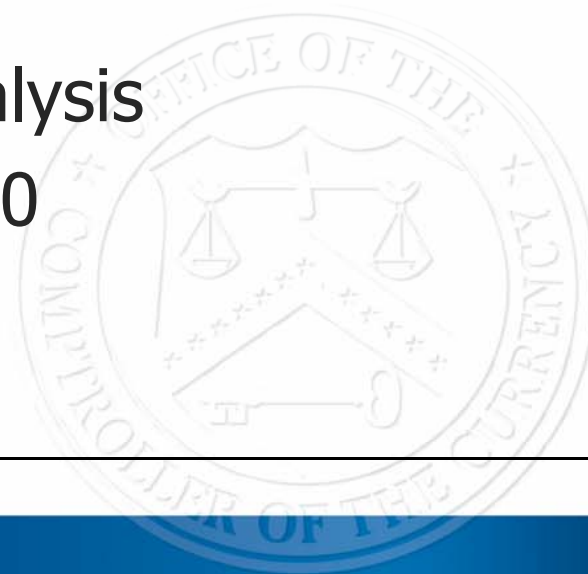


# Economic Update for the Virtual Mutual Forum



Economic & Policy Analysis  
September 22, 2020



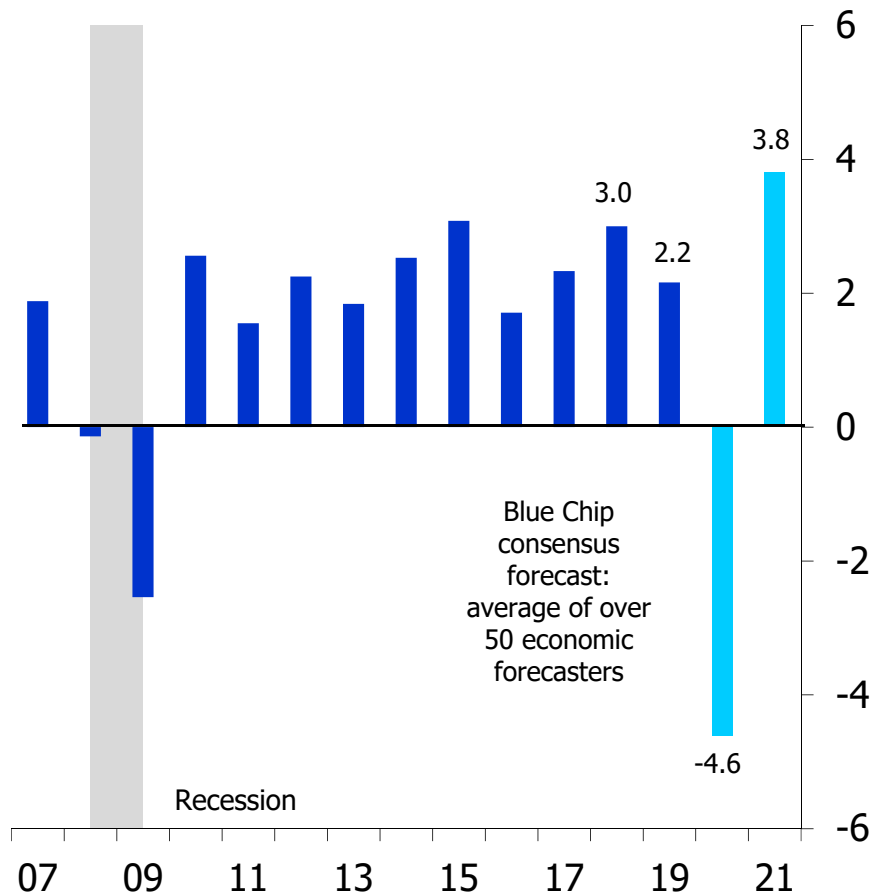
# Agenda

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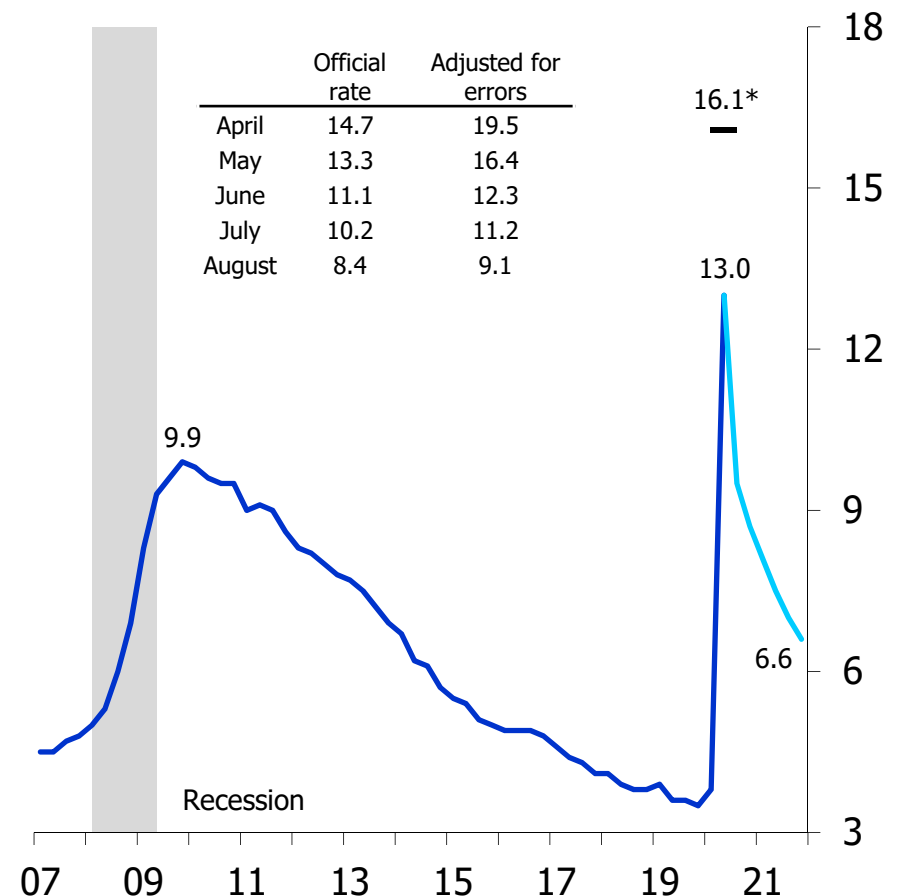
- Economy beginning to recover but activity remains below pre-pandemic levels
- Tracking loan performance is complicated with credit reporting moratorium and forbearance
  - Despite June's overall 1.7% mortgage delinquency rate, over 8% of borrowers missed their payment
- Low rates and tight housing supply support home price appreciation through COVID-19 crisis

# Consensus forecasts deep contraction in 2020, unemployment rate to remain high past 2021

Real GDP, % change annual rate



Quarterly average unemployment rate, %



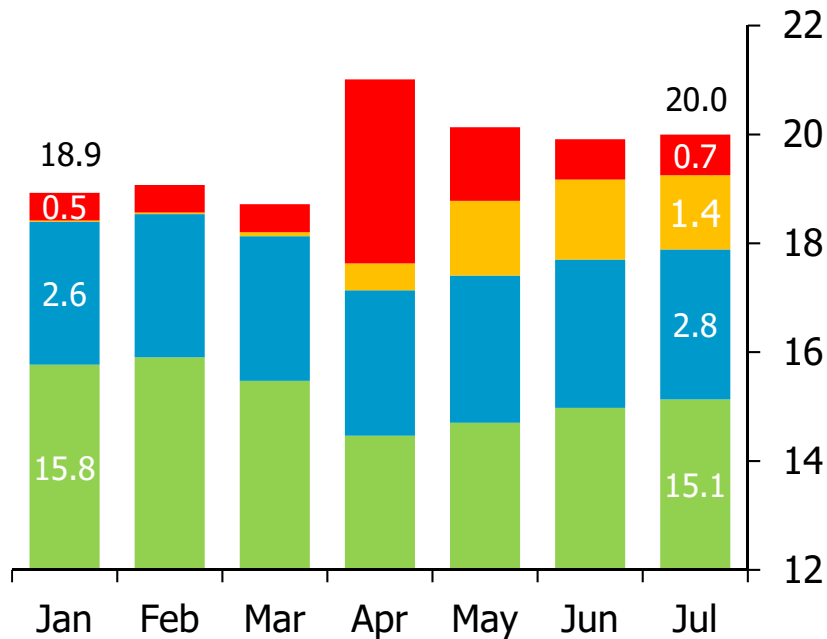
Sources: Bureau of Economic Analysis; Bureau of Labor Statistics; Blue Chip (September 2020)

\*Quarterly official U.S. unemployment rate adjusted for misclassification error noted by BLS.

# Government transfer payments support incomes; personal expenditures remain below Jan level

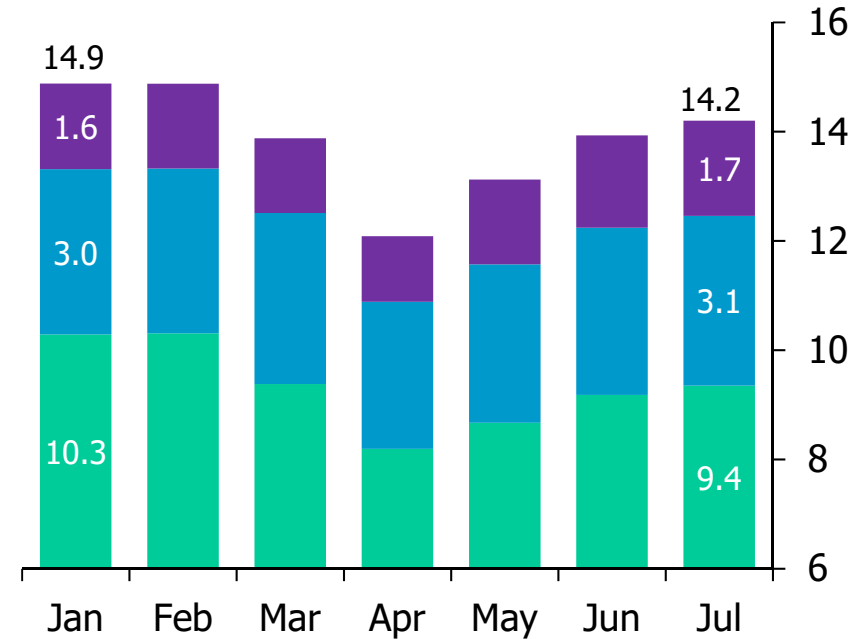
Personal income, \$ trillions

■ Stimulus & other transfers    ■ Unemployment insurance  
■ Social security    ■ Wages & salaries\*



Personal expenditures, \$ trillions

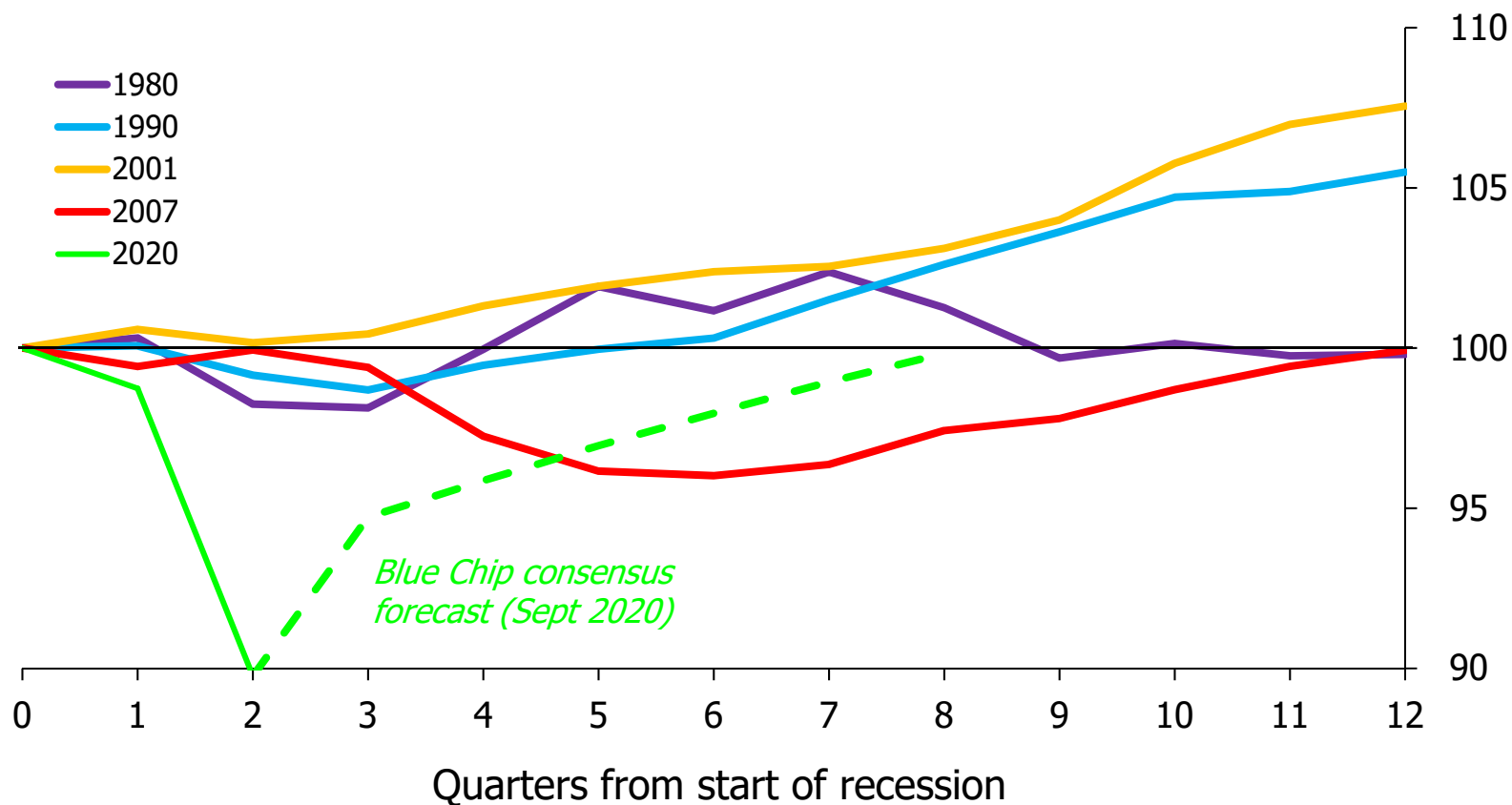
■ Services    ■ Nondurable goods    ■ Durable goods



\* Wages & salaries includes proprietors' income, rental income, and receipts on assets, less contributions for government social insurance

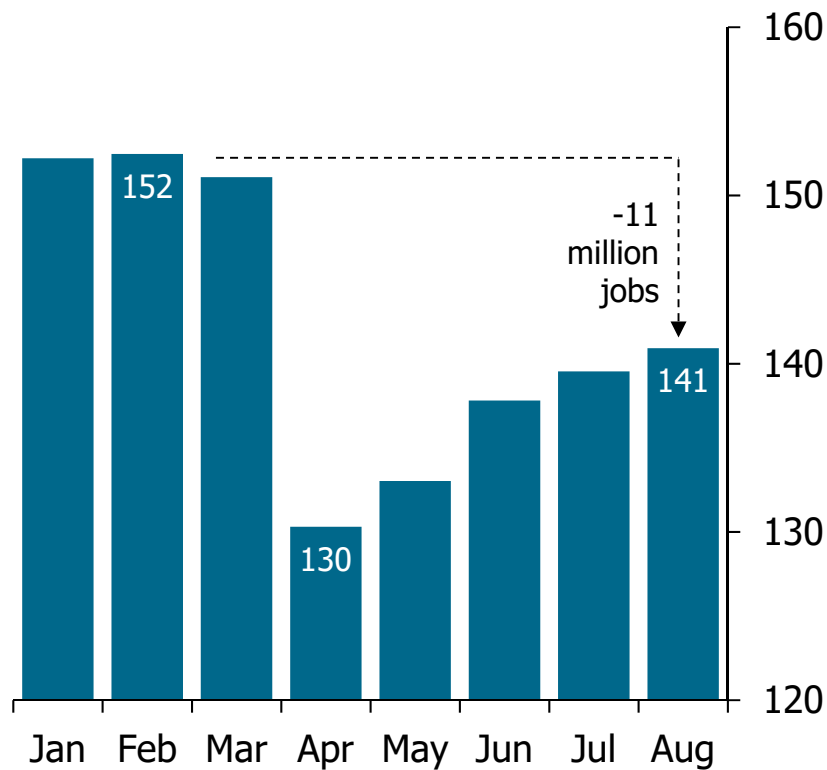
# Under consensus forecast real GDP does not reach pre-recession levels for eight quarters

Real GDP change by recession, pre-recession quarter = 100

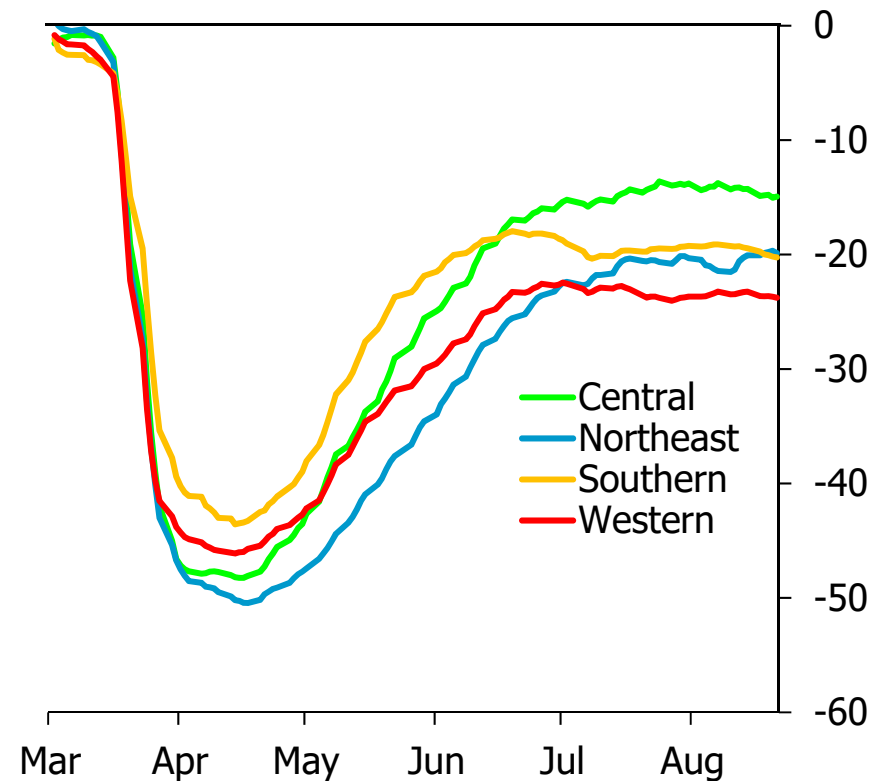


# Employment remains 11 million jobs below its pre-pandemic peak as business re-openings stall

Total nonfarm employment, in millions



Share of small service industry businesses open compared to Jan '20 by OCC District, %

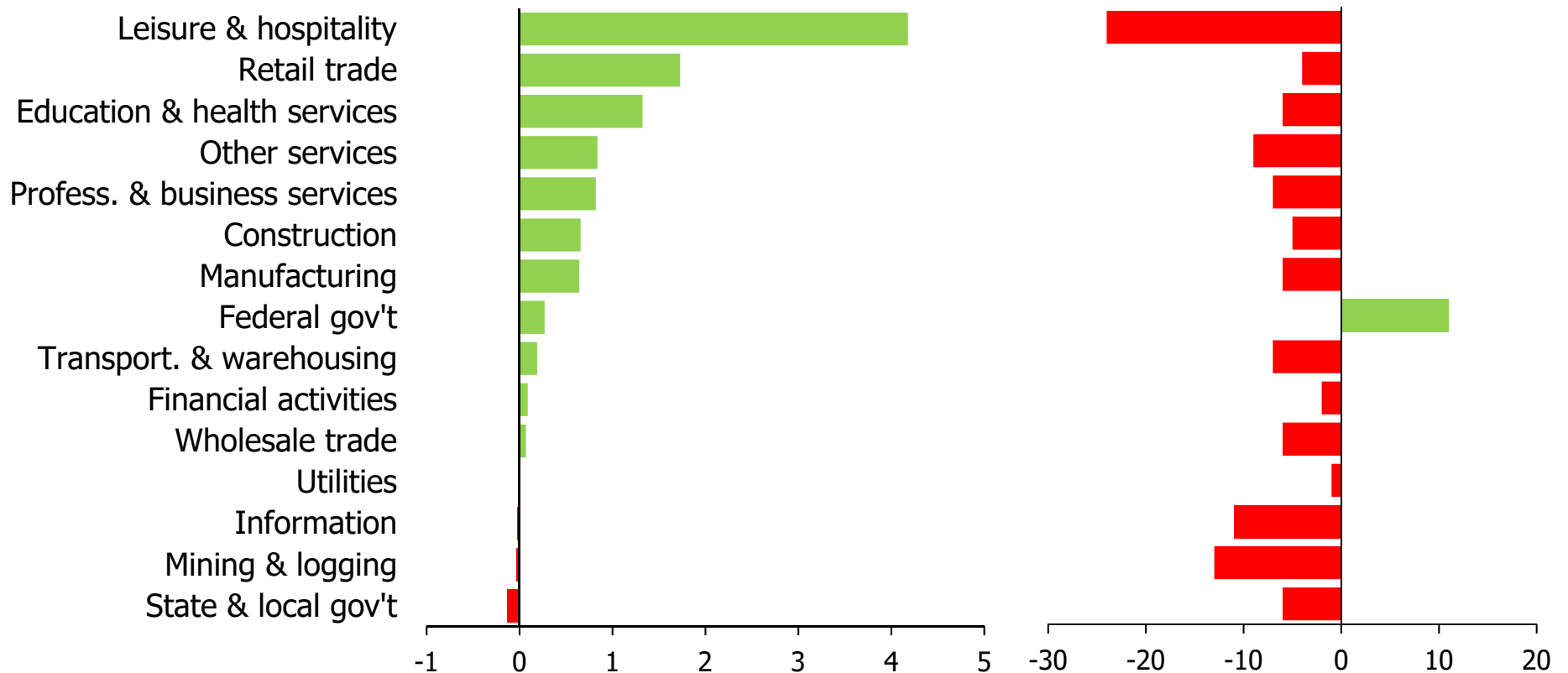


Source: Homebase (data through 8/21/2020; 5-day moving average); BLS (data through Aug 2020)  
 Note: Homebase is a scheduling and time tracking tool used by 60,000 small businesses operating in service industries such as restaurant, food & beverage, retail, personal care, health & fitness, leisure & entertainment, and repair service.

# Leisure & hospitality led job gains since April; nearly all industries still below January levels

April '20 to Aug '20 change in  
employment by industry, in 000's

Percent change in employment by  
industry from Jan '20 to Aug '20, %

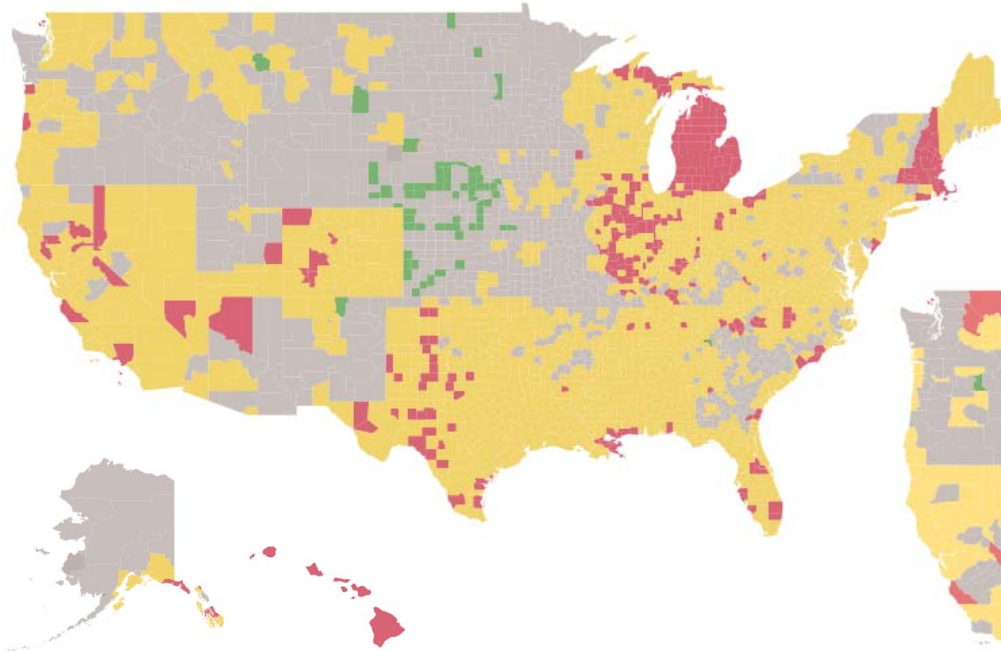


Source: Bureau of Labor  
Statistics (data through  
August 2020)

# Employment improves for many counties since April, but most well below January levels

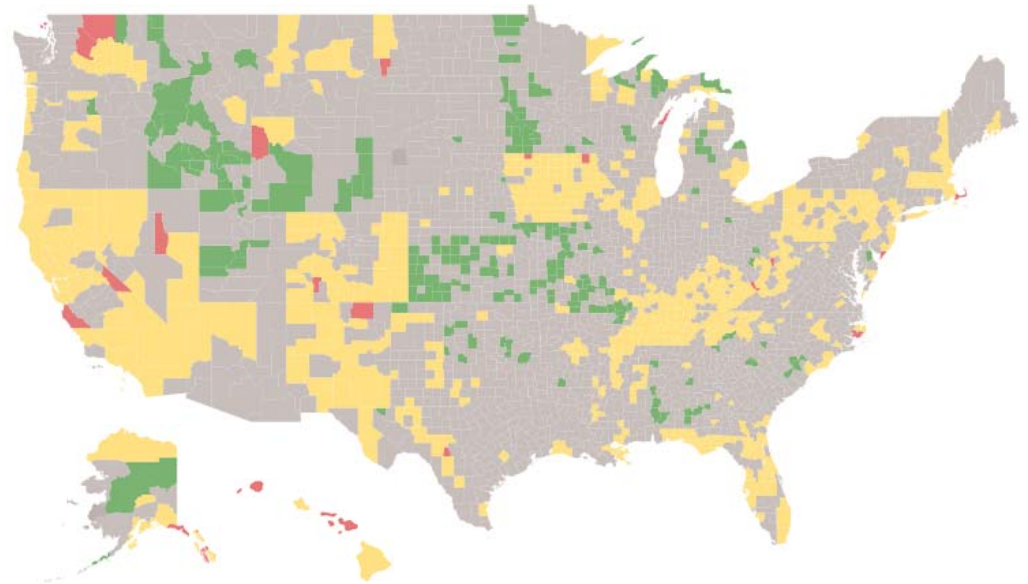
Total nonfarm employment, % change

Jan 2020 - April 2020



- Greater than 20% decline
- 10-20% decline
- Less than 10% decline
- Employment growth

Jan 2020 - July 2020



Source: Bureau of  
Labor Statistics (data  
through July 2020)



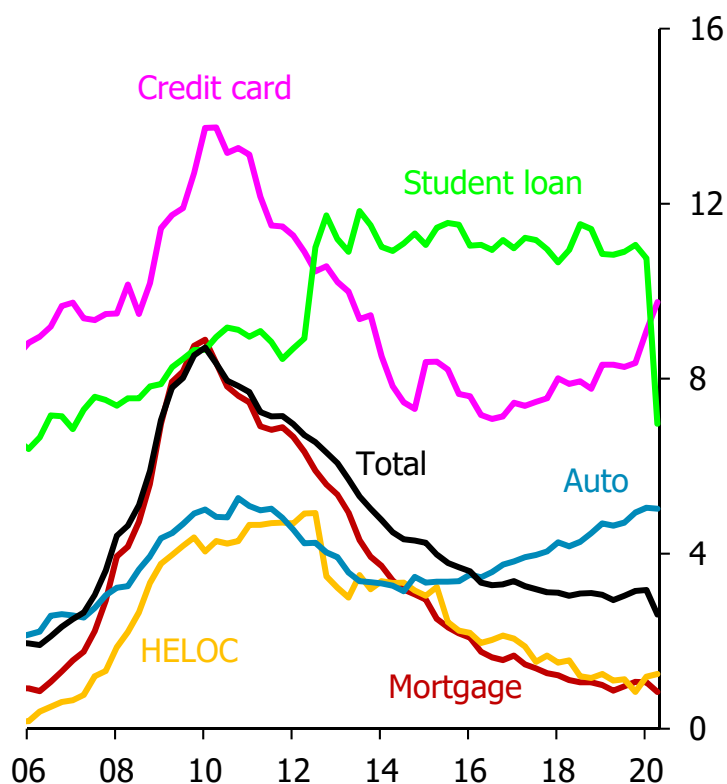
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# CARES Act complicates the interpretation of second quarter loan performance

Percent of Balance 90+ Days Delinquent by Loan Type



Dissecting 2Q:20 loan performance

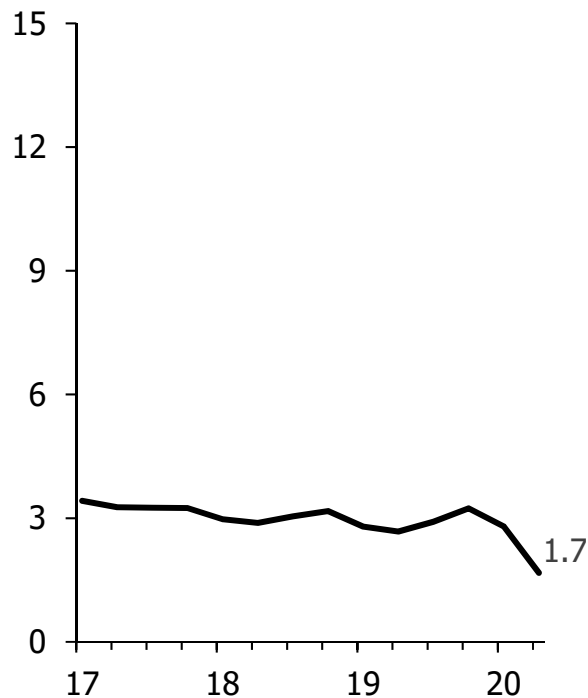
Loan type	YoY 90+ rate % chg	Notes
Mortgage	-3%	Forbearance might be categorized as delinquent on the lender's book, but typically as current on the credit reports
HELOC	14%	Rose 15bps to 1.25%, mostly due to declining balances
Auto	8%	Uptick in autos, continuing longer-term trend
Credit card	17%	Primarily due to decline in card balances
Student loan	-36%	Federal student loan borrowers automatically placed in forbearance
Total	-11%	Student loan improvement drives overall decline

Source: New York Fed Consumer Credit Panel/Equifax (data through June 2020)

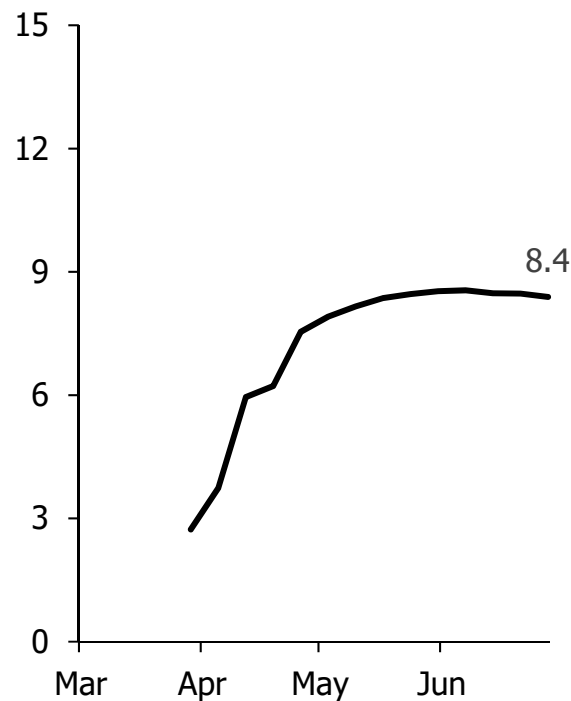
Note: FRBNY Household credit and debt report quarterly data from 2003 to present based on a 5% random sample of U.S. households from Equifax's consumer credit bureau data.

# Despite a 1.7% mortgage delinquency rate, over 8% of borrowers missed June's payment

Share of mortgages reported to credit bureaus as +30 days past due, %



Share of loans in forbearance, %



Share of borrowers missing a payment\*, %



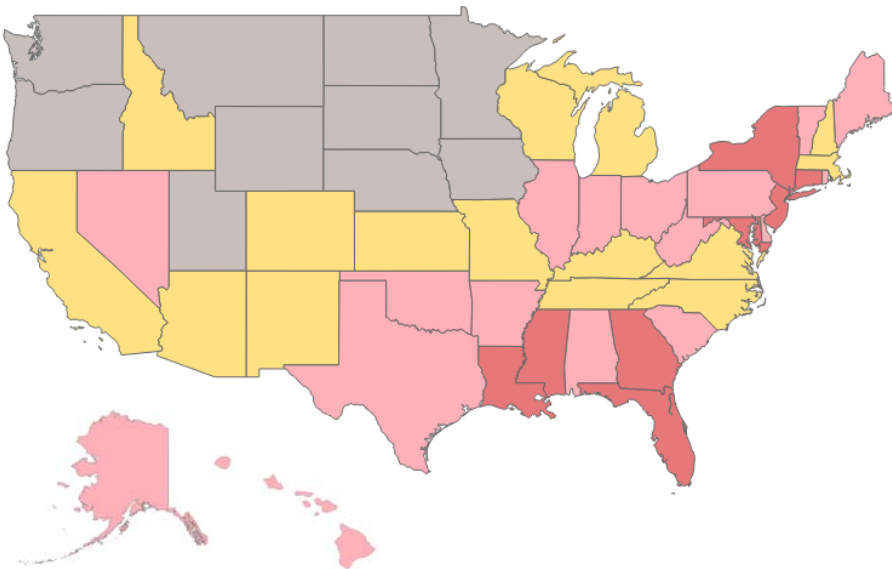
Source: National Mortgage Database (v11 data through June 2020); forbearance and payment rates come from the Mortgage Bankers Association (data through June 2020)

\*MBA asks servicers to report loans in forbearance as delinquent if the payment was not made based on the original terms of the mortgage.

# Highest missed payment rates on east coast; AK, CA, CO, HI and NV see largest increases

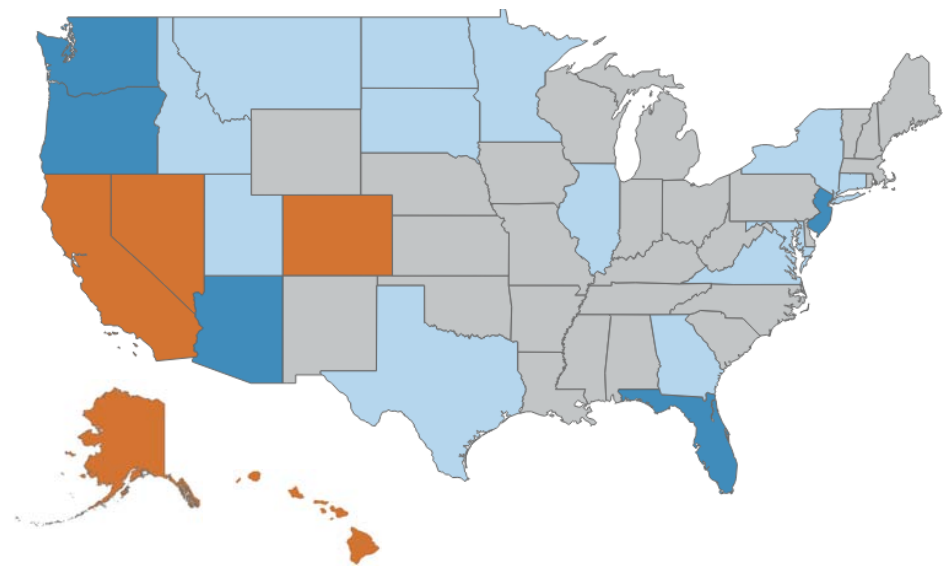
Share of borrowers missing a payment at June 2020, %

■ More than 10% 
 ■ 8-10% 
 ■ 6-8% 
 ■ Less than 6%



Percent change in borrowers missing a payment June 2019 to June 2020

■ More than doubled 
 ■ 50-75% rise 
 ■ Less than 50% rise



Source: Mortgage Banking Association (data through June 2020)

Note: Based on the MBA survey where servicers are asked to report loans in forbearance as delinquent if the payment was not made based on the original terms of the mortgage.

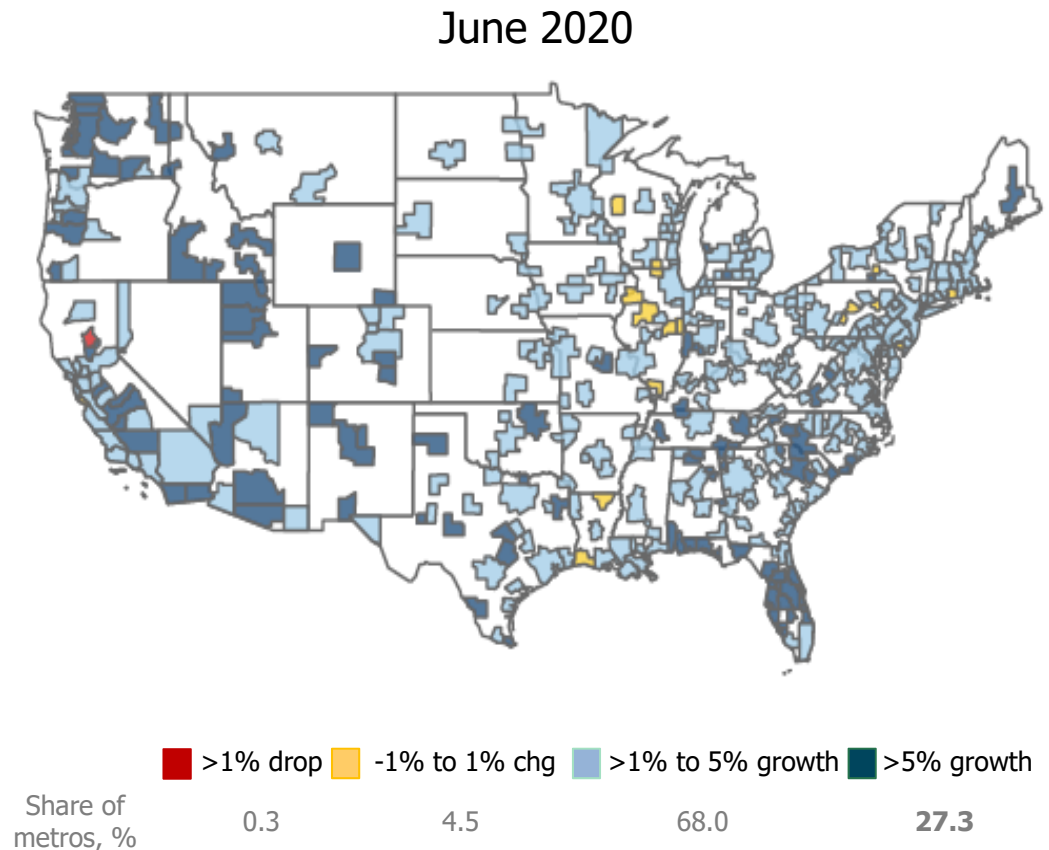
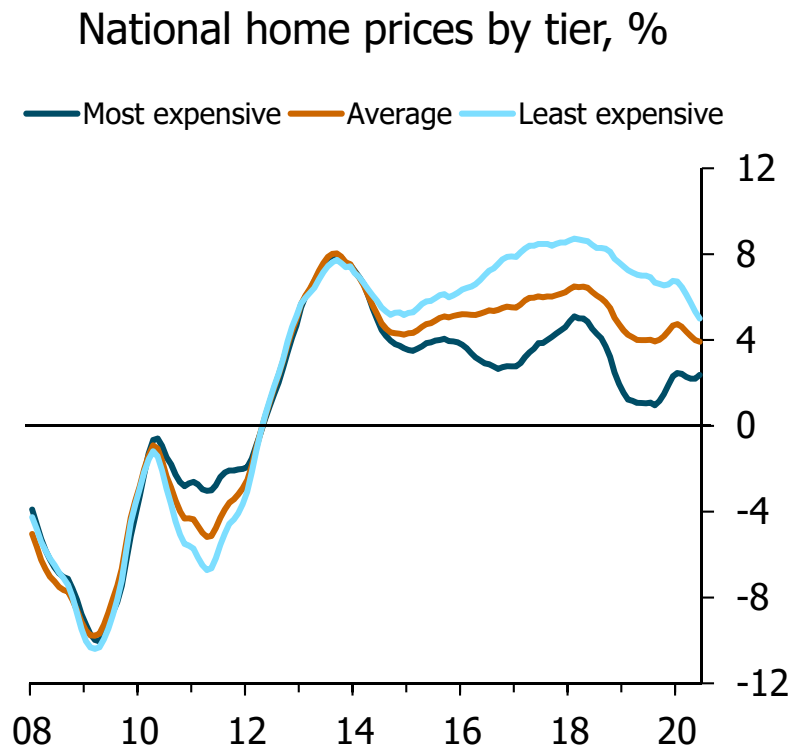
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# Home price appreciation continues in June 2020; prices grew above 5% in quarter of U.S. metros

Single family home price, year-over-year percent change



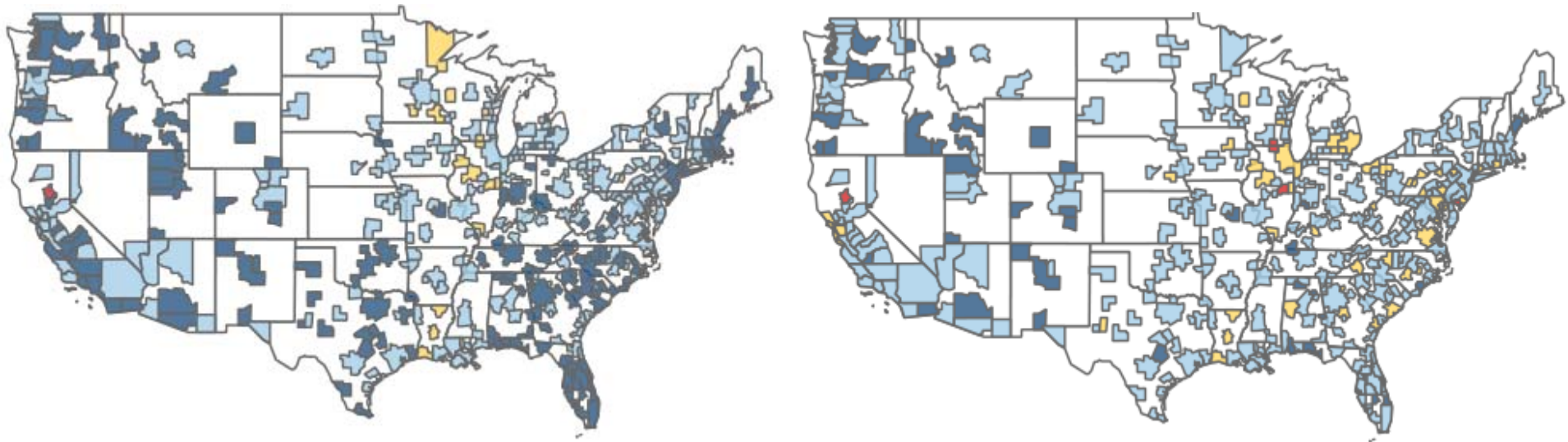
Source: Black Knight (data through June 2020)  
 Note: Table represents prices of non-distressed transactions.

# Metro-level home price appreciation stronger for cheaper homes than for most expensive homes

Single family home price, year-over-year percent change

Least expensive homes

Most expensive homes



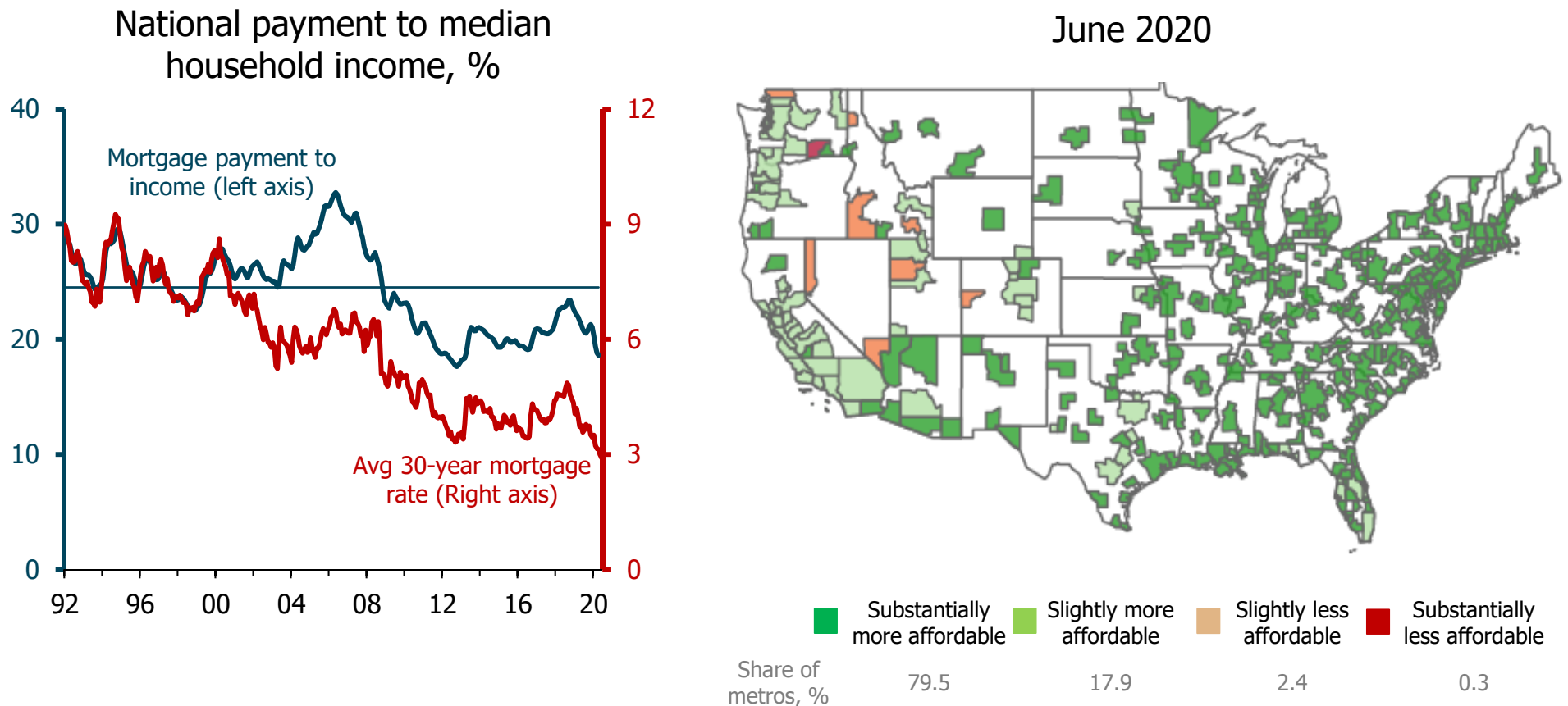
	<span style="color: red;">■</span> >1% drop	<span style="color: orange;">■</span> -1% to 1% change	<span style="color: lightblue;">■</span> >1% to 5% growth	<span style="color: darkblue;">■</span> >5% growth
Share of metros, %				
Bottom tier	0.3	5.0	52.8	<b>42.0</b>
Top tier	1.3	12.3	<b>75.3</b>	11.0

Source: Black Knight (data through June 2020)

Note: Table represents prices of non-distressed transactions. "Most expensive homes" represents homes priced at the top 20 percent of the market. "Least expensive homes" represents homes priced at the lowest 20 percent of the market.

# Nearly 80 percent of U.S. metros are substantially more affordable relative to historical average

## Mortgage payment to median household income



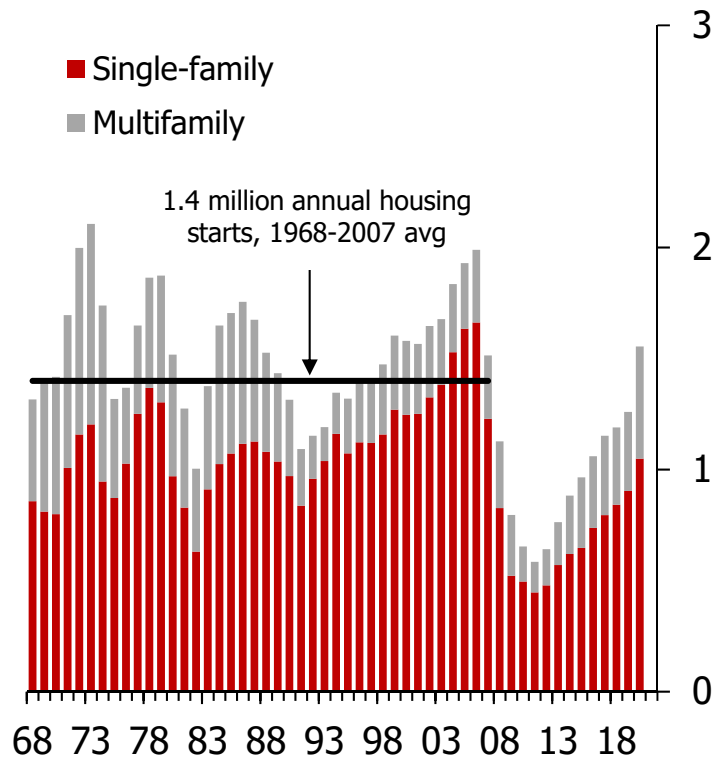
Source: Black Knight; Freddie Mac, Census, Moody's Analytics (Data through August 2020)

Note: Mortgage payment on average priced single-family home in market using 30-year fixed-rate mortgage with 20 percent down payment (P & I only) relative to median household income. Mortgage payment-to-income ratio historical average is calculated based on January 1992 to June 2020 period. Substantial is defined as being more or less than one standard deviation than the average.



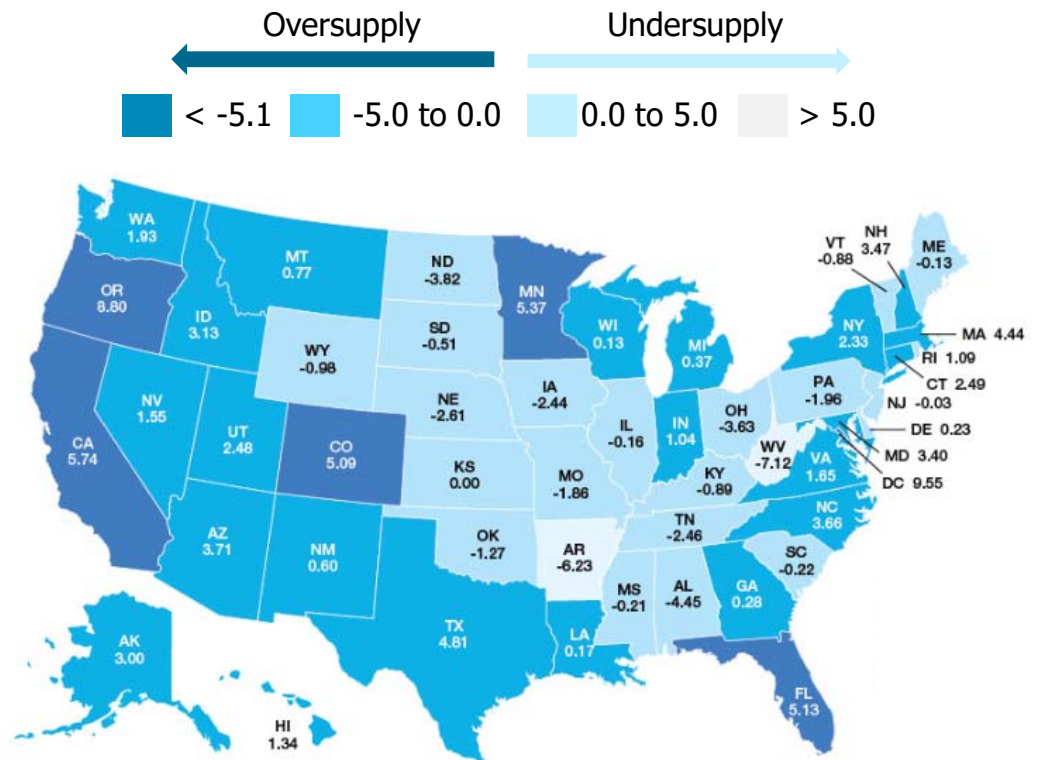
# Years of below trend homebuilding creates a housing shortage that supports home prices

Monthly U.S. housing starts, millions



\*2020 is annualized data through July

Freddie Mac's estimate of housing stock deficit as proportion of state's housing stock



Source: Census Bureau, Moody's Analytics (SAAR, August 2020); Freddie Mac Insight (Feb 27, 2020)

Note: Freddie Mac's state housing demand estimates relied on long-term vacancy rates and a target number of households.

# Conclusion

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- Despite recent recovery, employment remains 11 million jobs below its pre-pandemic peak with gains slowing
- Forbearance loan losses may be avoided if economic stress is temporary, otherwise losses are only delayed
- Low rates and tight housing supply support home price appreciation through COVID-19 crisis