COVID-19 and Commercial Real Estate

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Columbia Business School & NBER

July 22, 2020- Presentation to USC Lusk Center for Real Estate

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MARKETS

For Pensions, Valuing Real Estate Is Tough. Covid-19 Brings New Hurdles

With Covid-19 and the dramatic slowdown in deal making, investors are finding it more difficult to calculate the value of real-estate holdings

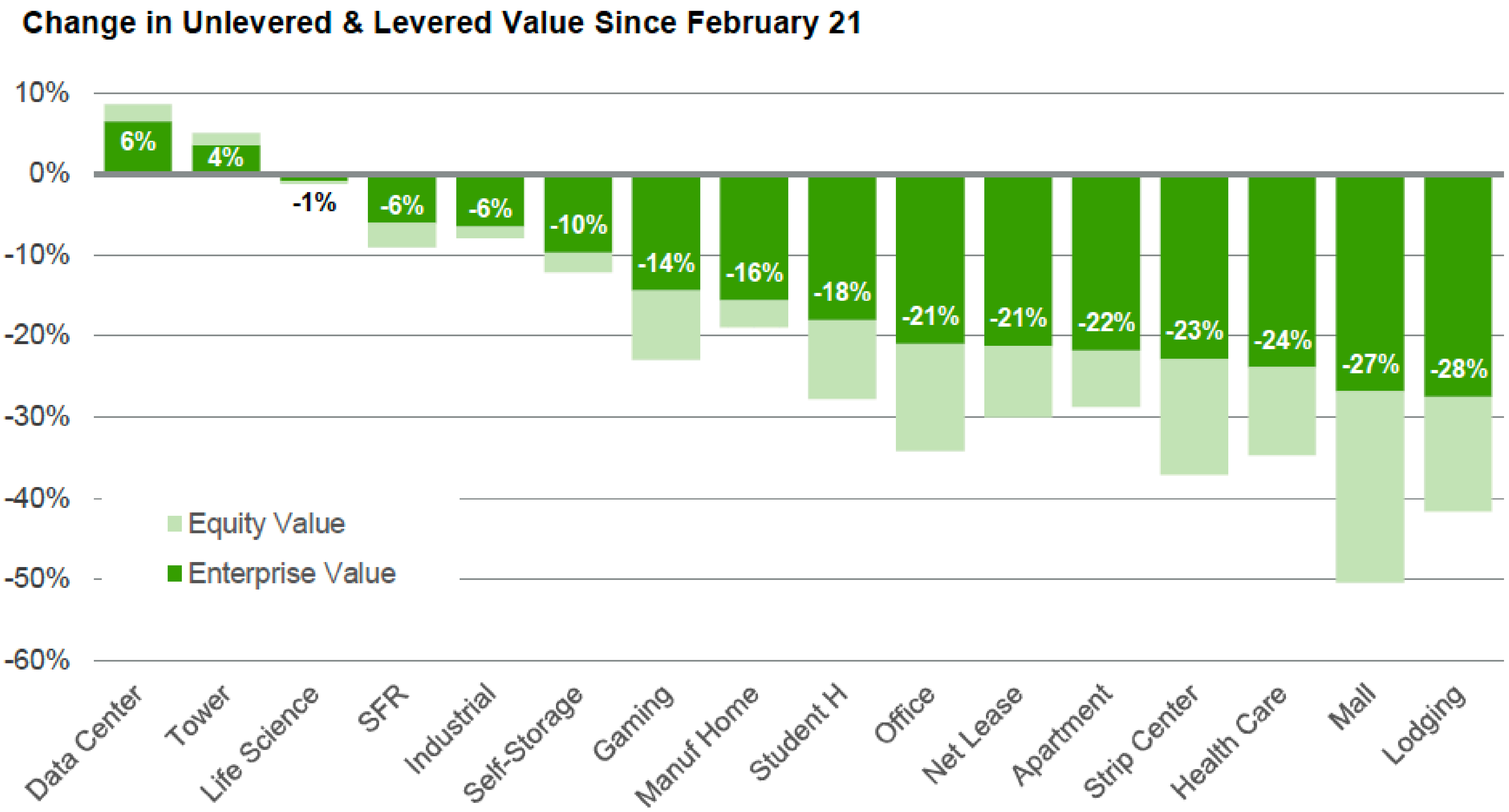
Calpers owns a stake in London's Gatwick Airport. Pensions invested in real estate and other real assets face new challenges valuing them as a result of the pandemic.

The Wall Street Journal, July 10, 2020, By Heather Gillers and Dawn Lim

Agenda

- ❖ Valuation of real estate is as uncertain as it has every been; REITs trade down sharply while private market has few transactions
- ❖ Linking the economy and policy to real estate: CARES, HEROES, and ??
- ❖ What should we expect for real estate prices?
- ❖ What about the future of cities?
- ❖ Is CMBS up for the challenge of a massive increase in defaults?

REIT data suggest CRE prices down 21% to 28% for apartments, office, mall and hotels



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Green Street Advisors, July 15, 2020

Housing market is seemingly on fire!

Redfin: Over half of home offers were in a bidding war in June

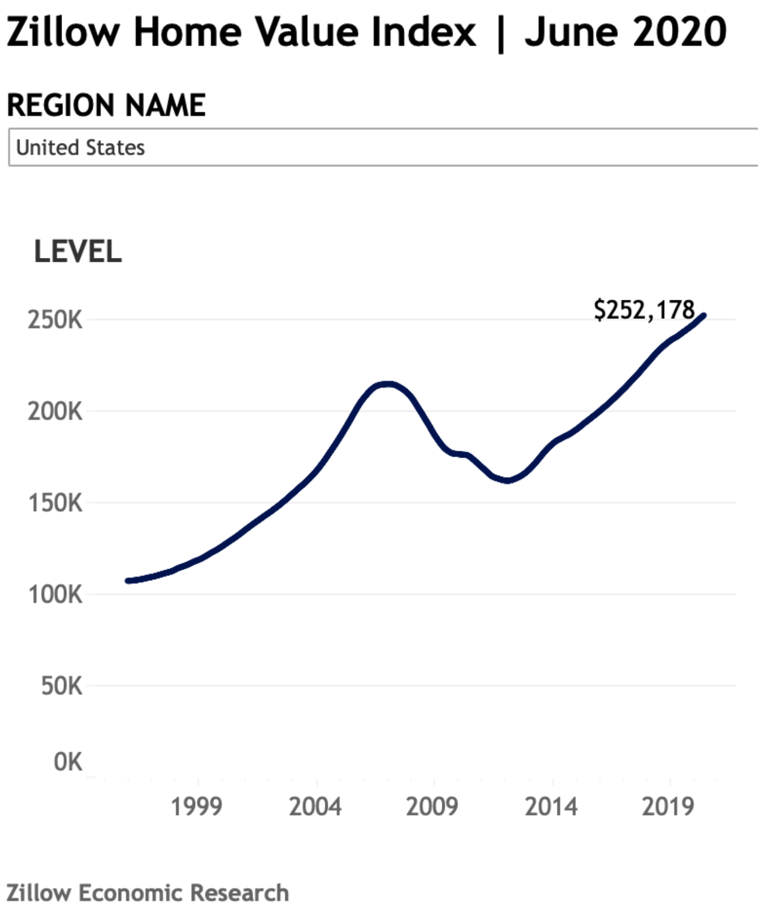
Less inventory and low mortgage rates fueling competition for homes

REAL ESTATE

Homebuilders just saw the strongest June sales since the last housing boom, as pandemic pushes more buyers to the suburbs

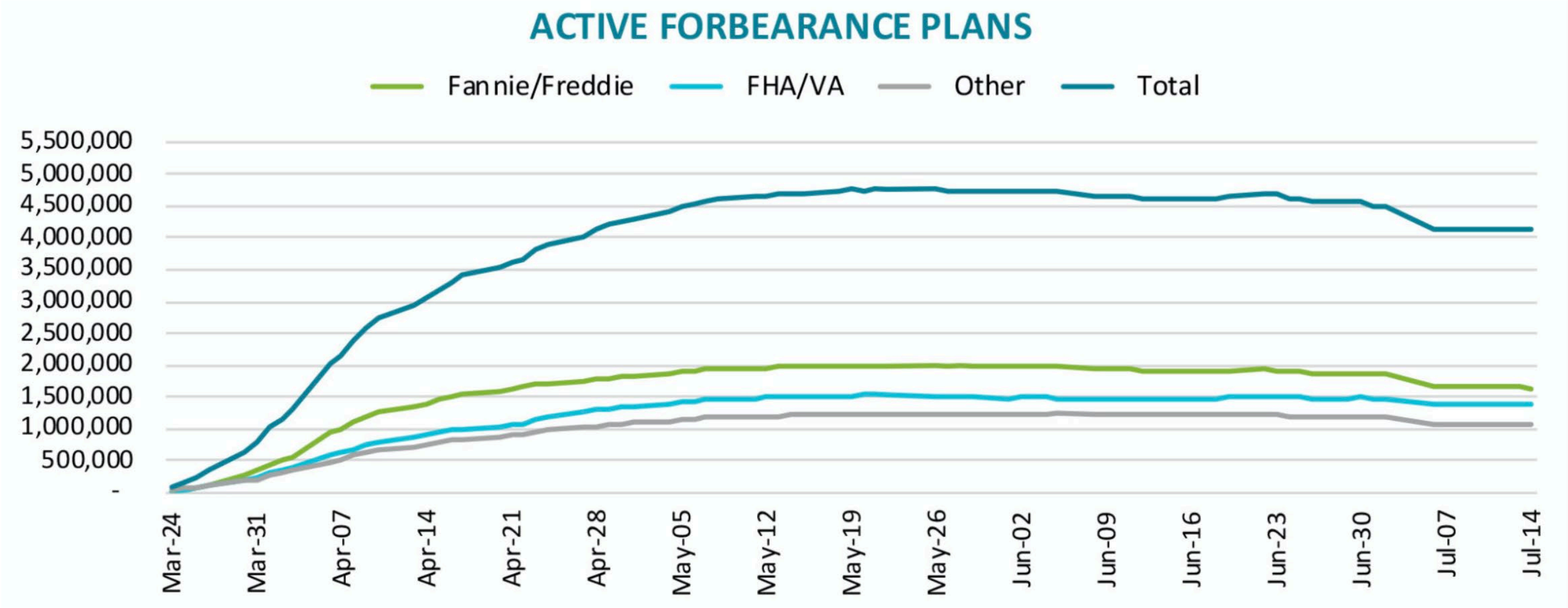
REAL ESTATE

Homebuilder sentiment jumps back to pre-coronavirus pandemic high



CNBC; Zillow

Yet 7.7% of mortgage borrowers are not making payments



Black Knight, July 2020

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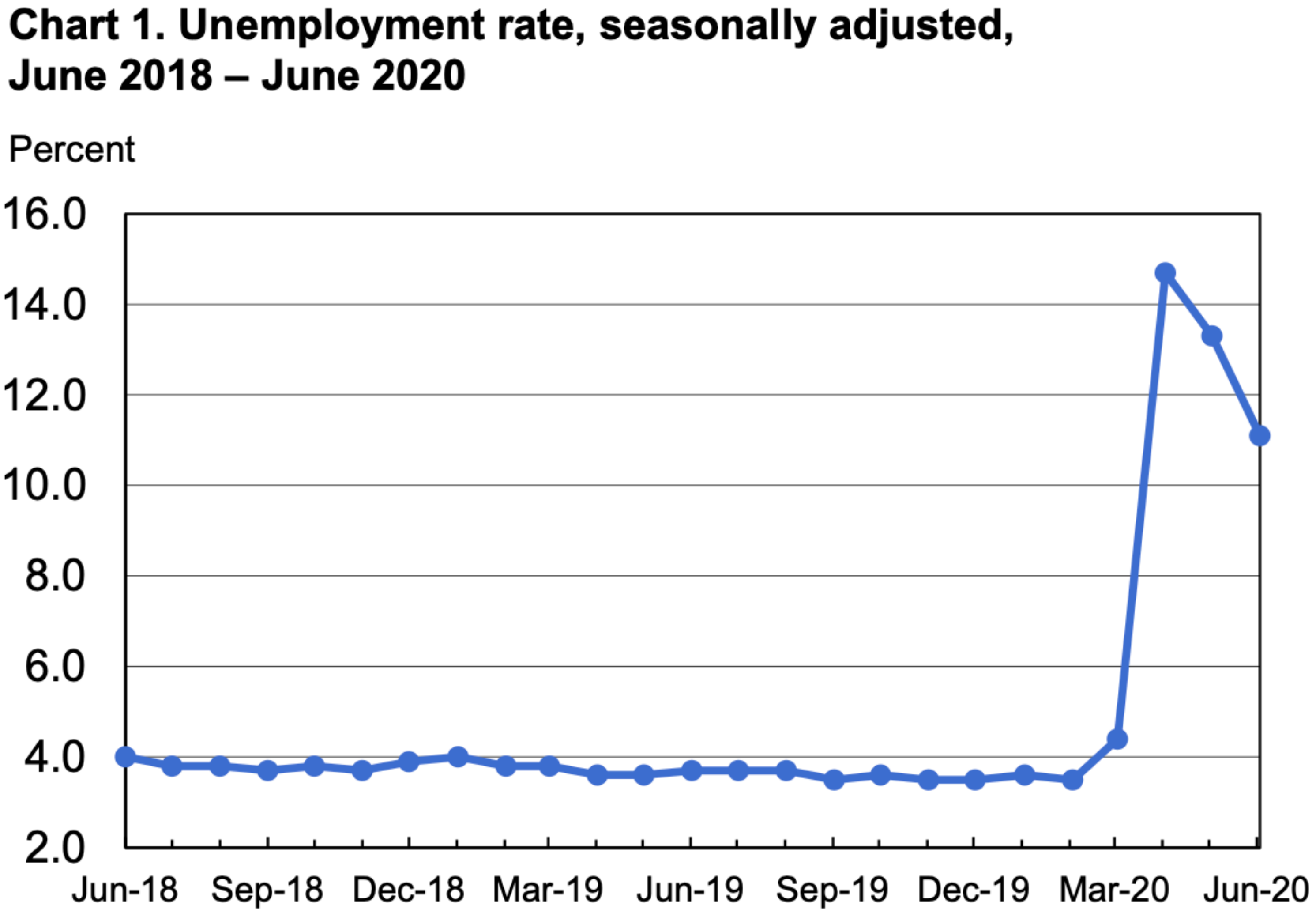
US Unemployment rate skyrockets

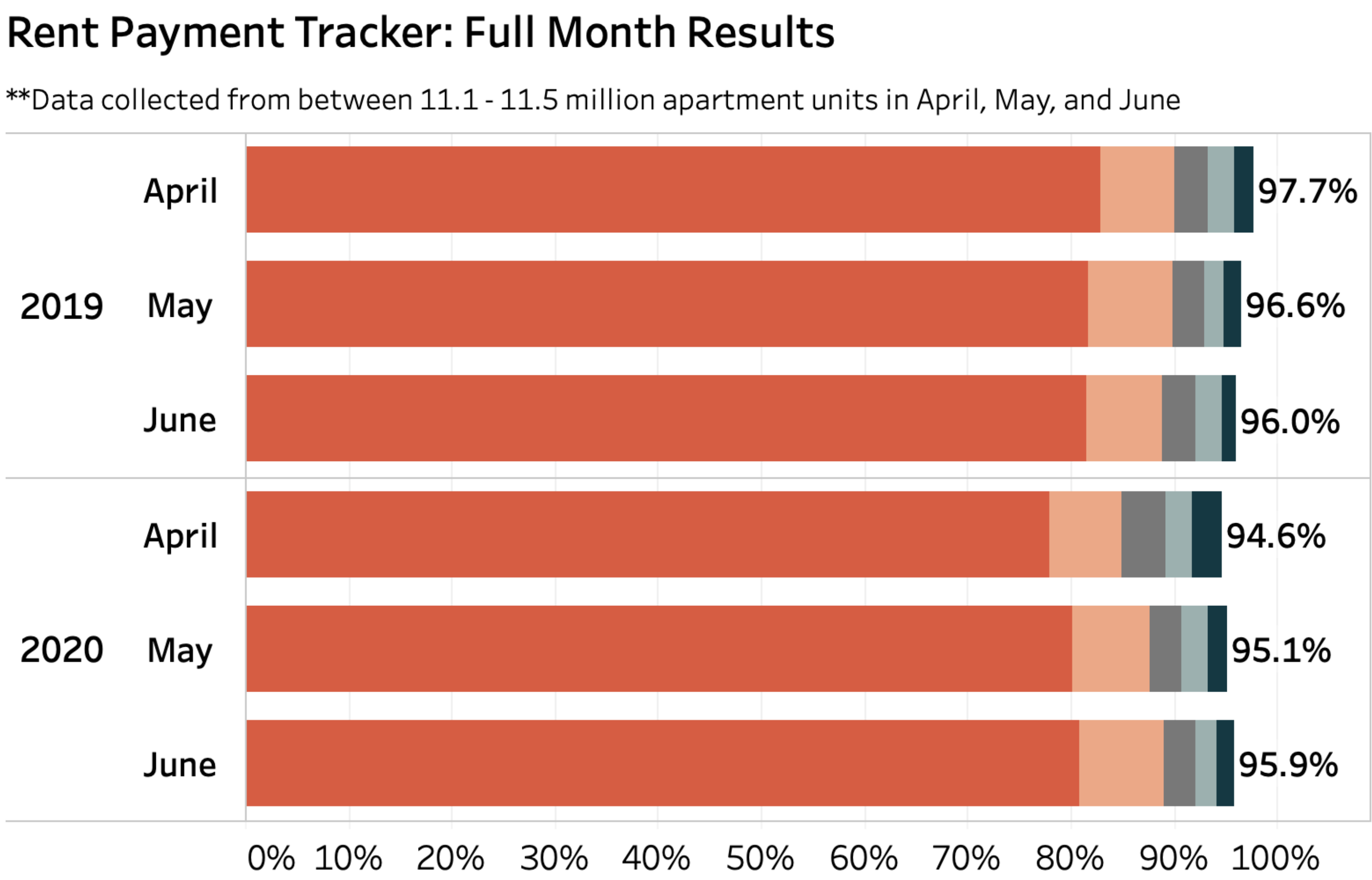


Bureau of Labor Statistics, June 2020

Despite the bad economic news, according to NCREIF, over 90% of office, industrial, and apartment tenants are paying rent.

NCREIF, June 2020

The National Multi Housing Council reports that over 95% of apartment tenants paid their rent in April, May & June



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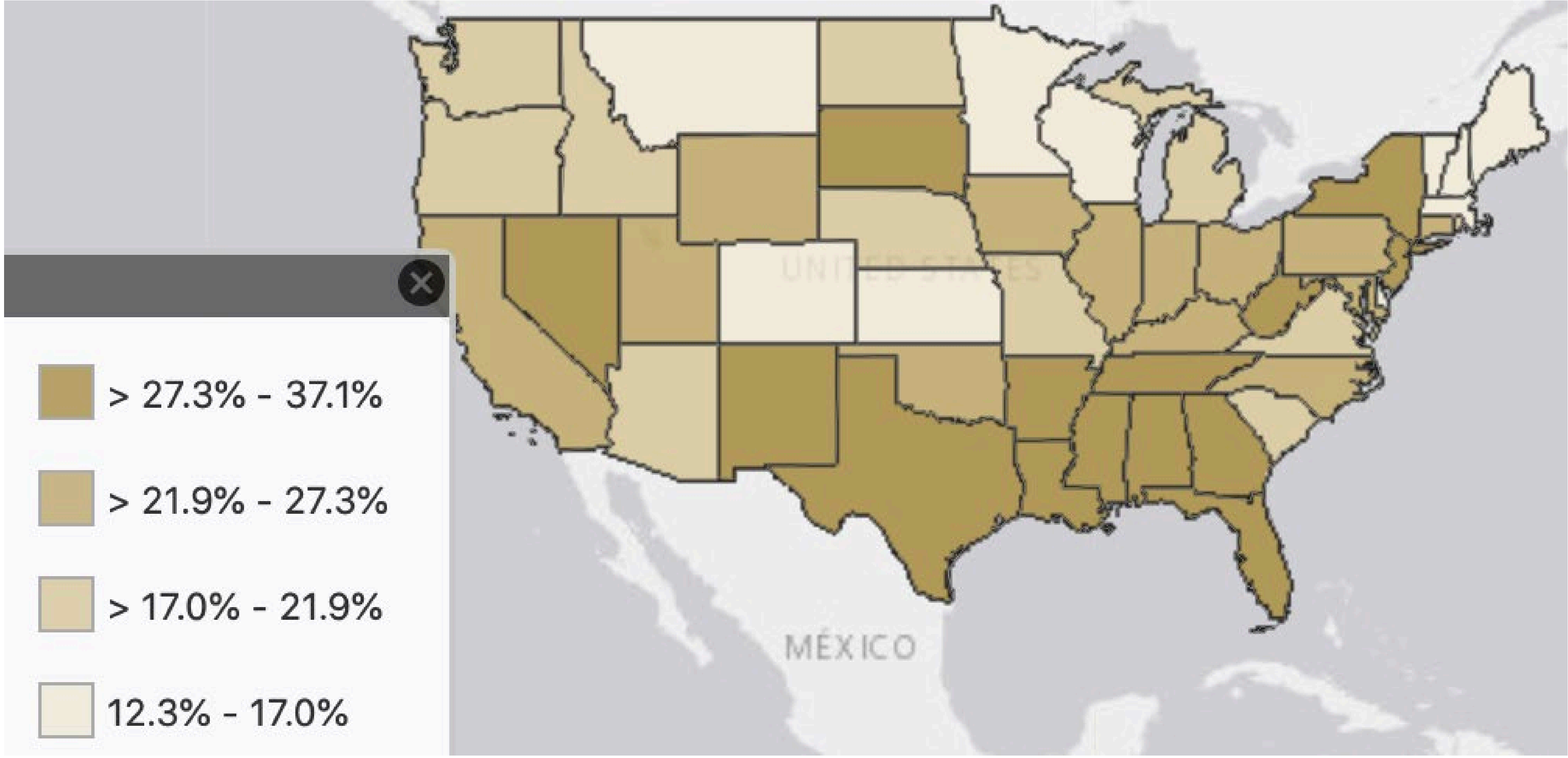
NMHC, July 2020

US Census Pulse Data are much more pessimistic

Percentage of adults who missed last month's rent or mortgage payment, or who have slight or no confidence that their household can pay next month's rent or mortgage on time.



Bureau of Economic Analysis, May 2020

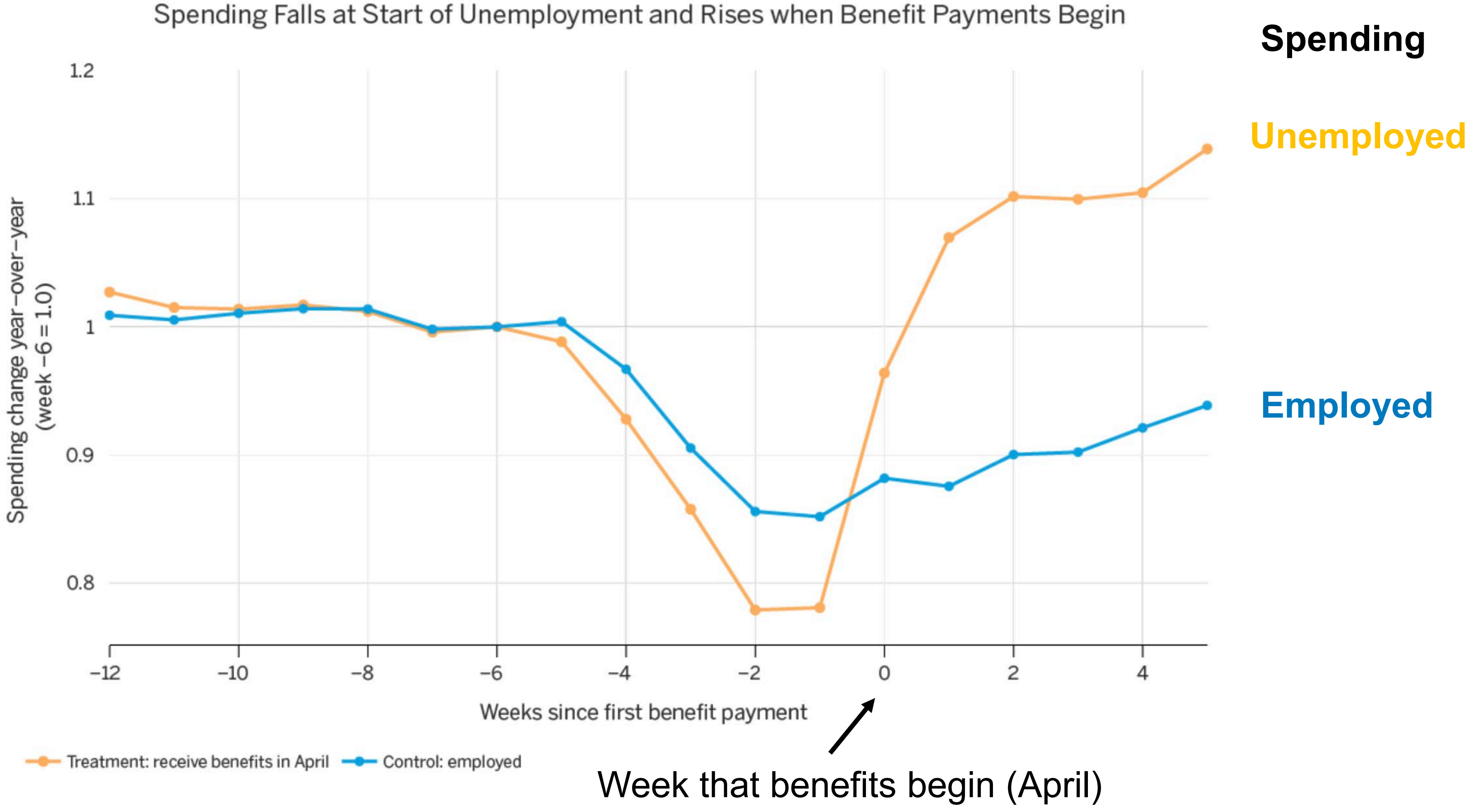
Impact of the COVID crisis appears to be <u>much worse for minority communities and smaller landlords.</u>

Disposable Personal Income was HIGHER in May than in February (How can this be?)

	2020				
	Jan.	Feb.	Mar.	Apr.	May
		Percent change from preceding month			
Personal income:					
Current dollars	0.6	0.5	-2.2	10.8	-4.2
Disposable personal income:					
Current dollars	0.6	0.5	-2.1	13.1	-4.9
Chained (2012) dollars	0.5	0.4	-1.8	13.6	-5.0
Personal consumption expenditures (PCE):					
Current dollars	0.4	0.0	-6.6	-12.6	8.2
Chained (2012) dollars	0.3	-0.1	-6.4	-12.2	8.1

Bureau of Economic Analysis, May 2020

Workers receiving unemployment benefits under the CARES Act INCREASED spending compared to baseline



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JP Morgan Chase Institute, July 2020

But what happens when CARES business payments end and extra $600 per week (and one-time $1,200) runs out?

HEROES surely won’t pass as is, but what will Congress (and the White House) do?

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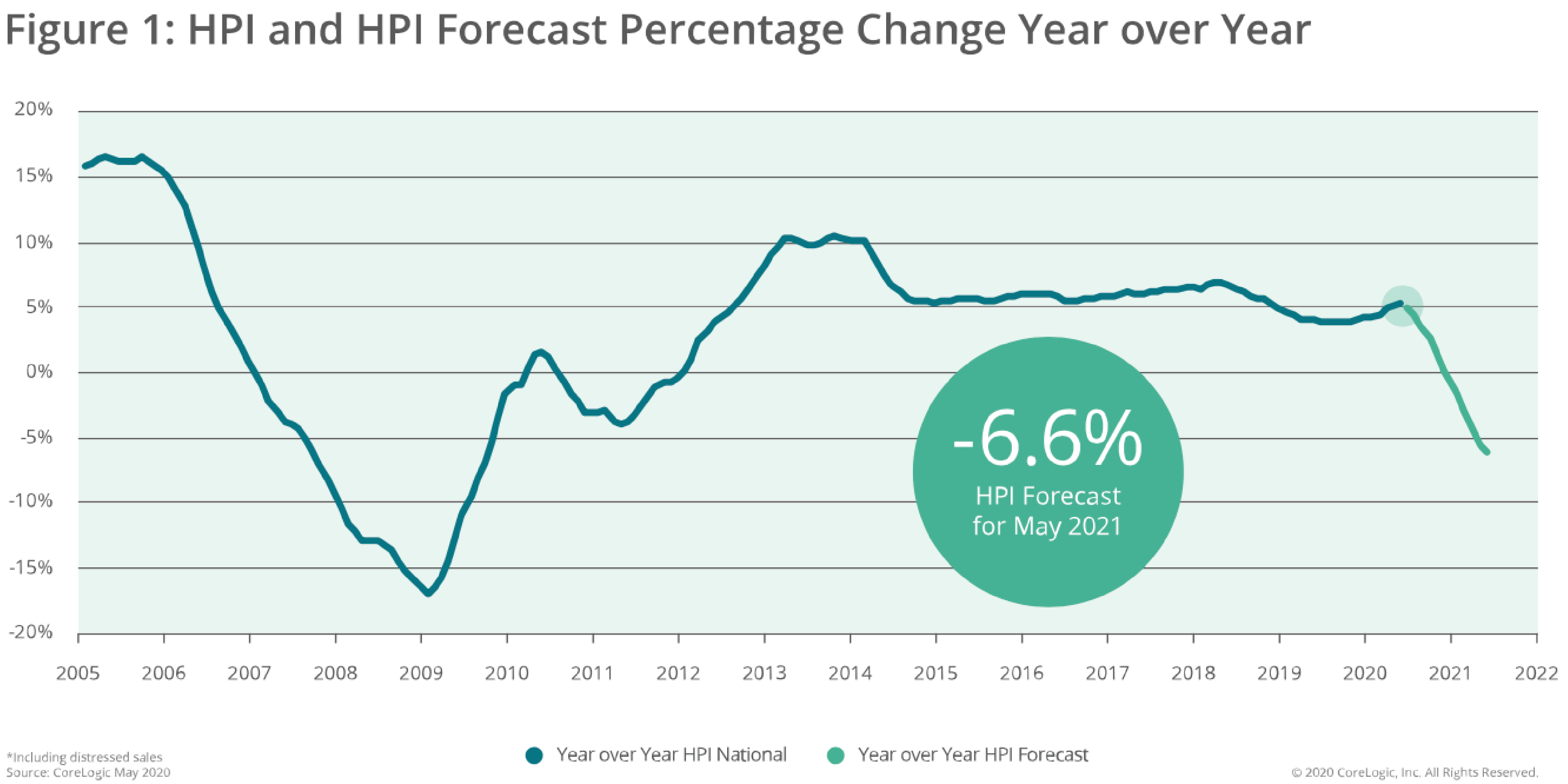
According to CoreLogic, home prices will tumble by next year



This morning, FHFA reported that home prices fell 0.3% in May (Economists predicted 0.3% increase)

(Bloomberg) -- Home prices rose 4.9% y/y in May according to a report from the Federal Housing Finance Agency
* Forecast range -0.3%-0.4% m/m from 13 economists surveyed
* Pacific fell 0.8% vs -0.1% in April
* Mountain fell 0.3% vs -0.1%
* West North Central unchanged vs 0.6%
* West South Central fell 0.2% vs 0.7%
* East North Central fell 0.3% vs 0.6%
* East South Central fell 0.4% vs 0.5%
* New England fell 1% vs -0.5%
* Mid-Atlantic unchanged vs 0.1%
* South Atlantic rose 0.1% vs -0.5%

What about commercial RE prices? An Example

Pre Covid												
NOI Growth	1.8%											
Going out Cap Rate	5.2%	(Note: Going in cap rate is 4.7%)										
		1.8%	1.8%	1.8%	1.8%	1.8%	1.8%	1.8%	1.8%	1.8%	1.8%	1.8%
NOI	$ 100.00	$ 101.80	$ 103.63	$ 105.50	$ 107.40	$ 109.33	$ 111.30	$ 113.30	$ 115.34	$ 117.42	$ 119.53	$ 121.68
less CapEx		$ (13.23)	$ (13.47)	$ (13.71)	$ (13.96)	$ (14.21)	$ (14.47)	$ (14.73)	$ (14.99)	$ (15.26)	$ (15.54)	
Sale Price											$ 2,340.03	
		$ 88.57	$ 90.16	$ 91.78	$ 93.44	$ 95.12	$ 96.83	$ 98.57	$ 100.35	$ 102.15	$ 2,444.03	
NPV	**6.50%**	**$1,931.06**										

<u>Baseline</u>: Buy an Apartment building with:

- 4.7% Going-in Cap rate
- 1.8% rental growth for 10-years
- Exit Cap of 5.2%
- Unlevered NPV @6.5%

Suppose rental collection is 50% for 4-years

Low/No Cash flow for 4 years												
NOI Growth	1.8%											
Going out Cap Rate	5.2%											
ST Reduction in rent	-50%											
		1.8%	1.8%	1.8%	1.8%	1.8%	1.8%	1.8%	1.8%	1.8%	1.8%	1.8%
NOI	$ 100.00	$ 101.80	$ 103.63	$ 105.50	$ 107.40	$ 109.33	$ 111.30	$ 113.30	$ 115.34	$ 117.42	$ 119.53	$ 121.68
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Sale Price											$ 2,340.03	
		$ 44.28	$ 45.08	$ 45.89	$ 46.72	$ 95.12	$ 96.83	$ 98.57	$ 100.35	$ 102.15	$ 2,444.03	
NPV	6.50%	$1,775.43										
Share of Pre-Covid NPV		**91.9%**										

Compared with baseline:

- No change in exit cap rate (5.2%)
- Rents return to same growth path (1.8%)
- Unlevered discount rate remains @6.5%

NPV Falls by 8.1%
(Not such a big hit)

Suppose rental collection is 50% for 4-years and same baseline rent 4-years later

NOI Growth	1.8%											
Going out Cap Rate	5.2%											
ST Reduction in rent	-50%											
		0.0%	0.0%	0.0%	0.0%	1.8%	1.8%	1.8%	1.8%	1.8%	1.8%	1.8%
NOI	$ 100.00	$ 100.00	$ 100.00	$ 100.00	$ 100.00	$ 101.80	$ 103.63	$ 105.50	$ 107.40	$ 109.33	$ 111.30	$ 113.30
less CapEx		$ (13.00)	$ (13.00)	$ (13.00)	$ (13.00)	$ (13.23)	$ (13.47)	$ (13.71)	$ (13.96)	$ (14.21)	$ (14.47)	
Sale Price											$ 2,178.87	
		$ 43.50	$ 43.50	$ 43.50	$ 43.50	$ 88.57	$ 90.16	$ 91.78	$ 93.44	$ 95.12	$ 2,275.70	
NPV	6.50%	$1,657.26										
Share of Pre-Covid NPV		**85.8%**										

Compared with baseline:

- No change in exit cap rate (5.2%)
- Rents return to same growth path after 4-years (1.8%)
- Unlevered discount rate remains @6.5%

NPV Falls by 14.2%

(Definitely worse)

If we decrease LT rent growth by 0.4% AND 4-yr rent collection of 50% & same baseline rent 4-years later

NOI Growth	1.4%											
Going out Cap Rate	5.6%											
ST Reduction in rent	-50%											
		0.0%	0.0%	0.0%	0.0%	1.4%	1.4%	1.4%	1.4%	1.4%	1.4%	1.4%
NOI	$ 100.00	$ 100.00	$ 100.00	$ 100.00	$ 100.00	$ 101.40	$ 102.82	$ 104.26	$ 105.72	$ 107.20	$ 108.70	$ 110.22
less CapEx		$ (13.00)	$ (13.00)	$ (13.00)	$ (13.00)	$ (13.18)	$ (13.37)	$ (13.55)	$ (13.74)	$ (13.94)	$ (14.13)	
Sale Price											$ 1,968.24	
		$ 43.50	$ 43.50	$ 43.50	$ 43.50	$ 88.22	$ 89.45	$ 90.71	$ 91.98	$ 93.26	$ 2,062.81	
NPV	6.50%	**$1,540.48**										
Share of Pre-Covid NPV		**79.8%**										

Compared with baseline:

- Exit cap rate increases (5.6%)
- Rents return to slower growth path after 4-years (1.4%)
- Unlevered discount rate remains @6.5%

NPV Falls by 20.2%
(This matches REIT data)

Takeaways

- ST rent collection doesn't impact values much (RE is a long-lived asset)
- Key to valuation is <u>new</u> price level at the end of the recession and the (new) LT growth rate
- Lower interest rates can help CRE prices if investors are searching for yield (assuming rents stay solid)
- This can help explain why hotels were not hit much worse than office or apartments (hotels have much larger ST impact)
- Don't forget about Cap Ex (if properties need to be improved for a new-normal)

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- ❖ Is CMBS up for the challenge of a massive increase in defaults?

Larger cities, especially NYC and other large cities in the Northeast will face big challenges

- **NY emerged strongly from the 1918 flu epidemic with less density**
- **Rents and prices in “Superstar Cities” (NY, SFO, LA, BOS,..) have grown faster than US average for 70 years**
- Run-up in real estate prices for Superstar Cities is tied to these cities being attractive for high-income households. Future depends on whether these households will pay increasing premiums to live in these cities. Without workers, most big firms won’t pay the same rent premiums for offices.
- In addition, severe fiscal challenges remain for many states/cities, especially NY, NJ, and CT (but also IL and others)

Office prices in "Superstar Cities" have grown substantially faster for many decades

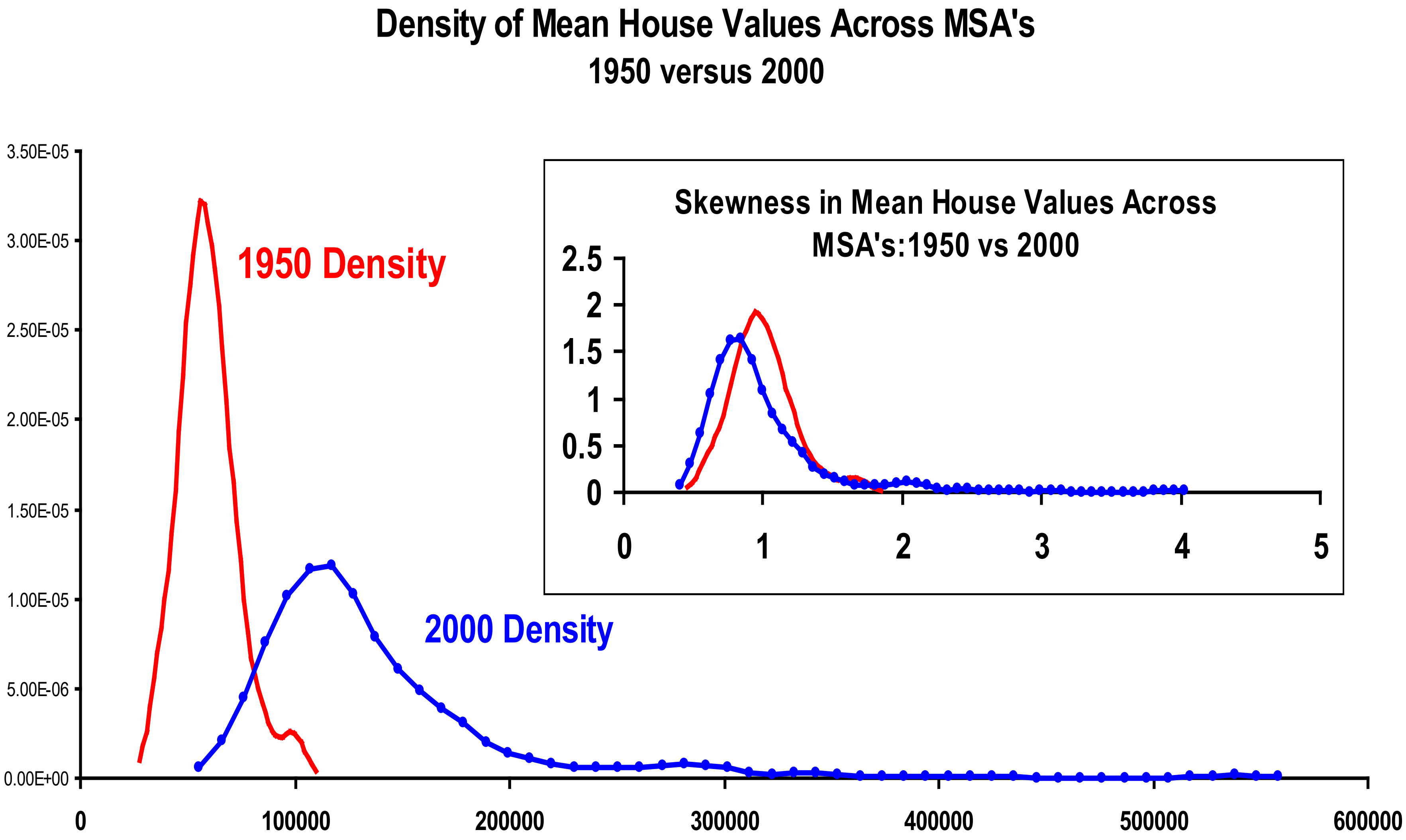
Market	Office PSF 2020	Annualized growth 1980-2020
Oklahoma City	$ 98.67	2.7%
San Antonio*	$ 167.90	2.9%
St. Louis	$ 117.19	3.3%
Hartford	$ 230.72	3.6%
Houston	$ 222.52	4.4%
Miami	$ 382.83	4.4%
Atlanta	$ 162.94	4.7%
Phoenix	$ 217.48	4.9%
Tampa*	$ 219.35	4.9%
Nashville	$ 176.43	5.0%
Portland	$ 230.62	5.1%
Washington DC*	$ 439.77	5.2%

Market	Office PSF 2020	Annualized growth 1980-2020
Denver*	$ 265.36	5.5%
Baltimore	$ 209.93	5.5%
Minneapolis	$ 235.33	5.6%
Dallas	$ 196.24	5.7%
Charlotte	$ 218.96	5.8%
Oakland*	$ 392.53	6.3%
Seattle	$ 414.27	6.6%
Chicago	$ 274.70	6.6%
San Diego	$ 426.33	6.9%
San Francisco*	$ 943.35	7.0%
Los Angeles	$ 453.39	7.3%
Boston	$ 708.19	7.4%
New York	$ 714.92	7.4%
San Jose	$ 592.21	7.5%

Note: Cities with a * are from 1983-2020

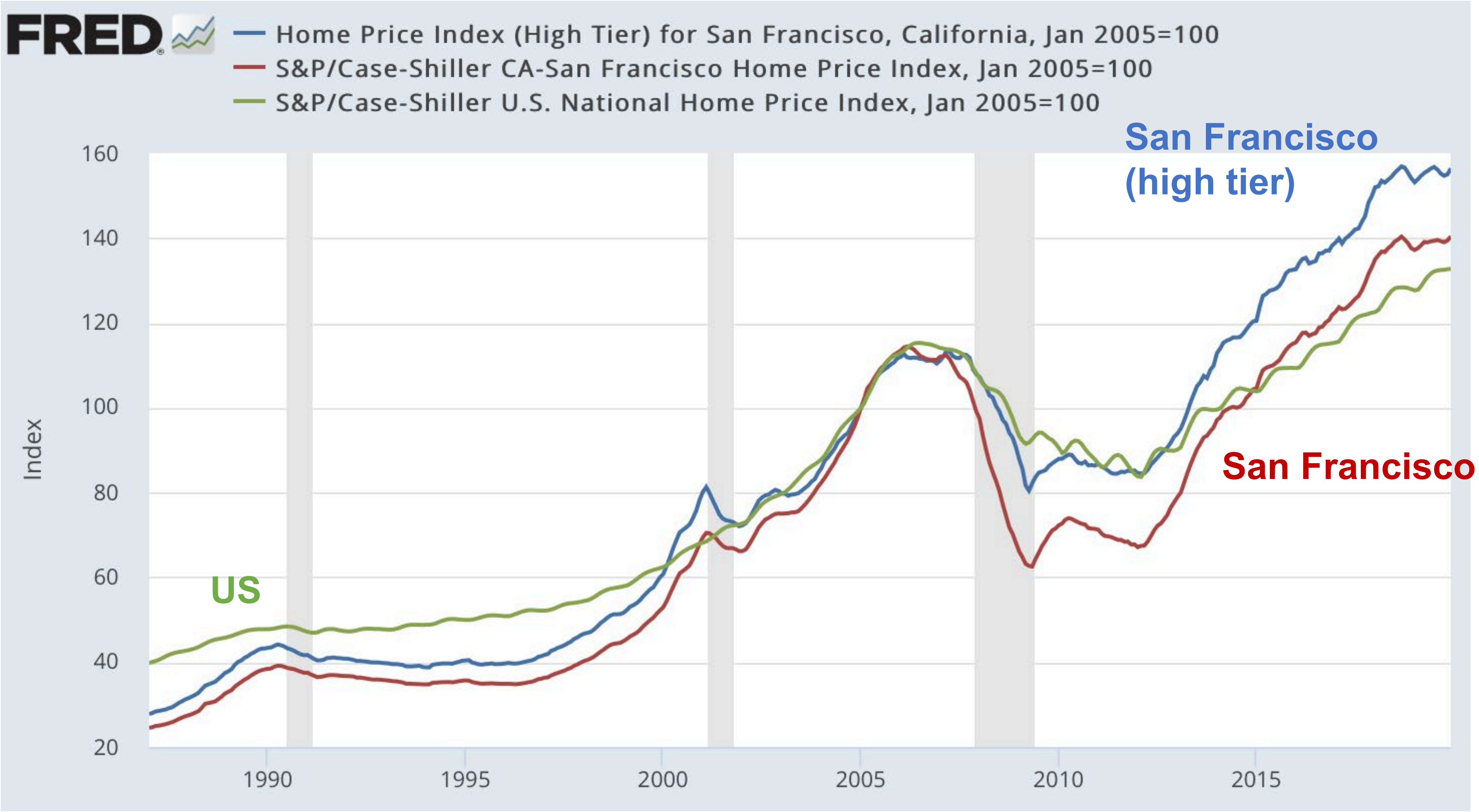
Source: NCREIF

In 1950, most expensive city was 2x mean. By 2000, most expensive city was 4x the mean. By 2020, even more ??



“Superstar Cities” by Gyourko, Mayer, & Sinai

San Francisco home prices have continued to grow faster than the US, especially top-tier homes



Larger cities, especially NYC and other Northeast cities, will face big challenges

- ❖ NY emerged strongly from the 1918 flu epidemic with less density
- ❖ Rents and prices in “Superstar Cities” (NY, SFO, LA, BOS,..) have grown faster than US average for 70 years
- ❖ <u>Run-up in real estate prices for Superstar Cities is tied to these cities being attractive for high-income households</u>.
  - ❖ Future depends on whether these households will pay increasing premiums to live in these cities.
  - ❖ Without workers, most big firms won’t pay the same rent premiums for offices.

Larger cities, especially NYC and other Northeast cities, will face big challenges

- ❖ <u>Severe fiscal challenges remain for many states/cities, especially NY, NJ, and CT (but also IL and others).</u> Repealing SALT unlikely to fix these problems. Inequality, high housing costs, aging infrastructure, inefficiencies create large headwinds. CA in better shape, but Sun Belt cities & rural locations appear best situated.
- ❖ Key unanswered questions: Will people (want to) return to office work in large numbers? What about Millennials?
  - ❖ Large banks announcing work from home initiatives likely to stay
  - ❖ Tech companies seem willing to sign some leases in NYC (post-COVID)- they think their workers (may) still want to live in NY

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How will we manage a sharp increase in delinquencies (and bankruptcies)?

NON-RATING ACTION COMMENTARY

Coronavirus Sparks Largest-Ever Rate Jump in U.S. CMBS Delinquencies

Mon 06 Jul, 2020 - 2:09 PM ET

Fitch Ratings-New York-06 July 2020: The U.S. CMBS delinquency rate in June posted the largest single month-over-month increase since the inception of Fitch Ratings' loan delinquency index nearly 16 years ago.

--Hotel: 11.49% (from 2.00% in May);

--Retail*: 7.86% (from 3.82%);

--Mixed Use: 4.17% (from 0.95%);

--Office: 1.92% (from 1.39%);

--Industrial: 0.67% (from 0.28%);

--Multifamily**: 0.59% (from 0.41%);

--Other: 0.93% (from 0.82%).

Conclusion

- ❖ Public markets continue to signal sharp declines in private real estate prices (even as tech shares hit new highs)
- ❖ Economy has done surprisingly well, but layoffs continue to be announced and personal income likely to fall further after July 31
- ❖ Rent and mortgage payments likely to decline as Federal support starts to diminish
  - ❖ Wildcard 1: How much will economic activity improve before a vaccine, even if hot spots diminish?
  - ❖ Wildcard 2: How long with foreclosure moratoria last? What will happen to unemployed households? Will policy makers continue to support tenants (not just renters, but also small businesses)?

Conclusion

- Need to worry about distributional impact of COVID
- Big questions for CRE prices:
  - What happens in 2022 (assuming we can conquer COVID)?
  - Will workers come back to the office?
  - Will cities continue to be attractive?
- I am an optimist and believe that people will want to work together and live in cities; won't fix structural problems in cities like NYC
- CRE prices in Superstar Cities were priced to perfection (w low cap rates), so potential for price declines is large as rent growth slows (happening pre-COVID). REITs more likely to own Gateway properties.

Conclusion

- Securitization has seemingly not improved as much as we hoped since 2008 (and isn't prepared for the task)
  - CMBS issuance and trading seemed to collapse within days until the Fed intervened, but still having issues
  - Special Servicers not equipped for large increase in defaults and may be conflicted (reportedly not negotiating with borrowers unless the borrowers paid costs in advance)
  - Bankruptcy judges and special servicers will determine the future of some properties (and property types). Lots more to come.
- Questions?