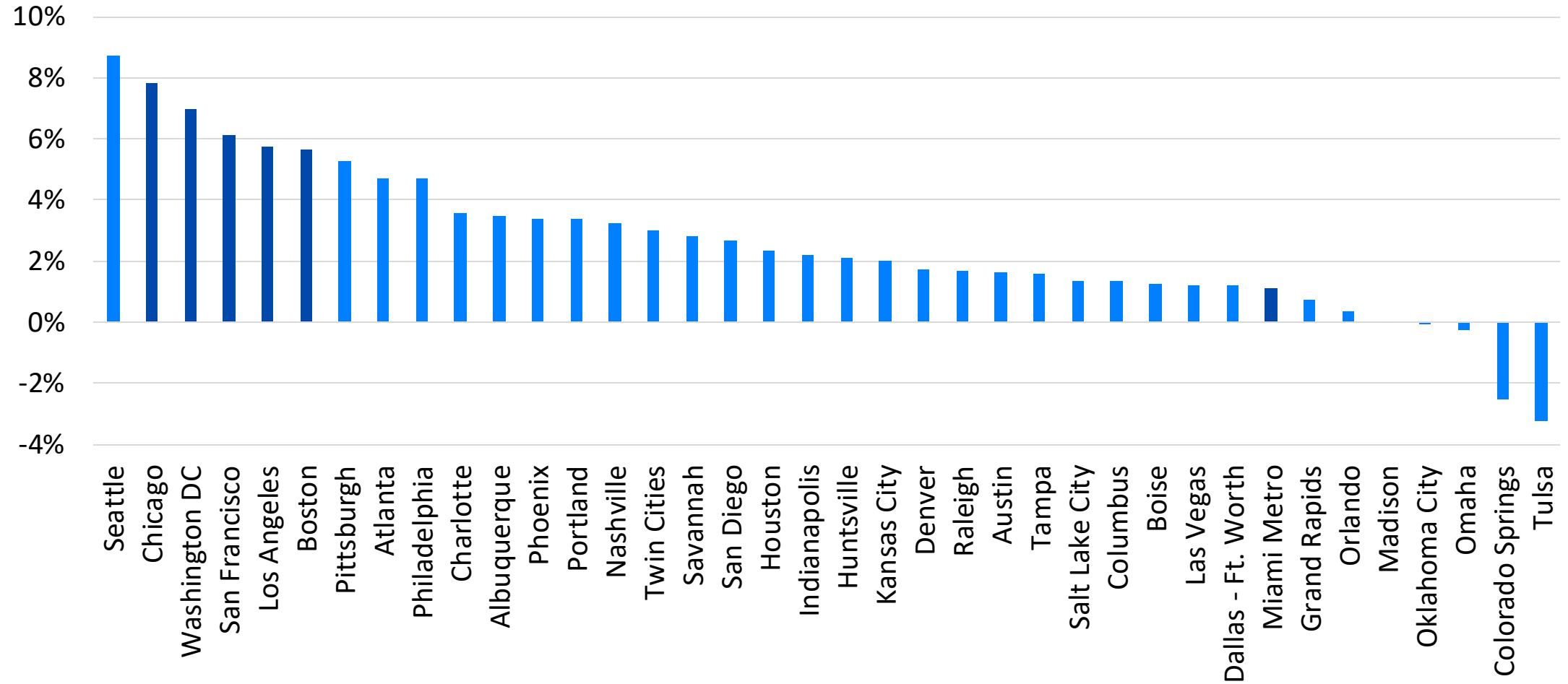


Urban Cores are Beginning to Recover



Suburbs Have Outperformed Their Urban Counterparts in Most Markets

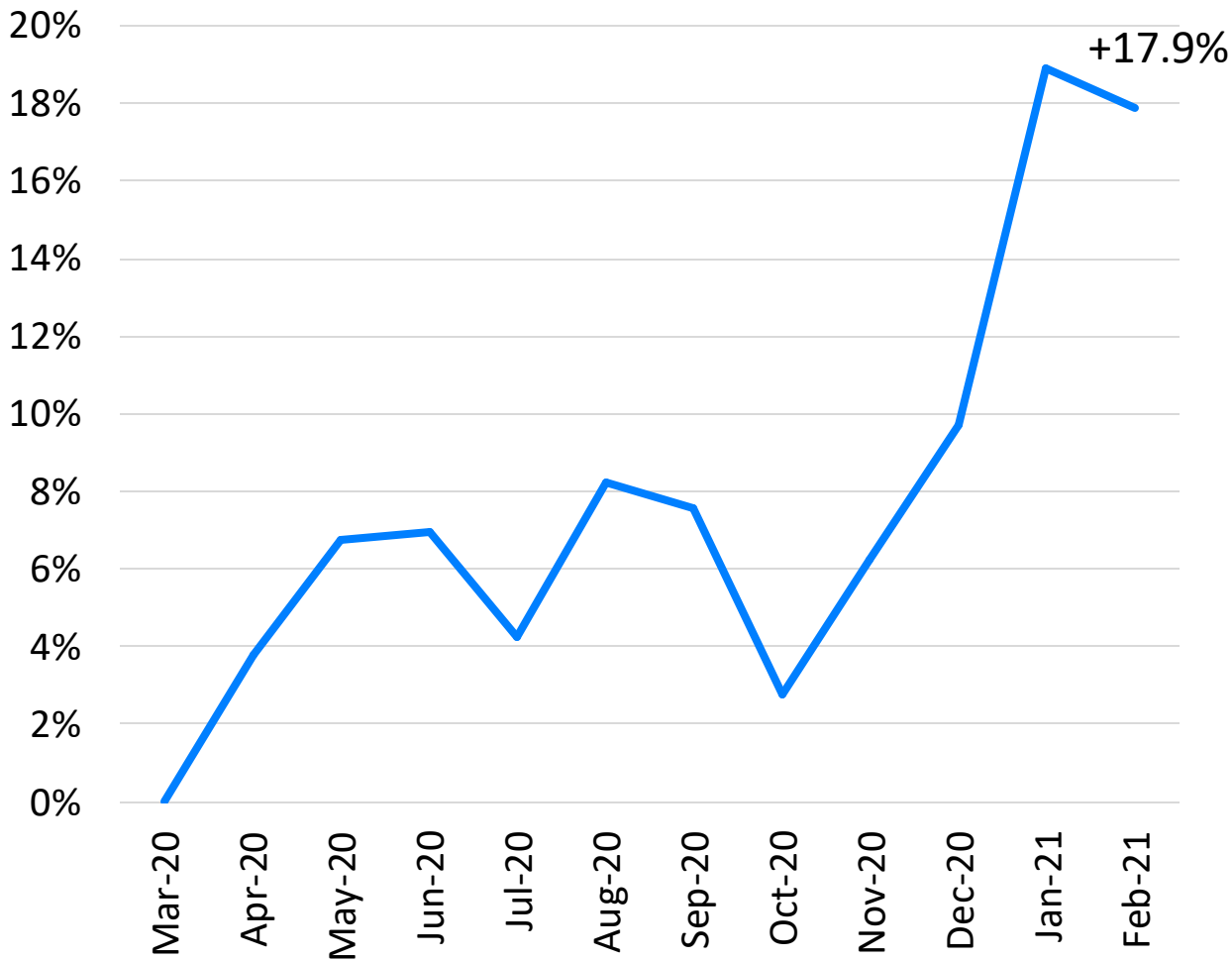
Difference Between Suburban and Urban Rent Growth Mar 2020-Mar 2021



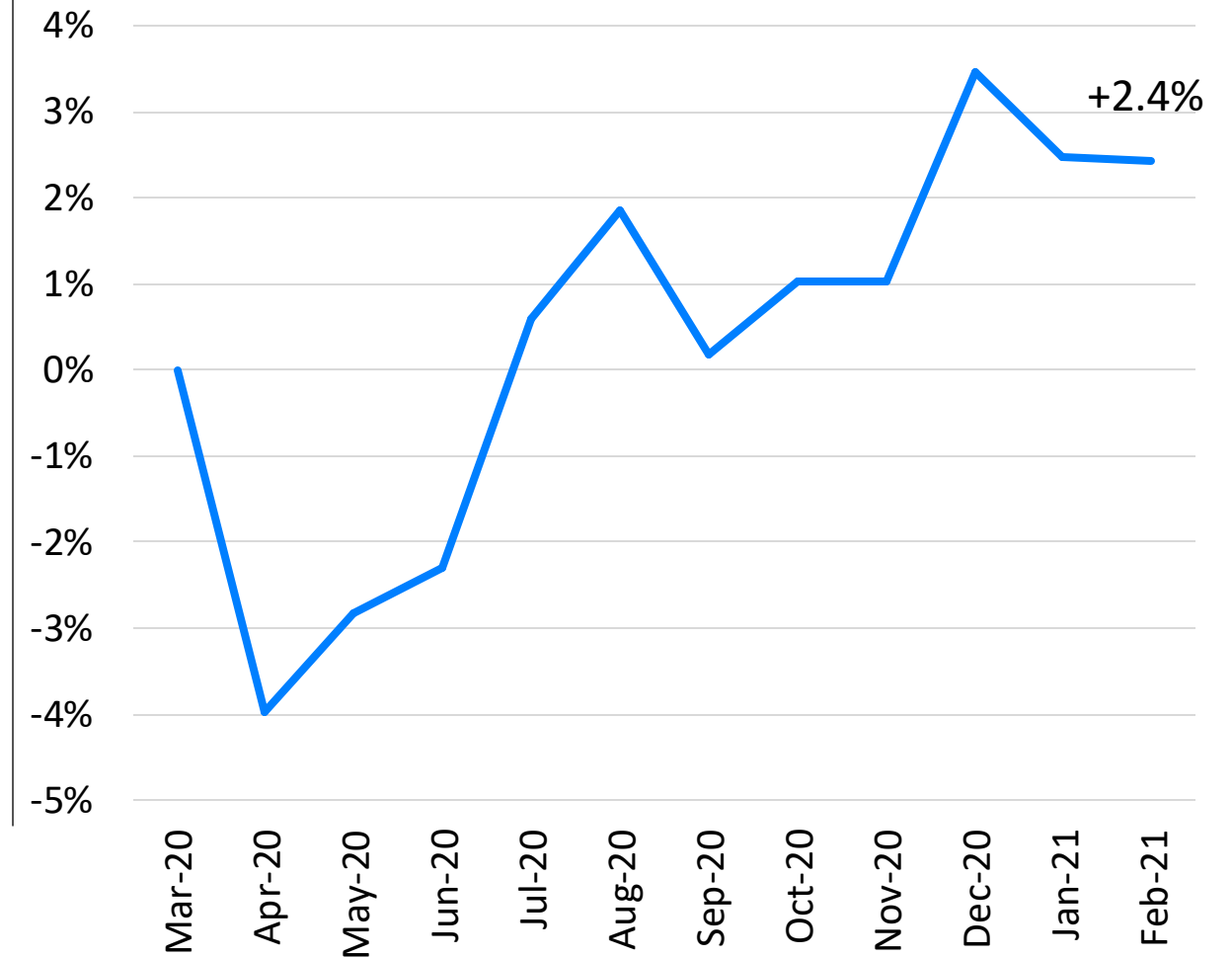
Dark blue bars are gateway markets. New York excluded as it does not have a suburban component
Source: Yardi Matrix

Suburban Markets Have Benefitted From Gateway Market Mass Exodus

Long Island: % Change in Rents Since March 2020



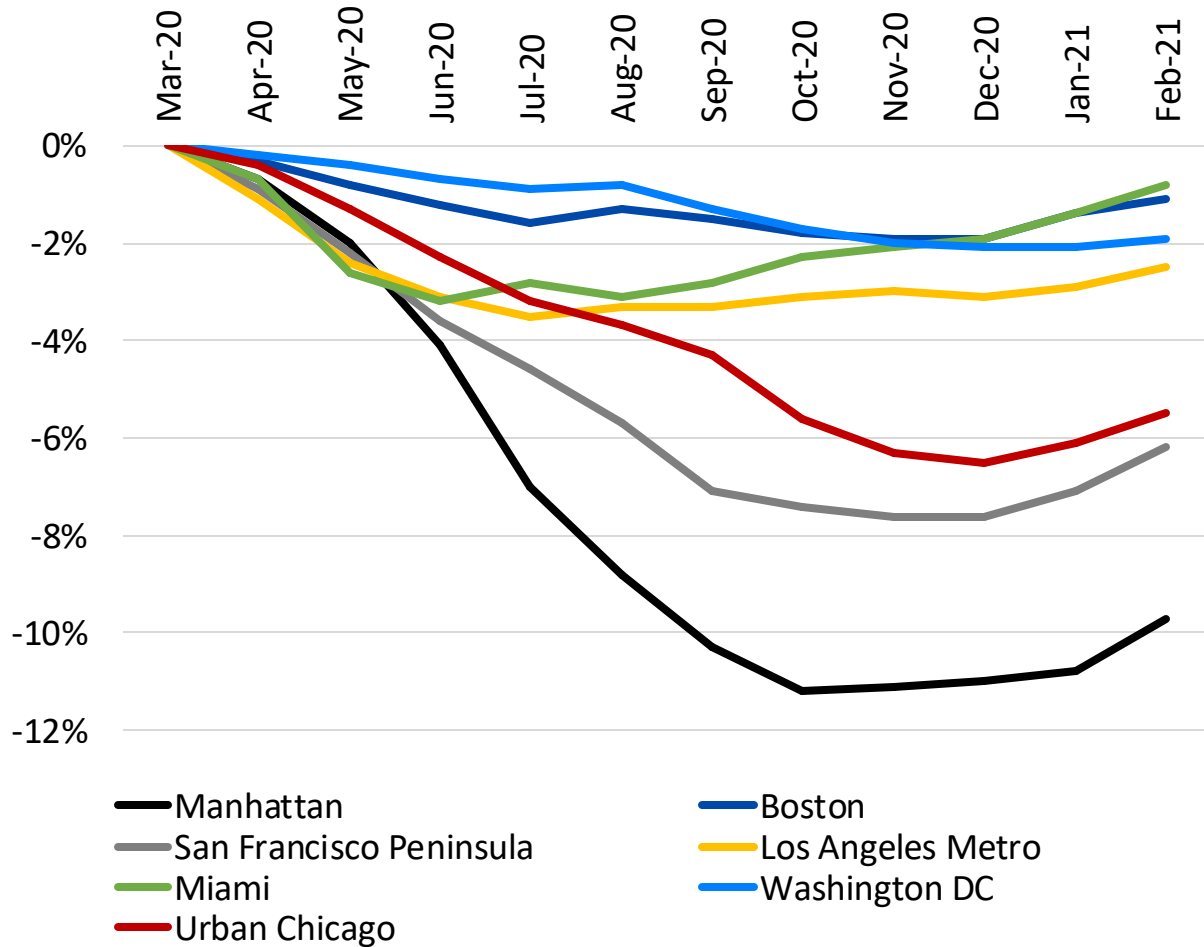
San Fernando Valley: % Change in Rents Since March 2020



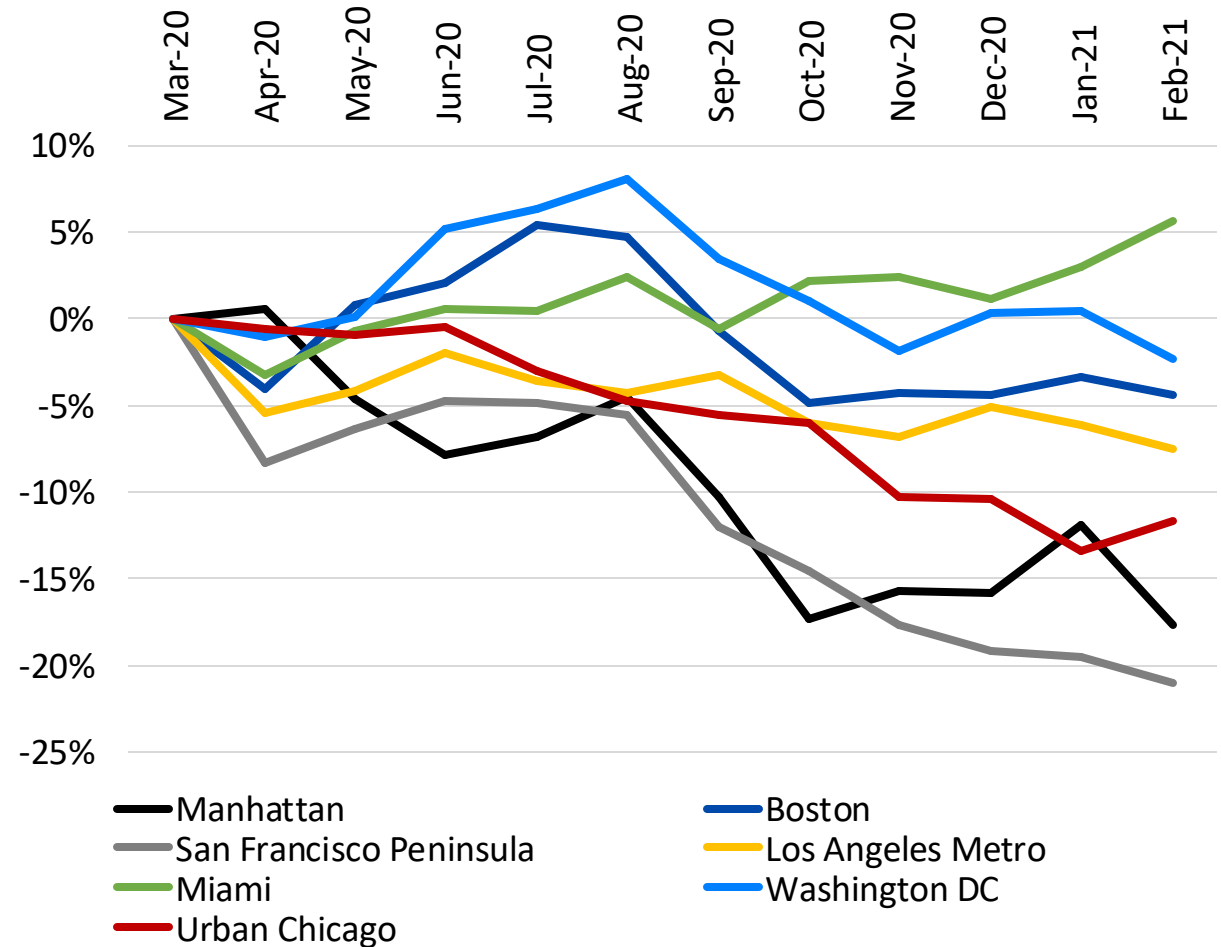
Source: Yardi Matrix Expert
Matrix Expert data is based upon aggregated and anonymized Yardi transaction activity

However, Gateway Markets Have Found a Sequential Bottom

Change in Occupancy Since March 2020



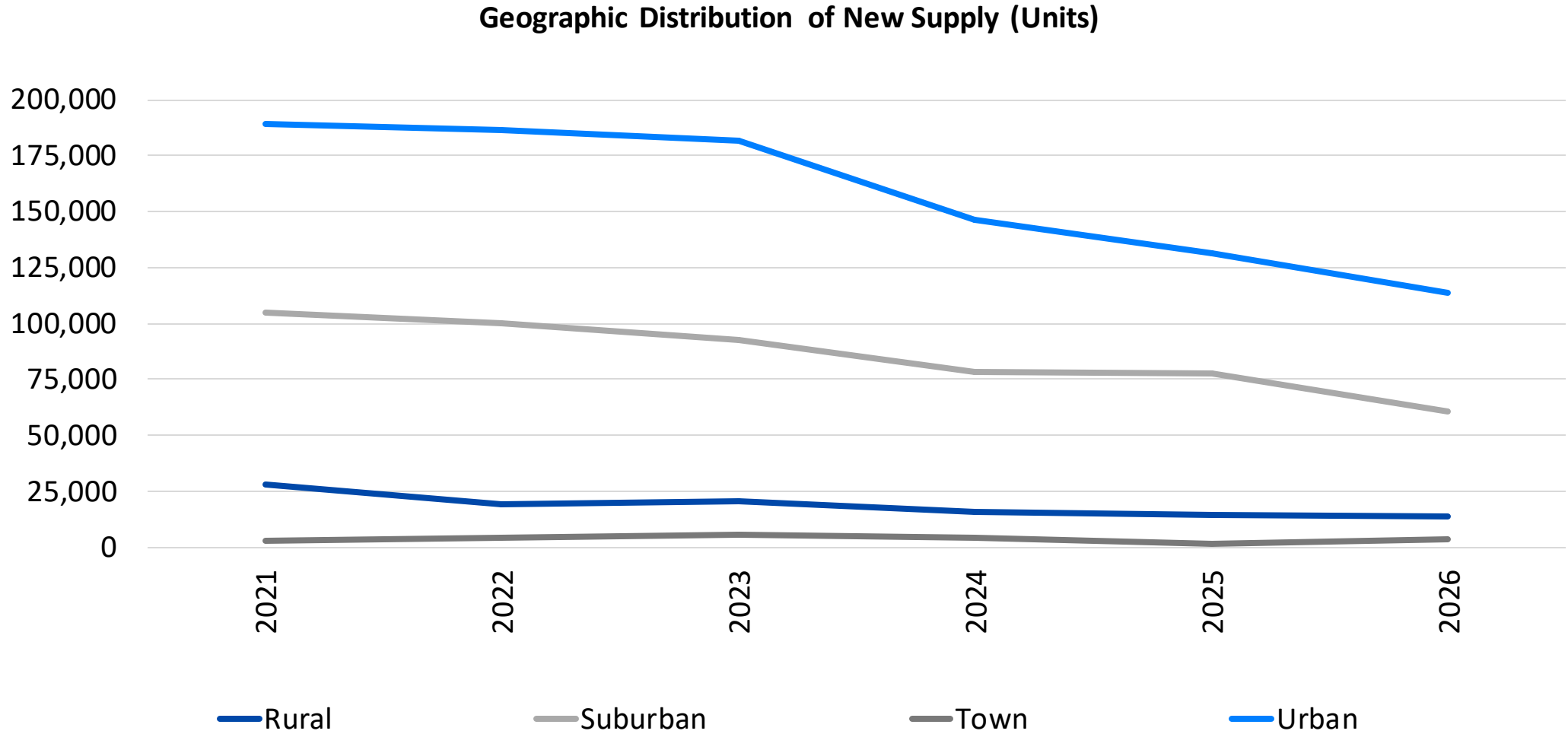
Change in Rents Since March 2020



Source: Yardi Matrix Expert
 Matrix Expert data is based upon aggregated and anonymized Yardi transaction activity



New Supply Concentrated in Urban Areas for the Time Being



In Summary

- Gateway markets and urban cores were hit the worst amid the pandemic, but they have found a sequential bottom
- As more of the population gets vaccinated and things begin to open, gateway markets and urban cores will begin to recover, albeit slowly
- Tech hub markets continue to have strong rent growth, occupancy and absorption after benefitting from in-migration fueled from the pandemic
- Tech hub markets are forecasted to have the most rent growth this year, while gateway markets will be swimming upstream
- Urban cores are still forecasted to deliver the most supply over the next couple years as projects that were started prior to the pandemic get delivered, but new projects will start to trail down in response to the decline in demand

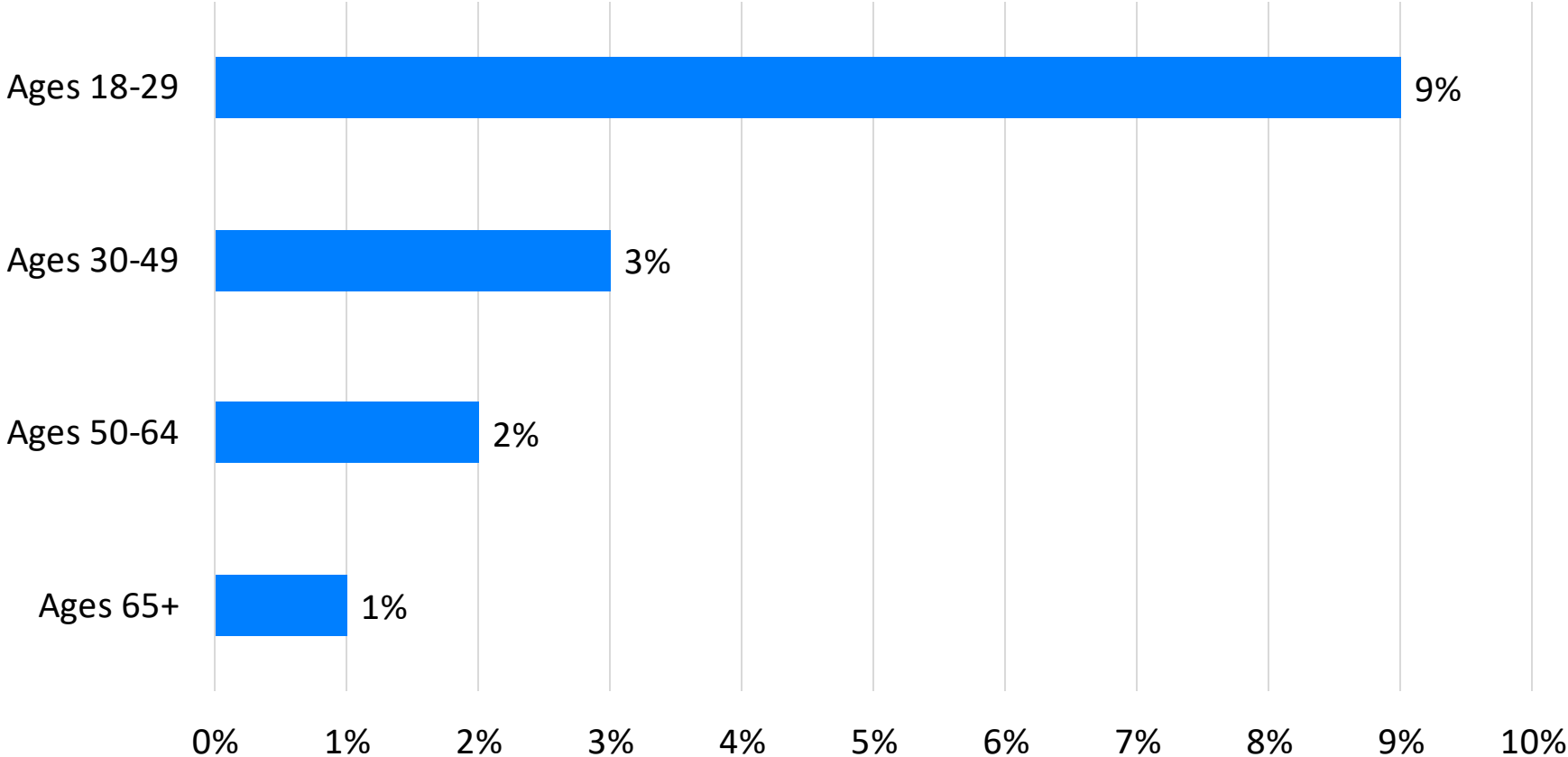
PANDEMIC IMPACTS
ON MULTIFAMILY INVESTMENTS
#1 – THE FUTURE OF WORK

Certain Demographic and Lifestyle Trends Have Seen a Reversal or Acceleration Due to Impacts of the Coronavirus

Trend	Outcome Post COVID
People moving from gateway to tech hub markets	Accelerated
Declining birth rates + people getting married later in life	Accelerated
More young people living at home longer	Accelerated
Virtualization	Accelerated
E-Commerce	Accelerated
Local political risk / higher taxes	Accelerated
Aging population creating new renters	No change
Experience over Things	Reversal
Densification	Reversal
Globalization	Reversal

The Majority of Those Who Moved During The Pandemic Were Young People, Who Are More Likely to Eventually Move Back to Urban Areas

**Pew Research Center Survey:
People Who Moved For Reasons Related to the COVID-19 Pandemic**

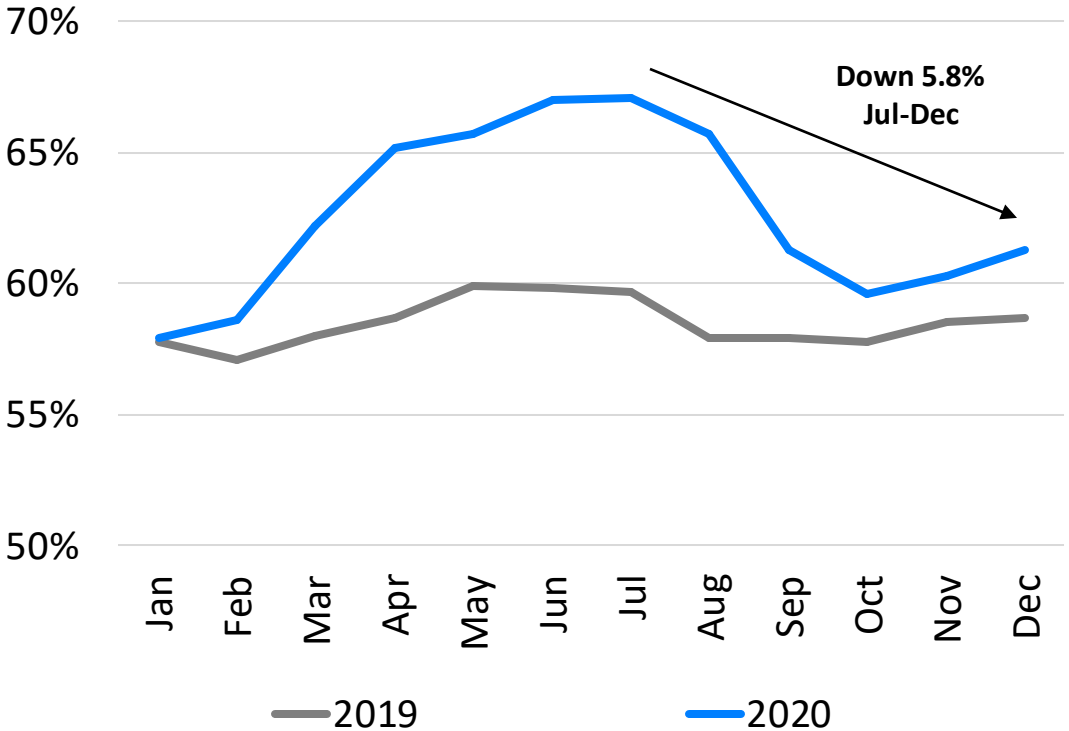


Source: Yardi Matrix; Pew Research Center

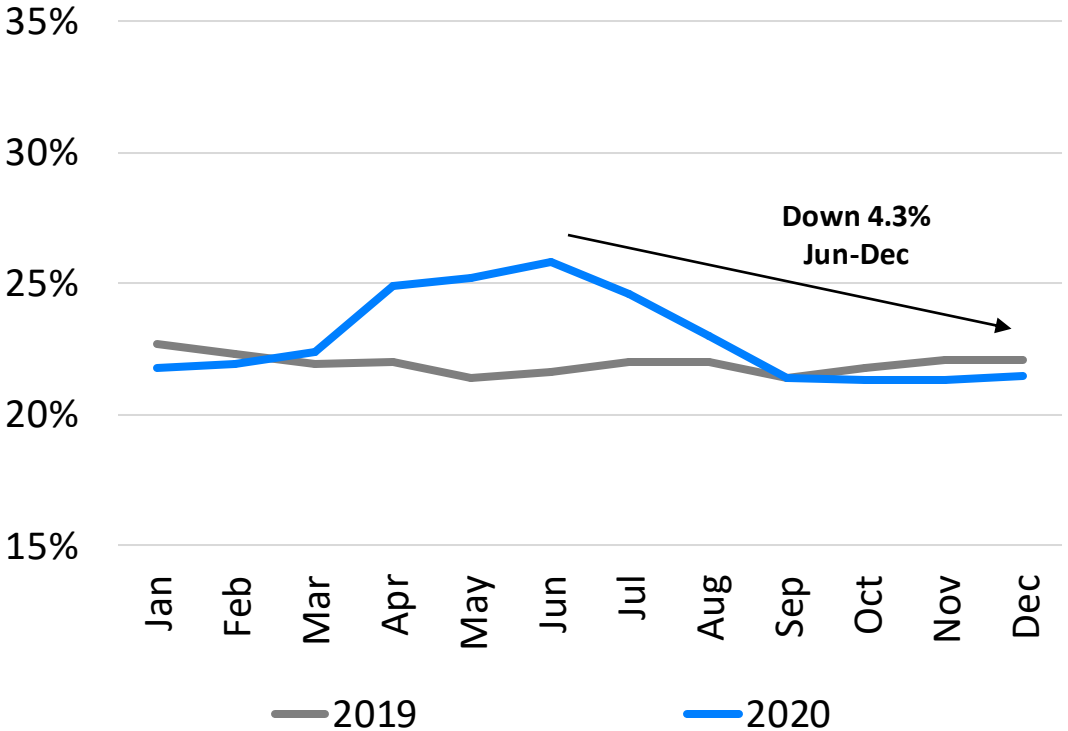


Young Adults Who Moved in with Their Parents During the Pandemic Have Started to Move Out

**Share Living in Parents' Homes
Age 18-24**



**Share Living in Parents' Homes
Age 25-29**



Source: Yardi Matrix; JCHS tabulations of US Census Bureau; Current Population Surveys via IPUMS-CPS; University of Minnesota; ipums.org



Transit Mobility Remains Low

Markets That Rely Heavily on Transit Will Be Slower to Open

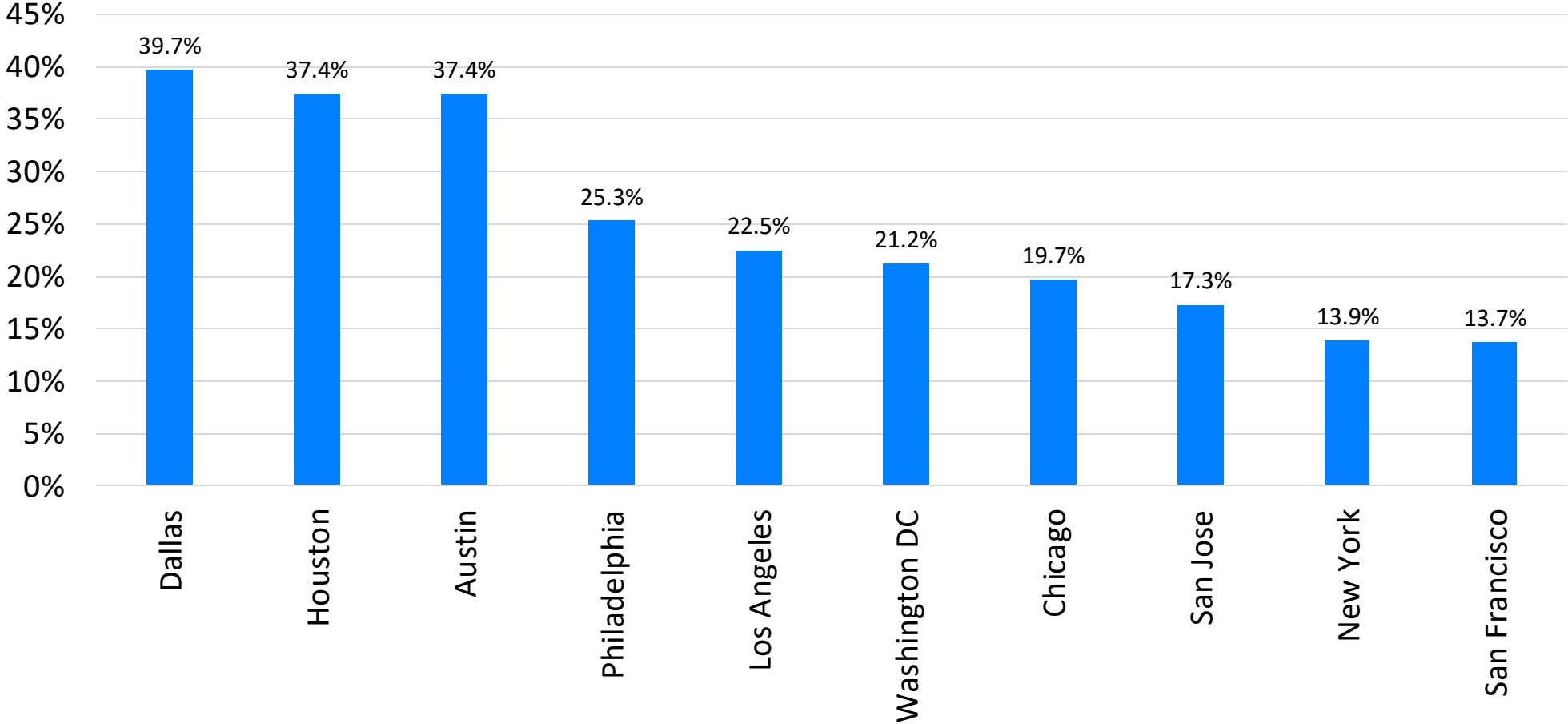
Metro	Change in Routing Requests - TRANSIT	Change in Routing Requests - DRIVING	Change in Routing Requests - WALKING	Metro	Change in Routing Requests - TRANSIT	Change in Routing Requests - DRIVING	Change in Routing Requests - WALKING
San Francisco	-57.2%	1.1%	-18.2%	Washington DC	-34.5%	35.3%	63.6%
Detroit	-55.0%	31.5%	89.5%	Austin	-34.2%	30.2%	98.8%
Seattle	-54.0%	49.8%	57.4%	Chicago	-33.7%	44.4%	111.4%
Minneapolis	-52.5%	14.4%	92.7%	Denver	-33.3%	27.2%	102.9%
Sacramento	-52.3%	33.7%	76.6%	Baltimore	-32.8%	41.6%	89.2%
Portland	-45.0%	23.7%	49.4%	Pittsburgh	-30.4%	26.8%	54.5%
Indianapolis	-44.4%	45.9%	127.3%	Charlotte	-30.3%	49.7%	115.0%
Houston	-44.0%	37.6%	83.3%	New York City	-29.2%	26.2%	10.2%
San Antonio	-43.3%	45.7%	152.6%	Orlando	-25.8%	46.9%	99.0%
Los Angeles	-41.9%	28.3%	52.6%	Boston	-24.8%	22.4%	42.5%
Atlanta	-41.4%	64.6%	113.6%	Raleigh	-24.6%	37.7%	99.3%
Salt Lake City	-37.4%	40.2%	101.8%	Phoenix	-21.6%	31.7%	58.7%
Tampa	-37.2%	39.8%	76.2%	Las Vegas	-17.7%	67.0%	156.3%
Dallas	-36.4%	45.9%	106.3%	Nashville	-16.8%	48.4%	114.8%
Philadelphia	-35.1%	42.9%	69.2%	Miami	-14.6%	30.6%	77.0%

Change in routing request = January 13, 2020 – April 2, 2021

Source: Yardi Matrix; Apple.com, "Mobility Trends Report"

Texas Markets Leading the Way With Office Occupancy, But All Markets Still Well Below Pre-Pandemic Levels

Weekly Office Occupancy Report as of 4/1/2021



Source: Yardi Matrix; Kastle.com



Work From Anywhere Fueling Additional Migration Out of Gateway Markets

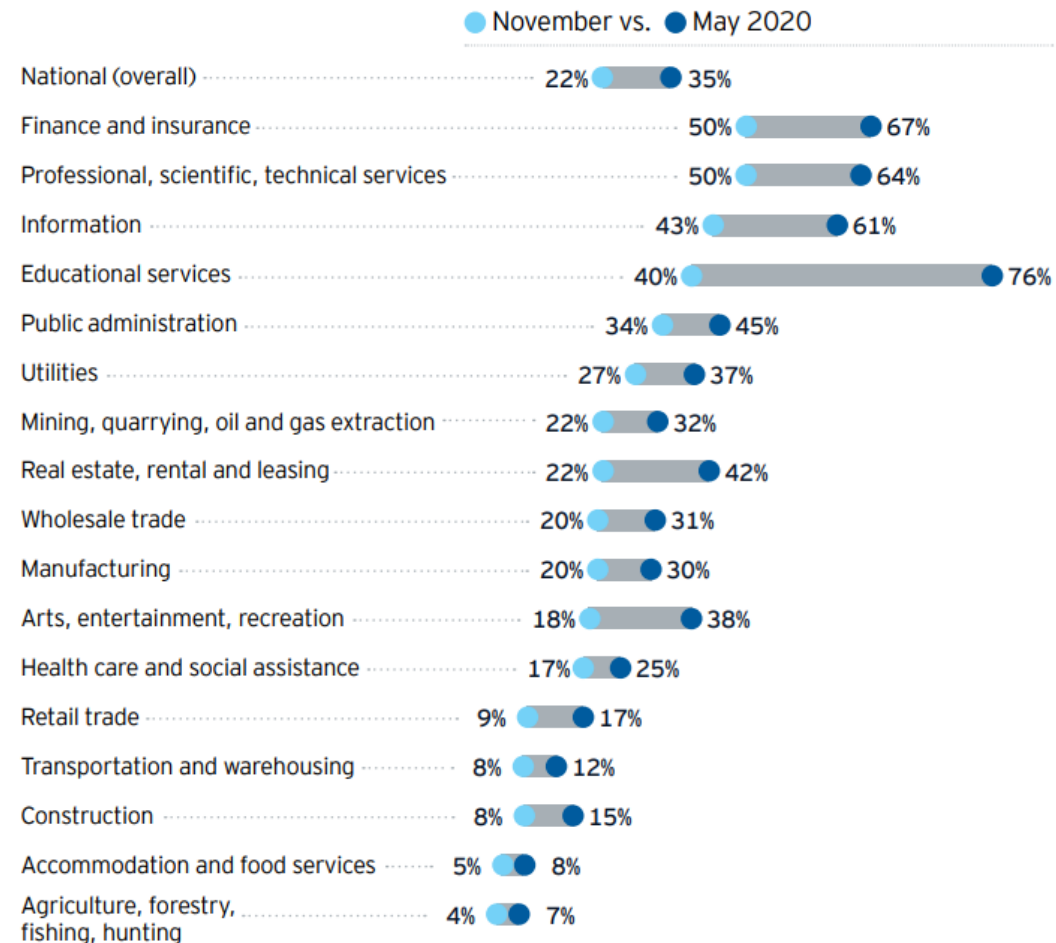
- Accelerated by the pandemic, the work from home revolution has fundamentally changed where home base is for employees - **work is not somewhere you go, but something you do**
- Companies have realized that working from home does not necessarily mean less productivity and are rethinking the concept of requiring employees to work in the office five days a week
 - Over 94% of respondents to ULI's Emerging Trends survey agree that in the future more companies will allow more employees to work remotely
- Timing of the return to offices will vary by market, **cities with a higher dependence on public transit will return to offices at a slower pace**
- Employees are taking this opportunity to **move out of dense, costly metros to lower cost alternatives**
- **Keep in mind:** people who are looking to prove their pre-conceived notions about the future of work will find data to support those notions because there is a spectrum

The Recovery of Urban Cores is Dependent Upon Company Views of Remote Work Post-Pandemic

- Prior to the pandemic, about **10%** of the U.S. labor force worked remotely full-time. As much as **25%** of the labor force is projected to work remotely full-time in the long term (could be significantly higher for office-using employment) and many more are likely to continue working remotely part-time
- Indeed reported that postings for jobs that mention remote work have more than doubled since the pandemic began – reaching 7% in February 2021, up from just below 3% a year ago
- Industries like technology are better equipped to handle remote work in the future, compared to industries like financial activities and government which handle sensitive information and often need to be monitored for compliance purposes
- **The shift to remote work has given smaller cities and communities the opportunity to compete with coastal hubs for residents**

The Share of Employees Working Remotely Has Decreased Nationally Since May 2020 but Remains Elevated

National Shift in Remote Work From May to November 2020



Financial Services and Government Employment Sectors Handle Sensitive Information, Which Makes Fully Remote Work Difficult

Financial Services

Likely method of work post-pandemic: **Office-based**

- Challenges around compliance and safety, especially for those who work with high-risk portfolios or deal with highly confidential data make working from home difficult for financial institutions
- Cybersecurity attacks are on the rise, and financial institutions are at particular risk given the nature of transactional and confidential information
- Increased regulations will likely require workers who need to be monitored for compliance purposes to return to the office

Examples:

- **JPMorgan** announced that hundreds of interns are set to work in their NYC and London offices this summer
- David Solomon, CEO of **Goldman Sachs**, said that working from home is “an aberration that we’re going to correct as soon as possible”

Government

Likely method of work post-pandemic: **Hybrid/In-Person**

- Federal government employees are more likely to use a hybrid or fully remote model post-pandemic, whereas local government workers are more likely to return to a fully in-person model
- For a large percentage of the federal government workforce to continue working remotely, the implementation of a telework foundation in terms of policies and infrastructure is necessary
- Like financial services, there are sensitive workloads, required face-to-face interviews and mail that needs to be opened which makes remote works difficult

Examples:

- The **cities of Las Vegas and Henderson** and **Clark and Nye Counties** in Nevada have suspended their hybrid programs and all employees have begun transitioning back to the office
- 90% of **Social Security Administration** employees can telework

The Tech Sector Will Likely Drive the Remote Work Trend

Technology

Likely method of work post-pandemic: **Hybrid/Fully Remote**

- Tech workers are in extremely high demand which pushes employers to accommodate tech talent and their needs
- Enables tech companies to recruit throughout the country rather than be tied to their physical offices
- Tech companies have among the best capabilities and overall infrastructure to transition seamlessly to remote work

Examples:

- **Twitter** is allowing employees to work from home indefinitely
- **Square** employees will be allowed to work from home permanently
- **Slack** will allow most employees to work from home permanently and is committed to hiring more permanently remote employees
- **Microsoft** will allow employees to work from home for approximately 50% of their work week

Education

Likely method of work post-pandemic: **Hybrid/In-Person**

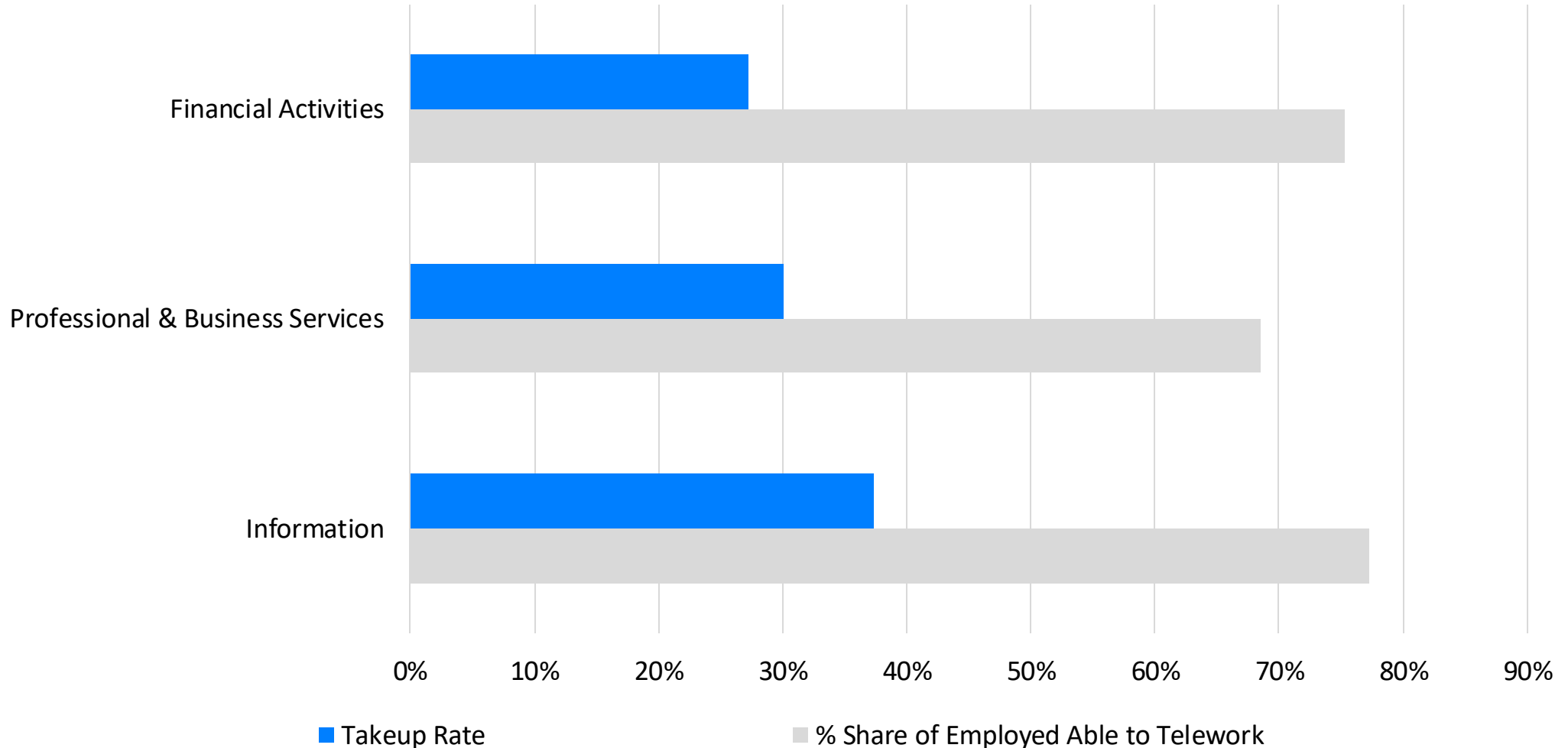
- Most K-12 students learn best in person, surrounded by classmates and led by a teacher
- But school systems are looking at remote learning as a way to meet diverse needs – teenagers who have jobs, children with certain medical conditions, or kids who prefer learning virtually
- Many universities are planning for an in-person return in fall 2021. But more remote and hybrid options will be available for students

Examples:

- **Jeffco Public Schools**, in Colorado, recently announced a full-time remote learning program across grade levels
- **Michigan State University** is planning a return to in-person classes and events in fall 2021. The university said it will offer 75% of undergraduate classes in person

Prior to the Pandemic, Office-Using Employees Were More Likely to Work From Home Than Workers in Other Sectors

Remote Work Prior to Pandemic in Office-Using Sectors National: 2017-2018



■ Takeup Rate

■ % Share of Employed Able to Telework

*Takeup rate classifies workers as teleworkers if they worked from home at least 8 hours per week

Source: Yardi Matrix; Bureau of Labor Statistics (BLS)

Implications of Work From Home for Multifamily – Yardi Matrix Analysis

Assumptions:

20-25% of office workers will work **remotely full-time**

40-50% of office workers will work on a **hybrid schedule**

30-35% of office workers will work in the **office full-time**

Biggest risk to multifamily is the people who work remotely full-time deciding to move out of the metro entirely

To determine the most at-risk metros:

- Number of office-using employees per metro
- Estimate number of full-time remote employees (20-25% of office-using employees per metro)
- Determine number of renters per metro (metro rentership rate x full-time remote employees)
- Determine % of housing stock (# of full-time remote employees that are renters/housing stock)

Gateway Markets Have the Greatest Potential to be Impacted by Remote Work

Market	Office-Using Emp. (Feb. 20)	Est. Full-Time Remote Employees	Est. # of Renters	% of Multifamily Stock	Market	Office-Using Emp. (Feb. 20)	Est. Full-Time Remote Employees	Est. # of Renters	% of Multifamily Stock
Los Angeles	1,102,070	250,000	128,750	44.5%	Salt Lake City	215,210	50,000	16,000	14.9%
San Francisco	484,690	110,000	51,700	41.4%	Minneapolis	528,620	120,000	32,400	14.5%
New York	2,095,050	470,000	230,770	35.8%	Atlanta	842,030	190,000	63,840	14.0%
Chicago	1,237,120	280,000	95,200	26.4%	Phoenix	620,750	140,000	44,940	14.0%
Boston	623,490	140,000	54,320	22.9%	Denver	453,160	100,000	37,100	12.7%
Washington DC	846,480	190,000	60,990	19.2%	Orlando	344,170	80,000	28,640	12.5%
Miami	288,170	65,000	25,610	18.6%	Dallas	867,270	195,000	68,835	11.9%
San Diego	362,350	80,000	33,760	17.6%	Charlotte	350,040	80,000	21,360	11.5%
Philadelphia	747,070	170,000	52,360	17.3%	Tampa	403,530	90,000	25,020	11.2%
Seattle	492,580	110,000	44,660	17.1%	Indianapolis	261,700	60,000	18,000	10.2%
Portland	294,990	65,000	24,375	15.0%	Houston	718,950	160,000	55,520	8.3%

*Gateway markets are bolded

Source: Yardi Matrix; U.S. Bureau of Labor Statistics (BLS); U.S. Census Bureau (BOC)



The Impact is Even Greater When Hybrid Employees are Considered

Market	Office-Using Emp. (Feb. 20)	Est. Hybrid Employees	Est. # of Renters	% of Multifamily Stock	Market	Office-Using Emp. (Feb. 20)	Est. Hybrid Employees	Est. # of Renters	% of Multifamily Stock
Los Angeles	1,102,070	495,000	255,405	88.3%	Salt Lake City	215,210	95,000	31,000	28.8%
San Francisco	484,690	220,000	100,000	82.0%	Minneapolis	528,620	235,000	64,000	28.8%
New York	2,095,050	940,000	460,000	71.8%	Phoenix	620,750	280,000	90,000	27.9%
Chicago	1,237,120	555,000	190,000	52.6%	Atlanta	842,030	380,000	127,000	27.8%
Boston	623,490	280,000	108,000	45.8%	Denver	453,160	205,000	76,000	25.9%
Washington DC	846,480	380,000	122,000	38.6%	Orlando	344,170	155,000	55,000	24.2%
Miami	288,170	130,000	51,000	37.1%	Dallas	867,270	390,000	138,000	23.8%
San Diego	362,350	165,000	69,000	35.9%	Charlotte	350,040	160,000	42,000	22.6%
Seattle	492,580	220,000	90,000	34.4%	Tampa	403,530	180,000	51,000	22.5%
Philadelphia	747,070	335,000	104,000	34.2%	Indianapolis	261,700	120,000	35,000	20.0%
Portland	294,990	130,000	50,000	30.5%	Houston	718,950	325,000	112,000	16.9%

*Gateway markets are bolded

Source: Yardi Matrix; U.S. Bureau of Labor Statistics (BLS); U.S. Census Bureau (BOC)



Office Workers Are Not the Only Ones Impacted by Remote Work, Service Jobs are Also Affected

- The impact of remote work will reverberate through the restaurants, bars, shops and services businesses that cater to office workers in urban cores
- Many service jobs will be eliminated “service worker multiplier effect” – probably supported another 2-3 service worker jobs
- Most of these service workers live outside of the urban core and they could find a job closer to where they live which would decrease commuting costs
- According to an analysis by the Bay Area Council Economic Institute, there are a total of 265,000 non-remote eligible jobs in the Bay Area that are directly connected to the size of the area workforce
 - According to the report, these jobs could migrate to local nodes, thereby supporting greater jobs-housing balance in the region
- **We’ll focus on the impact of this on our commercial webinar on May 13th**



Emerging Industry Consensus for Urban Core Return to Office

- The average employee of a **medium to large business** will spend about 2-3 days in the office
 - Makes up the majority of office leasing
 - With an increase in square footage per employee – overall office footprint per company would only decline ~10-20%
- **Small companies** (less than 20 employees) are more likely to conclude they do not need their office space
 - Could be a boon to coworking
 - Overall impact on office-using employment is ~10-20% and will happen slowly over 4-5 years
- The impact of small companies is why we believe the recovery of urban core multifamily occupancy won't happen quickly – around 18 to 24 months – with rents not recovering to pre-pandemic levels for 2 to 3 years

However, An Increase in Sq. Ft. Per Employee and An Increase in Office Employment Could Be a Positive Counterbalance to Remote Work

Office demand sensitivity analysis to density, change in office employment and telecommuting

		Sq.ft. per employee and increase relative to pre-pandemic baseline				
Change in office employment relative to pre-pandemic baseline	Increase in telecommuting relative to pre-pandemic baseline	120	150	180	210	240
		0%	25%	50%	75%	100%
6%	20%	-15%	6%	27%	48%	70%
6%	35%	-31%	-14%	3%	21%	38%
6%	50%	-47%	-34%	-21%	-7%	6%
4%	20%	-17%	4%	25%	46%	66%
4%	35%	-32%	-16%	1%	18%	35%
4%	50%	-48%	-35%	-22%	-9%	4%
2%	20%	-18%	2%	22%	43%	63%
2%	35%	-34%	-17%	-1%	16%	33%
2%	50%	-49%	-36%	-24%	-11%	2%
0%	20%	-20%	0%	20%	40%	60%
0%	35%	-35%	-19%	-3%	14%	30%
0%	50%	-50%	-38%	-25%	-13%	0%
-2%	20%	-22%	-2%	18%	37%	57%
-2%	35%	-36%	-20%	-4%	11%	27%
-2%	50%	-51%	-39%	-27%	-14%	-2%

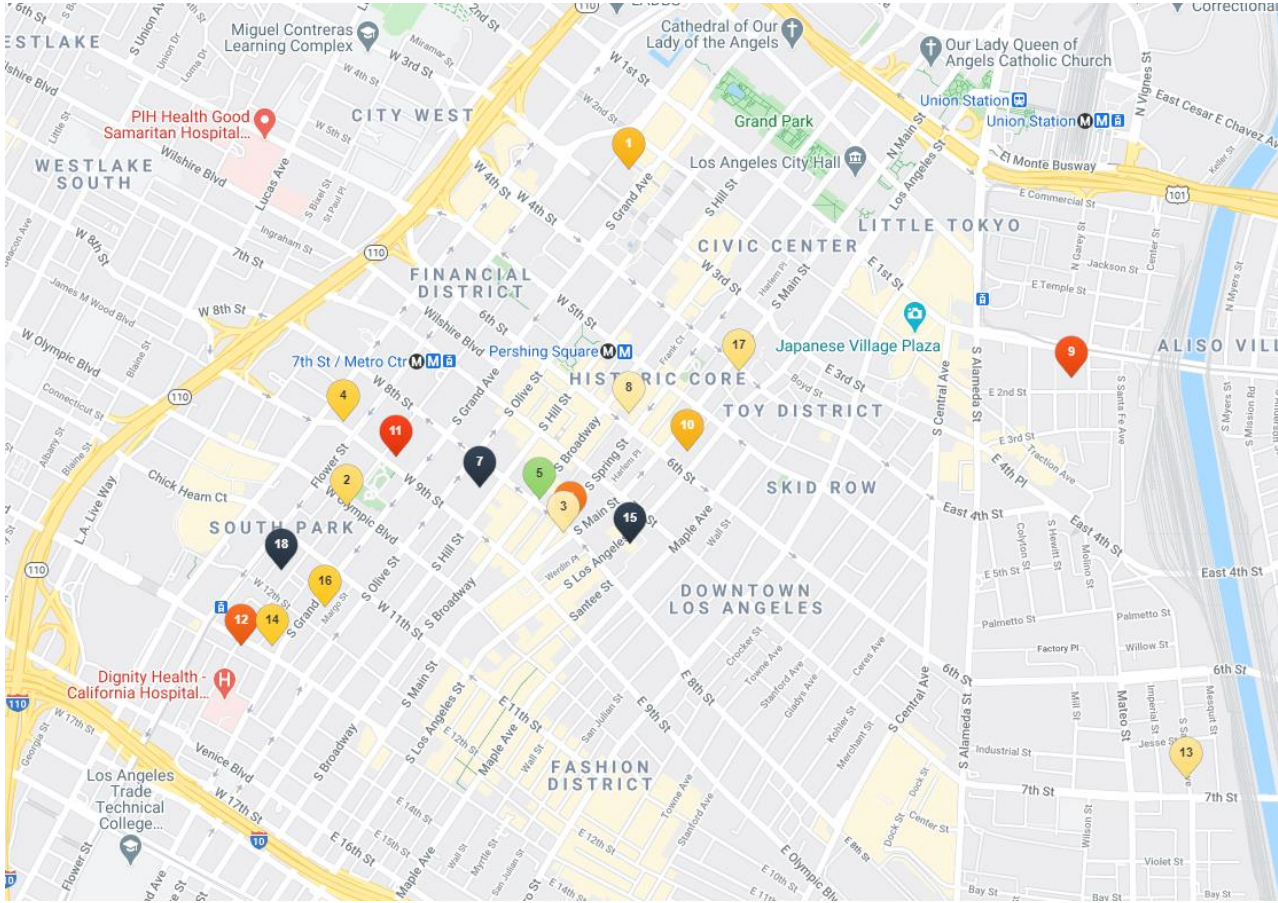
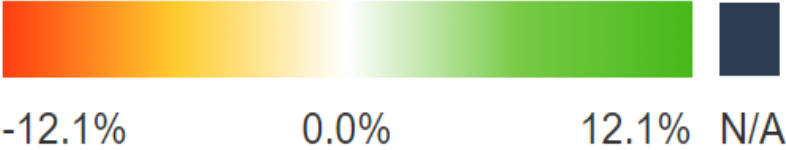
There Could be Targeted Distressed Opportunities in Urban Cores

Case Study: Downtown Los Angeles

Yardi Matrix estimated debt-service-coverage-ratio (DSCR) product

CASE STUDY	
Market	Los Angeles
DSCR	<1.00
Occupancy	<90%
Year Built	After 2000

Year Rent Change



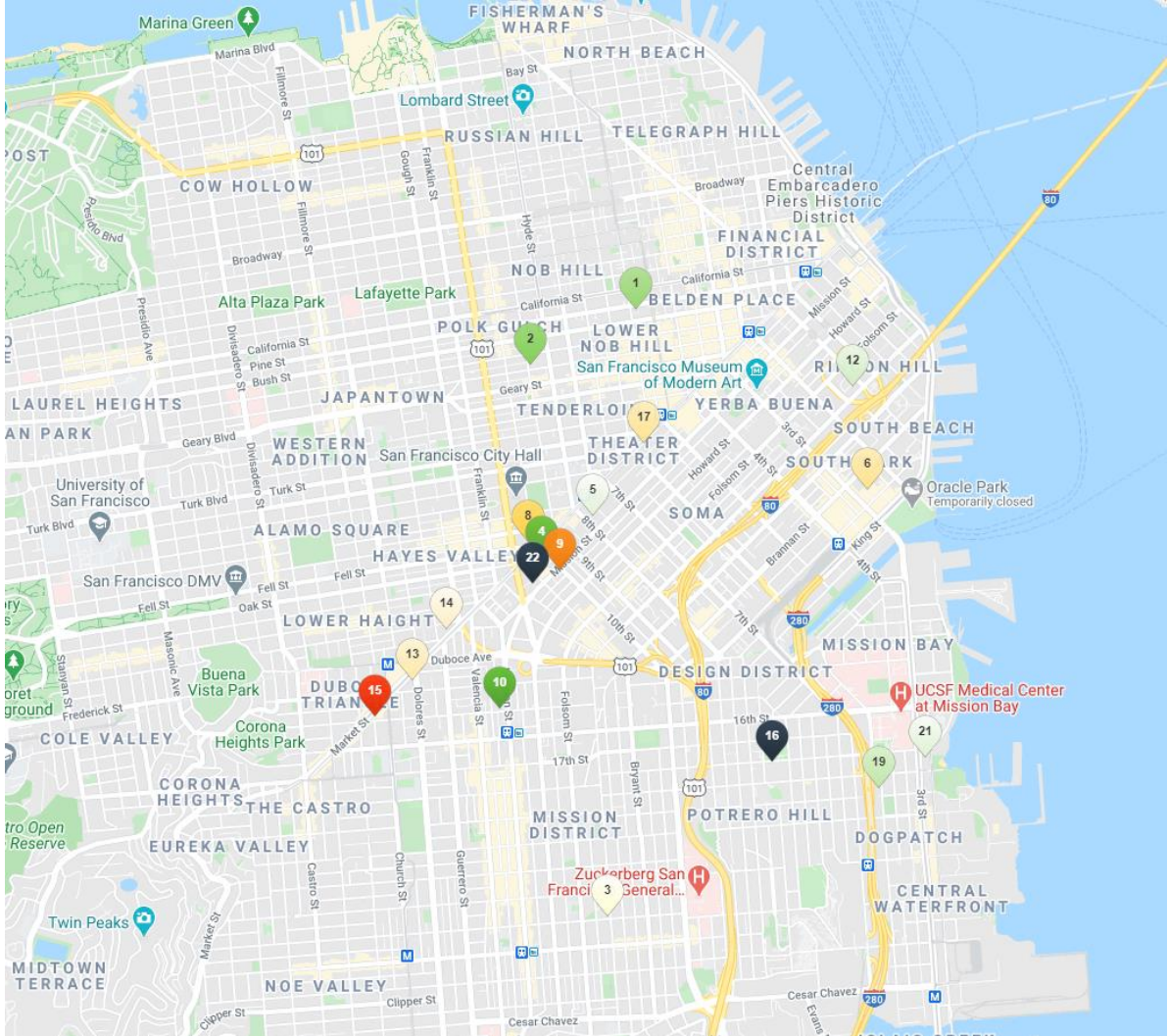
There Could be Targeted Distressed Opportunities in Urban Cores

Case Study: Downtown San Francisco

Yardi Matrix estimated debt-service-coverage-ratio (DSCR) product

CASE STUDY	
Market	San Francisco
DSCR	<1.00
Occupancy	<90%
Year Built	After 2000

Year Rent Change



Source: Yardi Matrix



There Could be Targeted Distressed Opportunities in Urban Cores

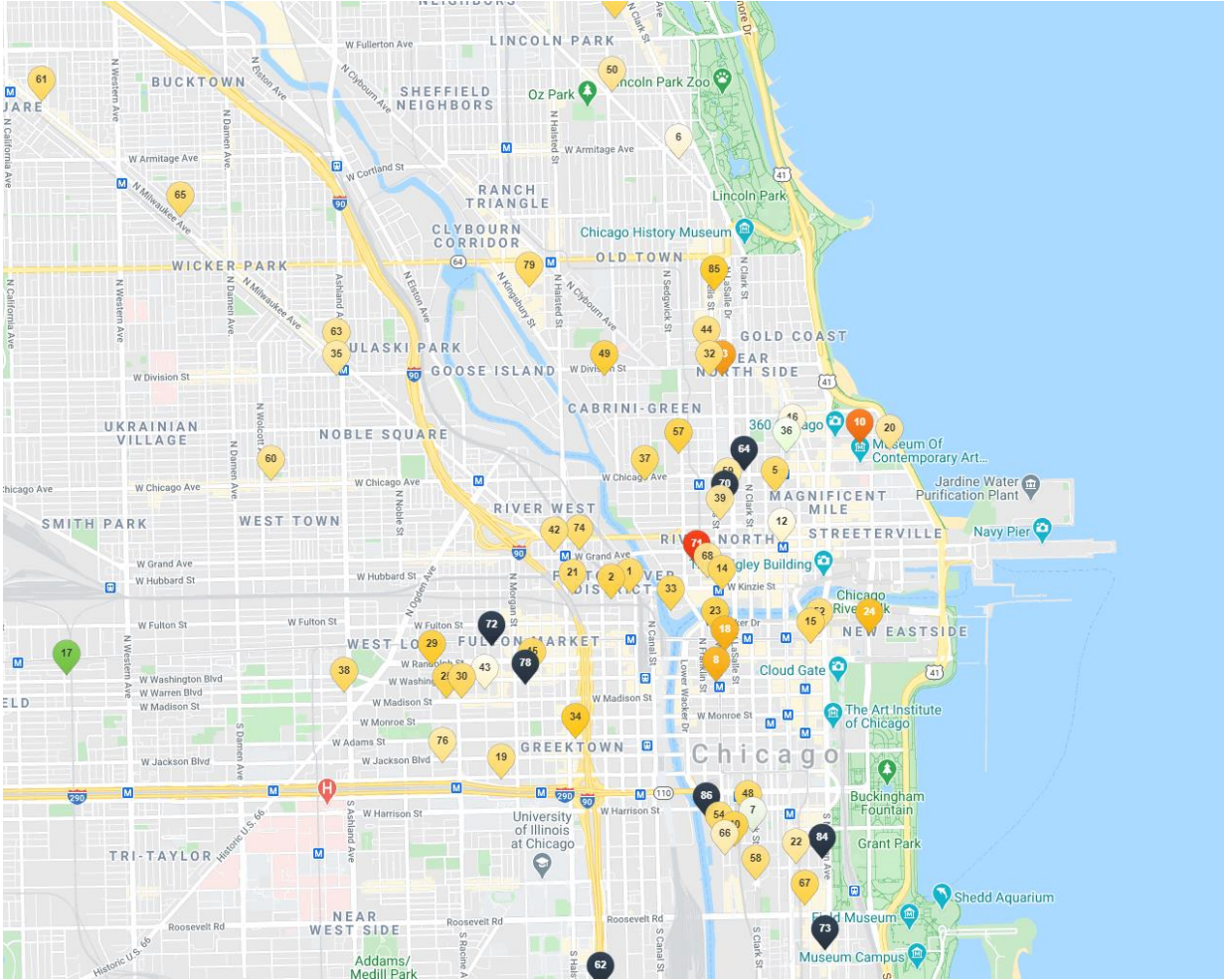
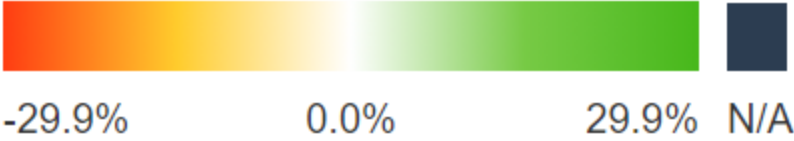
Case Study: Downtown Chicago

Yardi Matrix estimated debt-service-coverage-ratio (DSCR) product

CASE STUDY

Market	Chicago
DSCR	<1.00
Occupancy	<90%
Year Built	After 2000

Year Rent Change



In Summary

- Tech hubs will continue to do well, while large urban cores and gateway markets could see a meaningful spread to the suburbs
- The urban core will take a long time to recover, and targeted distress opportunities may arise
- The recovery of gateway markets and urban cores is largely dependent on the **future of work**
- Remote work is very industry dependent
 - Industries that handle sensitive information are less likely to work remotely, while tech jobs are more likely to work remote
 - Due to the multiplier effect, service jobs are eliminated in conjunction with office-workers not going to the office
- The shift to remote work has given smaller cities and communities the opportunity to compete with coastal hubs for residents
- Timing of the return to offices will vary by market, with cities with a higher dependence on public transit returning to offices at a slower pace

PANDEMIC IMPACTS ON MULTIFAMILY INVESTMENTS

#2 – SINGLE-FAMILY RENTALS & BUILT-TO-RENT



A Surge in Single-Family Rentals Came Out of the Recession

- Single-family rentals have been around for a long time, but the space was dominated by local mom-and-pop operators
- After the recession, large institutional companies such as American Homes 4 Rent and Tricon Residential started buying foreclosed single-family homes to rent out
- Eventually, supply at the entry-level price range began to run out, as first-time home buyers and big rental companies competed for desirable properties
- Over the last few years, this shortage of supply, combined with surging property values, made homeownership less attainable, fueling more demand for single-family rentals
- With growing demand but limited supply, institutional landlords started building their own single-family rentals, spurring the built-to-rent boom

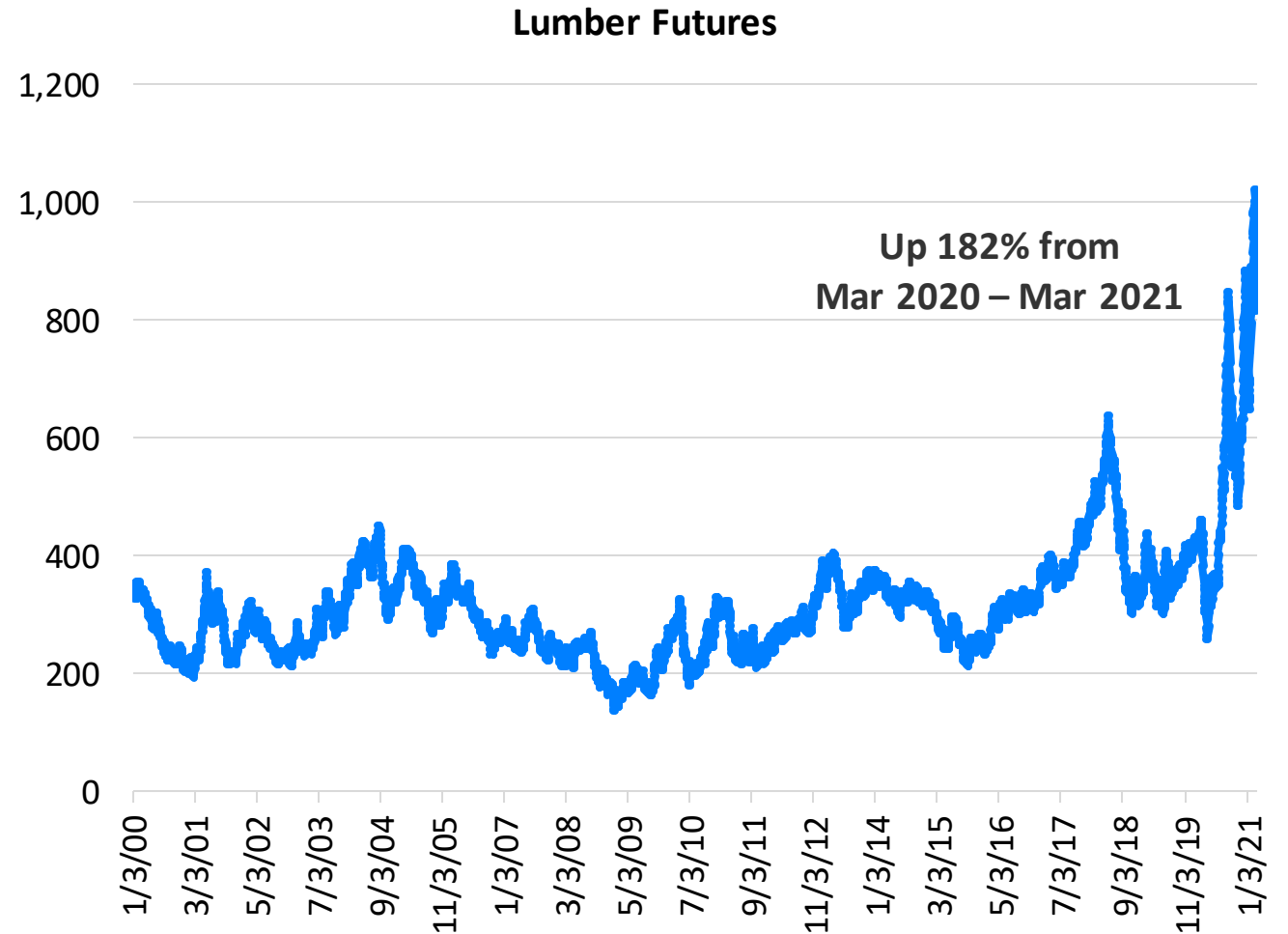
The Pandemic Has Fueled Even More Demand

- Current demand for single-family homes is stronger than ever, largely fueled by:
 - Record-low mortgage interest rates
 - People wanting more space coming out of the pandemic
 - According to John Burns Real Estate Consulting and National Rental Home Council, 59% of newly signed SFR leases are from households leaving cities
- But, there are constraints to purchasing:
 - Continued price appreciation outpacing wage growth
 - Long-standing limited supply at the entry-level
 - Millennials reaching home-buying age, but cannot afford the down payment due to student debt burdens

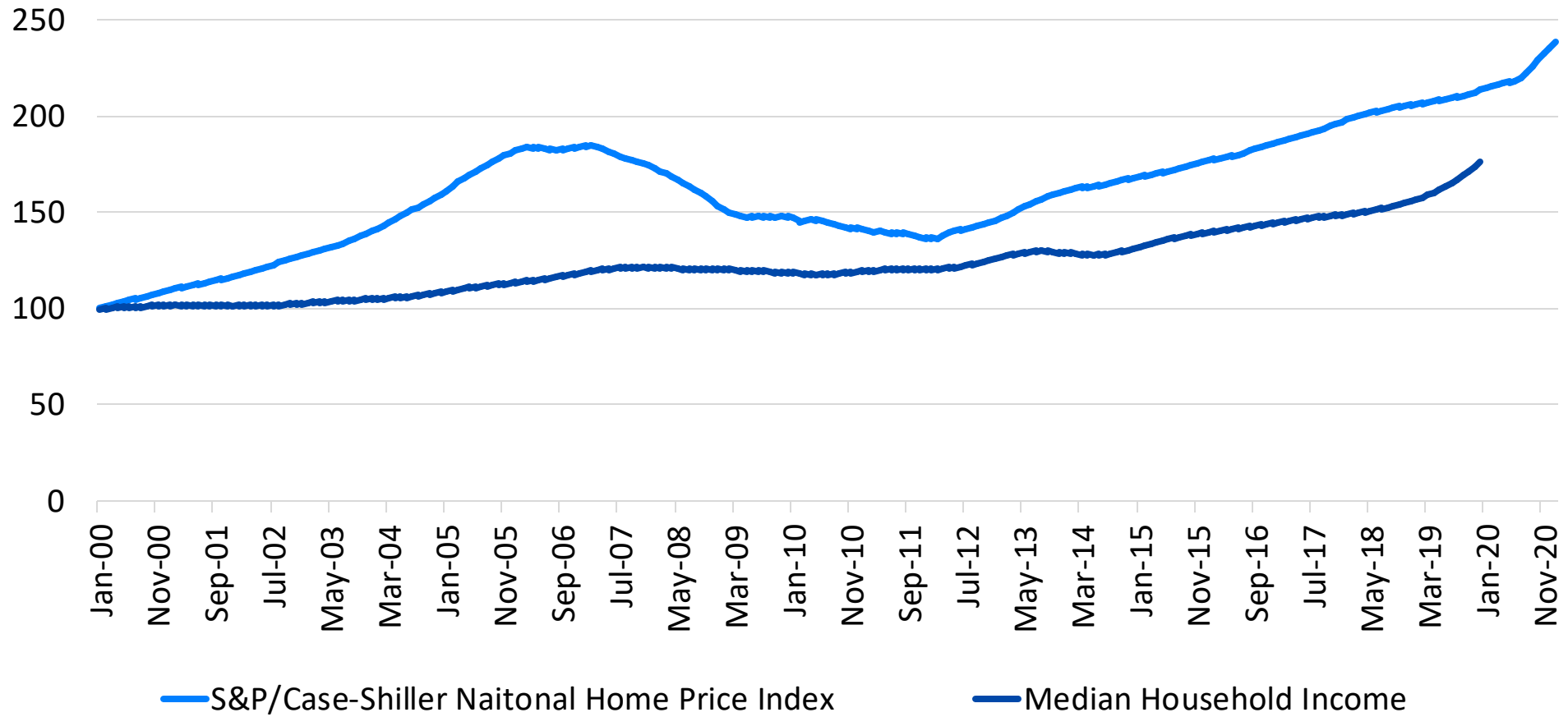
- More demand for homes, with constraints to purchasing, is fueling greater demand for single-family rentals:
 - Single-family rental stock (new and existing) grew 18% from 2008-2018 to approx. 15.5 million units, accounting for about one-third of all rental units nationwide – *Harvard Joint Center for Housing Studies' Rental Housing 2020* report
 - Built-to-rent homes currently make up 5-10% of new home stock – U.S. Census Bureau
 - And these will continue to grow, as more and more institutional investors are entering the market every day!

Prices Surging for Raw Materials Used in Single-Family Construction

- Lumber futures up 182% from one year prior
- Crude oil (used for paint, drain pipes, roof shingles and flooring) costs up more than 80% since October
- Copper (carries water and electricity throughout houses) costs up about 33% since last fall
- Prices for granite, insulation, concrete blocks and common brick have all pushed to records in 2021



Single-Family Home Prices Outpacing Income Growth, And Will Continue to Do So as Builders Pass Along Higher Construction Costs



Source: Yardi Matrix; Moody's Analytics; S&P Dow Jones Indices LLC; CoreLogic, Inc.: S&P CoreLogic Case-Shiller Home Price Indices [CSUS-SA]; U.S. Census Bureau (BOC); Current Population Survey (CPS)

The Four Types of Single-Family Built-to-Rent

HORIZONTAL MULTIFAMILY

- 1,500 sq ft
- 1-3 bedrooms
- \$1,300-\$1,900 rents
- Single-level cottage homes, enclosed small backyards
- NextMetro & Lennar in Phoenix and Denver pioneered concept
- Fully amenitized community-pool/clubhouse

TWO-STORY TOWNHOMES AND/OR ATTACHED ROW HOUSES

- 1,700 sq ft
- 2-3 bedrooms
- \$1,300-\$1,900 rents
- Western U.S.
- Partial to no amenities

LUXURY SINGLE-FAMILY

- 2,000-3,000 sq ft
- >4 bedrooms
- \$4,500-\$7,000 monthly rents
- California + Nevada
- No community amenities

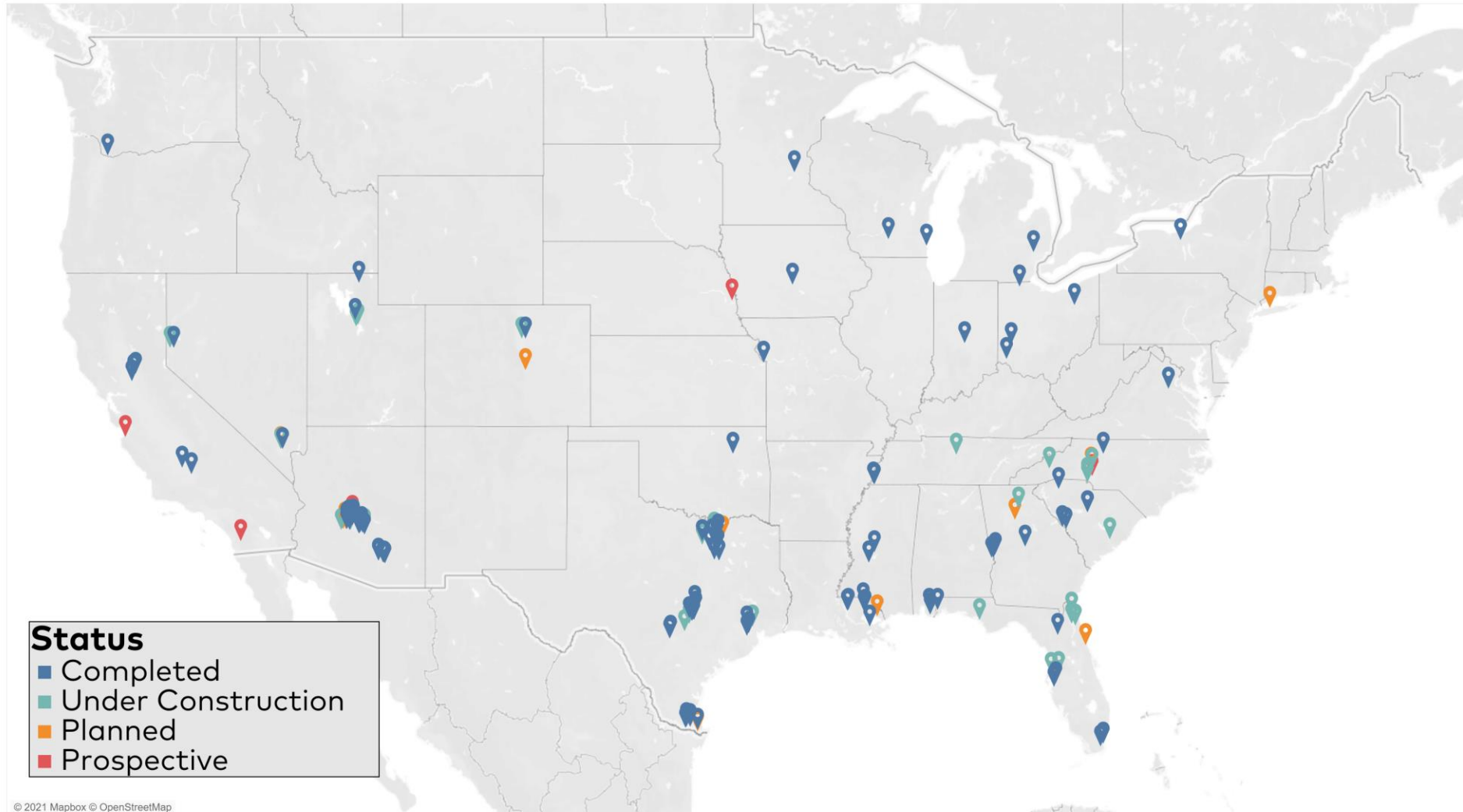
TRADITIONAL SINGLE-FAMILY

- 1,800-2,500 sq ft
- 3-4 bedrooms
- Southeastern U.S. (Nashville, TN)
- Larger lot sizes

More Companies Join the Single-Family Rental & Built-to-Rent Space Every Day

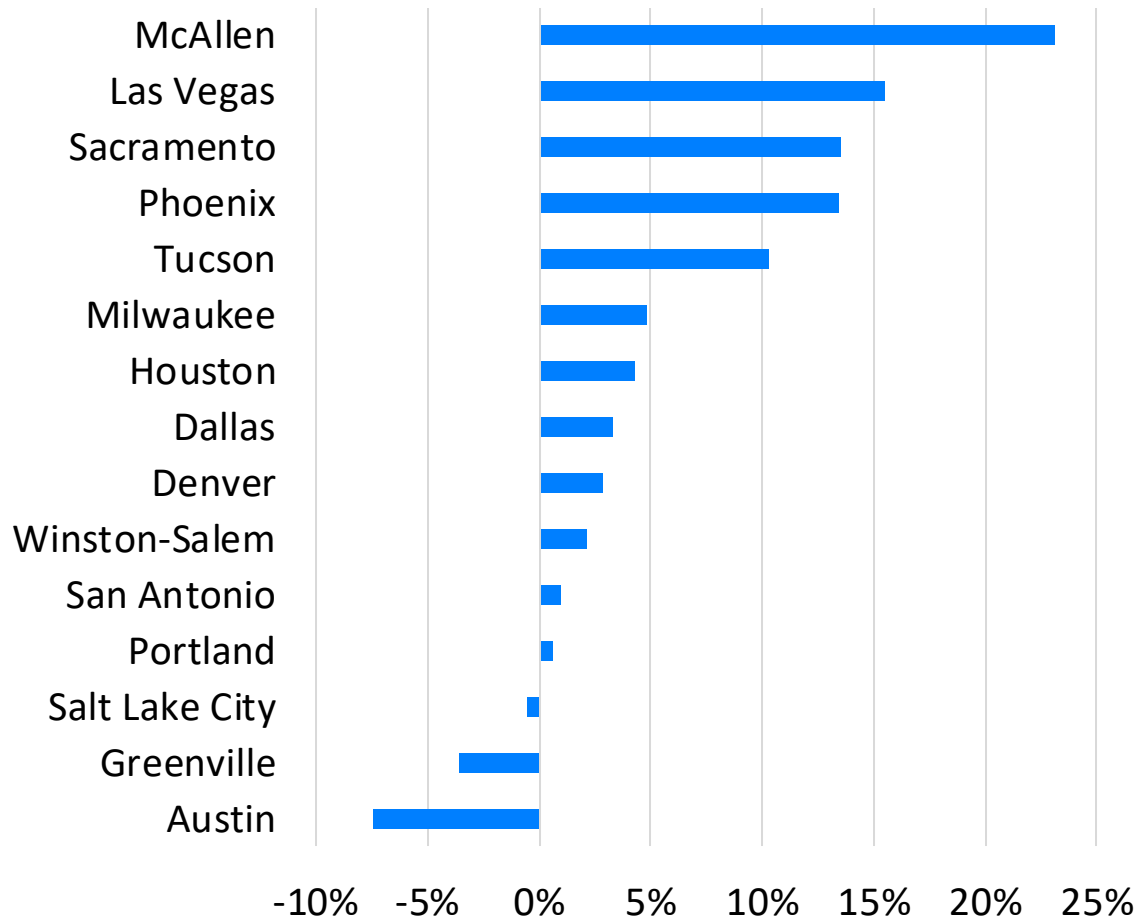
AHV Communities	Meritage Homes
American Homes 4 Rent & AMH Development	Metro Living
Atlantic Development & Investments	Middleburg Communities' "The Hamlet"
Avenue North	Mill Creek Residential
Balcara Group	New Village Homes
BB Living	NexMetro's "Avilla Homes"
Birchwood Homes	Nuveen Real Estate's "Sparrow"
Blank Property Group	Pacific Coast Capital Partners
Bright Realty	Parkland Residential
Cavan Commercial	Pinnacle
Christopher Todd Properties	Pretium + Ares Management Corp acquired Front Yard Residential
Community Development Corporation of Brownsville	Pretium + PSP Investments JV
Continental Properties	Progress Residential
D.R. Horton	RangeWater Real Estate
ECR Homebuilders	Starboard Realty Advisors
Family Development	The Empire Group
Inland Real Estate Group	The Wolff Company
Invitation Homes	Toll Brothers
JEN Partners	Towne Realty
JLL + Roofstock	Tricon Residential
Kay Kay Realty	Tricor Homes
Lamp Rynearson	Urban Moment
Lennar + Centerbridge's "Upward America Venture"	Virtua Partners
LGI Homes	Walker & Dunlop's "SFR & BFR Practice Group"
Matrix Equities	& More!!

Single-Family Rentals and Built-For-Rent *Now a Part of the Yardi Matrix Data Service!*

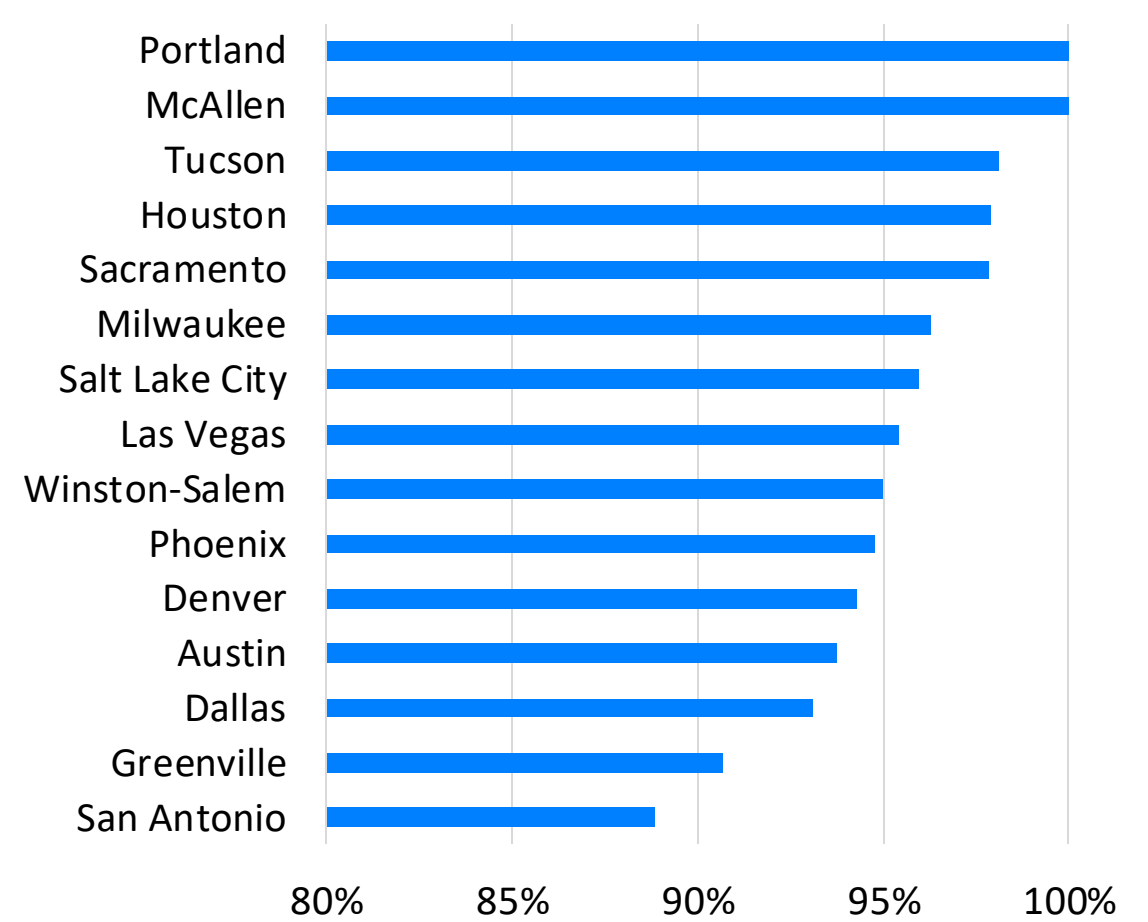


Single-Family Rent Growth and Occupancy Are Solid in Most Markets

March 2021 Year-over-Year Rent Growth

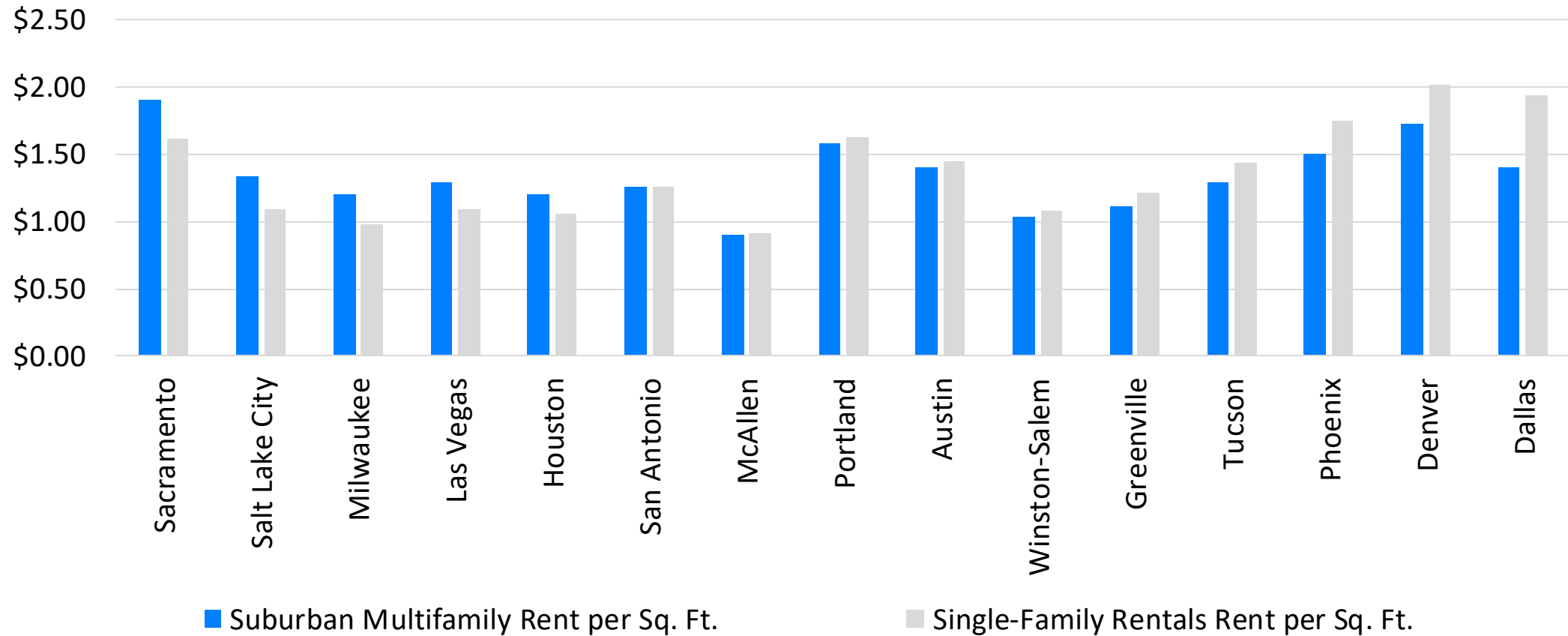


Feb 2021 Occupancy



There Isn't a Meaningful Difference Between Single-Family Rental and Suburban Multifamily Rents per Sq. Ft.

March 2021 Rent per Sq. Ft.
Suburban Multifamily vs Single-Family Rentals



Yardi Matrix House View – April 2021

- The economy is heating up as the job market strengthens
 - The U.S. economy added 916,000 jobs and the unemployment rate fell to 6% in March
 - Inflation concerns are still elevated as input prices increase
- The pandemic has further fueled a general spreading of the population
 - The question for investors is still how much of this is temporary vs permanent?
 - How permanent these demographic changes are is largely **dependent on the future of work**
- Gateway markets and urban cores are turning a corner, but still swimming upstream
 - More supply is still being delivered in urban cores as projects started prior to the pandemic continue to get completed
 - As people get vaccinated and demand picks up in the urban cores, there will be less concessions. **We are already seeing this happening**
 - Tech hub markets are doing well and will continue to grow
- The Great Recession paved the way for single-family rentals (SFR) and the COVID-19 pandemic fueled a surge in popularity with SFR and built-to-rent
 - New players continue to enter the market as demand for SFR continues to flourish
 - We are tracking SFR and built-to-rent supply and will continue to expand our coverage



Upcoming Events

NMHC Research Forum

Apartment Investment: Where Do We Go From Here?

TUESDAY, APRIL 20

NAA Digital Studio

Multifamily on the Move: State of the Industry Update

THURSDAY, APRIL 22

Yardi Matrix

Commercial National Outlook Webinar

THURSDAY, MAY 13



THANK YOU

Feel free to contact me with any questions

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